UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re: City of Detroit, Michigan, Debtor.	Bankruptcy Case No. 13-53846 Judge Thomas J. Tucker Chapter 9

RESPONSE TO CITY OF DETROIT'S MOTION TO ENFORCE PLAN OF ADJUSTMENT AND REQUIRE 30-YEAR AMORTIZATION OF THE UAAL IN THE POLICE AND FIRE RETIREMENT SYSTEM PENSION PLAN [ECF NO. 13602]

The Police and Fire Retirement System of the City of Detroit, Michigan (the "PFRS"), through its counsel, hereby responds in opposition to the City of Detroit's *Motion to Enforce Plan of Adjustment and Require 30-Year Amortization of the UAAL in the Police and Fire Retirement System Pension Plan*. In support of its Response, the PFRS relies on the Brief and exhibits attached herein.

Respectfully submitted,

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Date: September 9, 2022

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EXHIBIT LIST

Exhibit 1 None

Exhibit 2 None

Exhibit 3 Brief

Exhibit 4 Certificate of Service

Exhibit 5 None

Exhibit 6 Documentary Exhibits to Brief (summarized below):

Exhibit A: Emergency Manager Order No. 44 and PFRS Report

Exhibit B: Bowen Dep Transcript – July 1, 2014

Exhibit C: Kermans Dep Transcript - August 8, 2014

Exhibit D: Thomas Dep Transcript - July 15, 2014

Exhibit E: Hearing Transcript – September 15, 2014

Exhibit F: M. Kopacz Supplemental Report

Exhibit G: Hearing Transcript – September 29, 2014

Exhibit H: Moore Dep Transcript – July 24, 2014

Exhibit I: City of Detroit Legacy Report

Exhibit J: Gabriel Roeder Report – September 28, 2020

Exhibit K: Crain's Article dated March 7, 2022, "Duggan Budget Plan Includes Putting More Money in Retiree Protection Fund as Pension Cliff Nears"

EXHIBIT 3 – BRIEF

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re: City of Detroit, Michigan, Debtor.	Bankruptcy Case No. 13-53846 Judge Thomas J. Tucker Chapter 9

BRIEF IN SUPPORT OF RESPONSE TO CITY OF DETROIT'S MOTION TO ENFORCE PLAN OF ADJUSTMENT AND REQUIRE 30-YEAR AMORTIZATION OF THE UAAL IN THE POLICE AND FIRE RETIREMENT SYSTEM PENSION PLAN [ECF NO. 13602]

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I. INTRODUCTION

In the supreme irony for a so-called motion to "enforce a plan," the City cites no actual text—not one sentence—from the Plan of Adjustment (the "Plan") to support its claim that the Plan "requires" a 30-year amortization period for the upcoming payment to the PFRS. Because it cannot rely on the Plan to support its position, the City instead resorts to extrinsic evidence—a financial projection from the confirmation trial—which is also unavailing, as it (i) states on its face that it was merely a "hypothetical" scenario for payment of the PFRS claim that was "subject to change," (ii) was one of 2,300 exhibits introduced at trial and was never incorporated into the Plan, (iii) was cited by the Court in its Confirmation Opinion only in passing, and (iv) whose author admitted at trial that the parties would have to "decide what the amortization methodology is of the UAAL at the year 10." It is as though it was the City's "plan" in the colloquial sense—as in, its subjective intent—to use a 30-year amortization period, but it is confusing that with "the Plan"—as in, the formal legal document governing its exit from bankruptcy. The City's unilateral intent, no matter how sincerely held, does not trump the four corners of the Plan.

Under the four corners of the Plan, the PFRS was granted exclusive authority to decide its own funding policies, specifically including "amortization periods" for any unfunded liability that the is the City's responsibility to pay. The State Contribution Agreement entered into as part of Grand Bargain—which, unlike the financial projection the City hangs it hat upon, ***is*** attached to the Plan and expressly incorporated into it—required that the Retirement Systems appoint an independent Investment Committee to make decisions precisely like the one at issue here. The Investment Committee's authority to select applicable amortization periods was not only part and parcel to the overall Plan, it was even codified into Michigan law in conjunction with the Plan. In fact, the City, as the plan sponsor and payor source for the pension funds—is *prohibited* by state law from steering the Investment Committee's decision because the City is deemed a "party in interest." In other words, the City is presumed biased and not an "independent fiduciary" to the PFRS, and therefore, it is forbidden from controlling this decision.

These governance changes were specifically negotiated during the bankruptcy, and for good reason—the parties to the Grand Bargain were seeking to avoid the prior turbulent history between the City and the two Retirement Systems, which included numerous lawsuits for nonpayment, the disastrous Certificates of Participation ("COPs") transaction, a takeover by an Emergency Manager, and ultimately, this bankruptcy in which the City threatened to force a drastic reduction in thousands of retirees' pension payment via cramdown. Accordingly, in exchange for its contribution of nearly $200 million to the City's coffers—the State demanded that the City not be permitted to steer the funding policy for the PFRS in the future. The State was prescient in this regard, as that is precisely what the City is attempting to do now in this Motion: forcing the PFRS to accept a risky repayment schedule over three decades so the City can avoid its pension obligations and divert funds earmarked for the pensions to pay for other initiatives. The PFRS Investment Committee, though, exercising its fiduciary duties (and in complete lockstep with the PFRS Board of Trustees, who passed a resolution recommending adoption of the 20-year amortization period), determined it was more prudent for the PFRS to receive its money sooner than 30 years to shore up underfunding more quickly. The City's refusal to comply is proving the point—this Motion is a glaring example as to *why* the City is boxed out of this decision-making process.

While the Plan is silent as to the specific length of the applicable amortization period, it is not silent as to which party (the City versus the PFRS) gets to decide that issue. It is undisputedly the PFRS. In fact, Mayor Duggan's own statements to the media admit precisely this—he has openly complained about the "lack of control" the City has over this decision. But that is the deal the City struck. The City may now regret the deal it struck—but that was the deal. It is enshrined in the Plan of Adjustment, approved by this Court nearly a decade ago, long since substantially consummated under Section 1127 of the Bankruptcy Code, codified in Michigan law under Public Act 314—and enforceable by the PFRS. By asking this Court to enjoin the PFRS from setting its own funding policy, the City is not seeking "enforcement" of the Plan, it is actually seeking a wholesale modification of the Plan. And a tardy one at that, as the Sixth Circuit already held years ago that the Plan was substantially consummated and also specifically ruled that the Grand Bargain cannot be unwound.

While the Plan is abundantly clear that the PFRS is entitled to make the call regarding its amortization policy—and therefore, evidence extrinsic should not be consulted—if the Court does consider evidence outside the four corners of the Plan, then ***all*** the extrinsic evidence needs to be weighed, not just one financial projection out of 2,300 documents at trial. When the larger record is reviewed, the reason that a 30-year amortization period is absent from actual text of the Plan is clear: because the City's own experts on its "Pension Task Force" testified that no amortization period decision had been made and that a shorter period is the better practice. Those experts actually agree with the PFRS actuary, the Investment Committee and the PFRS Board's position—a shorter amortization period is the more prudent funding policy.

Moreover, raising the specter of "feasibility" now gets the City nowhere. It is undisputed that the City *has* the money. To its credit, the City has set aside hundreds of millions of dollars in trust to fund the 2023 Payment. The issue is not whether the City can afford a shorter 20-year amortization—it admits it can—the issue is that the City would rather spend that money on other things. The PFRS Board has diligently implemented the Plan and complied with it to a tee, and its Investment Committee is functioning precisely how it was intended under the Plan. Unfortunately, as was all too common pre-petition, the City wants to ignore its pension obligations and divert the cash to meet other needs—which was a recipe for disaster pre-bankruptcy. This is exactly what the Court-appointed feasibility expert, Martha Kopacz, warned against: "The City must be continually mindful that a root cause of the financial troubles it now experiences is the failure to properly address future pension obligations… if the City does not monitor the obligation that is going to be there in 2023… they could wake up with a bad nightmare, not unlike what they've been through with the pension systems to get to this point." The City's habit of reverting to the all-too-familiar routine of not paying its pension obligations as they become due should not be countenanced, and more importantly, the clear language of the Plan should not be ignored. The City's Motion should be roundly denied.

II. FACTUAL BACKGROUND

A. The Plan—as Part of the Grand Bargain—Required Formation of an Investment Committee With Authority to Determine Amortization

This Court, in confirming the City's Plan, emphasized that the "Grand Bargain" was the "cornerstone" of the entire Plan:

> [T]he Grand Bargain, which includes the State Contribution Agreement and the DIA settlement, is the cornerstone of the City's plan… Without these settlements, several other creditor settlements would also collapse. In addition, the approximately $816 million in outside funding provided as part of the Grand Bargain would not be available.

In re City of Detroit, 524 B.R. 147, 174-75 (2014). The Grand Bargain was a complex negotiated settlement involving at least twenty-seven different constituents, including the City, the State of Michigan (the "State"), the Official Committee of Retirees, the

GRS, the PFRS, the Detroit Institute of Arts (the "DIA"), two unions, seven employee and retiree associations, and fifteen charitable foundations (the "Foundations"). *Id.* at 169-70. It disposed of the City's largest creditor—the Retirement Systems—who had asserted a roughly $3 billion claim—and resolved two classes of creditor claims (Classes 10 and 11). *Id.* at 172-174. In exchange for funding from the State, the DIA, and the Foundations, extensive governance changes were required for both the GRS and PFRS. As will be set forth below, these governance changes divested the City of any ability to control the PFRS's funding policies (including any applicable amortization period) and granted that power exclusively to the Investment Committee and the Board within the PFRS.

(1) The Plan's Treatment of the PFRS Claim Lacks an Amortization Term

While the City claims the Plan "requires" a 30-year amortization period, the Plan's treatment for Class 10 claimants (the PFRS Pension Claim) makes no mention of any amortization period—let alone a 30-year one. Instead, the Plan only states:

> **A.** Contribution to PFRS… ***After June 30, 2023***, (1) PFRS will receive certain additional DIA Proceeds and (2) ***the City will contribute sufficient funds required to pay each Holder of a PFRS Pension Claim his or her PFRS Adjusted Pension Amount in accordance with and as modified by the terms and conditions contained in the Plan and the Prior PFRS Pension Plan, in accordance with the State Contribution Agreement and exhibits thereto.***

(Plan, Art. II(B)(3)(q)(ii)(A)) (emphasis added). At bottom, the only express economic term in the Plan regarding the lump sum payment owed by the City in 2023 was that the City would pay it. No other economic terms were included in the Plan for this payment (hereafter, the "2023 Payment"), and there is no mention of a 30-year amortization.[1] The City *did* expressly include amortization periods for other transactions contemplated in the Plan (*e.g.*, the New LTGO Bonds, the New B Notes, and the New C Notes)—but not for the PFRS Claim. *Id.* at 282, 315, 348.

The Plan also required key changes to the PFRS "governance," including the advent of an Investment Committee:

> F. Governance. On or as soon as reasonably practicable after the Effective Date, ***an Investment Committee shall be established under PFRS in accordance with the State Contribution Agreement. The Investment Committee shall be vested with the authority and responsibilities set forth in the State Contribution Agreement…*** [.]

Id. at Art. II.B.3.q.ii.F (emphasis added). The State Contribution Agreement referenced in Paragraphs (A) and (F) was attached as an exhibit to the Plan and is therefore part of the Plan itself. (Plan, Art. 1(283), pg. 23) (defining the "Plan" as "this plan of adjustment and All Exhibits attached hereto or referenced herein, as the same may amended, restated, supplemented, or otherwise modified").[2]

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[1] The only substantive term on a go forward basis for the PFRS under the Plan was a mandatory investment return assumption of 6.75% and that term was expressly stated in the Plan. *Id.* at Art. II.B.3.q.ii.B.

[2] The Confirmation Order—which the City repeatedly argues throughout its Motion is the "Plan"—is not part of the Plan. In fact, the "Confirmation Order" is a separately defined term in the Plan. (Plan, Art. 1(72), pg. 7) (defining the "Confirmation Order" as the order of the Bankruptcy Court confirming the Plan pursuant to section 943 of the Bankruptcy Code, as it may be subsequently amended, supplemented, or otherwise modified").

(2) The State Contribution Agreement

The funding contribution from the State under the Plan—which was the net present value of $350 million payable over 20 years (or $194.8 million)—was expressly contingent upon "the governance terms and conditions set forth in the State Contribution Agreement" being adopted by both the PFRS and GRS. (Plan, Art. IV.D(1), (3); see also Plan, Exhibit I.A.332 - State Contribution Agreement, Recital F, pg. 1) ("the State has agreed, subject to the satisfaction of the terms and conditions set forth herein and in the Plan, to make a contribution to the GRS and PFRS…").

The most critical governance change under the State Contribution Agreement was the implementation of an Investment Committee:

> 2. Governance Requirements of the GRS and PFRS. At all times during the 20 year period following the disbursement of the State Contribution to the GRS and PFRS, the GRS and PFRS each must establish an investment committee (the "Investment Committee") for the purpose of making recommendations to, and approving certain actions by, the respective System's board of trustees and/or making determinations and taking action under and with respect to Investment Management, as set forth in the terms and conditions enumerated on Exhibit A and Exhibit B, respectively… [.]

(Plan, Ex. B thereto, State Contribution Agreement, ¶ 1, pg. 716 of 809). In the list of specifically identified "Conditions Precedent," the State once again reiterated that it was not obligated to contribute funds unless "the Court enters a final, non-appealable order confirming the Plan, that includes… [a] requirement that the governing documents of the GRS and the governing documents of the PFRS be amended to include… the governance terms and conditions set forth in Paragraph 2, Exhibit A and B of this Agreement… [.]" *Id.* at ¶ 4(f)(ii)(a). The referenced "Exhibit B" is the "Investment Committee Governance" term sheet for the PFRS (the "Governance Term Sheet"). *Id.* at pg. 733 of 809.

(3) Composition and Authority of the Investment Committee

Before the State would agree to contribute its nearly $200 million cash infusion to the Retirement Systems, it required that an Investment Committee be formed, comprised of five independent members, two active employee members, and two retirees—but no City representatives. The State Contribution Agreement required a truly independent board; one insulated from interference by the City as the plan sponsor. It explicitly forbid any of the "independents" from being a City appointee: "None of the Independent Members shall be a party in interest as defined by MCL 38.1132d(4)." *Id.* That statute, in turn, defines a "party in interest" as: "The political subdivision sponsoring the [pension] system." MCL 38.1132d(4)(c) (emphasis added).

Due to these governance changes, the City was unable to obtain majority control and was stripped of any power to "control" any particular vote of the Investment Committee.

(4) The Investment Committee's Authority to Select Amortization Periods Under the Plan Documents

The Governance Term Sheet expressly granted the Investment Committee (via recommendations by the Investment Committee to the PFRS Board of Trustees) the power to decide a proper amortization period, not the City:

> "Investment management" with respect to plan assets shall mean:
>
> ***
>
> 4. ***Reviewing and affirming or rejecting the correctness of any and all calculations, actuarial assumptions and/or assessments used by the Plan Actuary***, including, but not limited to: (i) those underlying the restoration of pension benefits, ***funding levels and amortization thereof***, all in accordance with the Pension Restoration Program… (ii) ***those underlying the determination of annual funding levels and amortization thereof*** . . . [.]
>
> ***
>
> 8. Any interpretation of Plan documents, existing law, ***the POA, or other financial determination that could affect funding or benefit levels.***

Id. at pg. 737 of 809 (emphasis added). Thus, while the Plan is silent as to the specific length of the applicable amortization period, it is not silent as to which party (the City versus the PFRS) gets to decide the proper amortization period.

These governance changes are key to this Motion for three reasons. First, the Governance Term Sheet was expressly incorporated into the Plan and is enforceable as part of the Plan. Second, the State's funding obligation was contingent upon the Investment Committee being given authority to make "investment management decisions" so without these governance changes, the State would not have contributed its $194.8 million. Lastly, as set forth above, the Plan expressly states that the City's 2023 Payment must be made "in accordance" with these governance changes—which means that if the Investment Committee selects a 20-year amortization period for the

2023 Payment, the City must comply.[3] If the PFRS Investment Committee and the PFRS Board (which are in complete agreement that a shorter amortization period is necessary) had capitulated to the City's recent demand for a longer 30-year amortization period, the PFRS would be in breach of the Plan.

(5) The Investment Committee's Authority to Select Amortization Periods Under Michigan Law

The State Contribution also required the Investment Committee to comply with Michigan's Public Employee Retirement Act ("PERA" or "Public Act 314"):

> The IC [Investment Committee] shall be an investment fiduciary to the PFRS. An IC Member or other fiduciary under the PFRS shall discharge his or her duties with respect to the PFRS in compliance with the provisions of Public Act 314 of 1965, ***as amended.***

Id. at 735 of 809 (emphasis added). To implement the Governance Term Sheet, Michigan law itself was amended to clarify that the Investment Committee was bestowed with the authority to make *all* investment management decisions, including amortization. Public Act 314, as amended to carry out the Plan, provides:

> (1) Subject to a plan for adjustment,[4] each large sponsored system shall establish an investment committee.
> (2) ***The investment committee shall recommend to the governing board of the large sponsored system investment management decisions, including, but not limited to, all of the following:***

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[3] As noted above, the Plan treatment for the Class 10 PFRS Pension claim states: "[a]fter June 30, 2023… the City will contribute sufficient funds … in accordance with the State Contribution Agreement and exhibits thereto."

[4] A "Plan for adjustment" means "a plan for the adjustment of debts entered and approved by a federal bankruptcy court for a city that has established a large sponsored system." MCL 38.1133g(d). This statute was amended in 2014 in connection with the City's bankruptcy.

***

> (d) Subject to a plan for adjustment,[5] all calculations, actuarial assumptions, or assessments used by an actuary, including, but not limited to, those underlying the restoration of pension benefits, ***funding levels, and amortization of the restoration of pension benefits***, and those underlying the determination of annual funding levels and ***amortization of annual funding levels,*** and recommended contributions to the large sponsored system in accordance with applicable law.
>
> ***
>
> (g) Interpretation of the large sponsored system's governing documents, applicable laws, ***plans of adjustment approved by United States bankruptcy courts, and other financial determinations affecting the large sponsored system's funding or benefit levels.***

MCL 38.1133g (emphasis added). Thus, the State Contribution Agreement and the accompanying Governance Term Sheet—which included the PFRS's right to control amortization decisions—was not only expressly incorporated into the Plan, it was codified into Michigan law. The Plan states that the parties' rights and obligations under the Plan must be performed in accordance with Michigan law: "the laws of the State of Michigan… shall govern the rights, obligations, construction and implementation of the Plan and any contract… instrument, release or other agreement or document entered into or delivered in connection with the Plan." (Plan, Article VIII(I), pg. 72). Both the City and the PFRS are bound by MCL 38.1133g and must act in accordance with its mandate that the Investment Committee (in consultation with the PFRS Board) choose the amortization period. For this separate and independent

5 As noted previously, the only term the PFRS could not change under the Plan of Adjustment was the assumed investment rate of return 6.75%.

reason, the PFRS—not the City—undisputedly has exclusive authority for this decision.

The wisdom of removing the employer who pays into the retirement system from pulling the proverbial purse strings and deciding the amount of its annual contribution or repayment terms is obvious—the fiduciary responsibility of each Investment Committee member and the PFRS Board of Trustees is to the PFRS, not to the City. One way of ensuring the members are not "serving two masters" with potentially conflicting interests is to structure the Investment Committee in a way that would minimize the City's influence. Insulating the Investment Committee from these pressures was not only a requirement under the Plan, it became a requirement under Michigan law.

(6) The DIA Settlement Terms Also Required Governance Changes

The governance changes were echoed in the DIA Settlement, too, as part of the larger Grand Bargain. An express requirement of the DIA Settlement was that the City shall "adopt and maintain pension governance mechanisms that meet or exceed commonly accepted best practices reasonably satisfactory to the [DIA] Funders and the State to ensure acceptable fiscal practices and procedures for management and investment of pensions and selection of acceptable pension boards to ensure the foregoing." (Plan, Exhibit I.A.126 – Principal Terms of DIA

Settlement, pg. 67 of 809).[6]

Without these governance changes, the funding from both the State and the DIA would not have materialized, and the "cornerstone" of the City's entire Plan would have crumbled.

(7) The Amended PFRS Plan Documents Under the Plan of Adjustment

As part of the extensive changes to the PFRS under the Plan of Adjustment, new plan documents for the pension fund were drafted by the City's bankruptcy attorneys at Jones Day and ratified via Emergency Manager Order No. 44. (Ex. A, EM Order No. 44, ¶ 13, Ex. E thereto, "PFRS Plan"). Consistent with the State Contribution Agreement, the new PFRS Plan documents also expressly confer the amortization decision upon the Investment Committee. Under the new PFRS Plan:

> As of the effective date of the Plan of Adjustment, but subject to consummation of the State Contribution Agreement, an Investment Committee is hereby created for the purpose of making recommendations to the Board of Trustees and ***taking action under and with respect to certain investment management matters relating to the Retirement System.*** The creation and operation of the Investment Committee ***is controlled by the Governance Term Sheet*** . . . The Investment Committee shall serve in a fiduciary capacity with respect to the investment management of Retirement System assets, determination of investment return assumptions, and Board compliance with provisions of the governing documents[.]

(Ex. A, PFRS Plan, Art. I, Sec. 1.21). The "Governance Term Sheet" referenced in

[6] All governance terms were required for a period of twenty (20) years after the Plan of Adjustment. (Plan, Exhibit I.A.126 – Omnibus Transaction Agreement, Art. V, Section 5.2(a), pg. 104 of 809).

this paragraph, as set forth above, explicitly gave the Investment Committee the right to decide amortization, and this was repeated in Article 16.2 of the PFRS Plan:

> For purposes of this Combined Plan, "investment management decisions" and "investment management matters" shall include:
>
> ***
>
> (d) ***review and affirmation or rejection of the correctness of any and all calculations, actuarial assumptions and/or assessments used by the Actuary including***, but not limited to (i) those underlying the restoration of the pension benefits, ***funding levels and amortization thereof***, all in accordance with the pension restoration program attached to the Plan of Adjustment (as more fully described in Article K of Component II of this Combined Plan Document), (ii) those underlying the determination of ***annual funding levels and amortization thereof***, and (iii) on or after Fiscal Year 2024, the recommended annual contributions to the Retirement System in accordance with applicable law;
>
> ***
>
> Interpretation of Retirement System governing documents, existing law, ***the Plan of Adjustment or other financial determination that could affect funding or benefit levels***[.]

Id. at Art. 16.2(1), pg. 62-63 (emphasis added).[7] In fulfilling its duties, the Investment Committee is also expressly required to "give appropriate consideration" to the "liquidity needs of the Retirement System." *Id.* at Art. 16.3(3). Thus, the Plan could

[7] The power to decide any applicable amortization periods was also repeated in Section 9.3 as it relates to Component I (the hybrid plan). It states: "***For plan years commencing July 1, 2023 and later***, the accrued pension liabilities for Members shall be determined by the Actuary using reasonable and appropriate actuarial assumptions approved by the Board and the Investment Committee. The City's annual contributions to finance the normal cost of benefits and any such unfunded accrued pension liabilities shall be determined by the Actuary ***amortizing such unfunded accrued pension liabilities over a period or period of future years as established by the Board and approved by the Investment Committee*.**" *Id.* at Art. 9.3(2), pg. 39-40 (emphasis added).

not be more clear—the decision as to which amortization period to select is within the sole discretion of the Investment Committee and the Board of the PFRS.

B. The Larger Extrinsic Records Reveals Why a 30-Year Amortization Period Is Absent from the Plan

The Plan unambiguously grants the PFRS the right to set its own funding policy and the Court need look no further than the Plan document. But if the Court finds an ambiguity in the Plan and deems it appropriate to consult extrinsic evidence, then the entirety of the record needs to be examined—not just one financial projection out of a multi-week trial with dozens of witnesses.

(1) The City's Plan Always Envisioned That the Economic Terms for the 2023 Payment—Even the Amount—Were Subject to Change

In its Motion, the City pretends as if the amount and the repayment terms of its lump sum payment at the end of its ten-year hiatus was set in stone back in 2014 when the City exited from bankruptcy.[8] Neither term (either the amount or amortization

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[8] While not central to resolution of the City's Motion, the City improperly blames the PFRS and its actuaries for the City's own failure to properly calculate the underfunding amounts. [ECF No. 13602, pg. 30]. A brief historical recounting will clarify the record in this regard for the Court. In April of 2013, the City set up a "pension task force" comprised of multiple lawyers from Jones Day and at least three different experts – Charles Moore formerly of Conway Mackenzie, Glenn Bowen from Milliman and Gaurav Malhotra from Ernst & Young. (Ex. B, Bowen 7/1/2014 Dep at 304). The calculations and financial projections presented at the Confirmation Trial by the City were performed by Malhotra and Bowen. The Retirement Systems' actuary, Gabriel Roeder, did not testify or contribute to these calculations, and no one from either of the Retirement Systems—the GRS or the PFRS—were asked to participate on the pension task force. (Ex. C, Kermans Dep at 22, 133, 136; Ex. D, C. Thomas Dep at 135-140). The Retirement Systems' actuary, Gabriel Roeder, who has now been the actuary for nearly 80 years and

methodology) was set in stone. Far from it—the amount of the future payment was merely a reasoned "guess" but was ultimately dependent on how well the PFRS's investment portfolio performed over that ten-year period when all the parties knew the PFRS would be defunded. In fact, various scenarios were run by the City's actuary (Milliman) that analyzed what the effect of the PFRS's investment portfolio returns would be on the size of the City's payment at the end of the ten-year hiatus, and Milliman concluded the amount could fluctuate wildly—by over a *billion* dollars if the PFRS investments performed poorly.[9] This was always a "risk" inherent in the City's

knows the systems more intimately than any third party—was not asked to join the Pension Task Force. Neither was the former Director of the Retirement Systems, Cynthia Thomas. *Id.* In September of 2014, at the Confirmation Trial, Glenn Bowen testified that he used the Gabriel Roeder 2013 Valuation Report to conduct his analysis and he adopted all of the assumptions for his go forward model—including the mortality table assumptions regarding life expectancy. (Ex. E, 9/15/2014 Hrg. Tr., pg. 53-60). Milliman also ran the projections to determine the funding levels for 2023 both pension plans—not the GRS, PFRS, or its actuaries. *Id* at 75. Thus, any accusation that the PFRS "failed" to do proper calculations is an outright falsehood.

[9] The City's scenarios for the 2023 Payment amounts were set out in the table below in the Court-appointed expert's Supplemental Report (Ex. F), and despite these wild fluctuations, Kopacz still found the Plan "feasible" as did the Court.

PFRS Average Rate of Return Scenario Analysis[7]

Average Rates of Return July 2014 - June 2023	Estimated Funding Status June 2023	Estimated Projected Unfunded Liability June 2023	Estimated Projected Unfunded Liability Variance
3.00%	43%	$ 1,717	$ 1,036
5.00%	60%	$ 1,208	$ 527
6.00%	70%	$ 917	$ 236
6.75%	**78%**	**$ 681**	**$ -**
8.00%	92%	$ 252	$ (429)
0% - 1st 5 years; 10% - 2nd five years	53%	$ 1,439	$ 758
10% - 1st 5 years; 0% - 2nd five years	64%	$ 1,097	$ 416

Plan. Further, the City's financial expert, Malhotra, admitted to the Court that unlike the other creditor settlements—which were locked in, both in terms of amount and other economic terms—the pension liability at the end of the ten-year hiatus was not:

> THE COURT: Okay. I want to ask you, what are the two or three most critical assumptions in the City's 10-year forecast or projections that concern you the most?
> A. The first one, Your Honor, would be the unfunded pension liability of the City at the end of the 10 years because in a lot of this in terms of the settlement to the creditors, we have boxed in what the City's liability will be. On the side of the pensions, we are still using calculations to estimate what that 10-year unfunded liability will be. So that will be my first one as a concern because it's an unknown, it's an estimate, but it's still not boxed in in terms of how we have boxed in our best ability of the other claims.

(Ex. G, Malholtra Conf. Tr. Hrg. Tr. 9/29/2014, pg. 272).

To account for this uncertainty, the financial projections prepared by Malhotra—and cited by the City as support for this Motion—were replete with cautions and caveats to make clear that the projections were merely a "best guess":

> The attached Plan of Adjustment preliminary forecast… its assumptions and underlying data... consist of information obtained solely from the Client. With respect to prospective financial information relative to the Client, Ernst & Young … ***expresses no assurance of any kind on the information presented*** … ***There will usually be differences between forecasted and actual results*** because events and circumstances ***frequently do not occur as expected and those differences can be material***… reliance on this report is prohibited by any third party as the projected financial information contained herein ***is subject to material change and may not reflect actual results.***

(ECF No. 13606-2, pg. 69-70, the "Financial Projection") (emphasis added). In addition to this general caveat, the specific language the City cites in support of its claim that a 30-year amortization was "required" actually cautions that the entire exercise was a "hypothetical" treatment of the PFRS claim that was "subject to change:"

Hypothetical **claims treatment**

PFRS Pension

Contribution (years 1-10)	Estimated to be $261m from foundations/State settlement
Contributions (years 11-40)	UAAL as of June 30, 2023 ***estimated*** to be ~$681m(b) amortized over 30yr, including contributions in second decade from DIA and foundations

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Footnotes:

(a) Hypothetical art and State settlement proceeds are subject to a consensual agreement with respect to the treatment of pension-related claims

(b) ***Estimated*** pension contributions to retirement systems and unfunded pension liabilities as of June 30, 2023 are ***subject to change***

Id. (emphasis added).

(2) The City's Expert Admits an Amortization Schedule Was Not Yet Set

With respect to the amortization issue, Malhotra—the author of the very Financial Projection the City pins its entire Motion on—outright admitted that the amortization period was not yet determined for the pension liability that would be paid at end of the ten-year payment hiatus and would have to be decided later:

> THE COURT: Does the plan commit the City, legally commit the City to make those payments?
> THE WITNESS: My understanding is the City is committed to fund the unfunded liability. I just don't know -- ***the City and the Retirement Systems have to decide what the amortization methodology is of the UAAL at the year 10.*** And the City is committed to fund that underfunded liability. ***Depending on what amortization schedule gets picked, the payments can change slightly because of the interest rate.*** But my understanding is the City is committed to make the payments beyond 2024 into those pension systems.
>
> ***
>
> Q. Let me ask this: How would the change in amortization after 2024 affect the contribution level?
> A. ***It depends on the amortization methodology.*** What we have used

> in the projections is a straight line principal in which the City is making higher payments in the first decade and over the course of the 30 years makes lower payments going forward. You can change the amortization methodology to make it like a level payment over 30 years in which the City will have lower payments in the first say 10 years, but over the course of the 30 years the City will end up paying more because it has to pay more interest. ***<u>So it's more on the methodology aspect as to how that liability gets serviced.</u>***

(Ex. G, Malholtra Conf. Tr. Hrg. Tr. 9/29/2014, pg. 183-84) (emphasis added). Even without either (i) the amount of the unfunded pension liability in 2023 (which could swing by $100 million or even $1 billion), or (ii) the amortization schedule solidified, the Court still found the Plan feasible.

In addition to the Financial Projection admittedly being just a "best guess," it was not expressly incorporated into the Plan. At best, it was one piece of evidence ***out of 2,300*** that were admitted at the Confirmation Trial.[10] In fact, there were at least ten different versions of the City's financial projections admitted into evidence a trial. (Conf. Order at pg. 37). The sum total the Court commented about this particular Financial Projection—and the other ten iterations of it—was that the "City's revenue and expense projections… are reasonable, made in good faith, accurate, consistent with other financial projections made by the City and based upon assumptions that are reasonable when considered individually or collectively." *Id.* at 37-38. The Court ***summarized*** this "hypothetical" payment scenario for the 2023 Payment in the

[10] See Conf. Order, pg. 1-2 (noting the Court conducted a 24-day evidentiary hearing that entailed 41 witnesses and 2,300 exhibits).

Confirmation Opinion, but it did not expressly incorporate the Financial Projection into the Plan, nor did the Court find that any other (shorter) amortization period would impact the feasibility of the Plan. *In re City of Detroit*, 524 B.R. 147, 231-32 (Bankr. E.D. Mich. 2014). Thus, while the Financial Projection cited by the City may have been evidence to support the Plan's feasibility, that is a far cry from transforming a single line item within that projection into an express "requirement" of the Plan.

(3) The City's Plan Is Bereft of a 30-YearAmortization Term Because Its Own Experts Did Not Support It

As noted, Malhotra modeled a "hypothetical" scenario where the 2023 Payment was paid over 30 years, but he also admitted the amortization decision would not be made until the end of the ten years. The record is otherwise bereft of any mention of a 30-year amortization period—likely because the other two of the City's Pension Task Force experts, Glenn Bowen and Charles Moore—admitted at their depositions that the trend was toward shorter amortization periods.[11] And none of the City's experts (including Malhotra) testified that a 30-year amortization was (i) required under the Plan, or (ii) a requirement for the Plan's "feasibility." Even the Court-appointed feasibility expert, Martha Kopacz, took no position on amortization.[12] Again, while the Plan is clear, if the Court is going to look outside

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11 A 30-year amortization is the longest period allowable under Michigan law.

12 Kopacz, offered no opinion on the topic of amortization and did *not* testify that the Plan would be unfeasible with a shorter amortization period. (Ex. E, M. Kopacz 9/15/14 Hrg. Tr. at 188 – 190) ("Q. And you were not retained to opine on

of it, then it should consider the more fulsome evidentiary record as to precisely *why* this term is found nowhere in the Plan.

In connection with modeling performed throughout the Bankruptcy process, the City's own actuary, Bowen, admitted that he at times recommended shorter amortization periods to the City, and regardless, ultimately noted that this would be an issue for the Retirement System's actuaries to determine:

> Q. Okay. Scenario three, if you look at it, changes to a closed 30-year amortization. Do you see that?
> A. I do…
> Q. And you say… that the change from open to closed amortization and level percent of payroll to level dollar payroll for this scenario is based on our expectation of changes that the system actuary might make in response to the closing of the plan to new hires. . . Can you explain what you meant by that?
> A. The level percent of payroll amortization develops a payment pattern in dollars, where the dollars are smaller today than they are in the future, and basically increase geometrically over time as payroll increases. So it's a significantly backloaded way to pay off a debt…
> Q. Okay. And why are you trying to project what the system actuary might do?
> A. We were asked to value the particular scenario which was closing the plan to new hires. So with a finite future, given our expectation of what the system actuary would do, this represents the -- these results represent the information that we would expect that the system and the plan sponsor would see if the actuary took those steps.
> Q. And it's also a reflection, isn't it, ***that ultimately the decision is going to be made by the system actuary about how to deal with these things?***

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the appropriateness of any smoothing method or amortization period used by the Detroit Retirement Systems; correct? A. Correct.") When asked specifically about an "appropriate amortization period," she stated she would "have to study that" in order to be able to offer an opinion and agreed that she would "have no basis to know whether a five- or a ten- or a twenty- or a thirty-year amortization period would appropriate[.]" *Id.* at 190.

> A. ***Yes.***
> Q. And, in fact, you say in the next sentence, ***they might choose not to make any change or could make a different change.*** Do you see that?
> A. Yes, I do.
> Q. And so ultimately how… this will actually work out ***will depend on what the system actuary decides, correct? Or they decide in, the [pension] plan decides in consultation with the system actuary?***
> A. ***That is exactly what I was going to say.***
> Q. Okay. And then you go on and say: ***Milliman's recommendation in this instance would be to make both changes and also to decrease the term of the amortization period.*** Do you see that?
> A. I do.
> Q. Okay. ***And so, first, you are recommending here that there be a less than 30-year amortization period in the event that the plan is closed, correct?***
> A. ***Yes, we are***.

(Ex. B, Bowen 7/1/2014 Dep Tr. at 297-300) (emphasis added). Consistent with Bowen's testimony that the Retirement System's actuary would determine amortization, he explained that he did not ultimately make a recommendation to the City as to amortization with respect to either (i) the Plan design, generally or (ii) the 2023 Payment, specifically:

> Q. Okay. And what I'm trying to understand is whether, because of your role on the pension task force, you did more than simply receive instructions, but provide input to the pension task force about what your instructions should be, what scenario should be chosen, what parameters, what assumptions you made, any of those things?
> A. I don't believe that we played that role. We received, as you mentioned, many different plan design scenarios to model. We received many different investment returns to run those scenarios at. And we performed the modeling as requested…
> Q. ***So there's no circumstance where you ever recommended an amortization period, for example, other than what we've just seen?***
> A. ***To the best of my recollection, no.***

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Q. Is there any analysis here -- and ***I believe the answer is no, but I just want to make sure I'm not missing something -- of what the amortization period will be for the remainder of the UAAL after 2023?*** Anything to show how the remaining 30 percent is going to be amortized?
A. I'll check just to make sure. ***I don't see any mention in this letter***.

Id. at 304-95, 354 (emphasis added). When asked about multiple scenarios he ran regarding amortization periods for closed ("frozen") plans, Bowen admitted that while there was no "rule" forbidding 30 years, his general stance as an actuary is to prefer something shorter. "[I]f a plan sponsor were to conclude that we are closing our plan but we're going to fund over 30 years because that's what our budget permits, I can't tell them not to do it" but as an actuary, "***I would wish they would do something shorter[.]"*** *Id.* at 331 (emphasis added). Lastly, when asked about a 20-year amortization period used in modeling certain scenarios for the City, he reiterated:

Q. Did you tell the city at any point that use of a 20-year amortization period would be contrary to best practices?
A. I don't recall using those words, no… I'm more inclined to make statements that a shorter amortization period will cost more but will secure pension benefits sooner and will set the plan in a better position. If you choose to use a longer period, you'll have more, more risk of downside experience, to the extent you don't have the money in the plan to support the benefits[.]

Id. at 329-332 (emphasis added). Not surprisingly, when Bowen testified at the Confirmation Trial on September 15, 2014, he offered no testimony that a 30-year amortization period should be adopted.

Similarly, the City's other pension task force expert, Moore, testified that a 30-year amortization period would *not* be in line with what most public pension systems were adopting and noted the "trend" was toward a shorter period:

> Q. And, generally speaking, UAAL is amortized over a 30-year period; correct?
> A. No. That's incorrect. We're talking about two different things here. First of all, I've been -- I've attempted to be very careful to say that $292 million is an unfunded amount. UAAL stands for unfunded actuarial accrued liability… In addition to that, this is a closed and frozen plan. There's no new accrual of benefits. So what you were referring to with an amortization of a UAAL, that's the amortization of an unfunded actuarial amount and in the context of a plan that is still accruing benefits. ***The last point is there's no set standard in terms of 30 years. As a matter of fact, most plans are moving towards a shorter period of amortization, plus you have to get into whether it's an open 30-year or closed 30-year period.*** So there are a variety of factors that go into amortizing UAAL, but regardless, that's a completely separate topic than what we have here, which is an unfunded liability associated with a closed frozen plan.
> Q. What's the basis for your statement that most plans are moving towards a shorter period?
> A. ***I have reviewed many municipal plans and that is a trend that I have seen.***

(Ex. H, Moore 7/24/2014 Dep. Tr. at 333-334).[13] Against this backdrop, it is no surprise the Plan did not contain a requirement that the 2023 Payment must be amortized over 30 years—the City's own Pension Task Force was not supportive.

Mayor Duggan—setting aside for the moment that he openly threatened to *sue* these advisors for their alleged incompetence—now lauds the work done by the "parties and their attorneys and their advisors, as well as Kopacz" during the Bankruptcy and argues that the "thousands of hours" spent "working out the POA"

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[13] The trend toward a shorter period as identified by Moore continued in the years since he testified—according to the Public Plans Database, in 2012, approximately 40% of plans used a 30-year amortization period but as of 2019, it had declined to only 24%. (See https://publicplansdata.org/, last visited September 6, 2022).

must be considered and given deference. (ECF No. 13602, Duggan Dec. at ¶ 38). Giving deference to the "experts," however—Bowen, Moore, and now Gabriel Roeder, the PFRS Board, and the PFRS Investment Committee (which is comprised of independent financial experts who unanimously voted in favor of the 20-year period)—dictates the same result the PFRS already arrived at: it is exceedingly more prudent from a funding policy perspective to seek payment in a shorter time frame.

C. The PFRS, In Consultation With Advisors, Selects a 20-Year Amortization

The PFRS Board and the Investment Committee studied the amortization issue thoroughly for years and views it as an essential piece of its funding policy. Although it had absolutely no obligation to do so, the PFRS permitted the City to present its position multiple times prior to making its decision. The first presentation occurred in August of 2020, and was set forth in a report entitled "Legacy Pension Obligations." (Ex. I, Legacy Report, ECF No. 13478, Exhibit 2). In that presentation, the City warned that the City's financial situation had deteriorated during the pandemic. The Retirement Systems' long-time actuaries, Gabriel Roeder, analyzed the situation and cautioned the PFRS against a risky 30-year funding policy:

> [A]ssuming those comments to be accurate, the Retirement Systems face significant risk that the City will default on <u>any</u> funding policy, even the absolute minimum 30-year amortization… The City is proposing a benefit plan that allows for the Retirement Systems to run out of money.

(Ex. J, Report from Gabriel Roeder dated Sep. 28, 2020, pg. 2) (emphasis in original). Gabriel Roeder reminded PFRS of the potential for a payment default, as the City leaders admitted that as a result of "significant lost tax revenue due to the [pandemic] shutdowns," the City had only closed "budget gaps" by "taking advantage of funds available through the CARES act." *Id.* at 1. Gabriel Roeder offered detailed analysis, including the City's candid admission that its finances had deteriorated, and advised that "[i]n mature Legacy plans, the risk of plan insolvency is increased when amortization periods are longer than 10 or 15 years." *Id.* at 2.

Following that presentation, the City commissioned a report from Gene Klowarski of the Cheiron firm in which he opined that a 20-year amortization period would significantly increase the size of the City's payment but that in his opinion, the decrease in risk by front-loading the payments was "negligible." (ECF No. 13602-2, Ex. 12). With all due respect to Mr. Klowarski, his report is largely irrelevant, as the Investment Committee is entitled to rely on its own actuarial expert's opinions over the City's viewpoint. Plus, it undisputed that the City can "afford" a shorter amortization; it simply does not want to.

While the City (to its deserved credit) has diligently set aside funds in a trust to pay the 2023 Payment, in exercising their fiduciary duties, the Investment Committee and the PFRS Board are also entitled to consider the current financial condition of the City, as well as the long history of payment defaults that nearly bankrupted the Retirement Systems. The PFRS had to sue the City each and every year leading up to the Bankruptcy for failing to make its pension contributions.[14] In addition to lawsuits, the PFRS had to deal with a takeover of the City by an emergency manager, oversight by a state financial review commission, an arguably illegal transaction used to fund the City's pension obligations (*i.e.*, the COPs) that risked bankrupting the Systems altogether,[15] and then the ultimate payment default—the largest municipal bankruptcy in history—in which the City threw the Retirement Systems into the most serious funding crisis to date, refused to abide by the Michigan Constitution's prohibition against to not "impairing" pension obligations, and threatened to drastically cut retirees' pension payments via a cramdown, if necessary. Finally, after over a year of complex negotiations, the Grand Bargain was crafted and the Plan confirmed, but consistent with past practices, the City once again wants to avoid its pension

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[14] See e.g., Wayne County Circuit Court Case Nos. 12-009119-AW, 11-008267-AW, 10-007555-AW and 09-017512-AW.

[15] As the Court described this history in the Confirmation Opinion: "By 2005, the City had fallen behind in its constitutional and statutory requirements to make contributions to the PFRS and GRS. At the time, the City did not have sufficient resources to fully fund its pension plans, and the amounts it needed to borrow would have exceeded the debt limits under the Home Rule City Act ("HRCA")… In an attempt to meet its funding obligations without violating the HRCA, the City entered into a series of complex financial transactions." (Conf. Order, p. 192-193). These "complex financial transactions" included the certificates of participation (the "COPS"), which the City later argued were illegal and unenforceable transactions in violation of Michigan law and admitted that the City had created "sham entities" for the "sole purpose of making a one-time payment to the PFRS and GRS." *Id.* In short, the City openly admitted that it funded the pension systems in a highly questionable financial transaction that, if unwound, could have resulted in bankrupting the Systems if the COPs funds had to be disgorged.

obligations and spend the money elsewhere, jeopardizing PFRS's funding with a longer amortization period. The Investment Committee and the PFRS Board would not be exercising prudent fiduciary judgment if they failed to take the City's historical default risk into account when setting its funding policy—and they have.

When it came time to vote on the issue, the entire Investment Committee unanimously voted in favor of the shorter 20-year amortization period, and the Board agreed and also voted in favor of it. (ECF 13602, Exhibits 7-8, PFRS Mtg. Minutes).

D. The City Admits That It Lacks Control Over the Amortization Decision

The PFRS is fully within its rights to rely upon its own advisors and ignore the City's request for a longer amortization period. And the City knows this—Mayor Duggan has publicly admitted as much. The Mayor has expressed to the media that his frustration lies in the fact that his administration lacks control over the decision because the amortization payment schedule is determined by the PFRS Board and Investment Committee, stating:

> My bigger question is, why does the City of Detroit have no role in picking the investment committee that's making the decision on our retirees' pensions? … Now we've got an investment committee that was essentially appointed by [former Gov. Snyder] that doesn't report to anybody, that has voted to shorten the amortization to 20 years.

(Ex. K, Crain's Article 3/17/2022, "Duggan Budget Plan Includes Putting More Money in Retiree Protection Fund as Pension Cliff Nears"). The answer to this question is simple: the reason the City has no role in the Investment Committee is because (a) the State Contribution Agreement—and hence, the City's own bankruptcy plan—required this governance change in exchange for the nearly $200 million in funding donated by the State,[16] and (b) Michigan law forbids City officials, since they are representatives of the plan sponsor and the funding source for the PFRS, from comprising a majority of the Investment Committee and dictating the PFRS's funding policies. This Motion illustrates exactly *why* the City was required to give up its influence on these issues.

The admissions by Mayor Duggan undermine the entire premise of the City's Motion—the real complaint is that in hindsight, the Mayor is frustrated that he does not hold sway over the PFRS to force it to adopt a funding policy with a longer amortization period that is friendlier to the City's budget. As set forth above, the actual Plan is bereft of *any* mention of an amortization period, let alone a 30-year one. The City's anger or disappointment does not change the outcome. The City may now regret the deal it struck—but that was the deal. Any other outcome is actually a "modification" of the Plan, not "enforcement" of it.

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[16] The Mayor's criticism is also not factually accurate. The State did not "appoint" the individual members of the Investment Committee, nor does the Investment Committee have unfettered discretion with no oversight (it reports to the PFRS Board of Trustees).

III. LAW & ARGUMENT

A. The Plan Does Not Require a 30-Year Amortization and Instead Gives the PFRS Unfettered Discretion to Determine the Applicable Period

"In interpreting a confirmed plan, courts use contract principles, since the plan is effectively a new contract between the debtor and its creditors." *In re Conco, Inc*., 855 F.3d 703, 711 (6th Cir. 2017) (citation omitted). "State law governs those interpretations, and under long-settled contract law principles, if a plan term is unambiguous, it is to be enforced as written, regardless of whether it is in line with parties' prior obligations." *In re Dow Corning*, 456 F.3d 668, 676 (6th Cir. 2006) (citation omitted). Accordingly, "[a]bsent an ambiguity in the contract, the parties' intentions must be discerned from the four corners of the instrument without resort to extrinsic evidence." *In re Conco*, 855 F.3d at 711 (citation omitted); accord *In re Settlement Facility Dow Corning Trust*, 628 F.3d 769, 772 (6th Cir. 2010) (noting the Court may only "open the cleanroom of textual interpretation to whatever extrinsic evidence awaits outside" after the court has found a provision in the plan is "ambiguous"). "The fact that one party may have intended different results, however, is insufficient to construe a contract at variance with its plain and unambiguous terms." *In re Conco*, 855 F.3d at 712 (citation omitted).

(1) The Plan Documents Unambiguously Grant the PFRS the Power to Decide Amortization So Extrinsic Evidence Cannot Be Considered

Here, there is no ambiguity in the Plan—the documents clearly divest the City of any ability to unilaterally force the PFRS to accept a 30-year amortization and instead expressly give the Investment Committee (and the PFRS Board) the discretion to make this decision. The Governance Term Sheet and the new PFRS Plan documents are both expressly incorporated into the Plan itself and are directly enforceable as "the Plan." This Court already held that the amended PFRS Plan documents are part of the Plan of Adjustment and enforceable on their own accord. *In re City of Detroit*, 614 B.R. 255, 266-67 (E.D. Mich. Bkr. Crt., 2020). In fact, the City even went so far as to seek sanctions against certain retired firefighters that it claimed were acting in violation of the new PFRS Plan (in particular, the Deferred Retirement Option Plan or "DROP Program"). In that case, the City argued that the new PFRS Plan took effect on December 10, 2014, and that any actions taken by retirees in violation of the new PFRS Plan were a violation of the broad discharge injunction in the Plan of Adjustment. *Id.* at 266. The Court agreed that the new PFRS Plan was part of the Plan of Adjustment, reasoning:

> The Plan is defined the 'Plan' to mean 'this plan of adjustment and all Exhibit attached hereto or referenced herein, as the same may be amended, restated, supplemented, or otherwise modified.' The word 'Exhibits,' in turn, is defined to mean 'the documents listed on the 'Table of Exhibits' included herein…' and that the Table of Exhibits includes Exhibit I.A.254.a, entitled 'Form of New PFRS Active Pension Plan' and Exhibit I.A.254.b, entitled 'Principal Terms of New PFRS Active Pension Plan.' These two exhibits were attached to the Plan when it was filed on October 22, 2014. The first of these exhibits, Exhibit A.A.254.a, is entitled 'Combined Plan for the Police and Fire Retirement System of the City of Detroit, Michigan[,] Amendment and Restatement Effective July 1, 2014.' … Based on the foregoing, it is clear that the City's POA

includes the provisions of the New PFRS Plan[.]

Id. at 266-267. Just as the DROP program terms were enforceable against the retired firefighters, so too are the governance terms in the PFRS Plan enforceable here. The only difference is that in this case, the PFRS Plan terms do not aid the City—as they explicitly direct the PFRS to select the applicable amortization period—so the City seeks to ignore them. When it was to its benefit, the PFRS Plan documents were enforceable—even *sanctionable* if not followed. When it is now to the City's detriment, the City ignores the PFRS Plan documents altogether. As set forth above in painstaking detail, amortization is clearly for the PFRS to decide, and the City should be held to that. As the Court in *In re Conco* noted: "[t]he fact that one party may have intended different results… is insufficient to construe a contract at variance with its plain and unambiguous terms." The same is true here—while the City apparently "intended different results" with respect to the 30-year amortization period—that is no reason to ignore the Plan's plain and unambiguous terms.

(2) Even If Considered, the Extrinsic Evidence Is Unavailing

Despite there being no ambiguity in the Plan, the City attempts to rely on a piece of extrinsic evidence—its Financial Projection. While numerous projections were entered into evidence at the Confirmation Trial in support of "feasibility" of the Plan, there were nearly a dozen iterations of those projections and none of them were expressly incorporated into the Plan. Moreover, there were 2,300 exhibits entered into the evidentiary record at the Confirmation Trial, and under the City's argument, this entire evidentiary record would be part of the City's "Plan of Adjustment"—including multiple iterations of the same financial projections. There were literally *thousands* of exhibits introduced at trial to support plan confirmation. All 2,300 exhibits are not a "finding of fact" or "conclusion of law" as urged by the City.

Because there is no ambiguity, the Court can look no further than the Plan itself and resorting to extrinsic evidence is not permitted. Even if the Court did look to the extrinsic evidence the City relies on, it does not aid the City's case. On its face, the line item on the Financial Projection touted by the City as a "requirement" that the 2023 Payment be amortized over thirty years is replete with caveats and warnings that it was merely a "hypothetical" scenario that was "subject to change." In fact, the author of the Financial Projection, Malhotra, outright admitted that the details surrounding the "amortization schedule" and "amortization methodology" would be decided later. (Ex. G, Malhotra Conf. Hrg. Tr. at 183-84). The City's other two pension experts admitted that a shorter period than a 30-year amortization schedule would be preferable from an actuarial and funding policy perspective.

Moreover, the City *knows* that extrinsic documents not expressly incorporated into the Plan are irrelevant. In fact, the City successfully argued this position to defeat a similar claim by certain retirees who sought to enforce a Term Sheet executed between the Retired Detroit Police and Fire Fighters Association ("RDPFFA") prior to the Plan. When the RDPFFA attempted to enforce the Term Sheet post-confirmation, the City objected, and argued:

> The RDPFFA's position is palpably meritless. As a bankruptcy law ***and*** contractual matter… reliance on the Term Sheet itself is inappropriate because the Plan superseded the Term Sheet, and the Term Sheet is not enforceable independently from the Plan. . . The Plan is a new and binding contract between the City and the RDPFFA covering these topics . . . As a matter of law, the Term Sheet, as a stand-alone document, no longer binds the parties and is superseded by the Plan. See Official Comm. of Unsecured Creditors v. Dow Corning Corp. (In re Dow Corning Corp.), 456 F.3d 668, 676 (6th Cir. 2006), cert denied, 549 U.S. 1317 (2007) ("In interpreting a confirmed plan, courts use contract principles, since the plan is effectively a new contract between the debtor and creditors.") . . . Notably, paragraph 8 of the Term Sheet – the only provision at issue here—specifically states that it relates to the treatment of claims in Classes 10 and 12 under the Plan. **Plan treatment is governed only by the confirmed Plan, not by other documents extrinsic to—and whose substantive provisions are incorporated into—the Plan.** In re A.P. Liquidating Co., 283 B.R. 456, 459 (Bankr. E.D. Mich. 2002)… the Plan incorporated all the applicable terms set out in the Term Sheet, and the RDPFFA never objected to the omission of any terms from the Plan. **As such, the Plan replaced the Term Sheet and relevant rights of RDPFFA retirees are governed by the Plan.**

[ECF No. 9571, ¶¶ 24-26] (bold and italics emphasis original, bold and underlined emphasis added). This Court agreed, finding that the term sheet was not "incorporated into or made part of the Plan" and thus the term sheet "did not survive confirmation of the Plan." *In re City of Detroit*, 538 B.R. 314, 320 (E.D. Mich. Bkr. 2015). Further, the Court held that "only the Plan, and not the Term Sheet, governed the treatment of Classes 10 and 12." *Id.*

In a complete about face, the City is arguing the opposite here. As the City itself previously argued, the RDPFFA did not object when one of the salient terms from its Term Sheet was not expressly incorporated into the Plan, and therefore, the forfeited the right to object after confirmation. Here, the City *itself* wrote the Plan. It is the City's own Plan. If the City needed a 30-year amortization in order to make the Plan feasible, it should have insisted on making that an express term in the Plan. It did not. Moreover, unlike the RDPFFA Term Sheet, the Governance Term Sheet at issue here *was* expressly incorporated into the Plan, as were the new PFRS Plan documents—both of which expressly grant the PFRS with the decision-making authority on the amortization issue. Thus, the City's own prior interpretation and enforcement of the Plan undermines its current Motion, and the Court should not deviate from its prior holding.

B. Any Request to Modify the Plan Fails Because the Plan Has Already Been Substantially Consummated.

The Plan does not permit the City to unilaterally impose a 30-year amortization period on the System. Instead, as established above, the Plan unequivocally requires that decision be made by the PFRS itself—in particular, the Board and the Investment Committee. What the City is the *really* asking the Court for is a modification to the Plan—and a tardy modification, at that.

The Bankruptcy Code provides that a debtor may modify a plan "at any time after confirmation of such plan and before substantial consummation of such plan[.]" 11 U.S.C. § 1127(b); see also Plan, Art. VIII(B) ("the City may alter, amend, or modify the Plan or the Exhibits at any time prior to or after the Confirmation Date but prior to the substantial consummation of the Plan"). Here, it is undisputed that the Plan has already been substantially consummated. In prior appeals brought by aggrieved retirees, the City argued that it had already "substantially consummated the Plan" and therefore, it was too late to make any modifications to its terms, and the Sixth Circuit agreed:

> We measure "substantial consummation" by the Bankruptcy Code definition, which considers the extent of the debtor's transfer of property, assumption of responsibilities, and distribution of assets as prescribed by the plan. . . In this case. . . ***<u>the Plan has been substantially consummated, inasmuch as numerous significant—even colossal—actions have been undertaken or completed, many irreversible</u>***; and the requested relief of omitting the bargained-for (and by majority vote agreed-upon) pension reduction would necessarily rescind the Grand Bargain, its $816 million in outside funding, and the series of other settlements and agreements contingent upon the Global Retiree Settlement, thereby unravelling the entire Plan and adversely affecting countless third parties, including, among others, the entire City population… This is not a close call. In fact, the doctrine of equitable mootness was created and intended for exactly this type of scenario, to "prevent[] a court from unscrambling complex bankruptcy reorganizations" after "the plan [has become] extremely difficult to retract."

In re City of Detroit, Michigan, 838 F.3d 792, 799 (6th Cir. 2016) (citations omitted) (emphasis added). Thus, the City cannot modify the Plan now, particularly as it relates to the pensions or the Grand Bargain.

C. The City Should be Estopped from Arguing Against Its Prior Positions

The City has argued the *opposite* of what it is currently arguing in no less than three prior cases post-confirmation (each cited above) and should be estopped from its current arguments under the doctrine of judicial estoppel. In its prior dispute with retirees, the City argued the Plan was already substantially consummated and could not be modified, particularly as it relates to the pension settlement, since the Grand Bargain was the cornerstone for the rest of the Plan. In its dispute with the RDPFFA, the City successfully argued that the Court cannot look to extrinsic documents to modify the express terms of the Plan. Lastly, in a dispute with retired firefighters over the DROP Program, the City argued the PFRS Plan documents are enforceable as part of the Plan. The City won each of these cases and yet is disingenuously now attempting to argue the exact opposite: (i) that it can modify the Plan's governance terms, which expressly state that the PFRS gets to set the amortization period; (ii) that extrinsic documents—the Financial Projection—should supersede the Plan's express terms; and (iii) that the PFRS Plan documents are somehow not an enforceable part of the Plan. This is a violation of the doctrine of judicial estoppel and should not be countenanced.[17]

[17] Judicial estoppel is meant to preserve "the integrity of the courts by preventing a party from abusing the judicial process through cynical gamesmanship, achieving success on one position, then arguing the opposite to suit an exigency of the moment." *In re B & P Baird Holdings, Inc.*, 759 Fed.Appx. 468, 483 (6th Cir. 2019) (citation omitted). It is intended to prevent a party from "playing fast and loose with the courts," or "blowing hot and cold as the occasion demands," or "hav[ing] [one's] cake and eat[ing] it too." *Browning v. Levy*, 283 F.3d 761, 776 (6th Cir. 2002). Judicial estoppel is an "equitable doctrine that is 'not reducible to any general formulation of principle' and for which 'there are no inflexible or exhaustive prerequisites for determining [its] applicability.'" *In re B & P*, 759 Fed. Appx. at 482. While it is often limited to positions taken "under oath," this element does not mean in a strictly "testimonial sense" and includes the submissions of arguments, pleadings and papers to a court. *Id.*; *Valentine,* 386 F.3d at 812.

D. The City's Motion Is Procedurally Improper

While the Court should deny the City's Motion outright for all of the reasons cited above, the Motion (as currently postured) seeks entry of an Order that provides "the PFRS and the Investment Committee are enjoined and barred from shortening the 30-year amortization period." (Motion, Exhibit 1 – Proposed Order at ¶ 2). The core of the City's relief request in conjunction with the Motion is injunctive relief. Such requested relief is procedurally inappropriate pursuant to the Federal Rules of Bankruptcy Procedure, which provide, in relevant part: "An adversary proceeding is governed by the rules of this Part VII. The following are adversary proceedings: … (7) a proceeding to obtain an injunction or other equitable relief, except when a chapter 9, chapter 11, chapter 12, or chapter 13 plan provides for the relief[.]" F.R.B.P. 7001(7). Here, the City seeks relief from this Court enjoining the PFRS from carrying out the very functions and duties set forth in the Plan. Further, the factual and legal issues related to the 2023 Payment and the Plan are complex matters. The City should be required to initiate any request akin to the relief request in the Motion via an adversary proceeding, which, in turn, provides the PFRS with full due process rights vis-à-vis an injunction request, as contemplated in F.R.B.P. 7001(7), as the Motion is a contested matter with significant factual and legal issues that more appropriately requires an adversary proceeding with full discovery, dispositive motions, if necessary, a trial, and the complete landscape of due process for the PFRS. To the extent this Court determines the City is permitted to advance the Motion, as opposed to filing an adversary proceeding, the Motion is, at the very least, contested matter pursuant to F.R.B.P. 9014. In such event, the PFRS requests this Court direct the parties to proceed with discovery in accordance with F.R.B.P. 9014(c). The PFRS reserves all rights to discovery and/or evidentiary hearing with respect to the Motion.

Respectfully submitted,

Date: September 9, 2022

By: */s/ Jennifer K. Green*

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Attorney for Creditor – PFRS

EXHIBIT 4 – CERTIFICATE OF SERVICE

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re: City of Detroit, Michigan, Debtor.	Bankruptcy Case No. 13-53846 Judge Thomas J. Tucker Chapter 9

CERTIFICATE OF SERVICE

I hereby certify that on September 9, 2022, I electronically filed with the Clerk of Court the foregoing document using the CM/ECF system which will send notification of such filing(s) to all counsel of record.

Respectfully submitted,

Date: September 9, 2022

By: */s/ Jennifer K. Green*

Jennifer K. Green
Clark Hill PLC
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Attorney for Creditor – PFRS

EXHIBIT 5 – NONE

EXHIBIT 6 – EXHIBITS TO BRIEF

EXHIBIT A (PART 1)

EMERGENCY MANAGER
CITY OF DETROIT

ORDER No. 44

FINAL EMERGENCY MANAGER ORDER

BY THE AUTHORITY VESTED IN THE EMERGENCY MANAGER
FOR THE CITY OF DETROIT
PURSUANT TO MICHIGAN'S PUBLIC ACT 436 OF 2012,
KEVYN D. ORR, THE EMERGENCY MANAGER,
ISSUES THE FOLLOWING ORDER:

Whereas, on March 28, 2013, Michigan Public Act 436 of 2012 ("PA 436") became effective and Kevyn D. Orr became the Emergency Manager (the "EM") for the City of Detroit (the "City") with all of the authority, powers and duties provided under PA 436; and

Pursuant to Section 9(2) of PA 436, the EM "shall act for and in the place and stead of" the City's Mayor (the "Mayor") and the Detroit City Council (the "Council"); and

Section 9(2) of PA 436 also grants the EM "broad powers in receivership to rectify the financial emergency and assure the fiscal accountability of the [City] and the [City's] capacity to provide or cause to be provided necessary governmental services essential to the public health, safety, and welfare;" and

Section 10(1) of PA 436 provides, in part, that "[a]n emergency manager shall issue to the appropriate local elected and appointed officials and employees, agents, and contractors of the local government the orders the emergency manager considers necessary to accomplish the purposes of this act, including, but not limited to, orders for the timely implementation of a financial and operating plan..., or to take actions or refrain from taking actions, to enable the orderly accomplishment of the financial and operating plan. An order issued under this section is binding on the local elected and appointed officials and employees, agents, and contractors of the local government to whom it is issued. Local elected and appointed officials and employees, agents, and contractors of the local government shall take and direct those actions that are necessary and advisable to maintain compliance with the financial and operating plan;" and

The EM has developed and implemented a written financial and operating plan for the City consistent with the requirements of Section 11 of PA 436, the objective of which has been to enable City officials to provide, or cause to be provided, governmental services essential to the public health, safety and welfare of residents of the City, and assure the fiscal accountability of the City; and

Section 12 of PA 436 authorizes the EM, "notwithstanding any charter provision to the contrary," to exercise certain rights and powers, along with the other rights, duties and powers set forth in PA 436; and

Section 21 of PA 436 states, "[b]efore the termination of receivership and the completion of the emergency manager's term, or if a transition advisory board is appointed under section 23, then before the transition advisory board is appointed, the emergency manager shall adopt and implement a 2-year budget, including all contractual and employment agreements, for the local government commencing with the termination of receivership;" and

On July 18, 2013, consistent with the authorization of the Governor of the State of Michigan (the "Governor") provided under Section 18(1) of PA 436, the City filed a petition for relief pursuant to chapter 9 of title 11 of the United States Code, 11 U.S.C. §§ 101-1532 (as it may be amended, the "Bankruptcy Code") in the United States Bankruptcy Court for the Eastern District of Michigan (the "Bankruptcy Court"); and

By an order dated December 5, 2013 (Docket No. 1945) (the "Eligibility Order"), the Bankruptcy Court determined that the City is eligible for relief under chapter 9 of the Bankruptcy Code; and

On October 22, 2014, the City filed the Eighth Amended Plan for the Adjustment of Debts of the City of Detroit in the Bankruptcy Court (Docket No. 8045) (as it may be further amended, modified or supplemented, the "Plan of Adjustment");[1] and

By an order dated November 12, 2014 (the "Confirmation Order") (Docket No. 8272), the Bankruptcy Court confirmed the Plan of Adjustment pursuant to the Bankruptcy Code; and

In connection with the Plan of Adjustment, the City, Title Source, Inc. (the "Title Company"), The Detroit Institute of Arts (the "DIA") and the Foundation for Detroit's Future ("FDF") have entered into that certain Deposit Escrow Agreement dated September 19, 2014 (the "Deposit Escrow Agreement"), whereby the parties thereto have agreed to deposit certain agreements relating to the conveyance of the assets of the Detroit Institute of Arts to the DIA to be held in perpetual charitable trust, including, but not limited to, the Omnibus Transaction Agreement by and among the City, the DIA and the FDF (the "Omnibus Agreement"); the Settlement Conveyance and Charitable Trust Agreement by and between the City and the DIA (the "Conveyance Agreement"); the Quit Claim Deed from the City to the DIA granting the DIA the City's interest in the cultural center garage (the "Garage Deed"); the Quit Claim Deed from the City to the DIA granting the DIA the City's interest in the real property of the Detroit

1 Capitalized terms not otherwise defined herein have the meanings given to them in the Plan of Adjustment.

Institute of Arts (the "DIA Deed"); the Bill of Sale by and between the City and the DIA (the "Bill of Sale"); and the Intellectual Property Transfer Agreement by and between the City and the DIA (together with the Omnibus Agreement, the Conveyance Agreement, the Garage Deed, the DIA Deed, the Bill of Sale and any other document referenced in Schedule 1 of the Deposit Escrow Agreement, the "DIA Transfer Documents"); and

The City also is entering into various settlement agreements and other resolutions as set forth in the Plan of Adjustment and the exhibits thereto (collectively, the "Plan Settlements"), which will be effective upon effective date of the Plan of Adjustment (the "Effective Date"), including, without limitation, the following (as further defined or described in the Plan of Adjustment): (a) the UTGO Settlement Agreement, in substantially the form as Exhibit I.A.360 to the Plan of Adjustment, (b) the LTGO Settlement Agreement, in substantially the form as Exhibit I.A.237 of the Plan of Adjustment, (c) the 36th District Court Settlement, as outlined in Exhibit I.A.9 to the Plan of Adjustment; (d) the settlement of OPEB Benefits, as set forth in Section IV.G of the Plan of Adjustment and the Retiree Health Care Settlement Agreement attached as Exhibit I.A.298 to the Plan of Adjustment; (e) the DIA Settlement, as outlined in Exhibit I.A.126 of the Plan of Adjustment and pursuant to the DIA Settlement Documents substantially in the form as Exhibit I.A.127 of the Plan of Adjustment; (f) the State Contribution Agreement in substantially the form as Exhibit I.A.332 of the Plan of Adjustment (the "State Contribution Agreement"); (g) matters relating to the DWSD Authority; (h) the Syncora Settlement, including the Syncora Development Agreement in substantially the form as Exhibit I.A.340 of the Plan of Adjustment and the other Syncora Settlement Documents in substantially the forms as Exhibit I.A.344 of the Plan of Adjustment; (i) the FGIC/COP Settlement, including the FGIC Development Agreement in substantially the form as Exhibit I.A.198 to the Plan of Adjustment and the other FGIC/COP Settlement Documents in substantially the forms as Exhibit I.A.197; and (j) all other compromises and settlements included in, incorporated into or related to the Plan of Adjustment; and

On September 25, 2014, in accordance with Section 9(6)(c) of PA 436, the Council voted unanimously to remove the EM as of the Effective Date (the period from the appointment of the EM through such removal, the "EM Tenure"). By a letter to the Governor, the Mayor approved of the Council's vote on the same day; and

On September 25, 2014, in connection with the vote of Council to, and the Mayor's approval of, the removal of the EM as of the Effective Date, the EM adopted and issued his Order No. 42. By Order No. 42, the EM, among other things, (a) restored the authority of the Mayor and the Council over day-to-day operations and activities effective immediately as permitted by PA 436, (b) agreed not to exercise his powers under PA 436 to interfere with the powers restored to the Mayor and the Council and (c) agreed that he will exercise his powers through the conclusion of the EM Tenure only with respect to any action (or the prevention of any action) that is necessary or convenient for (i) the management of the case captioned "*In re City of Detroit, Michigan*, Case No 1353846" (the "Bankruptcy Case") and related bankruptcy proceedings and (ii) the implementation of the Plan of Adjustment; and

The EM has concluded that, as of and conditioned on the occurrence of the Effective Date, the financial conditions of the City will have been corrected in a sustainable fashion consistent with the requirements of Section 9(7) of PA 436; and

Section 22(1) of PA 436 provides that "[i]f an emergency manager determines that the financial emergency that he or she was appointed to manage has been rectified, the emergency manager shall inform the governor and the state treasurer;" and

By letter dated December 8, 2014, the EM will notify the Governor and the Treasurer of the State of Michigan (the "State Treasurer") of the EM's determination that the financial emergency he was appointed to manage within the City will have been rectified as of, and conditioned on the occurrence of, the Effective Date; and

As the EM Tenure approaches its conclusion and in anticipation of the Effective Date, the EM has determined that this Order is appropriate to: (a) promote the successful conclusion of the City's restructuring efforts and its capacity to provide or cause to be provided necessary governmental services essential to the public health, safety and welfare; and (b) otherwise fulfill the intents and purposes of PA 436 and chapter 9 of the Bankruptcy Code; and

As part of this Order, the EM has determined, among other things, that the terms hereof are appropriate to provide for a smooth transition at the conclusion of the EM Tenure and to promote the long-term financial recovery of the City and the health, safety and welfare of the public; and

Pursuant to Order No. 42, the EM has consulted with the Mayor and the Council regarding the terms of this Order.

It is hereby ordered that:

Restoration of City Governance

1. To the extent not already restored pursuant to the EM's Order No. 42, and except as provided by this Order or other or applicable Michigan or Federal statute, the powers and authority of the Mayor and the Council previously exercised by the EM shall be restored as of, and conditioned upon the occurrence of, the Effective Date.

Cooperation and Compliance by City Officials

2. The Mayor, Council members, department heads and other employees, agents and contractors of the City shall promptly and fully do all of the following:

   a. Cooperate with the EM through the end of the EM Tenure to the extent necessary to effectuate the implementation of a Plan of Adjustment, the Confirmation Order or other orders entered or that may be entered in connection therewith by the Bankruptcy Court in the Bankruptcy Case or in any related proceeding or appeal from any order entered or that may be entered by the Bankruptcy Court.

b. Comply with requests from the Michigan Financial Review Commission (the "Commission") created by Michigan Public Act 181 of 2014 ("PA 181"), known as the Michigan Financial Review Commission Act, to the extent necessary or appropriate to effectuate the purposes of PA 181. Such compliance shall include, at a minimum and without limitation, all of the following:

   i. Providing to the Commission any documents, records or other information requested of City officials by the Commission or its staff, including any documents, records or other information specifically required by PA 181.

   ii. Appearing before the Commission to provide testimony, documents, records or other information as and when requested by the Commission or its staff.

   iii. Providing to the Commission upon its request verification of compliance by the City with all of the following consistent with the requirements of Section 6(3) of PA 181:

      A. Section 8 of Michigan Public Act 152 of 2011, the Publicly Funded Health Insurance Contribution Act;

      B. Sections 4i, 4p, 4s and 4t of Michigan Public Act 279 of 1909, the Home Rule City Act;

      C. Michigan Public Act 34 of 2001, the Revised Municipal Finance Act; and

      D. Michigan Public Act 2 of 1968, the Uniform Budgeting and Accounting Act;

   provided that nothing herein shall limit, modify or excuse the City's obligation to comply with the applicable law, whether or not listed herein.

Plan of Adjustment Matters

3. Without limiting the terms of paragraph 2 above, the Mayor, the Council and all City officers, department heads and other employees, agents and contractors shall take such steps as are necessary or appropriate from and after the Effective Date to pursue the prompt implementation of the Plan of Adjustment, the Confirmation Order and all agreements necessary thereto, including the Plan Settlements. For the avoidance of doubt, such steps include, without limitation, the following:

a. The City shall defend any appeals of the Confirmation Order and any appeals of the Eligibility Order or other orders of the Bankruptcy Court necessary for the success of the Plan of Adjustment.

b. On or promptly after the Effective Date and provided that the conditions set forth in the Deposit Escrow Agreement and the DIA Transfer Documents have been otherwise satisfied, the City shall provide the certification described in Schedule 2 of the Deposit Escrow Agreement to the Title Company, and, upon release of the DIA Transfer Documents in accordance with the Deposit Escrow Agreement, the City shall cause the transfer of the assets of the Detroit Institute of Art described in the DIA Transfer Documents and the governance thereof to The Detroit Institute of Arts in accordance with the DIA Transfer Documents.

c. The City shall comply with all covenants set forth in Sections 5.2 and 5.3 of the Omnibus Agreement.

d. Without limiting any other provision hereof, the City shall make such distributions and take such actions as are contemplated in the Plan of Adjustment for the establishment of and distribution to the Detroit General VEBA and Detroit Police and Fire VEBA (as such terms are defined in the Plan of Adjustment), in substantially the form provided in the Plan of Adjustment, and consistent with the measures set forth in the letter agreement filed at Docket No. 8183, all of which are hereby specifically adopted, approved and ratified in all respects.

e. Upon the negotiation of documentation mutually acceptable to the parties, the City shall be authorized and is directed to take such actions and sign such documents as are necessary or appropriate to establish the DWSD Authority (i.e., the Great Lakes Water Authority) and implement the DWSD Authority Transaction consistent with the Memorandum of Understanding (as defined in the Confirmation Order).

f. The City is authorized to enter into and implement, and the EM hereby approves, the *Memorandum of Understanding Between the City of Detroit and Wayne County Community College* in the form approved by the Council on December 8, 2014.

4. All Plan Settlements and related agreements (including, without limitation, the DIA Transfer Documents), to the extent not previously approved by an order of the EM, are hereby expressly adopted, approved and ratified in all respects.

Restructuring Advisors

5. The Mayor or his designee may determine whether to retain the restructuring advisors listed on the attached Exhibit A (collectively, the "Restructuring Advisors") for such period as is necessary or appropriate to complete their work to implement the Plan of Adjustment and defend the appeals thereof (the "Restructuring Period"), subject to the terms of the Restructuring Advisors' contracts with the City, *provided that* the Mayor shall consult with the Commission with respect to any decision not to retain a Restructuring Advisor through the conclusion of the Restructuring Period.

6. The Emergency Manager, on behalf of the City, hereby restates and ratifies his approval of all fees and expenses for the City's restructuring professionals that have been subject to the Fee Examiner review process in the City's bankruptcy case (including the Restructuring Advisors) for services rendered through the Effective Date, subject to the Bankruptcy Court's independent review of reasonableness. The City is directed to continue to process and pay invoices of the City's restructuring professionals (including the Restructuring Advisors) for their work through the Effective Date based on the invoices presented, subject only to the Bankruptcy Court's independent review of reasonableness. For the avoidance of doubt, the City also shall pay any creditor advisors or court-appointed professionals and experts consistent with orders of the Bankruptcy Court. The City's Chief Financial Officer ("CFO") shall be responsible for the foregoing on behalf of the City, under the supervision of the Mayor.

7. Consistent with the foregoing, the City shall: (a) set aside a reserve account solely for the payment of restructuring fees consistent with full funding of the amounts identified for "Restructuring Professional Fees" in the City of Detroit Ten-Year Financial Projections; and (b) otherwise implement the fee provisions of the Plan of Adjustment, the Confirmation Order and any further orders of the Bankruptcy Court. The CFO shall be responsible for the foregoing on behalf of the City, under the supervision of the Mayor.

Two-Year Budget

8. Attached hereto as Exhibit B is the City's two-year budget consistent with the requirements of Section 21(1) of PA 436 (the "Two-Year Budget").
9. Consistent with the requirements of Section 21(2) of PA 436, the City shall not amend the Two-Year Budget without the written approval of the State Treasurer. In addition to approval by the State Treasurer, an amendment by the City to the Two-Year Budget shall not take effect unless approved by the Commission consistent with Section 7(c) of PA 181.

Labor Matters

10. All Collective Bargaining Agreements ("CBAs") set forth on Exhibit II.D.5 of the Plan of Adjustment and all CBAs identified on the attached Exhibit C (including CBAs relating to the Detroit Water and Sewerage Department), and any addenda, exhibits, schedules, appendices, supplements or related agreements though the date of this Order, are hereby adopted, approved and ratified in all respects. In addition to the foregoing, all City Employment Terms ("CETs") and other labor-related agreements approved or authorized by the EM are hereby adopted, ratified and approved in all respects, including, without limitation, the CETs and other agreements identified on the attached Exhibit C. The EM also ratifies and approves the CETs that were implemented prior to the EM Tenure and that remain in effect as of the date of this Order, including the CETs identified on the attached Exhibit C.

Pension Plan Matters

11. For the avoidance of doubt, and without limiting anything herein, the EM hereby expressly reaffirms his Order Nos. 25, 26, 29, 30 and 43 with respect to the changes to the City's pension plans and related ordinances, subject to the additional provisions below.

12. Pursuant to Section 16.4 of Component I of the Combined Plan for the General Retirement System of the City of Detroit, Michigan (the "Combined GRS Plan"), the EM, on behalf of the City, adopts the Combined GRS Plan, as amended and restated, in the form attached hereto as Exhibit D, which document (a) conforms the Combined GRS Plan to the terms of the confirmed Plan of Adjustment and (b) makes other clarifying modifications.

13. Pursuant to Section 17.5 of Component I of the Combined Plan for the Police and Fire Retirement System of the City of Detroit, Michigan (the "Combined PFRS Plan"), the EM, on behalf of the City, adopts the Combined PFRS Plan, as amended and restated, in the form attached hereto as Exhibit E, which document: (a) reflects changes in the terms and conditions of retirement benefits as provided in the CBAs and memoranda of understanding negotiated with certain of the employee representatives; (b) conforms the Combined PFRS Plan to the terms of the confirmed Plan of Adjustment; and (c) makes other clarifying modifications.

14. Copies of the Combined GRS Plan, as amended and restated, and the Combined PFRS Plan, as amended and restated, will be kept in the Office of the City Clerk for the City of Detroit and shall be available for public inspection.

15. The appropriate City officers, department heads and other employees shall cause the Boards of Trustees of the General Retirement System of the City of Detroit ("GRS") and the Police and Fire Retirement System of the City of Detroit ("PFRS") to timely file or cause to be filed on behalf of GRS and PFRS applications for Favorable Determination Letters with the Internal Revenue Service pursuant to Revenue Procedure 2014-6 (or any successor procedure) to obtain rulings that the Combined GRS Plan and the Combined PFRS Plan satisfy the requirements for favorable tax treatment under Sections 401(a) and 501(a) of the Internal Revenue Code. City officers, department heads and other employees, agents and contractors shall cooperate with and provide such information as the Boards of Trustees and their legal counsel may require in connection with such Favorable Determination Letter applications.

16. The Mayor, Council members and appropriate City officers, department heads and other employees shall cause the Boards of Trustees of the GRS and the PFRS to: (a) comply with the governance requirements set forth in Section 2 of the State Contribution Agreement (including, with respect to the GRS, the requirements of Exhibit A and, with respect to the PFRS, the requirements of Exhibit B) at all times during the 20-year period

following the disbursement to the GRS and the PFRS of the State Contribution (as defined in the State Contribution Agreement); and (b) establish and implement an income stabilization program that complies in all respects with Section 3 of the State Contribution Agreement.

Other EM Orders and Bond Orders

17. All prior Orders of the EM, to the extent that they are not otherwise inconsistent with this Order and have not previously been modified or rescinded (the "Prior Orders"), shall be incorporated by reference into this Order.

18. The reaffirmation herein of specific Orders of the EM shall not render the Orders not explicitly mentioned herein revoked, rescinded or altered in any way unless such Orders are otherwise inconsistent with this Order.

19. The bond orders issued by the EM, including the bond orders identified on the attached Exhibit F (collectively, the "Bond Orders"), are hereby ratified and affirmed.

Administrative Matters

20. The City shall maintain access to the EM page via the City's website for a period of at least one year following the end of the EM Tenure.

21. Nothing in this Order shall be construed as contrary to applicable law.

22. Nothing in this Order shall be construed to restrict or impair the authority of the Governor, in the Governor's sole discretion, to determine that the financial conditions of the City have not been corrected in a sustainable fashion as required by Section 9(7) of PA 436 and appoint a new emergency manager pursuant to Section 24 of PA 436.

23. If any provision of this Order is declared by a court of competent jurisdiction to be illegal, unenforceable or ineffective, such provision shall be deemed severable to the extent necessary so that all other provisions contained in this Order shall remain valid, enforceable and effective.

24. The City shall, and is directed to, maintain all insurance called for by Article 8 of the EM's Contract for Emergency Manager Services dated March 27, 2013 between Mr. Orr and the State of Michigan (the "EM Contract"), including, without limitation, any general liability, professional liability or errors and omissions policy under Sections 8.1 and 8.3 of the EM Contract, and any tail coverage for such insurance.

25. The City shall, and is directed to, fulfill its obligations under Section 8.2 of the EM Contract after the end of the EM Tenure, including, without limitation, by paying the costs of any judgment, settlement or attorneys' fees relating to any uninsured claim,

demand or lawsuit against the EM or any employee, agent, appointee or contractor of the EM for actions taken during the EM Tenure. If Mr. Orr is sued personally for any action performed within the scope of his official capacity as the EM, Mr. Orr shall have the right to direct the defense of any such action, and the Mayor, the Council, the Corporation Counsel and the other employees, officers, department heads and agents of the City shall not take any action contrary to, or to interfere with, Mr. Orr's right to direct such defense.

26. Prior to the Effective Date, and pursuant to Section 5.1 of the Financial Stability Agreement, as Amended and Restated on November 7, 2013 (the "FSA"), the EM hereby consents, with the mutual consent of the State Treasurer, to amend Section 6.1(c) of the FSA for the purpose of terminating the FSA as of the Effective Date. To that end, the *Addendum to the Financial Stability Agreement* in the form attached hereto as Exhibit G (the "FSA Amendment") is approved and ratified in all respects. For the avoidance of doubt, the mutual execution of the FSA Amendment by the EM and the State Treasurer shall not preclude the Council from voting to ratify execution of the FSA Amendment prior to the Effective Date.

27. This Order shall be distributed to the Governor, the State Treasurer, the Mayor, Council members, the CFO and all department heads.

28. This Order is effective immediately.

Modification of This Order and Prior EM Orders

29. Prior to the Effective Date, the EM may modify, amend, rescind, replace, supplement or otherwise revise this Order at any time. Further, nothing herein shall preclude the EM from issuing any other appropriate Orders, consistent with EM Order No. 42, prior to the Effective Date.

30. Pursuant to Section 21(2) of PA 436, the Council shall not revise this Order or any other Orders or ordinances implemented by the EM during his term, and that remain in effect, prior to one year after the termination of receivership. In addition, after the Effective Date, this Order, or any other Order issued by the EM that remains in effect, may be amended, modified or rescinded only by the following methods:

    a. By a subsequent Order issued by an emergency manager appointed by the Governor under Section 9 of PA 436, including:

        i. After a selection by the Council pursuant to Section 7(1)(b) of PA 436; or

        ii. Pursuant to Section 24 of PA 436; or

    b. By the City by resolution of the Council, approved by the Mayor and ratified by the Commission pursuant to Section 7(n) or 7(o) of PA 181.

Dated: December 8, 2014

By: Kevyn D. Orr
Kevyn D. Orr
Emergency Manager
City of Detroit

cc: Governor of the State of Michigan
State Treasurer
Mayor Michael Duggan
Members of Detroit City Council
Chief Financial Officer
City Department Heads

EXHIBIT E

Combined PFRS Plan

COMBINED PLAN FOR THE POLICE AND FIRE RETIREMENT SYSTEM OF THE CITY OF DETROIT, MICHIGAN

Amendment and Restatement Effective July 1, 2014

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COMPONENT I

ARTICLE 1. GENERAL PROVISIONS

Sec 1.1. Police and Fire Retirement System Established; Adoption of 2014 Plan Document

Effective July 1, 1941, a Pension System for Policemen and Firemen of the City of Detroit was established for the purpose of providing retirement allowances and death benefits for Policemen and Firemen and their beneficiaries by amendment to the Charter of the City of Detroit. That Pension System was amended on numerous occasions after July 1, 1941, including an amendment renaming the Retirement System as the "Police and Fire Retirement System of the City of Detroit." The provisions of the Police and Fire Retirement System of the City of Detroit, as in effect July 1, 2014, were set forth in a Combined Plan Document (including Appendix A attached thereto). As provided in Ordinance 15-14 and Ordinance 16-14 and Section 47-1-2 of the Detroit City Code, the Combined Plan Document replaced the provisions of the Police and Fire Retirement System of the City of Detroit as set forth in the City of Detroit Charter, the Detroit City Code and any conflicting provisions in any collective bargaining agreements, rulings or opinions covering Members (including, without limitation, City Employment Terms). All resolutions and policies of the Board previously enacted which were inconsistent with the provisions of the Combined Plan Document were also repealed to the extent of such inconsistency.

This Combined Plan Document is hereby amended and restated effective July 1, 2014, in the form of this instrument. Component I of the Plan Document applies to benefits accrued by Members on and after July 1, 2014 and to operation of the Police and Fire Retirement System of the City of Detroit on and after July 1, 2014. Component II of the Plan Document generally applies to benefits accrued by Members prior to July 1, 2014. Except as specifically provided in Component II, benefits provided under Component II of the Plan Document are frozen effective June 30, 2014.

Sec 1.2. Retirement System Intended to be Tax-Qualified; Governmental Plan

The Retirement System is a governmental plan under Section 414(d) of the Internal Revenue Code which is intended to be a qualified plan and trust pursuant to applicable provisions of the Internal Revenue Code. The Board shall construe and administer the provisions of the Retirement System in a manner that gives effect to the tax-qualified status of the Retirement System.

Sec 1.3. Compliance With Plan of Adjustment

The Retirement System is intended to comply with all relevant provisions (including Exhibits) of the Plan for the Adjustment of Debts of the City of Detroit, as approved by the United States Bankruptcy Court in *In re City of Detroit, Michigan, Case No. 13-53846* ("Plan of Adjustment"). Component I and Component II of the Combined Plan shall be interpreted and construed by the City, the Board of Trustees and the Retirement System to give full effect to the Plan of Adjustment. To the extent that a conflict arises between the Combined Plan Document and the Plan of Adjustment, the City, the Board of Trustees, the Investment Committee and the

Retirement System are directed to interpret any inconsistency or ambiguity to give full effect to the Plan of Adjustment.

Sec 1.4. Board of Trustees

Effective July 1, 1941, a Board of Trustees of the Police and Fire Retirement System of the City of Detroit was created. The Board is vested with responsibility for the general administration, management and operation of the Police and Fire Retirement System of the City of Detroit and with the trust and investment powers conferred in this Combined Plan Document.

Sec 1.5. Board of Trustees – Membership; Appointment

The Board of Trustees of the Police and Fire Retirement System of the City of Detroit shall consist of seventeen Trustees, as follows:

(1) The Mayor, *ex-officio*, or the Mayor's designee;

(2) The President of City Council or a member thereof elected by the City Council, *ex-officio*;

(3) The City Treasurer or Deputy City Treasurer, *ex-officio*;

(4) The City Finance Director, or a designated representative, *ex-officio*;

(5) The City Budget Director, or a designated representative, *ex-officio*;

(6) The Corporation Counsel of the City, or a designated representative, *ex-officio*;

(7) Three Fire Members of the Retirement System to be elected by the Fire Members under such rules and regulations as may be established by the Board of Fire Commissioners to govern such elections, as follows:

(a) Two to be elected by and from Members holding the rank of lieutenant (or its equivalent) and lower ranks; and

(b) One to be elected by and from Members holding ranks above the rank of lieutenant (or its equivalent);

(8) Three Police Members of the Retirement System to be elected by the Police Members under the rules and regulations as may be established by the Commissioner of Police to govern such elections, as follows:

(a) Two to be elected by and from Members holding the rank of lieutenant (or its equivalent) and lower ranks; and

(b) One to be elected by and from Members holding a rank above lieutenant (or its equivalent); and

(9) One individual who neither is a Member of the Retirement System nor an employee of the City in any capacity to be selected by the Board;

(10) Two Retirees receiving benefits under the Retirement System, one of whom shall be elected by Retired Police Members and one of whom will be elected by Retired Fire Members pursuant to Sections 1.6 and 1.7 below;

(11) One Trustee appointed by the Mayor upon election of a Retiree Police Trustee; and

(12) One Trustee appointed by the Mayor upon election of a Retiree Fire Trustee.

Sec 1.6. Board of Trustees; Scheduling of Elections for Active and Retiree Trustees

(1) Annual elections for active Police Officers and Fire Fighters shall be held in the Police and Fire Departments during the month of May to elect a trustee to fill the vacancy created by the expiration of a term.

(2) Elections to fill vacancies created by the expiration of a term for a Retiree Trustee shall be held every three years during the month of May.

(3) A special election for Retiree Trustees shall be held as soon as practicable after the Plan of Adjustment is confirmed. Unless a Retiree Trustee elected by reason of this special election resigns or is removed from the position of Trustee in accordance with the terms of the Combined Plan Document, a Retiree elected to the office of Trustee in the special election shall be eligible to serve a full term of three (3) years from the date of the special election, plus such period of time until the last day of June that follows the third anniversary of the special election, at which time an election for Retiree Trustees shall be held in accordance with Section 1.7.

Sec 1.7. Procedures for election of Retiree Trustees

The procedures for the election of the Retiree Trustees shall be as follows:

(1) *Notice.* Notice of a primary election shall be sent to each Retiree by United States Mail.

(2) *Notice of Candidacy.* A proposed candidate shall submit a notarized letter to the executive director notifying the Retirement System of his or her candidacy.

(3) *Ballot.* Each candidate whose name appears on the ballot at any election held for the office of Retiree Trustee shall be identified by the title of the position the Retiree held at the time of retirement and by the word "incumbent" if the candidate is a current trustee seeking re-election. No ballot shall contain any organizational or political designation or mark. Rotation and arrangement of names on the ballot shall be in accordance with the rules and regulations of the Board.

(4) *Voting.* Procedures regarding mailing of ballots, poll lists, custody of ballots, marking of ballots, return of ballots, handling of return envelopes received, and sealed ballot boxes

shall be the same as those adopted and followed by the Board in the immediately preceding election of an active employee Trustee.

(5) *Procedures*. Procedures regarding the selection and certification of successful candidates for nomination, the selection of Trustees from nominees, tie votes, and the destruction of ballots shall be the same as those adopted and followed by the Board in the immediately preceding election of an active employee Trustee.

(6) *Board Rules*. Any matters relative to the election of the Retiree member of the Board not covered by this Section 1.7 shall be handled in accordance with such rules and regulations as the Board may adopt and Michigan law.

Sec 1.8. Board of Trustees; Oath; Term; Vacancies

Within ten days after appointment or election, each Trustee shall take an oath of office to be administered by the City Clerk.

The term of office for each elected Trustee under Sections 1.5(7), (8) and (10) shall be three years. The term of office for the Trustee who is selected by the Board under Section 1.5(9) shall be two years. The term of office for the Trustees appointed by the Mayor under Sections 1.5(11) and (12) shall be three years. Except as provided in Section 1.6(3), elected Trustees holding office on June 30, 2014 shall serve the remainder of their terms.

If a Trustee resigns or is removed by the other Trustees for cause, or if an elected or appointed Trustee fails to attend three consecutive scheduled Board meetings without being excused for cause by the Trustees attending such meetings, the Trustee shall be considered to have resigned from the Board. If a vacancy occurs in the office of Trustee from any cause other than expiration of a term, the vacancy for the unexpired term shall be filled within sixty days of the date of said vacancy in the same manner as the office was previously filled. No vacancy shall result by reason of a change in the rank or grade of a Trustee during the term of office.

Sec 1.9. Board of Trustees; Officers and Employees

The Board shall elect from its membership a chairman and a vice chairman. The executive director of the Retirement System or his or her representative shall serve as secretary of the Board. The Board may employ such special actuarial, medical and other contractors and employees as shall be required, subject to the powers and authority reserved to the Investment Committee and subject to the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq.*

Sec 1.10. Board of Trustees; Meetings; Rules of Procedure; Votes; Quorum

(1) The Board shall hold regular meetings, at least one in each month, and shall hold special meetings as necessary. The Board shall designate the time and place thereof in advance. The Board shall adopt its own rules of procedure, including provisions for special meetings and notice thereof, and shall keep a record of proceedings. All meetings of the Board shall be public and are subject to the *Michigan Open Meetings Act, MCL 15.261 et seq.* All Board meetings shall be held within the City of Detroit.

(2) Each Trustee shall be entitled to one vote on each question before the Board. A majority vote of the Trustees present shall be necessary for a decision by the Trustees at any meeting of the Board.

(3) Eight members of the Board, four of whom must be elected members, shall constitute a quorum.

Sec 1.11. Board of Trustees; Compensation; Expenses

All members of the Board of Trustees shall serve without additional compensation from the City or the Retirement System; however Retiree Trustees shall receive a hourly stipend from the Retirement System equal to the lowest rate of pay received by an active employee Trustee for attending Board meetings, educational time and travel out of the City on official business of the Retirement System. All Trustees shall be reimbursed from the Expense Fund for all actual, reasonable and necessary expenses incurred in the performance of their duties as Trustees.

Sec 1.12. Rules for Administration of Funds.

Subject to the limitations contained in this Combined Plan Document, the Board of Trustees shall, from time to time, establish rules and regulations for the administration of the funds created by this Combined Plan Document and for the transaction of its business.

Sec 1.13. Board of Trustees; Certain Data to be Kept

The Board of Trustees shall keep, or cause to be kept, in convenient form, such data as shall be necessary for the actuarial valuation of the various funds of the Retirement System and for checking and compiling the experience of the Retirement System. The ordinary actuarial, accounting and clerical services for the operation of the Retirement System shall be performed by the employees of the Retirement System.

Sec 1.14. Board of Trustees; Annual Audit Report

The Board shall render a report to the Mayor, the City Council and the Investment Committee on or before the fifteenth day of January, showing the fiscal transactions of the Retirement System for the year ending on the preceding thirtieth day of June, the amounts of accumulated cash and securities in the various funds of the System, and the last balance sheet showing the financial condition of the Retirement System by means of an actuarial valuation of the assets and liabilities of the Retirement System.

Sec 1.15. Board of Trustees; Legal Advisors

(1) The Board shall appoint legal advisors (including a general counsel) who shall be directly responsible to and shall hold office at the pleasure of the Board of Trustees. Any legal advisor to the Board of Trustees shall be an attorney licensed to practice law in the State of Michigan and shall be experienced in matters relating to pension systems. The qualifications of legal counsel shall be approved by the Board of Trustees.

(2) Legal advisors to the Board of Trustees shall have such duties relative to pension matters as shall be assigned by the Board of Trustees.

(3) Costs and expenses relative to the position of legal advisors to the Board shall be payable out of the assets of the Retirement System, subject to the provisions of the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq.*

Sec 1.16. Board of Trustees; Medical Director

(1) The Board shall appoint a Medical Director who is directly responsible to and shall hold office at the pleasure of the Board. The Medical Director shall be a physician who has not at any time been regularly or permanently employed by any department, board, or commission of the City, county, or state, has not held an elective, appointive, or salaried office in any city, county, or state government at any time, and is not eligible to participate in a retirement system maintained by the City. However, service as an intern in any city, county, or state hospital or sanitarium and service in any state military body shall not disqualify a physician for appointment as Medical Director.

(2) The Medical Director shall arrange for and pass upon all medical examinations required under the provisions of the Combined Plan, and shall report in writing to the Board of Trustees his or her conclusions and recommendations on medical matters referred to it.

Sec 1.17. Designation of Actuary; Authority to Engage Additional Actuaries

The Retirement System actuary as of July 1, 2014 shall continue to serve as such until resignation or removal by the Board. In the event the Board desires to retain a new actuary, the Board and the Investment Committee shall collectively participate in the evaluation and selection of a qualified actuary. The Retirement System actuary shall be responsible for assisting the Board and the Investment Committee in performing its actuarial duties and shall comply with all requests for information or modeling requested by the Board and the Investment Committee, and shall attend meetings of the Board and Investment Committee as requested, so as to allow the Board and the Investment Committee to perform satisfactorily the rights and duties set forth in the Combined Plan, the term sheet regarding Investment Committee Governance for Police and Fire Retirement System, attached to that certain agreement by and between the Michigan Settlement Administration Authority, a Michigan body public corporation (the "Authority"), the Retirement System, the General Retirement system for the City of Detroit, Michigan ("GRS"), and the City (the "State Contribution Agreement") as Exhibit B (the "Governance Term Sheet"), and the Plan of Adjustment. Furthermore, the Board shall not act on any recommendation made by the Retirement System's actuary based on any calculation, assumption or assessment rejected by the Investment Committee.

Nothing herein shall be interpreted as limiting the Investment Committee's authority to engage an actuarial consulting firm other than the Retirement System's actuary to perform actuarial services deemed necessary to fulfill its fiduciary and other duties to the Retirement System as set forth in the Governance Term Sheet and the Plan of Adjustment.

Sec 1.18. Board of Trustees; Adoption of Mortality and Other Tables of Experience and Rates of Interest; Limitations on Payments by the Retirement System

(1) Subject to Section 16.1, the Board shall adopt such mortality and other tables of experience, and a rate or rates of interest, as shall be necessary for the operation of the System on an actuarial basis, provided, that the authority granted by this Section shall not permit or be used to provide for an interest rate which would violate the prohibitions of Subsection (2) or (3) of this Section.

(2) The Retirement System and the Trustees charged with management of the System shall not make any payment to active or retired Members other than payments that are required by the governing documents of the Retirement System. This prohibition applies to all payments that are not authorized by this Combined Plan, whether such payments are those commonly referred to as a "thirteenth check" or by any other name.

(3) Anything in this Combined Plan Document or any other document to the contrary notwithstanding, the annual actuarial interest rate assumption for the period commencing July 1, 2014 and ending June 30, 2023 shall be six and three-quarters percent (6.75%).

Sec 1.19. Board of Trustees; Annual Actuarial Valuation of Assets and Liabilities

Subject to Section 16.1, each year, on the basis of such mortality and other tables of experience, and such rate or rates of regular interest as the Board shall adopt pursuant to Section 1.18, the Board shall cause to be made an actuarial valuation of the assets and liabilities of the Retirement System.

Sec 1.20. Board of Trustees; Powers and Duties; Fiduciary Status; Fiduciary Duties

The Board of Trustees shall have such powers and duties as are necessary for the proper administration of the Retirement System and the custody and investment of Retirement System assets, other than those powers and duties reserved to the Investment Committee. To the extent the Board exercises discretion with respect to investment of Retirement System assets, each member of the Board of Trustees shall be an investment fiduciary as defined in the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq*., and shall discharge his or her duties with respect to the Retirement System in compliance with the provisions of the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq*. A member of the Board of Trustees shall discharge his or her duties with the care, skill and caution under the circumstances then prevailing that a prudent person, acting in a like capacity and familiar with such matters, would use in the conduct of an activity of like character and purpose. Board members shall comply with all Board governance policies and procedures, including the Ethics and Code of Conduct Policies, unless such compliance would violate the member's fiduciary duties or conflicts with the provisions set forth in this Combined Plan Document.

Sec 1.21. Investment Committee; Establishment; Purpose; Fiduciary Status; Fiduciary Duties

As of the effective date of the Plan of Adjustment, but subject to consummation of the State Contribution Agreement, an Investment Committee is hereby created for the purpose of making recommendations to the Board of Trustees and taking action under and with respect to certain investment management matters relating to the Retirement System. The creation and operation of the Investment Committee is controlled by the Governance Term Sheet. The Investment Committee shall remain in effect for a period of not less than twenty years following the date of confirmation of the Plan of Adjustment. The Investment Committee shall be an investment fiduciary as defined in the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq.* and shall have all powers granted fiduciaries under the first sentence of *MCL 38.1133(5) and (6)*. The Investment Committee shall serve in a fiduciary capacity with respect to the investment management of Retirement System assets, determination of the investment return assumptions, and Board compliance with provisions of the governing documents of the Retirement System. An Investment Committee member shall discharge his or her duties with respect to the Retirement System in compliance with the provisions of the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq.* An Investment Committee member shall discharge his or her duties with the care, skill and caution under the circumstances then prevailing that a prudent person, acting in a like capacity and familiar with such matters, would use in the conduct of an activity of like character and purpose. Investment Committee members shall comply with all Board governance policies and procedures, including the Ethics and Code of Conduct Policies, unless such compliance would violate the member's fiduciary duties or conflict with the provisions set forth in the Governance Term Sheet.

Sec 1.22. Investment Committee; Membership; Appointment

The Investment Committee shall consist of nine (9) members, determined as follows:

(1) Five independent members, at least two of whom must be residents of the State of Michigan, and none of whom may be a party in interest with respect to the Retirement System, as defined in as defined in Section 38.1132d(4) of the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq.* Each independent Investment Committee member shall have expert knowledge or extensive experience with respect to either (a) economics, finance, or institutional investments, or (b) administration of public or private retirement plans, executive management, benefits administration or actuarial science. At least one of the independent Investment Committee members shall satisfy the requirements of (a) above and at least one of the independent Investment Committee members shall satisfy the requirements of (b) above. The initial independent Investment Committee members shall be selected by mutual agreement of the appropriate representatives of the State of Michigan, the City and the Board, in consultation with the Foundation for Detroit's Future (the "Foundation"), and shall be named in the Plan of Adjustment. If one or more of the five initial independent Investment Committee members are not selected by mutual agreement prior to confirmation of the Plan of Adjustment, then the United States Bankruptcy Court, Eastern District of Michigan shall designate such number of independent Investment Committee

members as necessary to bring the number of independent Investment Committee members to five (5);

(2) Two Retirees who shall be appointed by the Board consisting of one elected retired Police Member and one elected retired Fire Member who are serving on the Board and who are receiving benefit payments under the Retirement System; and

(3) Two Employee members who shall be appointed by the Board consisting of one Fire Department Employee and one Police Department Employee who are active members of the Board.

Sec 1.23. Investment Committee; Term; Resignation and Removal; Vacancies

The term of office for the independent members of the Investment Committee shall be six years; provided, however, that the initial term for the independent Investment Committee members shall be determined as follows:

Independent Member	Term of Office
(1)	2 years
(2)	3 years
(3)	4 years
(4)	5 years
(5)	6 years

The term of office for a Retiree or Employee Investment Committee member shall be the number of years remaining on such individual's term of office as a member of the Board of Trustees. Each Investment Committee member shall serve until his or her successor is appointed at the expiration of his or her term of office, or until his or her death, incapacity, resignation or removal, if earlier. Notwithstanding any provision of this Combined Plan Document, an initial independent Investment Committee member shall not be prohibited from becoming a successor independent Investment Committee member after expiration of his or her initial term.

An Investment Committee member may resign at any time by giving ninety days' prior written notice to the Investment Committee, the City and the Board, which notice or time period may be waived by the Investment Committee. An Investment Committee member may be removed from office by majority vote of the remaining Investment Committee members for any of the following reasons: (a) the member is legally incapacitated from executing his or her duties as a member of the Investment Committee and neglects to perform those duties; (b) the member has committed a material breach of the provisions of the Retirement System or the policies or procedures of the Retirement System and the removal of the member is in the interests of the Retirement System or its Members and Beneficiaries; (c) the member is convicted of a violation of law and the removal is accomplished by a vote of the members of the Investment Committee in accordance with the voting procedure set forth in Section 1.24; or (d) if the member holds a license to practice and such license is revoked for misconduct by any State or federal government. A member who fails to attend four (4) consecutive scheduled meetings of the Investment Committee shall be deemed to have resigned, unless in each case his or her absence is excused for cause by the remaining members attending such meetings. In the event of any removal or resignation, the Investment Committee shall by resolution declare the office of the member vacated as of the date such resolution is adopted.

Any vacancy occurring on the Investment Committee shall be filled within sixty (60) days following the date of the vacancy for the unexpired portion of the term, in the same manner in which the office was previously filled.

Successor independent Investment Committee members shall be recommended by a majority of the remaining independent Investment Committee members and shall be confirmed by the Board and the Treasurer of the State of Michigan ("State Treasurer"), in consultation with the Foundation, in accordance with such rules and regulations as may be adopted by the Investment Committee (provided that such rules are not inconsistent with the Governance Term Sheet or the Plan of Adjustment). In the event the Board and the State Treasurer cannot agree on a successor independent Investment Committee member within thirty (30) days of the receipt of the recommendation of the Investment Committee, the remaining independent Investment Committee members shall appoint the successor independent Investment Committee member.

In the event the United States Bankruptcy Court, Eastern District of Michigan appoints one or more of the initial independent Investment Committee members, a successor to any such independent Investment Committee member shall be appointed in the same manner as provided in the preceding paragraph following three (3) weeks' notice to the Board of the individuals appointed, in accordance with such rules and regulations as may be adopted by the Investment Committee (provided that such rules are not inconsistent with either the Governance Term Sheet or the Plan of Adjustment).

Successor Investment Committee members shall have the powers and duties conferred on Investment Committee members herein.

Sec 1.24. Investment Committee; Operation; Meetings; Quorum; Voting

The Investment Committee members shall select from among the independent members a chair and a vice chair. The Investment Committee members shall select from among themselves a secretary. The Investment Committee shall hold regular meetings, not less frequently than once every other month, and shall hold special meetings as necessary. The Investment Committee shall designate the time and place thereof in advance. The secretary or his or her designee shall be responsible for providing meeting notices to the other Investment Committee members. The Investment Committee shall adopt its own rules of procedure and shall keep a record of proceedings. Notice and conduct of all Investment Committee meetings, both regular and special, shall be subject to the *Michigan Open Meetings Act, MCL 15.261 et seq.* All Investment Committee meetings shall be held within the City of Detroit.

Five Investment Committee members shall constitute a quorum at any meeting, as long as at least three of the independent Investment Committee members are in attendance. Each independent Investment Committee member shall be entitled to one vote on each question before the Investment Committee. Each Retiree and Employee member shall be entitled to one-half vote on each question before the Investment Committee. Except as otherwise provided in the Governance Term Sheet, at least four concurring votes shall be necessary for a decision by the

Investment Committee and each Investment Committee member shall be entitled to one vote on each question before the Investment Committee.

An Investment Committee member may have his or her voting privileges temporarily suspended by a 70% or higher vote of the other members if the member is indicted or sued by a state or federal government for an alleged violation of the law that relates to his or her service on the Investment Committee, or for other alleged financial crimes, including fraud.

Sec 1.25. Investment Committee; Compensation; Expenses; Employment of Advisors

Investment Committee members shall not receive any compensation from the Retirement System for their services; Investment Committee members shall, however, be reimbursed for the reasonable, actual and necessary expenses incurred in the performance of their duties. All reasonable and proper expenses related to the administration of the Investment Committee, including but not limited to the purchase of insurance, shall be payable out of the assets of the Retirement System. The Investment Committee may retain actuarial, legal counsel, audit or other professional or support personnel to provide advice to the Investment Committee as it deems reasonably necessary to perform its functions, and such parties or persons may be reasonably compensated from the assets of the Retirement System. Such engagements shall not be subject to approval of the Board.

Sec 1.26. Investment Committee; Special Reporting Obligation

(1) Beginning in calendar year 2015, pursuant to Section 6 of the State Contribution Agreement, the Investment Committee shall provide compliance reports to the State Treasurer on a semi-annual basis and at such other times as the State Treasurer reasonably may request (each, a "Compliance Report") that certifies that the Investment Committee is not aware of any defaults under the State Contribution Agreement, or, if the Investment Committee is aware of a default under the State Contribution Agreement, specifically identifying the facts of such default.

(2) In the event the Retirement System receives a written notice from the State Treasurer declaring and specifically identifying the facts of an alleged default under the State Contribution Agreement ("Default Notice"), and such default is cured as provided in the State Contribution Agreement, the Investment Committee must provide to the State Treasurer a written certification that (i) the default has been cured, and (ii) no material damages have been caused by the default that have not otherwise been remedied (the "Cure Certification").

(3) Beginning in calendar year 2015, the Investment Committee shall provide to the City not later than December 31 of each year evidence reasonably necessary to show that the internal controls governing the investment of Retirement System assets are in compliance with the applicable provisions of the Plan of Adjustment.

(4) Beginning in calendar year 2015 and for each calendar year thereafter, as of a date which is not later than December 31 of each such calendar year the Investment Committee shall provide to the Foundation the following information:

(a) a copy of the audited annual financial statement and the corresponding management letter for the Retirement System for the Fiscal Year ending June 30 of such calendar year, containing a non-qualified opinion of an independent external auditor to the Retirement System;

(b) a certification from the Chair of the Investment Committee on behalf of the Investment Committee ("Pension Certificate") in a form reasonably acceptable to the Foundation that, as of the date of the annual report required to be provided by the City to the Foundation under the Omnibus Transaction Agreement by and among the City, The Detroit Institute of Arts and Foundation For Detroit's Future ("Annual Report"):

  (i) the City is current in its obligation to contribute to Component II of the Combined Plan determined in accordance with the Plan of Adjustment;

  (ii) the Investment Committee has been operated in accordance with the terms set forth in this Component I of the Combined Plan Document; and

  (iii) the City continues to maintain the pension governance terms reflected in this Component I of the Combined Plan as of the effective date of the Plan of Adjustment, without modification or amendment during the twenty (20) year period following the effective date of the Plan of Adjustment, except as required to comply with applicable federal law, including without limitation to maintain the tax qualified status of the Retirement System under the Internal Revenue Code, or to comply with the Plan of Adjustment;

(c) a copy of (i) the Compliance Report covering the calendar year for which the Annual Report is made; (ii) any additional Compliance Reports provided during the calendar year for which the Annual Report is made as requested by the State Treasurer; (iii) either the certificate of compliance or the Default Notice, within the meaning of Section 6 of the State Contribution Agreement, as applicable, that was provided to the Investment Committee by the State Treasurer; and (iv) in the event that the State Treasurer issued a Default Notice, the Cure Certification, within the meaning of Section 6 of the State Contribution Agreement, provided by the Investment Committee. Notwithstanding anything in this paragraph (c) to the contrary, if the parties to the State Contribution Agreement agree to revise the requirements of Section 6 of the State Contribution Agreement or the information required in the Compliance Report, in order to meet the obligations of this paragraph (c), the Investment Committee shall be required only to provide documentation to the Foundation that meets such revised requirements; and

(d) any additional information that may be reasonably requested by the Foundation from time to time.

(e) Beginning in calendar year 2016, before May 15th of each calendar year, the Investment Committee shall provide to the Chief Financial Officer of the City confirmation that, as of the date of the City's report to the Foundation, there has been no impairment or modification of the information contained in the most recent Pension Certificate since the date of such Pension Certificate.

ARTICLE 2. DEFINITIONS

Sec 2.1. Definitions

Unless a different definition is contained within this Combined Plan Document, or a different meaning is plainly required by context, for purposes of this Combined Plan Document the following words and phrases have the meanings respectively ascribed to them by this section:

(1) *Accumulated Mandatory Employee Contributions* means the sum of all amounts deducted from the Compensation of a Member and credited to the Accumulated Mandatory Employee Contribution Fund for periods on and after July 1, 2014.

(2) *Accumulated Voluntary Employee Contributions* means the total balance in a Member's individual account under Component I of the Retirement System representing after-tax amounts deducted from the Compensation of the Member, together with earnings on such contributions.

(3) *Actuarial Equivalent or Actuarially Equivalent* means a Retirement Allowance or benefit amount having the same Actuarial Equivalent Value as another applicable benefit.

(4) *Actuarial Equivalent Value* means the value of an applicable Retirement Allowance or benefit amount, where values are calculated under generally accepted actuarial methods and using the applicable tables, interest rates and other factors established by the Board upon recommendation of the Investment Committee. The rates of interest, tables and factors adopted by the Board from time to time to determine Actuarial Equivalence shall not violate the terms of the Plan of Adjustment.

(5) *Administrative Rules and Regulations* means rules and regulations promulgated by the Board of Trustees for the administration of the Retirement System and for the transaction of its business.

(6) *Age, Attainment of* means the age an individual reaches on the day of his or her birthday.

(7) *Average Final Compensation* means the average Compensation received by a Member during the five consecutive years of Credited Service which immediately precede the date of the Member's last termination of City employment as an employee of the Police Department or the Fire Department. If a Member has less than five years of Credited Service, the Average Final Compensation shall be the average of the annual Compensation received by the Member during the Member's total years of Credited Service.

(8) *Beneficiary* means any person or persons (designated by a Member pursuant to procedures established by the Board) who are entitled to receive a Retirement Allowance or Pension payable from funds of the Retirement System due to the participation of a Member.

(9) *Board of Trustees or Board or Retirement Board* means the Board of Trustees of the Police and Fire Retirement System of the City of Detroit.

(10) *City* means the City of Detroit, Michigan, a municipal corporation.

(11) *City Council or Council* means the legislative body of the City.

(12) *Combined Plan* means the Combined Plan for the Police and Fire Retirement System of the City of Detroit, Michigan, effective July 1, 2014, and as amended thereafter.

(13) *Compensation* means a Member's base salary or wages actually paid to the Member for personal services rendered to the Employer, excluding bonuses, overtime pay, payment of unused accrued sick leave, longevity pay, payment for unused accrued vacation, the cost or value of fringe benefits provided to the Member, termination or severance pay, reimbursement of expenses, or other extra payment of any kind. Compensation will include any amount which is contributed by the City to a plan or program pursuant to a salary reduction agreement and which is not includable in the taxable income of the Member under Sections 125, 402(e)(3), 402(h) or 403(b) of the Internal Revenue Code or which is contributed by the City on behalf of a Member as provided in Section 9.3(3) and 9.5 pursuant to a qualified "pick-up program".

For periods of time prior to July 1, 2014, the City shall provide to the Retirement System actual base salary or wages paid to Members using the best and most reliable sources of information available to the City. In the event the City is unable to provide actual base wages to the Retirement System, the City shall make reasonable estimates of each Member's base salary or wages for purposes of determining a Member's Compensation for periods prior to July 1, 2014.

Notwithstanding the foregoing, solely for purposes of determining a Member's Voluntary Employee Contributions, Compensation shall mean the gross salary or wages paid to the Member for personal services rendered to the City.

The annual Compensation of each Member taken into account for the purposes of determining all benefits provided under the Retirement System for any determination period shall not exceed the limitation set forth in Code Section 401(a)(17) ($260,000 for the Plan Year commencing July 1, 2014). Such limitation shall be adjusted for the cost-of-living in accordance with Section 401(a)(17)(B) of the Internal Revenue Code. The cost-of-living adjustment in effect for a calendar year applies to any determination period beginning in such calendar year. If Compensation for any prior determination period is taken into account in determining a Member's benefits for the current determination period, the Compensation for such prior determination period is subject to the applicable annual compensation limit in effect for that determination period. If a determination period consists of fewer than 12 months, the annual compensation limit is an amount equal to the otherwise applicable annual compensation limit multiplied by a fraction, the numerator of which is the number of months in the short determination period, and the denominator of which is 12.

(14) *Component I* means the portion of the Retirement System described in this Combined Plan and which consists of:

(a) the 2014 Defined Benefit Plan, which is a qualified plan and trust pursuant to applicable sections of the Internal Revenue Code; and

(b) the 2014 Defined Contribution Plan which is a qualified plan and trust pursuant to applicable sections of the Internal Revenue Code.

(15) *Component II* means the portion of the Retirement System described in this Combined Plan and which consists of:

(a) the Frozen Defined Benefit Plan, which is a qualified plan and trust pursuant to applicable sections of the Internal Revenue Code; and

(b) the Frozen Defined Contribution Plan, which is a qualified plan and trust pursuant to applicable sections of the Internal Revenue Code.

(16) *Credited Service* means service credited to a Member to the extent provided in Article 4 of Component I of this Combined Plan Document.

(17) *Disability or Disabled*: see Total Disability or Totally Disabled.

(18) *DFFA* means the Detroit Fire Fighters Association.

(19) *DPCOA* means the Detroit Police Command Officers Association.

(20) *DPLSA* means the Detroit Police Lieutenants and Sergeants Association.

(21) *DPOA* means the Detroit Police Officers Association.

(22) *DROP Account* means the account established by the Board for a Member who is eligible for and who elects to participate in the DROP Program.

(23) *DROP Program* means a program established for eligible Members pursuant to Article 12.

(24) *Employee* means an employee of the City's Police Department who has taken an oath of office or a Fire Fighter providing services to the City, but does not include:

(a) individuals whose City services are compensated on a contractual or fee basis;

(b) any person during any period when such person is classified by the City as a non-common-law employee or an independent contractor for federal income tax and withholding purposes whose compensation for services is reported on a form other than Form W-2 or any successor form for reporting wages paid to and taxes withheld from employees, even if a court or administrative agency determines that such person is a common-law employee of the City;

(c) the Medical Director of the Retirement System.

If a person described in (b) above is reclassified by the City as a common-law employee of the City and otherwise meets the definition of an Employee, the person will be eligible to participate in the Retirement System prospectively as of the actual date of such reclassification only (and only to the extent such individual otherwise qualifies as an Employee).

(25) *Employer* means the City.

(26) *Final Compensation* means the annual compensation of a Member at the time of his or her termination of employment.

(27) *Fire Fighter* means the rank in the Fire Department currently or formerly classified by the civil service commission as Fire Fighter.

(28) *Fire Member* means an employee of the Fire Department of the City of Detroit who is a participant in the Retirement System.

(29) *Fiscal Year* means the twelve month period commencing each July 1 and ending on the following June 30.

(30) *Hour of Service* means (i) each hour for which a Member is paid or entitled to payment by the City for the performance of duties, and (ii) each hour for which a Member is directly paid or entitled to payment by the City for reasons other than the performance of duties (such as vacation, holiday, illness or approved leave of absence).

(31) *Internal Revenue Code or Code* means the United States Internal Revenue Code of 1986, as amended.

(32) *Investment Committee* means the committee established pursuant to Section 1.22 which shall have the powers and duties described herein.

(33) *Mandatory Employee Contributions* mean the contributions made by a Member to the Retirement System pursuant to Section 9.3(3).

(34) *Medical Beneficiary* means a Member who has retired from employment with the City and the Spouses and dependents of such Member who are receiving post-retirement benefits in accordance with the terms of a retiree medical plan sponsored or maintained by the City.

(35) *Medical Benefits* mean the provision of payments for certain sickness, accident, hospitalization and medical benefits within the meaning of Treasury Regulation section 1.401-14(a), including dental, vision and mental health benefits, as designated by the City.

(36) *Medical Benefits Account* means the bookkeeping account established under Section 17.1 to provide for the payment of Medical Benefits on behalf of Medical Beneficiaries.

(37) *Medical Director* means the physician appointed by the Board pursuant to Section 1.16.

(38) *Member* means any Police Member or Fire Member who has not retired or died.

(39) *Normal Retirement Age* means for any Member Age fifty with twenty-five years of Credited Service, with the following transition period for a Member who is an active employee on June 30, 2014 regarding payment of Component I benefits only:

Fiscal Year	Age and Credited Service
2015	Age 43 and 20 years
2016	Age 43 and 20 years
2017	Age 44 and 21 years
2018	Age 45 and 22 years
2019	Age 46 and 23 years
2020	Age 47 and 24 years
2021 and thereafter	Age 50 and 25 years

Pursuant to Code Section 411(e), as in effect in 1974, a Member shall be 100% vested in his or her accrued benefit under the Retirement System upon Attainment of Normal Retirement Age while in Service.

(40) *Notice to Members, Beneficiaries, and Retirees* means a mailing using First Class United States Mail to the Members, Beneficiaries, and Retirees at their last known addresses.

(41) *Patrolman* means the rank in the Police Department currently or formerly known as patrolman.

(42) *Pension Reserve* means the present value of all payments to be made on account of any Retirement Allowance payable under Component I of the Combined Plan. Such Pension Reserve shall be computed upon the basis of such mortality and other tables of experience, and interest, as provided herein until June 30, 2023 and, thereafter, as shall be adopted by the Board upon the recommendation of the Investment Committee.

(43) *Plan Actuary or Actuary* means the enrolled actuary or actuarial firm appointed as provided in Section 1.17 to serve as technical advisor to the Investment Committee and the Board on matters regarding the funding and operation of the Retirement System and to perform such other duties as the Investment Committee or the Board may direct.

(44) *Plan Document or Combined Plan Document* means this instrument, effective as of July 1, 2014, with all amendments hereafter adopted.

(45) *Plan of Adjustment* means the Plan for the Adjustment of Debts of the City of Detroit, which has been approved by the United States Bankruptcy Court in *In re City of Detroit, Michigan,* Case No. 13-53846.

(46) *Plan Year* means the twelve month period commencing on July 1 and ending on June 30.

(47) *Police and Fire Retirement System of the City of Detroit or Retirement System* means the Police and Fire Retirement System of the City of Detroit created and, prior to July 1, 2014, memorialized in Title IX, Chapter VI, of the 1918 Detroit City Charter, as

amended, continued in effect through the 1974, 1997 and 2012 Detroit City Charters, Article 47 of the Detroit City Code, Article 54 of the Detroit City Code of 1964, and collective bargaining agreements and, on and after July 1, 2014, pursuant to Section 47-1-2 of the Detroit City Code, memorialized in this Combined Plan Document, as amended from time to time.

The Retirement System consists of:

(a) The 2014 Defined Benefit Plan, which is described in Component I hereof;

(b) the 2014 Defined Contribution Plan, consisting of the Voluntary Employee Contribution Account, which is described in Component I hereof;

(c) the Frozen Defined Benefit Plan, which is described in Component II hereof; and

(d) the Frozen Defined Contribution Plan, which is described in Component II hereof.

References to the words Retirement System in Component I of the Plan Document shall mean the provisions of the 2014 Defined Benefit Plan and/or the 2014 Defined Contribution Plan described in Component I, unless a different meaning is plainly required by context.

(48) *Police Member* means a Police Officer who has taken the oath of office as prescribed in the Detroit City Charter, excluding patrolmen of other City departments, privately employed patrolmen and special patrolmen, who is a participant in the Retirement System.

(49) *Police Officer* means the rank in the Police Department currently or formerly known as Police Officer.

(50) *Prior Service* means the service credit awarded to a Member before July 1, 2014 under the terms of the Retirement System as in effect on June 30, 2014, as certified by the Board of Trustees.

(51) *Retiree* means a former Member who is receiving a Retirement Allowance from the Retirement System.

(52) *Retirement* means a Member's withdrawal from the employ of the City with a Retirement Allowance paid by the Retirement System.

(53) *Retirement Allowance* means an annual amount payable in monthly installments by the Retirement System, whether payable for a temporary period or throughout the future life of a Retiree or Beneficiary.

(54) *Service* means personal services rendered to the City by an employee of the Police Department or Fire Department, provided such person is compensated by the City for such personal services.

(55) *Spouse* means the person to whom a Member is legally married under applicable law at the time a determination is made.

(56) *Straight Life Retirement Allowance* means payment of a Member's Retirement Allowance over the Member's lifetime.

(57) *Total Disability or Totally Disabled* means:

(a) during the first twenty-four (24) months that a Member receives benefits from the Retirement System due to injury, illness or disease, that the Member is unable to perform, for wage or profit, the material and substantial duties of the Member's occupation; and

(b) during all subsequent months that a Member receives benefits from the Retirement System due to illness, injury or disease, that the Member is unable to perform, for wage or profit, the material and substantial duties of any occupation for which the Member is suited, based on education, training and experience.

(58) *Vesting Service* means service credited to a Member to the extent provided in Article 4 of Component I of this Combined Plan Document.

(59) *Voluntary Employee Contributions* mean the after-tax contributions made by a Member to the Retirement System pursuant to Section 10.1.

(60) *Voluntary Employee Contributions Account* means the account established pursuant to Section 10.3 for a Member who elects to make Voluntary Employee Contributions.

The following terms shall have the meanings given to them in the Sections of this Combined Plan Document set forth opposite such term:

Accumulated Mandatory Employee Contribution Fund	Section 9.2(1)
Accumulated Voluntary Employee Contribution Fund	Section 9.2(2)
Annual Addition	Section 13.2(1)
Annual Report	Section 1.26(4)(b)
Authority	Section 1.17
cash refund annuity	Section 5.4(1)(a)
compensation	Section 13.1(12)
Compliance Report	Section 1.26(1)
Cure Certification	Section 1.26(2)
current active	Section 9.3(3)
Default Notice	Section 1.26(2)
Deferred Retirement Option Plan Fund	Section 9.2(5)
Deferred Retirement Option Plan Program (DROP)	Section 12.1
Differential Wage Payment	Section 4.4
Direct rollover	Section 18.9(1)(b)
Distributee	Section 18.9(1)(c)
Dollar Limit	Section 13.1(3)(b)
Disability Retirement Review Board/DRRB	Section 5.6(2)

Eligible retirement plan	Section 18.9(1)(d)
Eligible rollover distribution	Section 18.9(1)(e)
Expense Fund	Section 9.2(7)
Foundation	Section 1.22(1)
funding level	Section 9.5(3)
Governance Term Sheet	Section 1.17
Income Fund	Section 9.2(8)
ING	Section 12.3(1)
investment management decisions/investment management matters	Section 16.2
limitation year	Section 13.1(2)
Medical Benefits Account Fund	Section 9.2(6)
Medical Plans	Section 17.1
new employee	Section 9.3(3)
Option "A". Joint and Seventy-Five Percent Survivor Allowance	Section 8.1(1)(c)
Option "B". Joint and Twenty-Five Percent Survivor Allowance	Section 8.1(1)(e)
Option One. Modified Cash Refund Annuity	Section 8.1(1)(a)
Option Three. Joint and Fifty Percent Survivor Allowance	Section 8.1(1)(d)
Option Two. Joint and One Hundred Percent Survivor Allowance	Section 8.1(1)(b)
Pension Accumulation Fund	Section 9.2(3)
Pension Certificate	Section 1.26(4)(b)
Pension Improvement Factor (Escalator)	Section 6.2
Plan of Adjustment	Section 1.3
Police and Fire Retirement System of the City of Detroit	Section 1.1
Pop-up Form	Section 8.1(2)(b)
Rate Stabilization Fund	Section 9.2(4)
Standard Form	Section 8.1(2)(a)
State Contribution Agreement	Section 1.17
State Treasurer	Section 1.23
Straight Life Retirement Allowance	Section 8.1(1)

ARTICLE 3. MEMBERSHIP

Sec 3.1. Eligible Employees

(1) Except as provided in Section 3.2, the membership of the Retirement System shall consist of all persons who are employed with the Police and Fire Departments of the City and who are employed as Police Officers or Fire Fighters according to the rules and regulations of the respective Departments. An eligible Employee's membership in the Retirement System shall be automatic; no eligible Employee shall have the option to elect to become a Member of the Retirement System.

(2) Any appointive official of the Police Department or Fire Department appointed from the membership thereof shall be permitted to remain a Member, paying contributions and entitled to benefits as though he or she had remained in the rank, grade or position held at the date of his or her appointment.

(3) Any Police Officer or Fire Fighter who, prior to being confirmed, shall be killed or Totally Disabled as the result of the performance of active duty, shall be deemed to have been a Member as of his or her date of death.

(4) Any Member who shall be transferred to a civilian position in his or her Department shall continue as a Member, subject to all the obligations of a Member.

Sec 3.2. Cessation of Membership; Re-Employment

(1) If a Member dies, or is separated from service with the City by resignation, dismissal, retirement or Disability, he or she shall cease to be a Member. A Member who elects to participate in the DROP Program under Component I, Component II or both shall be considered to have separated from service with the City by reason of retirement and shall not accrue a benefit under the Retirement System, be required to make Mandatory Employee Contributions to the Retirement System pursuant to Section 9.3(3) or 9.5, or be permitted to make Voluntary Employee Contributions pursuant to Section 10.1.

(2) If a vested Member ceases to be a Member under paragraph (1) other than by reason of participation in the DROP Program and later becomes a Police Officer or Fire Fighter other than in the position of Police Assistant, he or she shall again become a Member, subject to the obligations of a Member. The benefit payable to the Member upon a subsequent termination shall be based upon his or her total Credited Service earned on and after July 1, 2014, provided that, if the Member received a distribution of his or her Accumulated Mandatory Contributions following termination, the Member recontributes the Accumulated Mandatory Contributions to the Retirement System within two years of his or her re-employment date. If a Member who receives a distribution of his or her Accumulated Mandatory Contributions fails to recontribute such amount to the Retirement System within two years of re-employment, only the Credited Service earned on and after the Member's re-employment date shall be taken into consideration in determining his or her Retirement Allowance.

(3) If a Member ceases to be a Member under paragraph (1) and later becomes employed as a Police Assistant, such Member shall not become a Member upon re-employment. If such Member was receiving a Retirement Allowance from the Retirement System prior to his or her date of rehire, such Retirement Allowance shall not be suspended during the period of the Member's reemployment as a Police Assistant.

(4) Retirement benefits for a Retiree who returns to active full time employment other than as a Police Assistant shall be subject to the following:

(a) A Retiree who returns to work will have his or her Retirement Allowance suspended upon re-employment. The variable Pension Improvement Factor (Escalator) shall not be added to the amount of the original Retirement Allowance during the Retiree's re-employment period.

(b) A Retiree who returns to work will be entitled to receive a second Retirement Allowance in accordance with the provisions of the Retirement System in effect during his or her re-employment period.

(c) A Retiree's Average Final Compensation and Credited Service for purposes of determining the Retiree's second Retirement Allowance will be based upon the Compensation and Credited Service earned by the Retiree after he or she returns to work.

(d) An individual who retires for a second time will not be allowed to change the payment option selected by the Member with respect to the original Retirement Allowance. However, the individual may select a separate payment option with respect to his or her second Retirement Allowance.

Sec 3.3. Report From City

It shall be the duty of the City to submit to the Board of Trustees a statement showing the name, title, compensation, duties, date of birth, date of hire, and length of service of each Member, and such other information as the Board of Trustees may require or reasonably request for proper administration of the Retirement System.

ARTICLE 4. SERVICE CREDIT

Sec 4.1. Credited Service

(1) The Board shall keep an accurate record of each Member's accumulated Credited Service from the date of commencement of employment with the City to the date of termination of employment with the City.

(2) A Member shall be credited with one month of Credited Service for each calendar month during which he or she performs one hundred forty (140) or more Hours of Service for the City as a Member beginning on the later of (i) July 1, 2014 or (ii) his or her date of hire with the City as a Police Officer or Fire Fighter and ending on the date his or her employment with the City as a Police Officer or Fire Fighter is terminated. Service shall be credited in years and twelfths ($1/12^{th}$) of a year. Not more than one-twelfth ($1/12^{th}$) of a year of Credited Service shall be credited to a Member on account of all service rendered to the City in a calendar month. Not more than one year of Credited Service shall be credited to a Member on account of all service rendered to the City in any period of 12 consecutive months.

(3) Not more than one month of Credited Service shall be granted for any period of more than one month during which the Member is absent without pay; notwithstanding the foregoing, any Member who shall be suspended from duty and subsequently reinstated to duty without further disciplinary action shall receive credit for the time of such period of suspension.

(4) Solely for purposes of determining eligibility for a retirement benefit under Sections 5.1 and 5.4, a Member shall be credited with the sum of his or her Prior Service as determined by the Board and his or her Credited Service on and after July 1, 2014 determined under Section 4.1(2). The period of time during which a Member is on layoff from the service of the City shall be included in the Member's Credited Service solely for the purposes of determining whether the Member has attained his or her Normal Retirement Age for purposes of Section 5.1.

Sec 4.2. Vesting Service

(1) A Member shall be credited with a year of Vesting Service for each Plan Year commencing on or after July 1, 2014 during which the Member performs 1,000 or more Hours of Service for the City.

(2) A Member's total Vesting Service shall be the sum of his or her Prior Service and his or her Vesting Service determined under Section 4.2(1).

Sec 4.3. Service Credit; Military Service

A Member who enters the military service of the United States while employed with the City shall have the period of such military service credited as Credited Service and Vesting Service in the same manner as if the Member had served the City without interruption, provided that (1) the Member's entry into such military service and re-employment thereafter shall be in accordance with applicable laws, ordinances, and regulations of the State of Michigan and the City, (2) he or she is re-employed by the City upon completion of such military service, and (3) the Member contributes to the Retirement System the Mandatory Employee Contributions that would have been made by the Member but for the Member's military service. The Member shall be permitted to make such contributions in accordance with Code Section 414(u) and regulations thereunder. During the period of military service and until return to City employment, the Member's Mandatory Employee Contributions to the Retirement System shall be suspended.

Sec 4.4. Service Credit; Qualified Military Service

Notwithstanding any provision of this Combined Plan Document to the contrary, contributions, benefits, and service credit with respect to qualified military service under Component I, shall be provided in accordance with Code Section 414(u). Notwithstanding anything to the contrary herein, if a Member dies while performing qualified military service (as defined in Code Section 414(u)), to the extent required by Code Section 401(a)(37), the survivors of the Member are entitled to any additional benefits (if any, and other than benefit accruals relating to the period of qualified military service) provided under the Retirement System as if the Member had resumed and then terminated employment on account of death.

Notwithstanding anything to the contrary herein, if the City decides to provide Differential Wage Payments to individuals who are performing service in the uniformed services (as defined in Chapter 43 of Title 238, United States Code) while on active duty for a period of more than thirty days, such Differential Wage Payment will be treated as compensation under the Code Section 415(c)(3) limits, but not for purposes of benefit accruals under the Retirement System. For these purposes the term "Differential Wage Payment" means a payment defined in Code Section 3401(h)(2) that is made by the City to an individual who is performing service in the uniformed services while on active duty for a period of more than thirty days.

ARTICLE 5. ELIGIBILITY FOR RETIREMENT

Sec 5.1. Eligibility for Unreduced Normal Retirement Benefit

Any Member who attains his or her Normal Retirement Age while employed by the City may retire upon written application filed with the Board setting forth the date on which the Member desires to be retired. The date of retirement shall be effective as of the first day following the later of (i) the Member's last day on the City payroll, or (ii) the date the Member executes and files an application for retirement, notwithstanding that the Member may have separated from service during the notification period. Such a Member shall be entitled to receive an unreduced Retirement Allowance calculated as provided in Section 6.1 and payable in a form of payment selected by the Member pursuant to Section 8.1.

Sec 5.2. Eligibility for Deferred Vested Retirement Benefit

Any Member who terminates employment with the City prior to satisfying the requirements for receipt of a retirement benefit under Section 5.1 and who is credited with ten (10) or more years of Vesting Service upon his or her termination of employment (regardless of Age) shall be entitled to receive an unreduced Retirement Allowance calculated pursuant to Section 6.1 commencing at any time following his or her Attainment of Age sixty-two; provided that any member of DPLSA or DPCOA who is credited with ten (10) or more years of Vesting Service upon his or her termination of employment (regardless of Age) shall be entitled to receive an unreduced Retirement Allowance commencing at any time following his or her Attainment of Age fifty-five. Any Member (other than a member of DPLSA or DPCOA), may elect to begin receiving a Retirement Allowance following his or her Attainment of Age fifty-five, actuarially reduced for commencement prior to age sixty-two, in lieu of an unreduced Retirement Allowance beginning at age sixty-two. The Retirement Allowance payable to a Member who makes such an election shall be the Actuarial Equivalent of the deferred Retirement Allowance that would be payable to the Member at his Normal Retirement Date pursuant to Section 6.1, assuming the Member terminated employment on the early retirement date, as determined by the Plan Actuary based upon factors, assumptions and methods adopted by the Board upon recommendation of the Investment Committee. Deferred vested retirement benefits shall be payable in accordance with a form of payment selected by the Member pursuant to Section 8.1.

Sec 5.3. Eligibility for Disability Retirement Benefit – Duty Disability

(1) If, prior to attainment of his or her Normal Retirement Date, a Member shall become Totally Disabled for duty by reason of injury, illness or disease resulting from performance of duty and if, pursuant to Section 5.6, the Board shall find such injury, illness or disease to have resulted from the performance of duty, on written application to the Board by or on behalf of such Member or by the head of his or her Department such Member shall be retired, notwithstanding that during such period of notification he or she may have separated from service and provided further that the Medical Director, after examination of such Member shall certify to the Board the Member's Total Disability. A Member who retires as a result of duty disability shall receive for a period of twenty-four months the sum of:

(a) a basic benefit equal to fifty percent (50%) of his or her Final Compensation at the time his or her duty disability retirement begins, and

(b) a supplemental benefit equal to sixteen and two-thirds percent (16-2/3%) of his or her Final Compensation at the time his or her duty disability retirement begins.

Subject to Section 9.5, on the first day of each Plan Year, a Member's duty disability benefit will be increased as provided in Section 6.2.

(2) After a Member receives benefits hereunder for a period of twenty-four months, the Board will determine whether the Member is disabled from any occupation. If the Member is disabled from any occupation, the Member shall continue to receive the benefit provided in paragraphs (1)(a) and (1)(b) until such time as the Member would have attained twenty-five years of Credited Service had he or she continued in active service with the City. At that time, the Member shall continue to receive the benefit described in paragraph 1(a) above; however, benefits described in paragraph (1)(b) above will cease. If the Member is not disabled from any occupation, he or she shall continue to receive the benefit described in paragraph (1)(a) above; benefits described in paragraph (1)(b) will cease.

(3) Duty disability benefits shall continue to be paid to a Member on duty disability retirement after the Member has attained twenty-five years of Credited Service to the earlier of (i) the Member's Attainment of Age sixty-five, or (ii) the date the Member ceases to be Totally Disabled as determined by the Board. Upon termination of disability or Attainment of Age sixty-five, a Member with twenty-five years of Credited Service shall be eligible to receive a Retirement Allowance as provided in Section 6.1. The amount of such Retirement Allowance shall be equal to the amount which would have been payable to the Member if the Member's conversion from duty disability retirement to a Retirement Allowance had occurred on the date the Member attained twenty-five years of Credited Service.

(4) If a Member on duty disability retirement returns to active service with the City and shall re-qualify for duty disability retirement for the same or related reasons within twenty-four months of his or her return to active service, then the disability shall be deemed a continuation of the prior Total Disability and the period of the Member's active service following the return to work will not qualify the Member to be entitled to a new initial determination of disability for purposes of determining the benefit payable to the Member. Instead, such Member will return to duty disability retirement benefits based on the number of months of disability with which the Member was credited at the time of his or her return to active service, as if there had not been a break in his or her period of duty disability retirement.

(5) During the period a Member is eligible to receive duty disability benefits under this Section 5.3, the Member shall continue to be credited with Credited Service until the Member accrues twenty-five years of Credited Service, at which time accrual of Credited Service shall cease.

(6) In the event that a recipient of a duty disability retirement benefit receives earned income from gainful employment during a calendar year, the amount of the Member's disability benefit payable during the next subsequent Plan Year will be adjusted so it does not exceed the difference between (i) the Member's Compensation at the date of duty disability, increased by the Pension Improvement Factor (Escalator) (if any) applicable to such benefit pursuant to Section 6.2 during the period of duty disability, and (ii) the amount of the Member's remuneration from gainful employment during the prior calendar year. The amount of income received by a Member shall be determined by the Board based upon information received from the Member or based upon information secured from other reliable sources. Furnishing such information to the Board at such times as the Board shall require shall be a condition for the Member's continued eligibility for duty disability benefits. In the event a Member's Retirement Allowance was not appropriately reduced for any period in which he or she is engaged in a gainful occupation, the Board shall adjust future benefit payments to such Member until the amount of the overpayment is recouped by the Retirement System.

Sec 5.4. Eligibility for Disability Retirement Benefit – Non-Duty Disability

(1) Upon the application of a Member or the Member's Department head, a Member who becomes totally and permanently disabled prior to his or her Normal Retirement Age in the employ of the City not resulting from the performance of duty shall be retired by the Board; provided that the Medical Director shall certify to the Board after a medical examination, that such Member is Totally Disabled. Such a Member shall receive the following applicable benefits:

(a) If such Member has less than five years of Credited Service at the time of his or her disability retirement, his or her Accumulated Mandatory Employee Contributions standing to his or her credit in the Accumulated Mandatory Employee Contributions Fund shall be returned to him or her, or at his or her option he or she shall receive a cash refund annuity which shall have the Actuarial Equivalent Value of his or her Accumulated Mandatory Employee Contributions. For purposes of this Section 5.4(1)(a), a "cash refund annuity" is an annuity that provides a death benefit equal to the positive difference, if any, between the original cost of the annuity and the sum of annuity payments received by the Member prior to his or her death.

(b) If such Member has five or more years of Credited Service at the time of his or her disability retirement, he or she shall receive a disability Retirement Allowance commencing as of the date of disability computed in accordance with the provisions of Section 6.1 and payable in any of the optional forms provided in Section 8.1 hereof. His or her annual Straight Life Retirement Allowance shall not be less than twenty per cent (20%) of his or her Average Final Compensation.

(2) If a Member receiving non-duty disability retirement benefits is or becomes engaged in a gainful occupation, business, or employment paying more than the difference between the disabled Member's Retirement Allowance increased by the Pension Improvement Factor (Escalator) (if any) applicable to such benefit pursuant to Section 6.2, and his or

her Average Final Compensation determined as of the date of non-duty disability, the Member's Retirement Allowance shall be reduced by the amount of such difference. If the amount of the Member's earnings changes, the Retirement Allowance may be adjusted accordingly. The amount of income received by a Member shall be determined by the Board based upon information received from the Member or based upon information secured from other reliable sources. Furnishing such information to the Board at such times as the Board shall require shall be a condition for the Member's continued eligibility for non-duty disability benefits. In the event a Member's Retirement Allowance was not appropriately reduced for any period in which he or she is engaged in a gainful occupation, the Board shall adjust future benefit payments to such Member until the amount of the overpayment is recouped by the Retirement System.

Sec 5.5. Disability Retirees; Reexamination

(1) At least once each year following the retirement of a Member under Section 5.3 or Section 5.4, the Board shall require that such disabled Member who has not attained his or her Normal Retirement Age undergo a medical examination, to be made by, or under the direction of the Medical Director; provided, however, that medical examinations shall not be required if the Medical Director determines that the Member's condition is permanent and there is no need for further reexamination. Members shall be reimbursed for reasonable costs actually incurred by the Members in connection with such examinations. Should any such Retiree who has not attained Normal Retirement Age fail to submit to a required medical examination, the Member's Retirement Allowance may be suspended by the Board until the examination is completed. Should such failure continue for one year, all of the disabled Member's rights in and to the duty or non-duty disability Retirement Allowance may be revoked by the Board. If upon such examination of a Member, the examiner reports that the Member is no longer Totally Disabled, and such report is concurred in by the Board, the Member shall be restored to active service with the City and the Retirement Allowance paid pursuant to Section 5.3 or Section 5.4 shall be suspended until the Member terminates active service with the City.

(2) A disabled Member who has been, or shall be, reinstated to active service in the employ of the City shall again become an active Member. All Credited Service at the time of reinstatement, in the case of a duty disabled Member, or at the time of the disability retirement, for a non-duty disabled Member, shall be restored to the Member; provided that, if a non-duty disabled Member received a distribution of his or her Accumulated Mandatory Contributions following the disability retirement pursuant to Section 5.4(1)(a), the Member recontributes the Accumulated Mandatory Contributions to the Retirement System within two years of his or her re-employment date. If a Member who receives a distribution of his or her Accumulated Mandatory Contributions fails to recontribute such amount to the Retirement System within two years of re-employment, only the Credited Service earned on and after the Member's re-employment date shall be taken into consideration in determining his or her Retirement Allowance.

Sec 5.6. Disability Benefits; Procedures for Determination of Disability

(1) The Board shall establish procedures for determining whether a Member is Totally Disabled. Such procedures shall be consistent with any collective bargaining agreements between the City and the unions covering Police Employees and Fire Employees.

(2) If a Member is determined to be Totally Disabled under Section 5.3(1) or 5.4(1), the Board or its designee will examine the pension file, including the submissions of the Member and the Police or Fire Department, to determine if there is any dispute as to whether the disability "resulted from the performance of duty" within the meaning of the Combined Plan. If it is undisputed that the disability did result from the performance of duty, the Board will grant duty disability retirement benefits. If it is undisputed that the disability did not result from the performance of duty, the Board will grant non-duty disability retirement benefits, provided the Member meets the other conditions of eligibility. If the performance of duty issue is in dispute, the Board will refer the matter to arbitration by a member of the Disability Retirement Review Board ("DRRB"). The decision of the DRRB member as to whether the disability resulted from the performance of duty shall be final and binding upon the Member, the Department and the Board. The DRRB shall consist of three qualified arbitrators who will be individually assigned in rotating order to decide the matters referred to arbitration by the Board. The three members of the DRRB shall be disinterested persons qualified as labor arbitrators and shall be selected in accordance with agreements between the City and the unions representing Members. The procedure for the termination of DRRB members and the selection of new DRRB members also shall be carried out in accordance with the agreements between the City and the unions representing Members.

(3) The hearing before a member of the DRRB will be conducted in accordance with the following procedures:

(a) The Member and the City will have the right to appear in person or otherwise may be represented by counsel if they wish and will be afforded an equal opportunity to present evidence relevant to the issues;

(b) A court reporter will be present and make a stenographic record of the proceedings;

(c) The hearing will be closed to the public, except that the Member may select one person to be with him or her in the hearing room; provided, however, that person may not testify;

(d) The witnesses will be sequestered;

(e) The witnesses will be sworn by the court reporter and testify under oath;

(f) The Member may not be called by the City as an adverse witness;

(g) The DRRB member will apply the rules of evidence and follow the procedures which are customarily applied and followed in labor arbitration cases;

(h) If the Member wishes to have an employee of the City released from duty to appear as a witness on his or her behalf, the Member may so inform the Board in writing which, in turn, will submit a written request to the appropriate Department executive for the release of the employee for the purpose of so testifying;

(i) The DRRB member will afford the parties an opportunity for the presentation of oral argument and/or the submission of briefs;

(j) The DRRB member will issue a written decision containing credibility resolutions as necessary, findings of fact and conclusions with respect to all relevant issues in dispute;

(k) The authority of the DRRB member is limited to deciding whether or not the Member's disability "resulted from the performance of duty" within the meaning of the Combined Plan. The DRRB member shall have no authority to add to, subtract from, modify or disregard the terms of the Combined Plan; and

(l) The costs associated with the hearing, including the arbitrator's fees and expenses and the court reporter's fees and expenses, will be paid by the Retirement System.

(4) If a disabled Member is determined by the Board to no longer be Totally Disabled, he or she may appeal that determination within seven (7) days thereof by filing a written request with the Board for a re-examination. The Board shall promptly arrange for such re-examination. The Member's disability benefits will be continued pending that final and binding medical finding, and if the finding is that the Member is no longer Totally Disabled, his or her disability benefits will be further continued while the Police or Fire Department conducts such examinations and/or investigations as necessary to determine whether the Member is qualified for reappointment to active duty. In the event that the examinations and/or investigations conducted by the Police Department result in a determination that a Member is not qualified, for medical reasons, for reappointment to active duty, disability benefits will be continued.

(5) The Board shall not act upon or grant the application filed by a Member who, although he or she is not capable of performing the full duties of a Police Employee or Fire Employee, has not suffered any diminishment of his or her base wages or benefits because he or she is either:

(a) regularly assigned to a position, the full duties of which he or she is capable of performing; or

(b) assigned to a restricted duty position, unless the Member's Department advises that it intends to seek a disability retirement for the Member in the foreseeable future.

(6) The provisions in paragraph (5) above are not intended to and will not:

(a) affect the right of a Member to seek a disability retirement when no restricted duty position is available; or

(b) restrict in any way the existing authority of the Chief of Police or the Fire Commissioner to seek a duty or non-duty disability retirement for a Member or for that Member, at that time, to request a duty or non-duty disability retirement.

Sec 5.7. Return of Accumulated Mandatory Contributions to Non-Vested Member

If a Member ceases employment with the City other than by reason of retirement, death or Disability, the Member may elect to receive distribution of the Accumulated Mandatory Employee Contributions made to the Retirement System by such Member. If a Member elects to receive his or her Accumulated Mandatory Employee Contributions, such amounts shall be paid to the Member in a lump sum payment or in equal monthly installments for a period not to exceed three years, according to such rules and regulations as the Board may adopt from time to time. Other than as provided in Section 3.2(2), a Member who receives a refund of his or her Accumulated Mandatory Employee Contributions shall not receive a Retirement Allowance from Component I of the Retirement System.

Sec 5.8. Benefits Offset by Workers' Compensation and Benefits; Subrogation

(1) Any amounts which may be paid or payable to a Member, Retiree, or Beneficiary on account of disability or death under the provisions of any Workers' Compensation, pension, or similar law, except federal Social Security old-age and survivors' and disability insurance benefits, shall be an offset against any amounts payable from funds of the Retirement System (Component I and Component II combined) on account of the same disability or death. If the present value of the benefits payable under said Workers' Compensation, pension, or similar law, is less than the Retirement Allowance payable by the Retirement System (under both Component I and Component II), the present value of the said Workers' Compensation, pension, or similar legal benefit shall be deducted from the amounts payable by the Retirement System (under both Component I and Component II), and such amounts as may be provided by the Retirement System, so reduced, shall be payable as provided in this Combined Plan Document.

(2) In the event a person becomes entitled to a pension payable by the Retirement System because of an accident or injury caused by the act of a third party, the Retirement System shall be subrogated to the rights of said person against such third party to the extent of the benefit which the Retirement System pays or becomes liable to pay.

ARTICLE 6. RETIREMENT ALLOWANCE; VARIABLE PENSION IMPROVEMENT FACTOR (ESCALATOR)

Sec 6.1. Retirement Allowance

The Retirement Allowance payable to a Member commencing at the later of his or her Normal Retirement Age or his or her actual retirement from employment with the City in the form of a Straight Life Retirement Allowance shall be equal to two percent (2%) of the Member's Average Final Compensation multiplied by the Member's years (computed to the nearest one-twelfth ($1/12^{th}$) year) of Credited Service earned after June 30, 2014.

Sec 6.2. Variable Pension Improvement Factor (Escalator)

Except as provided in Section 9.5, beginning July 1, 2015 and effective the first day of each Plan Year thereafter, the Board may determine that the annual Retirement Allowance of a Member payable under this Component I shall be increased by a factor of one percent (1.0%), compounded ("Pension Improvement Factor (Escalator)"); provided, that the recipient of said Retirement Allowance shall have been receiving a Retirement Allowance for a period of not less than twelve months prior to the first day of such Plan Year.

ARTICLE 7. DEATH BENEFITS

Sec 7.1. Accidental Death Benefit; Performance of Duty

(1) If a Member is killed in the performance of duty in the service of the City, or dies as the result of illness contracted or injuries received while in the performance of duty in the service of the City, and such death, illness, or injury resulting in death, is found by the Board to have resulted from the actual performance of duty in the service of the City, the following benefits shall be paid:

(a) the Accumulated Mandatory Employee Contributions standing to his or her credit in the Accumulated Mandatory Employee Contributions Fund at the time of his or her death shall be paid to such person or persons as the Member shall have nominated by written designation duly executed and filed with the Board. If no such designated person survives the Member, the said Accumulated Mandatory Employee Contributions shall be paid to the Member's legal representative, subject to paragraph (e) of this Section 7.1(1).

(b) the Member's surviving Spouse shall receive a pension of five-elevenths of the Member's Final Compensation payable for the Spouse's lifetime. If the Member's child or children under age eighteen years also survive the deceased Member, each such child shall receive a pension of one-tenth of such Final Compensation; provided, that if there are more than two such surviving children under age eighteen years, each such child's pension shall be an equal share of seven thirty-thirds of such Final Compensation. Upon the death, marriage, adoption, or Attainment of Age eighteen years of any such child, his or her pension shall terminate and there shall be a redistribution of the benefit by the Board to the deceased Member's remaining eligible children, if any; provided, that in no case shall any such child's pension exceed one-tenth of the Member's Final Compensation. In no case shall the total of the benefits provided for in this paragraph (b), payable on account of the death of a Member exceed two-thirds of the Member's Final Compensation.

(c) if no surviving Spouse survives the deceased Member or if the Member's surviving Spouse dies before his or her youngest unmarried surviving child attains Age eighteen years, his or her unmarried child or children under Age eighteen years shall each receive a pension of one-fourth of the Member's Final Compensation; provided that if there are more than two such surviving children under Age eighteen years, each such child's pension shall be an equal share of one-half of such Final Compensation. Upon the death, marriage, adoption, or Attainment of Age eighteen years of any such child, his or her pension shall terminate and there shall be a redistribution by the Board to the deceased Member's remaining eligible children, if any; provided, that in no case shall any such child's pension exceed one-fourth of the Member's Final Compensation.

(d) if the Member has no surviving Spouse or surviving children under Age eighteen years and if the Member leaves surviving either a father or mother or both, whom the Board shall find to be actually dependent upon such Member for financial support, such dependent father and mother shall each receive a pension of one-sixth of the Member's Final Compensation.

(e) If a Member dies intestate, without having designated a person or persons, as provided in paragraph (a) of this Section 7.1(1), and without heirs, the amount of his or her Accumulated Mandatory Employee Contributions in the Accumulated Mandatory Employee Contribution Fund, not to exceed a reasonable sum, to be determined by the Board, shall be used to pay his or her burial expenses, provided the Member leaves no other estate sufficient for such purpose. Any balance credited to such Member in the Accumulated Mandatory Employee Contribution Fund which is not used for burial expenses shall remain a part of the funds of the Retirement System and shall be transferred to the Pension Accumulation Fund.

Sec 7.2. Non-Duty Death Benefits

The surviving Spouse of any Member who dies while in the employ of the City (other than in the performance of duty) after the date such Member has earned ten or more years of Vesting Service, shall receive a Retirement Allowance computed in the same manner in all respects as if said Member had (i) retired effective on the day preceding the Member's death, notwithstanding that the Member had not attained Normal Retirement Age, (ii) elected a Joint and One Hundred Percent Survivor Allowance as described in Section 8.1, and (iii) nominated the surviving Spouse as Beneficiary.

Sec 7.3. Refund of Accumulated Mandatory Contributions Upon Death of Member

If a Member who is not covered by Section 7.1 or 7.2 dies while employed by the City or following termination of employment but prior to commencement of a Retirement Allowance, the Member's Accumulated Mandatory Employee Contributions to the Retirement System at the time of death shall be paid to the Beneficiary nominated in a written designation duly executed by the Member and filed with the Board. In the event there is no such designated Beneficiary surviving, the Member's Accumulated Mandatory Employee Contributions shall be paid to the Member's estate. If a Member who dies without a legal will has not nominated a Beneficiary, the Member's Accumulated Mandatory Employee Contributions at the time of death may be used to pay burial expenses if the Member leaves no other estate sufficient for such purpose. Such expenses shall not exceed a reasonable amount as determined by the Board. Any balance credited to such Member in the Accumulated Mandatory Employee Contribution Fund which is not used for burial expenses shall remain a part of the funds of the Retirement System and shall be transferred to the Pension Accumulation Fund.

ARTICLE 8. FORMS OF PAYMENT

Sec 8.1. Retirement Allowance Options

(1) Until the date the first Retirement Allowance payment check is issued, any Member may elect to receive a Straight Life Retirement Allowance payable throughout life, or the Member may elect to receive the Actuarial Equivalent of the Straight Life Retirement Allowance computed as of the effective date of retirement, in a reduced Retirement Allowance payable throughout life, and nominate a Beneficiary, in accordance with the options set forth below:

(a) *Option One. Modified Cash Refund Annuity.* A Retiree will receive a reduced Retirement Allowance for as long as he or she lives, provided that if the Retiree dies before payment of the Accumulated Mandatory Employee Contributions made to the Retirement System on and after July 1, 2014 has been received in an aggregate amount equal to, but not exceeding the Retiree's Accumulated Mandatory Employee Contributions at the time of retirement, the difference between said Accumulated Mandatory Employee Contributions and the aggregate amount of annuity payments already received, shall be paid in a single lump sum to a Beneficiary nominated by written designation duly executed by the Member and filed with the Board. If there is no such designated Beneficiary surviving said Retiree, any such difference shall be paid to the Retiree's estate.

(b) *Option Two. Joint and One Hundred Percent Survivor Allowance.* Upon the death of a Retiree who elected a Joint and One Hundred Percent Survivor Allowance, one hundred percent of the Member's reduced Retirement Allowance shall be paid to and continued throughout the life of the Beneficiary nominated by written designation duly executed and filed with the Board prior to the date the first payment of the Retirement Allowance becomes due.

(c) *Option "A". Joint and Seventy-Five Percent Survivor Allowance.* Upon the death of a Retiree who elected a Joint and Seventy-Five Percent Survivor Allowance, seventy-five percent of the Member's reduced Retirement Allowance shall be continued throughout the life of and paid to the Beneficiary nominated by written designation duly executed by the Member and filed with the Board prior to the date the first payment of the Retirement Allowance becomes due.

(d) *Option Three. Joint and Fifty Percent Survivor Allowance.* Upon the death of a Retiree who elected a Joint and Fifty Percent Survivor Allowance, fifty percent of the Member's reduced Retirement Allowance shall be continued throughout the life of and paid to the Beneficiary nominated by written designation duly executed by the Member and filed with the Board prior to the date the first payment of the Retirement Allowance becomes due.

(e) *Option "B". Joint and Twenty-Five Percent Survivor Allowance.* Upon the death of a Retiree who elected a Joint and Twenty-Five Percent Survivor Allowance, twenty-five percent of the Member's reduced Retirement Allowance shall be continued throughout the life of and paid to the Beneficiary nominated by written designation duly executed by the Member and filed with the Board prior to the date the first payment of the Retirement Allowance becomes due.

(2) *Joint and Survivor Optional Forms of Payment.* The Joint and Survivor Optional Forms of Payment provided under the Retirement System shall be made available in either the standard form or the pop-up form, as follows:

(a) *Standard Form.* Under the Standard Form, the reduced Retirement Allowance shall be paid throughout the lifetime of the Retiree.

(b) *Pop-up Form.* Under the Pop-up Form, the reduced Retirement Allowance shall be paid throughout the lifetime of the Retiree and the designated Beneficiary. In the event of the death of the designated Beneficiary during the lifetime of the Retiree, the amount of the Retirement Allowance payable to the Retiree shall be changed to the amount that would have been payable had the Retiree elected the Straight Life Retirement Allowance Form of Payment.

Sec 8.2. Disposition of Surplus Benefits upon Death of Retiree and Beneficiary

If under a Joint and One Hundred Percent Survivor allowance, a Joint and Seventy-Five Percent Survivor allowance, a Joint and Fifty Percent Survivor allowance or a Joint and Twenty-Five Percent Survivor allowance as provided for under Section 8.1, both a Retiree and Beneficiary die before they have received in Retirement Allowance payments an aggregate amount equal to the Retiree's Accumulated Mandatory Employee Contributions (and if the Retiree makes an election pursuant to Section 10.4(2), his or her Accumulated Voluntary Employee Contributions) at the time of retirement, the difference between the said Accumulated Mandatory Employee Contributions (and Accumulated Voluntary Employee Contributions, if applicable) and the aggregate amount of Retirement Allowances paid to the Retiree and Beneficiary, shall be paid in a single lump sum to such person or persons nominated by written designation of the Retiree duly executed and filed with the Board. If there is no such person or persons surviving the Retiree and the Beneficiary, any such difference shall be paid to the estate of the Retiree or the Beneficiary, whichever of them is the last to die.

ARTICLE 9. FUNDING AND RESERVES

Sec 9.1. Funding Objective of the Retirement System

The funding objective of Component I of the Retirement System is to establish and receive City and Member contributions during each Plan Year that are sufficient to fully cover the actuarial cost of benefits anticipated to be paid on account of Credited Service rendered by Members during the Plan Year (the normal cost requirements of the Retirement System), and to amortize the unfunded actuarial costs of benefits likely to be paid on account of Credited Service rendered on or after July 1, 2014 and before the first day of the Plan Year (the unfunded actuarial accrued liability of Component I of the Retirement System).

Sec 9.2. Funds

Component I of the Retirement System shall consist of the Accumulated Mandatory Employee Contribution Fund, the Accumulated Voluntary Contribution Fund, the Pension Accumulation Fund, the Rate Stabilization Fund, the Deferred Retirement Option Program Fund (if applicable), the Medical Benefits Account Fund, the Expense Fund and the Income Fund, as follows:

(1) The Accumulated Mandatory Employee Contribution Fund shall be the Fund in which shall be accumulated the contributions of Members to provide their Retirement Allowances. Upon the retirement, termination, disability or death of a Member with a Retirement Allowance, the Member's Accumulated Mandatory Employee Contributions shall be deemed to be part of the Pension Reserve which shall be used to pay the Member's or Beneficiary's Retirement Allowance.

(2) The Accumulated Voluntary Employee Contribution Fund shall be the Fund in which shall be accumulated the voluntary after-tax contributions of Members, together with earnings thereon.

(3) The Pension Accumulation Fund shall be the fund in which shall be accumulated reserves for the Retirement Allowances and other benefits payable from that portion of the City's annual contribution as is designated by the City to be utilized for payment of Retirement Allowances, and amounts transferred to Component I as provided in Section G-2(f) of Component II to finance Transition Cost (as defined in Section G-2(f) of Component II), together with earnings thereon, and from which shall be paid Retirement Allowances and other benefits on account of Members.

(4) The Rate Stabilization Fund shall be the Fund to which shall be credited the City's contributions in excess of the amount of the City's contribution which is credited to the Pension Accumulation Fund, together with earnings thereon, and amounts transferred to Component I as provided in Section G-2(f) of Component II.

(5) The Deferred Retirement Option Plan Fund shall be the fund in which shall be accumulated the amounts credited to the DROP Accounts of Members who have elected to participate in the DROP Program pursuant to Article 12, together with earnings

thereon, provided that the DROP Accounts are held and invested within the Retirement System.

(6) The Medical Benefits Account Fund shall be the fund in which shall be accumulated the amounts contributed to the Retirement System for the purposes of funding Medical Benefits, together with earnings thereon.

(7) The Expense Fund shall be the fund to which shall be credited funds, if any, provided to the Retirement System by the City to pay the administrative expenses of the Retirement System, and from which shall be paid certain expenses incurred in connection with the administration and operation of the Retirement System.

(8) The Income Fund shall be the Fund to which shall be credited all interest, dividends, and other income derived from the investments of the assets of Component I of the Retirement System and earnings thereon, all gifts and bequests received by Component I of the Retirement System, and all other moneys credited to Component I of the Retirement System, the disposition of which is not specifically provided for in this Article 9. There shall be paid or transferred from the Income Fund, all amounts required to credit earnings and losses to the various Funds of the Retirement System in accordance with the provisions of Component I of this Combined Plan Document. Amounts credited to the Income Fund in excess of amounts needed to credit earnings and losses of the Retirement System as provided in this Component I for any Plan Year shall be used in the following manner in the following order: (i) to pay administrative expenses of Component I (to the extent there are insufficient funds for this purpose credited to the Expense Fund), and/or (ii) transferred to the Pension Accumulation Fund and used to pay Retirement Allowances and other benefits on account of Members.

Sec 9.3. Method of Financing Retirement System Benefits

(1) The pension liabilities for Members under this Component I shall be determined by the Plan's Actuary using the Entry Age Actuarial Cost Method of actuarial valuation.

(2) The City's annual contribution to finance the prospective pension liabilities during the nine Plan Year period commencing July 1, 2014 and ending June 30, 2023 shall be (a) eleven and two-tenths percent (11.2%) of the Compensation of active employees who are members of the DFFA (for pay periods ending on or before November 6, 2014) and members of DPOA (for pay periods ending on or before October 3, 2014) and (b) twelve and one-quarter percent (12.25%) of the Compensation of active employees who are members of the DPCOA, the DPLSA, the DPOA (for pay periods beginning on or after October 3, 2014) and the DFFA (for pay periods beginning on or after November 6, 2014). A portion of the City's annual contribution for each Plan Year shall be credited to the Pension Accumulation Fund and a portion shall be credited to the Rate Stabilization Fund, each amount as determined by the City in its sole discretion. For plan years commencing July 1, 2023 and later, the accrued pension liabilities for Members shall be determined by the Actuary using reasonable and appropriate actuarial assumptions approved by the Board and the Investment Committee. The City's annual contributions to finance the normal cost of benefits and any such unfunded accrued pension liabilities

shall be determined by the Actuary amortizing such unfunded accrued pension liabilities over a period or periods of future years as established by the Board and approved by the Investment Committee.

(3) Except as provided in Section 9.5, for each Plan Year, a Member who was an active employee as of June 30, 2014 ("current active") shall contribute to the Retirement System an amount equal to six percent (6%) of his or her Compensation for such Plan Year and a Member who is hired or rehired by the City on or after July 1, 2014 ("new employee") shall contribute to the Retirement System an amount equal to eight percent (8%) of his or her Compensation for such Plan Year. A Member's Mandatory Employee Contributions for the Plan Year beginning July 1, 2014 and ending June 30, 2015 shall commence as of the Member's first payroll date occurring in August 2014. The officer or officers responsible for processing the payroll shall cause a Member's Mandatory Employee Contributions to be deducted from the Member's Compensation on each and every payroll, for each and every payroll period, from the later of (i) the Member's first payroll date occurring in August 2014 and (ii) the Member's date of hire, to the date he or she ceases to be an active Member. The contribution shall be deducted from a Member's Compensation, notwithstanding that the minimum compensation provided by law for any Member shall be reduced thereby. Payment of compensation, less said Mandatory Employee Contributions, shall be a complete discharge of all claims and demands whatsoever for the services rendered by the said Member during the period covered by such payment. Member Mandatory Employee Contributions will be used for the purpose of funding the normal cost of the Retirement System.

Sec 9.4. Member Contributions Picked-Up

(1) The City shall pick up Member Mandatory Employee Contributions required pursuant to Sections 9.3(3) and 9.5 in accordance with Code Section 414(h).

(2) The picked-up contributions, although designated as employee contributions shall be treated as City contributions for the purpose of determining a Member's tax treatment under the Internal Revenue Code. The City shall pay the contributions picked-up on behalf of a Member from the same source of funds that are used for paying compensation to the Member.

(3) The City shall pick up Member Mandatory Employee Contributions by a reduction in the Member's cash salary or an offset against a future salary increase, or both. The City shall designate the Mandatory Employee Contributions that are picked-up and paid to the Retirement System as employer contributions and not as employee contributions. No Member who participates in the Retirement System shall have the option of choosing to receive the contributed amounts directly instead of having those amounts paid by the City to the Retirement System.

Sec 9.5. Fiscal Responsibility: Benefit Reductions and Increased Funding Obligations

(1) To safeguard the long-term actuarial and financial integrity of the Retirement System, in the event the funding level of Component I of the Retirement System projected over a

five year period falls below ninety percent (90%), the Trustee may not award the variable Pension Improvement Factor (Escalator) described in Section 6.2 to any individual beginning with the Plan Year following the Plan Year in which such determination is made and continuing until the funding level is restored to not less than ninety percent (90%).

(2) In the event the funding level of the Retirement System projected over a five year period falls below ninety percent (90%), the following remedial action shall be required in the order set forth below, beginning with the Plan Year following the Plan Year in which such determination is made and continuing until the funding level is projected to be not less than one hundred percent (100%) on a market value basis within the next five years:

(a) the remedial action required in Section 9.5(1) shall be implemented or continued;

(b) all amounts credited to the Rate Stabilization Fund shall be transferred to the Pension Accumulation Fund for the purposes of funding benefits payable under the Retirement System;

(c) Mandatory Employee Contributions for active and new employees shall be increased by one percent (1%) per year for up to the next following five Plan Years;

(d) Mandatory Employee Contributions for active and new employees shall be increased by an additional one percent (1%) per year for up to the next following five Plan Years;

(e) Mandatory Employee Contributions for active and new employees shall be increased by an additional one percent (1%) per year for up to the next following five Plan Years;

(f) the Retirement Allowance payable to a Retiree shall not include the variable Pension Improvement Factor (Escalator) that was most recently paid to the Retiree on the date the funding level is projected to fall below ninety percent (90%);

(g) the Retirement Allowance payable to a Retiree shall not include the variable Pension Improvement Factor (Escalator) that was most recently added to the Member's Retirement Allowance for the Plan Year preceding the Plan Year referenced in paragraph (f) above;

(h) Mandatory Employee Contributions for active and new employees shall be increased by an additional one percent (1%) per year for up to the next following five Plan Years; and

(i) contributions made to the Retirement System by the City shall be increased, consistent with applicable actuarial principles and the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq.*

(3) For purposes of this Section 9.5, the "funding level" of Component I of the Retirement System shall mean the ratio of the market value of the assets of Component I of the Retirement System to the actuarial accrued liability of Component I of the Retirement System. The actuarial accrued liability shall be calculated by the Plan's Actuary utilizing an interest rate assumption of six and three-quarters percent (6.75%) and other reasonable assumptions as directed by the Board upon the recommendation of the Investment Committee. The market value of assets shall be determined on the basis of a three-year look back period of smoothed investment returns.

ARTICLE 10. VOLUNTARY EMPLOYEE CONTRIBUTIONS

Sec 10.1. Voluntary Employee Contributions; Amount; Vesting

Subject to procedures established by the Board, a Member who is covered by a collective bargaining agreement with the City that permits the Member to make Voluntary Employee Contributions to Component I of the Retirement System may elect to contribute a whole percentage not less than one percent (1%) nor more than ten percent (10%) of his or her Compensation for a Plan Year to a Voluntary Employee Contribution Account maintained on his or her behalf under Component I of the Retirement System. A Member represented by the DPOA may elect to reduce the amount paid to him or her by the City for accumulated sick leave in excess of 400 hours by a whole percentage not less than one percent (1%) nor more than one hundred percent (100%) of such amount and have such amount contributed by the City to a Voluntary Employee Contribution Account maintained on his or her behalf under Component I of the Retirement System. Voluntary Employee Contributions shall be made to the Retirement System on an after-tax basis. Amounts credited to a Member's Voluntary Employee Contribution Account shall be one hundred percent (100%) vested at all times.

Sec 10.2. Changing an Election to Contribute

A Member may change or revoke an election to make Voluntary Employee Contributions to the Retirement System pursuant to this Article 10 in such manner and with such advance notice as the City shall determine. Notwithstanding the foregoing, a Member shall be permitted to change such election not less frequently than annually.

Sec 10.3. Individual Member Accounting; Crediting of Earnings

The Board shall maintain a Voluntary Employee Contribution Account on behalf of each Member who elects to make Voluntary Employee Contributions to the Retirement System. Each Plan Year, a Member's Voluntary Employee Contribution Account shall be credited with earnings at a rate equal to the actual net investment rate of return on the assets of the Retirement System for the second Fiscal Year immediately preceding the Fiscal Year in which the earnings are credited; in no event, however, shall the earnings rate credited to a Member's Voluntary Employee Contribution Account for any Plan Year be less than zero percent (0%) nor greater than five and one-quarter percent (5.25%).

Sec 10.4. Distribution of Accumulated Voluntary Employee Contributions

(1) If a Member ceases employment with the City other than by reason of death, the Member may elect to receive distribution of the Accumulated Voluntary Employee Contributions credited to his or her Voluntary Employee Contribution Account. If a Member elects to receive his or her Accumulated Voluntary Employee Contributions, such amounts shall be paid to the Member in a lump sum payment or in equal monthly installments for a period not to exceed three years, according to such rules and regulations as the Board may adopt from time to time.

(2) In lieu of receiving distribution of his or her Accumulated Voluntary Employee Contributions as provided in Section 10.4(1), a Member may elect to have the Actuarial

Equivalent Value of his or her Accumulated Voluntary Employee Contributions added to his or her Retirement Allowance and paid in the form of an annuity described in Section 8.1. Any such annuity shall be subject to market rates of investment return and other market-related assumptions, as adopted by the Board upon recommendation of the Investment Committee.

(3) If a Member dies while employed by the City or following termination of employment but prior to receiving distribution of the Member's Accumulated Voluntary Employee Contributions, the amounts credited to the Member's Voluntary Employee Contribution Account at the time of death shall be paid to the Beneficiary nominated in a written designation duly executed by the Member and filed with the Board. In the event there is no such designated Beneficiary surviving, the Member's Accumulated Voluntary Employee Contributions shall be paid to the Member's estate. If a Member who dies without a legal will has not nominated a Beneficiary, the Member's Accumulated Voluntary Employee Contributions at the time of death may be used to pay burial expenses if the Member leaves no other estate sufficient for such purpose. Such expenses shall not exceed a reasonable amount as determined by the Board.

ARTICLE 11. LOAN PROGRAM FOR VOLUNTARY EMPLOYEE CONTRIBUTIONS

Sec 11.1. The Loan Program

A loan program shall be available to Members who have amounts credited to a Voluntary Employee Contributions Account under Component I of the Retirement System. The Board is authorized to adopt rules and regulations, from time to time, to govern the administration and the operation of the loan program. Copies of the rules shall be made available to eligible Members in the offices of the Retirement System. Any loans granted or renewed under the Retirement System shall be made and administered pursuant to and in compliance with Section 72(p) of the Internal Revenue Code and regulations thereunder.

Sec 11.2. Eligibility for Loan

Subject to the rules and procedures established by the Board, loans may be made to eligible Members from such Member's Voluntary Employee Contribution Account. An eligible Member is any Member who has participated in the Retirement System for twelve months or more. Former Members, Spouses and Beneficiaries are not eligible to receive any loans from the Retirement System. No Member shall have more than two outstanding loans from the Retirement System (Component I and/or Component II) at any time. A Member who has previously defaulted on a loan under either Component I or Component II shall not be eligible for a loan from the Retirement System.

Sec 11.3. Amount of Loan

An eligible Member who has satisfied applicable rules and procedures established by the Board may borrow from his or her Voluntary Employee Contribution Account an amount which does not exceed the lesser of (i) fifty percent (50%) of the Member's Voluntary Employee Contribution Account balance, and (ii) Fifteen Thousand Dollars ($15,000.00), in each case reduced by: (1) the Member's highest outstanding loan balance under the Retirement System (both Component I and Component II) during the one year period ending on the day before the date on which the loan is made, or (2) the outstanding loan balance under the Retirement System (both Component I and Component II) on the date on which the loan is made, whichever is less. The minimum loan amount shall be One Thousand Dollars ($1,000.00).

Sec 11.4. Terms and Conditions

In addition to such rules and procedures that are established by the Board, all loans shall comply with the following terms and conditions:

(a) Each loan application shall be made in writing.

(b) All loans shall be memorialized by a collateral promissory note for the amount of the loan, including interest, payable to the order of the Retirement System and properly executed by the Member.

(c) Each loan shall be repaid by substantially equal payroll deductions over a period not to exceed five years, or, where the loan is for the purpose of buying a principal residence, a period not to exceed fifteen years. In no case shall the amount of the payroll deduction be less than Twenty Dollars ($20.00) for any two-week pay period. A Member receiving a loan will be required to authorize payroll deductions from his or her compensation in an amount sufficient to repay the loan over its term.

(d) An amount equal to the principal amount of the loan to a Member (but not more than one half of the Member's vested interest in the Defined Contribution Plans of the Retirement System) will be designated as collateral for guaranteeing the loan.

(e) Each loan shall bear interest at a rate determined by the Board. The Board shall not discriminate among Members in its determination of interest rates on loans. However, loans initiated at different times may bear different interest rates, where, in the opinion of the Board, the difference in rates is supported by a change in market interest rates or a change in the Retirement System's current assumed rate of return. The loan interest rate shall bear a reasonable relationship to market rates for secured loans of a similar duration and shall bear a reasonable relationship to the costs to the Retirement System of administering the loan. The loan interest rate shall be calculated in a manner that will not negatively affect either the City's costs with respect to the Retirement System or the investment return allocated to Members.

(f) Loan repayments shall be suspended during a period of military service, as permitted by Section 414(u)(4) of the Internal Revenue Code. A Member who has an outstanding loan balance from the Retirement System who is absent from employment with the City, and who has satisfied the requirements of Section 414(u) of the Internal Revenue Code shall not be required to make loan repayments to the Retirement System during said periods of absence.

Sec 11.5. Loan Balance

A Member's outstanding loan balance shall be considered a directed investment by the Member and interest payments shall be credited to the Member's Voluntary Employee Contribution Account (provided that the interest credited to the Member's Voluntary Employee Contribution Account shall be reduced appropriately to cover the administrative costs of the loan program and avoid negatively affecting the City's costs or the Retirement System's investment returns), and shall not be part of the Retirement System's net investment income or part of the Member's Voluntary Employee Contribution Account balance for the purpose of allocation of net investment income under the Retirement System.

Sec 11.6. Default

In the event a Member defaults on a loan before the loan is repaid in full, the unpaid balance thereof will become due and payable and, to the extent that the outstanding amount is not repaid by the end of the calendar quarter which follows the calendar quarter in which the last payment was received, such amount shall be deemed to have been distributed to the Member for tax purposes, consistent with Section 72(p) of the Internal Revenue Code.

Sec 11.7. Distribution

No distribution shall be made to a Member, former Member, Spouse or Beneficiary from the Retirement System until all outstanding loan balances and applicable accrued interest have been repaid or offset against amounts distributable to the Member from the Retirement System.

Sec 11.8. Annual Report

The Retirement System shall include, in its annual report to all Members, an accounting of the loan program established by this Component I, which contains the number and amount of loans made, the costs of administering the program, the amount of payments made including interest received by the Retirement System, the amount of loans outstanding, including any defaults or delinquencies, and an evaluation as to whether the interest charged in the Fiscal Year covered the costs of administering the loan program.

ARTICLE 12. DEFERRED RETIREMENT OPTION PLAN ("DROP") PROGRAM

Sec 12.1. General Provisions

The following provisions are hereby established as the Deferred Retirement Option Plan ("DROP") Program under Component I, which shall be available to Members who are covered by collective bargaining agreements with the City that permit such Members to participate in the DROP program and those non-union executives of the Police Department and the Fire Department.

(1) In lieu of terminating employment and accepting a Retirement Allowance under the Component I, any Member of the Retirement System who is eligible for the DROP program and who is eligible to immediately retire and receive an unreduced Retirement Allowance under Section 5.1 may elect to participate in the DROP program and defer the receipt of his or her Retirement Allowance in accordance with the provisions of this Article 12. Any such election shall be irrevocable.

(2) A Member shall be entitled to participate in the DROP program under Component I for a maximum of five years. At the end of such five year period of participation in the DROP program, the Member shall be retired from employment.

Sec 12.2. Conversion to Retirement Allowance

Upon the effective date of a Member's participation in the DROP program, the Member shall cease to accrue a Retirement Allowance pursuant to Section 6.1 and shall elect a form of payment for his or her Retirement Allowance pursuant to Section 8.1. Seventy-five percent (75%) of the monthly Retirement Allowance (including applicable variable Pension Improvement Factor (Escalator) increases) that would have been payable, had the Member elected to terminate employment with the City on the effective date of his or her DROP election and receive an immediate Retirement Allowance, shall be paid into a DROP Account established on behalf of the Member under the Retirement System or in an entity selected by the Board.

Sec 12.3. Investment of DROP Assets

(1) ING was previously selected by the Board as the DROP administration and investment entity for Members who elect to participate in the DROP program. ING shall continue to be the DROP administration and investment entity, unless and until such time as the Board terminates the agreement with ING as provided in paragraph (4) or determines that it is administratively feasible for the DROP program to be administered and invested under the Retirement System.

(2) As soon as possible after July 1, 2014, the Board shall determine whether it is administratively feasible for the DROP program to be administered and the assets in DROP accounts invested under the Retirement System. If the Board determines that it is feasible to administer the DROP program under the Retirement System, the Board shall promptly take appropriate steps to implement such decision.

(3) If amounts credited to a DROP Account are invested under the Retirement System, such amounts shall be comingled with the assets of the Retirement System for investment purposes and shall be invested by the Trustees. A Member's DROP Account shall be credited with annual earnings at a rate equal to seventy-five percent (75%) of the actual net earnings rate of the assets of the Retirement System; however, in no event shall the earnings rate applied to a Member's DROP Account for any Plan Year be less than zero percent (0%) nor greater than seven and three-quarters percent (7.75%).

(4) The Board of Trustees previously entered into an administrative services agreement with ING. Such agreement shall remain in effect until such time as it is terminated by the Board as provided therein.

(5) The Board of Trustees may replace ING with a trust-type vehicle or the Board may determine that amounts subject to a DROP election will be invested with Retirement System assets as provided above.

(6) Any fees associated with the maintenance of DROP Accounts outside of the Retirement System shall be paid by the Members by means of deduction from their DROP Accounts.

Sec 12.4. Distribution of Amounts Credited to DROP Account

A Member shall not receive a distribution of amounts credited to his or her DROP Account prior to his or her termination of employment with the City. Upon termination of employment, a Member who is a participant in the DROP program shall receive, at his or her option either a lump sum payment from the DROP Account equal to the amount then credited to the DROP Account or an annuity based upon the amount credited to his or her DROP Account. Any such annuity shall be subject to market rates of interest return and other market-related assumptions as adopted by the Board upon recommendation of the Investment Committee. In addition, one hundred percent (100%) of the Member's monthly Retirement Allowance that otherwise would have been paid as of the date the Member's participation in the DROP program commenced (together with any applicable variable Pension Improvement Factor (Escalator) increases) shall commence to the Member in accordance with the form of payment selected by the Member at the commencement of his or her participation in the DROP program. Termination of employment includes termination of any kind, such as resignation, retirement, discharge or disability.

Sec 12.5. Death of Member While Participating in the DROP Program

If a Member dies while participating in the DROP program, a lump sum payment equal to the Member's DROP Account balance shall be paid to the Beneficiary named by the Member, or if no Beneficiary has been designated, to the Member's estate. In addition, one hundred percent (100%) of the Member's Retirement Allowance (together with any applicable variable Pension Improvement Factor (Escalator) increases) that would have been paid to the Member but for the Member's decision to participate in the DROP program will be restored. Survivor benefits, if any, shall be paid in accordance with the payment option elected by the deceased Member at the time the Member elected to participate in the DROP program.

Sec 12.6. Disability of Member While Participating in the DROP Program

If a Member becomes Totally Disabled while participating in the DROP program and while still an Employee and his or her employment with the City is terminated because he or she is Totally Disabled, such Member (a) shall be immediately retired and one hundred percent (100%) of the Retirement Allowance that would have been paid to the Member as of the date the Member's participation in the DROP program commenced (together with any applicable variable Pension Improvement Factor (Escalator) increases) will commence in accordance with the payment option selected by the Member at the commencement of the Member's participation in the DROP program as provided in Section 12.1(2), and (b) shall be entitled to receive payment of the funds in his or her DROP Account (in the form of a lump sum or other Actuarially Equivalent form of payment described in Section 8.1). Such Member shall not be entitled to disability retirement benefits under Section 5.3 or Section 5.4 hereof.

Sec 12.7. Cost Neutrality

(1) The DROP program shall be effective only for as long as it is cost-neutral to the City, provided however, that the DROP program shall continue during the pendency of proceedings, described in paragraph (2) below, designed to restore the Retirement System to cost neutrality.

(2) If the City contends that the DROP program is not cost-neutral, including, but not limited to, making the City's annual contribution to the Retirement System higher than it would be if the DROP program was not in effect, the Board and the City, along with the Plan Actuary and an actuary appointed by the City (who will be an associate or a fellow of the Society of Actuaries and a member of the American Academy of Actuaries) shall meet and confer in good faith regarding the cost. If the Board and the City are unable to reach an agreement as to cost, the matter shall be submitted to a third, independent, actuary chosen or agreed upon by the Plan Actuary and the City's actuary. This actuary, when rendering a decision, will be limited to ordering implementation of changes necessary to make the DROP program cost-neutral. Upon the implementation of changes necessary to make the DROP program cost-neutral, Members shall have thirty days to elect to either (a) retire from active employment with the City, or (b) withdraw from the DROP program and resume active participation in Component I of the Retirement System. The Board shall notify DROP participants of these changes prior to implementation. Those DROP participants resuming participation in Component I of the Retirement System shall not accumulate Credited Service for any time that they were participating in the DROP program (under either Component I or Component II). Those not making either election shall continue to participate in the DROP program.

(3) In the event the DROP program cannot be changed to restore cost neutrality, it shall be discontinued and Members participating in the DROP program at that time shall have the option to either (i) retire, or (ii) continue active employment with the City and resume active participation in Component I of the Retirement System. DROP participants resuming participation in Component I of the Retirement System shall not accumulate Credited Service for the time during which such DROP participants participated in the DROP program (under either Component I or Component II).

ARTICLE 13. LIMITATION ON BENEFITS AND CONTRIBUTIONS

Sec 13.1. Compliance With Code Section 415(b) And Regulations

(1) Notwithstanding any other provision of this Combined Plan Document, the defined benefit component of the Retirement System shall be administered in compliance with the provisions of Code Section 415(b) and regulations thereunder that are applicable to governmental plans.

(2) The maximum annual benefit accrued by a Member during a "limitation year" (which shall be the Plan Year) and the maximum annual benefit payable under the Retirement System to a Member at any time within a Plan Year, when expressed as an annual benefit in the form of a straight life annuity (with no ancillary benefits), shall be equal to \$160,000 (as such amount is adjusted pursuant to Code Section 415(d) for such Plan Year).

(3) Notwithstanding the foregoing:

(a) if the benefit under the Retirement System is payable in any form other than a straight life annuity, the determination as to whether the limitation described in Section 13.1(2) has been satisfied shall be made, in accordance with the regulations prescribed by the Secretary of the Treasury, by adjusting such benefit to the Actuarially Equivalent straight life annuity beginning at the same time, in accordance with Section 13.1(9) or (10);

(b) if the benefit under the Retirement System commences before Age sixty-two, the determination of whether the limitation set forth in Section 13.1(2) (the "Dollar Limit") has been satisfied shall be made, in accordance with regulations prescribed by the Secretary of the Treasury, by reducing the Dollar Limit so that the Dollar Limit (as so reduced) is equal to an annual benefit payable in the form of a straight life annuity, commencing when such benefit under the Retirement System commences, which is Actuarially Equivalent to a benefit in the amount of the Dollar Limit commencing at Age sixty-two (adjusted for participation of fewer than 10 years, if applicable); provided, however, if the Retirement System has an immediately commencing straight life annuity commencing both at Age sixty-two and the age of benefit commencement, then the Dollar Limit (as so reduced) shall equal the lesser of (i) the amount determined under this Section 13.1(3)(b) without regard to this proviso, or (ii) the Dollar Limit multiplied by a fraction the numerator of which is the annual amount of the immediately commencing straight life annuity under the Retirement System and the denominator of which is the annual amount of the straight life annuity under the Retirement System, commencing at Age sixty-two; and

(c) if the benefit under the Retirement System commences after Age sixty-five, the determination of whether the Dollar Limit has been satisfied shall be made, in accordance with regulations prescribed by the Secretary of the Treasury, by increasing the Dollar Limit so that the Dollar Limit (as so increased) is equal to an annual benefit payable in the form of a straight life annuity, commencing when the benefit under the Retirement System commences, which is Actuarially Equivalent to a benefit in the amount of the Dollar Limit commencing at Age sixty-five; provided, however, if the Retirement System has an immediately commencing straight life annuity commencing both at Age sixty-five and the Age of benefit commencement, the Dollar Limit (as so increased) shall equal the lesser of (i) the amount determined under this Section 13.1(3)(c) without regard to this proviso, or (ii) the Dollar Limit multiplied by a fraction the numerator of which is the annual amount of the immediately commencing straight life annuity under the Retirement System and the denominator of which is the annual amount of the immediately commencing straight life annuity under the Retirement System, commencing at Age sixty-five.

(4) The adjustments in Sections 13.1(3)(b) shall not apply to a Member with at least 15 years of Credited Service as a Police Member or a Fire Member within the meaning of Code Section 415(b)(2)(H). In addition, the adjustments in Sections 13.1(3)(b) and 13.1(6) shall not apply to benefits payable on account of the disability or the death of a Member.

(5) Notwithstanding the foregoing provisions of this Section 13.1, except as provided in Section 13.1(6), the maximum annual benefit specified in Section 13.1(2) above shall not apply to a particular Retirement System benefit if (a) the annual amount of such Retirement System benefit, together with the aggregate annual amount of any other pensions payable with respect to such Member under all other defined benefit plans maintained by the City, does not exceed $10,000 for the Plan Year or any prior Plan Year, and (b) the Member was not at any time a participant in a Defined Contribution Plan maintained by the City.

(6) In the case of a Member who has less than ten years of participation in the Retirement System, the limitation set forth in Section 13.1(2) shall be such limitation (without regard to this Section 13.1(6)), multiplied by a fraction, the numerator of which is the number of years of participation in the Retirement System (or parts thereof) credited to the Member and the denominator of which is ten. In the case of a Member who has less than ten years of Vesting Service, the limitations set forth in Section 13.1(2) and in Section 13.1(5) shall be such limitations (determined without regard to this Section 13.1(6)) multiplied by a fraction, the numerator of which is the number of years of Vesting Service, or parts thereof, credited to the Member and the denominator of which is ten. The adjustment in this Section 13.1(6) shall not apply to benefits paid on account of the disability or death of a Member.

(7) Notwithstanding anything in this Section 13.1 to the contrary, if the annual benefit of a Member who has terminated employment with the City is limited pursuant to the limitations set forth in Section 13.1(2), such annual benefit shall be increased in accordance with the cost-of-living adjustments of Code Section 415(d).

(8) For purposes of determining actuarial equivalence under Paragraph (b) or (c) of Section 13.1(3), the interest rate assumption shall be five percent (5%) and the mortality table used shall be the applicable mortality table specified by the Board.

(9) The Actuarially Equivalent straight life annuity for purposes of adjusting any benefit payable in a form to which Code Section 417(e)(3) does not apply, as required by Paragraph (a) of Section 13.1(3), is equal to the greater of (a) the annual amount of the straight life annuity payable under the Retirement System commencing at the same annuity starting date as the form of benefit payable to the Member, or (b) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the form of benefit payable to the Member, computed using the interest rate and mortality assumptions set forth in Section 13.1(8).

(10) The Actuarially Equivalent straight life annuity for purposes of adjusting any benefit payable in a form to which Code Section 417(e)(3) applies, as required by Paragraph (a) of Section 13.1(3), is equal to the greatest of (a) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same Actuarial Equivalent present value as the form of benefit payable to the Member, (b) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the form of benefit payable to the Member, computed using a five and one-half percent (5.5%) interest rate assumption and the applicable mortality table specified by the Board, or (c) the annual amount of the straight life annuity commencing at the same annuity starting date that has the same actuarial present value as the form of benefit payable to the Member, computed using the applicable interest rate and the applicable mortality table, both as specified by the Board, divided by 1.05.

(11) For purposes of applying the limitations set forth in this Section 13.1, all qualified defined benefit plans (whether or not terminated) ever maintained by the City shall be treated as one defined benefit plan.

(12) For purposes of this Section 13.1, the term "compensation" shall include those items of remuneration specified in Treasury Regulation § 1.415(c)-2(b) and shall exclude those items of remuneration specified in Treasury Regulation § 1.415(c)-2(c), taking into account the timing rules specified in Treasury Regulation § 1.415(c)-2(e), but shall not include any amount in excess of the limitation under Code Section 401(a)(17) in effect for the year. The term "compensation" as defined in the preceding sentence shall include any payments made to a Member by the later of (a) two and one-half months after the date of the Member's severance from employment with the City or (b) the end of the limitation year that includes the date of the Member's severance from employment with the City, provided that, absent a severance from employment, such payments would have been paid to the Member while the Member continued in employment with the City and are regular compensation for services performed during the Member's regular working hours, compensation for services outside the Member's regular working hours (such as overtime or shift differential pay), commissions, bonuses or other similar compensation.

(13) This Section 13.1 shall be administered in conformity with the regulations issued by the Secretary of the Treasury interpreting Code Section 415 including, but not limited to those interpreting Section 415(b)(2)(H), and any regulation providing for the "grandfathering" of any benefit accrued prior to the effective date of such regulations or statutory provision.

Sec 13.2. Compliance with Code Section 415(c) and Regulations

(1) The "Annual Addition" with respect to a Member for a limitation year shall in no event exceed the lesser of:

(a) $40,000 (adjusted as provided in Code Section 415(d)); or

(b) One hundred percent (100%) of the Member's compensation, as defined in Code Section 415(c)(3) and regulations issued thereunder, for the limitation year.

(2) The Annual Addition with respect to a Member for a limitation year means the sum of his or her Voluntary Employee Contributions made to the Retirement System, and the employer contributions, employee contributions and forfeitures allocated to his or her accounts under any other qualified Defined Contribution Plan (whether or not terminated) maintained by the City, and the amounts described in Code Sections 415(l)(2) and 419A(d)(2) allocated to his or her account.

(3) In the event the Annual Addition to the Retirement System on behalf of a Member would otherwise exceed the amount that may be applied for his or her benefit under the limitation contained in this Section 13.2, the limitation shall be satisfied by reducing the Member's Voluntary Employee Contributions to the extent necessary and distributing such amounts to the Member.

ARTICLE 14. RETIREMENT SYSTEM ADMINISTRATION

Sec 14.1. Board of Trustees as Retirement System Administrator

(1) The Retirement Board shall have the power and authority to manage and administer the Retirement System in accordance with the provisions of this Combined Plan Document.

(2) The Retirement Board shall provide procedures for the processing and review of benefit claims, corrections of errors, and similar matters, as further described in Section 14.2.

(3) The Retirement Board and the Retirement System shall not make any payment to active or retired Members or Beneficiaries other than payments that are required by the Retirement System as established by this Combined Plan Document. This prohibition applies to all payments that are not authorized by this Combined Plan Document, whether such payments are those commonly referred to as a "thirteenth check" or payments by any other name.

Sec 14.2. Powers and Duties of Board

(1) The Board shall have the following powers and duties:

(a) exclusive authority regarding the administration, management and operation of the Retirement System, including, but not limited to, the right to contract for office space, computer hardware and software, and human resource services (any or all of which may be obtained from the City), and to make rules and regulations with respect to the operation of the Retirement System not inconsistent with the terms of the Combined Plan Document and applicable law, and to amend or rescind such rules and regulations;

(b) to determine questions of law or fact that may arise as to the rights of any person claiming rights under the Retirement System;

(c) to determine the contributions to the Retirement System required of the City and Members pursuant to the documents governing operation of the Retirement System, including the Plan of Adjustment;

(d) to construe and interpret the provisions of the Retirement System and to reconcile any inconsistencies;

(e) to perform ministerial functions, whether or not expressly authorized, which the Board may deem necessary or desirable in carrying out its duties under the Retirement System;

(f) except to the extent authority is vested in the Investment Committee, authority to employ, contract and pay for professional services including, but not limited to, actuarial, investment, legal, accounting, medical, and any other services that the Board considers necessary for the proper operation of the Retirement System;

(g) except to the extent authority or responsibility is vested in the Investment Committee, to arrange for annual audits of the records and accounts of the Retirement System by a certified public accountant or by a firm of certified public accountants pursuant to generally accepted auditing standards;

(h) to prepare an annual report for the Retirement System for each Fiscal Year in compliance with generally accepted accounting principles. The report shall contain information regarding the financial, actuarial, and other activities of the Retirement System during the Fiscal Year. The Board shall furnish a copy of the annual report to the Mayor and finance director of the City, to the chair of the City Council and the Investment Committee. The report shall also contain a review of the latest actuarial valuation of the Retirement System;

(i) to maintain or cause to be maintained such separate funds and accounts as are required to be maintained under the provisions of Components I and II of the Combined Plan Document and such additional accounts as the Board deems necessary or expedient for the proper administration of the Retirement System and the administration and investment of the assets of the Retirement System. The Board shall maintain suitable records, data and information in connection with the performance of its functions, including, but not limited to, accurate and detailed accounts of all investments, receipts, disbursements, and other actions, including the proportionate interest therein and contributions of each Member who has made contributions to the Retirement System;

(j) to correct any error in the records of the Retirement System that results in overpayment or underpayment of contributions to the Retirement System by the City or a Member, or overpayment or underpayment of benefits to a Member, former Member, or Beneficiary by the Retirement System. In the event of overpayment to a Member, former Member or Beneficiary, the Board may, as far as practicable, adjust future payments to such individual in such a manner that the Actuarial Equivalent of the benefit to which such individual was entitled shall be paid;

(k) to the extent permissible under Michigan law (and consistent with the Retirement System's favorable tax qualified status under Code Section 401(a)), purchase one or more insurance policies to indemnify any person and such person's heirs and legal representatives who is made a party to (or threatened to be made a party to) any action, suit or proceeding whether brought by or in the right of the Board, the Investment Committee or the Retirement System or otherwise, by reason of the fact that such person is or was a Board member, Investment Committee member, director, officer, employee or agent of the Board (or an advisory body or committee of the Board) or the Retirement System. The insurance policies purchased by the Board shall not indemnify any person who is judicially determined to have incurred liability due to fraud, gross negligence or malfeasance in the performance of his or her duties; and

(l) except to the extent authority or responsibility is vested in the Investment Committee, to perform any other function that is required for the proper administration of the Retirement System.

Sec 14.3. Executive Director; Employees

The Board shall employ on behalf of the Retirement System an executive director and any other employees for which the Board establishes positions. The executive director shall do all of the following:

(a) manage and administer the Retirement System under the supervision and direction of the Board;

(b) annually prepare and submit to the Board for review, amendment, and adoption an itemized budget projecting the amount required to pay the Retirement System's expenses for the following Fiscal Year; and

(c) perform such other duties as the Board shall delegate to the executive director.

The executive director, unless such power is retained by the Board, shall determine the compensation of all employees of the Retirement System (except the executive director, whose compensation shall be determined by the Board and the chief investment officer, whose compensation shall be determined by the Investment Committee) and such compensation shall be payable from the Retirement System. Any person employed by the Retirement System may but need not be an employee of the City.

Sec 14.4. Discretionary Authority

The Board shall have sole and absolute discretion to:

(a) interpret the provisions of the Retirement System;

(b) make factual findings with respect to any and all issues arising under the Retirement System;

(c) determine the rights and status of Members, Retirees, Beneficiaries and other persons under the Retirement System;

(d) decide benefit claims and disputes arising under the Retirement System pursuant to such procedures as the Board shall adopt; and

(e) make determinations and findings (including factual findings) with respect to the benefits payable hereunder and the persons entitled thereto as may be required for the purposes of the Retirement System.

Sec 14.5. Administrator's Decision Binding

The Board's decision on any matter arising in connection with administration and interpretation of the Retirement System shall be final and binding on Members, Retirees and Beneficiaries.

ARTICLE 15. MANAGEMENT OF FUNDS

Sec 15.1. Board as Trustee of Retirement System Assets

The Board of Trustees shall be the trustee of the funds held under the Retirement System, shall receive and accept all sums of money and other property paid or transferred to it by or at the direction of the City, and subject to the terms of Article 16, shall have the power to hold, invest, reinvest, manage, administer and distribute such money and other property subject to all terms, conditions, limitations, and restrictions imposed on the investment of assets of public employee retirement systems or plans by *Act No. 314* of the *Public Acts of 1965, being sections 38.1132 et seq. of the Michigan Compiled Laws*, as amended.

Sec 15.2. Maintenance of Segregated Funds

The Board of Trustees shall maintain separate funds as required for the proper administration of the Retirement System and shall not commingle the assets held under the Retirement System for the purpose of funding benefits accrued by Members prior to July 1, 2014, together with earnings and losses on such assets (or replacement assets), as more fully described in Component II of this Combined Plan Document, with the assets of the Retirement System held for the purpose of paying benefits accrued by Members on and after July 1, 2014 as described in this Component I of the Combined Plan Document. Notwithstanding the foregoing, the assets held under Components I and II of this Combined Plan Document may be commingled for investment purposes, and transferred as provided in Section G-2(f) of Component II.

Sec 15.3. Custodian of Funds

The Board of Trustees shall appoint or employ custodians of the assets of the Retirement System. The custodians shall perform all duties necessary and incidental to the custodial responsibility and shall make disbursements as authorized by the Board.

Sec 15.4. Exclusive Purpose

All money and other assets of the Retirement System shall be held by the Trustees and invested for the sole purpose of paying benefits to Members and Beneficiaries and shall be used for no other purpose other than payment of the reasonable expenses of maintaining the Retirement System. In exercising its discretionary authority with respect to the management of the money and other assets of the Retirement System, the Trustees shall exercise the care, skill, prudence and diligence under the circumstances then prevailing, that a person acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of like character with like aims.

Sec 15.5. Prohibited Conduct

Members of the Board and employees of the Retirement System are prohibited from:

(1) Having any beneficial interest, direct or indirect, in any investment of the Retirement System;

(2) Being an obligor or providing surety for any money loaned to or borrowed from the Retirement System;

(3) Except as provided in Article 11, borrowing any money or other assets of the Retirement System; and

(4) Receiving any pay or other compensation from any person, other than compensation paid by the Retirement System, with respect to investments of the Retirement System.

ARTICLE 16. INVESTMENT OF RETIREMENT SYSTEM ASSETS

Sec 16.1. Investment Powers of the Board and the Investment Committee

Subject to the requirements set forth in this Article 16, the Board shall have the power and authority to manage, control, invest and reinvest money and other assets of the Retirement System subject to all terms, conditions, limitations, and restrictions imposed on the investment of assets of public employee retirement systems or plans by *Act No. 314* of the *Public Acts of 1965, being sections 38.1132 et seq. of the Michigan Compiled Laws*, as amended. Notwithstanding anything in this Combined Plan Document to the contrary, for the twenty year period following the effective date of the Plan of Adjustment, the Investment Committee shall make recommendations to the Board with respect to investment management matters as provided in this Article 16.

All investment management decisions made by the Board, as more fully described in Section 16.2, shall require a recommendation by an affirmative vote of the Investment Committee as provided in this Combined Plan Document. The Board shall take no action with respect to any matter for which the Investment Committee has responsibility and authority, including the investment management matters described in Section 16.2, unless and until such action has been approved by affirmative vote of the Investment Committee. All actions and recommendations of the Investment Committee shall be forwarded to the Board for consideration and are subject to Board approval. If (a) the Board fails to approve or disapprove an investment management decision that has been recommended by an affirmative vote of the Investment Committee, and such failure continues for forty-five days after the date that the recommendation was made to the Board, or (b) the Board disapproves an investment management decision within such forty-five day period but fails to provide to the Investment Committee within such forty-five day period a detailed written response outlining the reasons for such disapproval, then the Investment Committee and the chief investment officer are authorized to implement the decision.

If the Board disapproves an investment management decision within such forty-five day period and provides to the Investment Committee within such forty-five day period a detailed written response outlining the reasons for such disapproval, then the Investment Committee shall have forty-five days after the receipt of the Board response to either (a) withdraw the recommended investment management decision, or (b) request, in writing, a conference with the Board to be held within ten days, but not less than five business days, of the request by the Investment Committee to discuss the disapproval by the Board described in the written response. Any such conference shall be conducted with at least three independent Investment Committee members present in person or by phone. Within ten days of the commencement of the conference or twenty days following the Investment Committee's request for a conference if no conference is held, the Investment Committee shall either withdraw the recommended investment management decision or provide the Board with a written explanation of the Investment Committee's decision to proceed with the recommended investment management decision. After delivery of such written explanation by the Investment Committee, the Investment Committee and the chief investment officer are authorized to implement the decision. Any action taken by the Board or the Investment Committee in violation of the terms of this Article 16 shall constitute an *ultra vires* act and the Investment Committee or the Board is granted the express right to seek to preliminarily enjoin such action without the need to show irreparable harm.

Sec 16.2. Investment Management

(1) For purposes of this Combined Plan, "investment management decisions" and "investment management matters" shall include:

(a) development of an investment policy statement with sound and consistent investment goals, objectives, and performance measurement standards which are consistent with the needs of the Retirement System;

(b) within 120 days after the effective date of the Plan of Adjustment, placement of all of the assets of the Retirement System not already under qualified management with qualified investment managers selected by the Investment Committee;

(c) evaluation, retention, termination and selection of qualified managers to invest and manage the Retirement System's assets;

(d) review and affirmation or rejection of the correctness of any and all calculations, actuarial assumptions and/or assessments used by the Actuary including, but not limited to (i) those underlying the restoration of pension benefits, funding levels and amortization thereof, all in accordance with the pension restoration program attached to the Plan of Adjustment (as more fully described in Article K of Component II of this Combined Plan Document), (ii) those underlying the determination of annual funding levels and amortization thereof, and (iii) on or after Fiscal Year 2024, the recommended annual contributions to the Retirement System in accordance with applicable law;

(e) in accordance with approved actuarial work as provided in paragraph (d) above and based on the annual actuarial valuation reports and any other projections or reports as applicable from the Actuary or other professional advisors, the determination of the extent of restoration of pension benefits, including but not limited to the payment of all or a portion of the lost COLA payments, all in conformance with the pension restoration program attached to the Plan of Adjustment;

(f) communication of the Retirement System's investment goals, objectives, and standards to the investment managers, including any material changes that may subsequently occur;

(g) determination and approval of the Retirement System's investment and asset allocation guidelines, taking into account the appropriate liquidity needs of the Retirement System;

(h) the taking of corrective action deemed prudent and appropriate when an investment manager fails to perform as expected;

(i) interpretation of Retirement System governing documents, existing law, the Plan of Adjustment or other financial determination that could affect funding or benefit levels;

(j) review and approval, prior to final issuance, of the annual audit and all financial reports prepared on behalf of the Retirement System and meet and confer with the Auditor or other professional advisors as necessary prior to approval of the annual audit or other financial reports;

(k) determination of the funding status of the Retirement System and any remedial action to be taken pursuant to Section 9.5; and

(l) performance of an asset/liability valuation study for the Retirement System every three years, or more often as requested by the Investment Committee or the Board.

All actions of the Investment Committee shall comply with the provisions of pertinent federal, state, and local laws and regulations, specifically *Public Act 314* and *Plan Investment Guidelines.*

Sec 16.3. Best Practices

Prior to adopting investment guidelines and asset allocation policies, selecting investment managers or adopting investment return assumptions, the Investment Committee shall have an understanding of and shall give appropriate consideration to the following:

(a) the fiduciary best practices and institutional standards for the investment of public employee retirement system plan assets;

(b) the objective to obtain investment returns above the established actuarial investment return assumption to support the restoration of benefits under the pension restoration program described in the Plan of Adjustment and Component II of this Combined Plan Document, to the extent that it is prudent and consistent with the overall funding, liquidity needs and actuarial assumptions governing the Retirement System; and

(c) the liquidity needs of the Retirement System.

Sec 16.4. Chief Investment Officer

The Investment Committee shall have the exclusive power to select, retain and terminate the services of a chief investment officer for the Retirement System. The Investment Committee shall determine any and all compensation and other terms of employment of any chief investment officer hired by it. The chief investment officer shall report directly to the Investment Committee and the Executive Director of the Board. The chief investment officer shall be responsible for assisting the Investment Committee and the Board with respect to oversight of the Retirement System's investment portfolio. The chief investment officer shall provide such periodic reports relating to the Retirement System's assets to the Investment Committee and the Board as it or they shall request.

Sec 16.5. Investment Consultants

The Board and/or Investment Committee may retain the services of one or more investment consultants who shall be responsible for assisting the Board and the Investment Committee with oversight of the Retirement System's investment portfolio. Any such investment consultant shall be a registered advisor with the United States Securities and Exchange Commission and shall be a nationally recognized institutional investment consultant with expertise in the investment of public pension plan assets. Any such investment consultant shall acknowledge in writing its role as investment fiduciary with respect to the Retirement System as defined in the *Public Employee Retirement System Investment Act, as amended, MCL 38.1132 et seq*. The Board or the Investment Committee, as appropriate, shall determine the compensation and other terms of employment of any investment consultant hired by it. The duties of an investment consultant may include, but shall not be limited to:

(a) providing an asset/liability valuation study for the Retirement System;

(b) reviewing the Retirement System's asset allocation based on current market assumptions;

(c) identifying and recommending to the Investment Committee and the Board appropriate investment strategies based on the financial condition of the Retirement System;

(d) implementing the approved investment strategies, such as recommending to the Investment Committee, for Board approval, an asset allocation strategy, building an investment structure for the Retirement System, and identifying qualified investment managers (through an organized search process) to execute and implement investment strategies;

(e) monitoring and evaluating the ongoing progress of the investment managers toward stated investment goals and objectives;

(f) recommending to the Investment Committee and the Board any necessary corrective actions, including adjustments to the investment structure or investment management organizations in the event of a deviation from expectations;

(g) communicating the investment policies of the Retirement System to the investment managers;

(h) reviewing the investment policies with the appropriate employees of the Retirement System;

(i) aiding the Investment Committee in providing recommendations on issues relating to rebalancing and cash flow management, securities lending, transition management, cash equalization and other investment related topics;

(j) attending Investment Committee and Board meetings in person, or telephonically, as needed or as requested;

(k) meeting with the Investment Committee and the Board to provide detailed quarterly performance reports and executive summaries of performance;

(l) meeting with the Investment Committee and the Board to review capital markets and inform the Board and Retirement System employees on the current investment environment; and

(m) meeting with the Investment Committee and the Board to provide recommendations on asset allocation, investment structure, and manager selections.

ARTICLE 17. RETIREE MEDICAL ACCOUNT

Sec 17.1. Establishment of Account

A Medical Benefits Account shall be established and maintained under the Retirement System out of which the Board shall pay the cost, which would otherwise be borne by the City, for certain medical and related benefits provided under the plans or programs maintained by the City to provide Medical Benefits (the "Medical Plans") for the benefit of the Medical Beneficiaries. The provisions of this Article 17 are intended to comply with Section 401(h) of the Code and shall be construed to comply therewith.

Sec 17.2. Effective Date

Medical Benefits shall be paid from the Medical Benefits Account beginning October 19, 2014 or such other date recommended by an enrolled actuary (within the meaning of Section 7701(a)(35) of the Code) and approved by the Board and Investment Committee.

Sec 17.3. Funding of Benefits

Subject to the Plan of Adjustment and the right reserved to the City to amend or terminate the provision of Medical Benefits under its general power to amend the Combined Plan Document under Section 18.6, the City expects and intends to make actuarially determined contributions under the Retirement System from time to time to fund the Medical Benefits Account. The assets of the Medical Benefits Account may be invested together with the other assets of the Retirement System, in which case earnings of the Retirement System shall be allocated to the Medical Benefits Account on a reasonable basis or such assets may be invested separately. In any event, no part of the Retirement System, other than the assets of the Medical Benefits Account, shall be available to pay for any part of the cost of Medical Benefits.

The amount determined by the City to be contributed for any Plan Year pursuant to the paragraph above shall be reasonable and ascertainable and shall not exceed the total cost for such Plan Year of providing Medical Benefits to the Medical Beneficiaries, determined in accordance with generally accepted actuarial methods and assumptions that are reasonable in view of the provisions and coverage of the medical and other welfare plans providing such benefits, the funding medium and any other applicable considerations. At the time the City makes a contribution to the Trustee, the City shall designate the portion thereof that is allocable to the Medical Benefits Account.

Sec 17.4. Limitation on Contributions

At all times the aggregate of the contributions made by the City to provide Medical Benefits shall not exceed twenty-five percent (25%) of the sum of the aggregate contributions made by the City to the Plan under Sections 9.3, 9.4 and 9.5, other than the contributions to fund past service credits, plus the aggregate contributions to the Medical Benefits Account. In the event that a contribution under Section 17.3 shall exceed the amount described in the preceding sentence, such contribution shall be reduced by the excess amount.

Sec 17.5. Impossibility of Diversion

In no event, prior to the satisfaction of all liabilities to provide Medical Benefits shall the Medical Benefits Account be used for, or diverted to, any purpose other than the payment of such benefits and any necessary or appropriate expenses of administration associated therewith. Any amounts credited to the Medical Benefits Account following the satisfaction of all such liabilities shall be returned to the City.

Sec 17.6. Administration

The Medical Plans shall continue to be administered, and claims processed, under their respective terms. The interpretation and administration of the terms of this Article 17 shall be as provided in the provisions of the Combined Plan Document.

Sec 17.7. Right to Amend or Terminate Medical Plans

The City expressly reserves the exclusive right, retroactively to the extent permitted by law, to amend, modify, change, terminate or revoke any medical or other welfare plan or policy maintained by the City that provides medical or other welfare benefits, including but not limited to Medical Benefits, and to require Members, former Members, their eligible Spouses and dependents to pay all or any portion of the cost of such medical benefits.

Sec 17.8. Reversion

At no time prior to the satisfaction of all liabilities under the Retirement System to provide Medical Benefits, shall any part of the Medical Benefits Account be used for any purpose other than providing Medical Benefits, and any necessary or appropriate expenses attributable to the administration of the Medical Benefits Account. If any residual assets remain in the Medical Benefits Account after the satisfaction of all obligations of the City to provide Medical Benefits to the Medical Beneficiaries, such assets shall be returned to the City. In the event a Medical Beneficiary's interest in the Medical Benefits Account is forfeited prior to the termination of the Retirement System, an amount equal to such forfeiture shall be applied as soon as possible to reduce the City's contributions to the Medical Benefits Account.

Sec 17.9. Limitation of Rights

A Medical Beneficiary shall have no right, title or claim in any specific asset of the Medical Benefits Account, but shall have the right only to the Medical Benefits provided from time to time under the Medical Benefits Account.

ARTICLE 18. MISCELLANEOUS

Sec 18.1. Nonduplication of Benefits

If any Member is a participant in another defined benefit pension plan, retirement system or annuity plan sponsored by the City (including Component II of this Retirement System) and the Member is or becomes entitled to accrue pension benefits under such plan or retirement system (including Component II of this Retirement System) with respect to any period of service for which he or she is entitled to accrue a benefit under Component I of this Retirement System, such Member shall not be eligible to accrue or receive payment of a benefit under Component I with respect to such period of service.

Sec 18.2. Assignments Prohibited

The right of a person to a pension, annuity, the return of Accumulated Voluntary Employee Contributions and/or the return of Accumulated Mandatory Employee Contributions, the Retirement Allowance itself, to any optional form of benefit, to any other right accrued or accruing to any person under the provisions of this Retirement System, and the monies in the various funds of the Retirement System shall not be assignable and shall not be subject to execution, garnishment, attachment, the operation of bankruptcy or insolvency law, or any other process of law whatsoever, except as specifically provided in this Combined Plan Document or by an eligible domestic relations order of a lawful court.

Sec 18.3. Protection Against Fraud

A person who, with intent to deceive, makes any statements or reports required under this Retirement System that are untrue, or who falsifies or permits to be falsified any record or records of this Retirement System, or who otherwise violates, with intent to deceive, any terms or provisions of the Retirement System, shall be subject to prosecution under applicable law.

Sec 18.4. Errors

If any change or error in the records results in any person receiving from the Retirement System more or less than the person would have been entitled to receive from the Retirement System had the records been correct, the Board shall correct such error and, as far as practicable, shall adjust the payment in such a manner that the Actuarially Equivalent benefit of the benefit to which such person was correctly entitled shall be paid.

Sec 18.5. Conviction of Felony; Forfeiture of Rights

If a Member or Retiree shall be convicted of by a court of competent jurisdiction or enters a nolo contendere plea accepted by a court for a felony against the City arising out of his or her service as an employee of the City and while a Member of the Retirement System, the court may order the forfeiture of all or a portion of the rights of the Member to benefits hereunder, except the return of his or her Accumulated Contributions, as provided in the *Public Employee Retirement Benefits Forfeiture Act, MCL 38.2701, et. seq.* In such case, the Retirement System shall pay to an individual, if any, who would otherwise be a Beneficiary of the Member or Retiree whose retirement benefit is being forfeited under this Section 18.5 an

Actuarially Equivalent monthly retirement allowance at the Age that the Member or Retiree would have become eligible for unreduced retirement benefits under the Retirement System.

Sec 18.6. Amendment; Termination; Exclusive Benefit

The City reserves the right to amend the Combined Plan Document created hereunder at any time; such amendments may include termination of the Retirement System; provided, however, that following the effective date of the Plan of Adjustment, no amendment other than amendments permitted under the terms of the Plan of Adjustment (including amendments contemplated in Section K-3(5) of Component II) may be made to the terms, conditions and rules of operation of the Retirement System, the Combined Plan Document or any successors plan or trust that govern the calculation of pension benefits during the period ending June 30, 2023, nor may any amendment or termination deprive any Member, former Member or Beneficiary of any then vested benefit under the Retirement System, except as provided in the Plan of Adjustment. Notwithstanding the foregoing, the City and the Board have the authority to amend the Combined Plan Document as necessary to retain the tax qualified status of the Retirement System under the Internal Revenue Code. The City shall make no amendment or amendments to the Retirement System which causes any part of the assets of the Retirement System to be used for, or diverted to, any purpose other than the exclusive benefit of Members, former Members or their Beneficiaries; provided, that the City may make any amendment necessary, with or without retroactive effect, to comply with applicable federal law. Any amendment of the Retirement System by the City must be approved by the Council or a person standing in the stead of the Council.

Upon termination of the Retirement System or upon complete discontinuance of contributions to the Retirement System, the rights of all Members to benefits accrued to the date of such termination or discontinuance, to the extent then funded, shall be nonforfeitable.

Sec 18.7. Expenses of Administration; Forfeitures Not to Increase Benefits

All expenses relating to administration of Component I of the Retirement System shall be paid from the assets maintained under this Component I and all expenses relating to administration of Component II of the Retirement System shall be paid from the assets maintained under Component II. Any forfeitures arising under the Retirement System due to a Member's termination of employment or death, or for any other reason, shall be used to pay expenses of the appropriate Component of the Retirement System and shall not be applied to increase the benefits any Member would otherwise receive under the Retirement System at any time prior to termination of the Retirement System.

Sec 18.8. Required Distributions - Compliance with Code Section 401(a)(9) and Regulations

The Retirement System will apply the minimum distribution requirements of Code Section 401(a)(9) in accordance with the final regulations issued thereunder, notwithstanding any provision in the Combined Plan Document to the contrary. Pursuant to Code Section 401(a)(9)(A)(ii), a Member's interest must begin to be distributed by the later of (i) the April 1 of the calendar year following the calendar year that he or she attains the Age of seventy and one-half (70-1/2), or (ii) April 1 of the calendar year following the year in which he or she retires. Distributions will be made in accordance with Regulations Sections 1.401(a)(9)-2 through 1.401(a)(9)-9. The provisions of this Section 18.8 and the regulations cited herein and incorporated by reference override any inconsistent plan distribution options.

Sec 18.9. Direct Rollovers

(1) For purposes of compliance with Code Section 401(a)(31), a distributee may elect, at the time and in the manner prescribed by the Board, to have any portion of an eligible rollover distribution paid directly to an eligible retirement plan specified by the distributee in a direct rollover.

(a) For purposes of this Section 18.9, the following terms shall have the following meanings:

(b) "Direct rollover" means a payment by the Retirement System to an eligible retirement plan specified by a distributee.

(c) "Distributee" means a Member or former Member. It also includes the Member's or former Member's surviving Spouse, a Spouse or former spouse who is the alternate payee under an eligible domestic relations order, or a nonspouse Beneficiary who is a designated beneficiary as defined by Code Section 401(a)(9)(E). However, a nonspouse Beneficiary may only make a direct rollover to an individual retirement account or individual retirement annuity established for the purpose of receiving the distribution, and the account or annuity will be treated as an "inherited" individual retirement account or annuity.

(d) "Eligible retirement plan" means any of the following that accepts a distributee's eligible rollover distribution:

(i) a qualified trust described in Code Section 401(a);

(ii) an annuity plan described in Code Section 403(a);

(iii) an annuity contract described in Code Section 403(b);

(iv) an individual retirement account described in Code Section 408(a);

(v) an individual retirement annuity described in Code Section 408(b);

(vi) a Roth IRA described in Code Section 408A; or

(vii) a plan eligible under Code Section 457(b) that is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or a political subdivision of a state that agrees to separately account for amounts transferred into that plan from the Retirement System.

(e) "Eligible rollover distribution" means any distribution of all or any portion of the balance to the credit of a distributee under the Retirement System, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or the life expectancy) of the distributee or the joint lives (or joint life expectancies) of the distributee and the distributee's designated Beneficiary, or for a specified period of ten years or more; any distribution to the extent such distribution is required under Code Section 401(a)(9); the portion of any distribution that is not includible in gross income; and any other distribution which the Internal Revenue Service does not consider eligible for rollover treatment, such as any distribution that is reasonably expected to total less than $200 during the year. Notwithstanding the foregoing, a portion of a distribution will not fail to be an "eligible rollover distribution" merely because the portion consists of after-tax contributions that are not includible in Member's gross income upon distribution from the Retirement System. However, such portion may be transferred only (i) to an individual retirement account or annuity described in Code Section 408(a) or (b) or to a qualified defined contribution plan described in Code Section 401(a) that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible; (ii) to a qualified defined benefit plan described in Code Section 401(a) or to an annuity contract described in Code Section 403(b) that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible; or (iii) to a Roth IRA described in Code Section 408A.

Sec 18.10. Construction

Words in the singular should be read and construed as though used in the plural, and words in the plural should be read and construed as though used in the singular, where appropriate. The words "hereof", "herein", and "hereunder" and other similar compounds of the word "here", shall mean and refer to Component I and/or Component II of this Combined Plan Document or to the Combined Plan Document in its entirety, as the context may require, and not to any particular provision or section thereof. The table of contents, article and section headings are included for convenience of reference, and are not intended to add to, or subtract from, the terms of the Combined Plan Document or the Retirement System created hereunder.

Sec 18.11. Severability

If any section or part of a section of this Combined Plan Document or provision relating to the Retirement System is for any reason held to be invalid or unconstitutional, such holding shall not be construed as affecting the validity of the remaining sections of the Combined Plan Document or Retirement System or of the Combined Plan Document or Retirement System in its entirety.

COMPONENT II

ARTICLE A. COMMON PROVISIONS OF THE POLICE AND FIRE RETIREMENT SYSTEM

Sec. A-1. Common Provisions

Certain provisions of the Combined Plan for the Police and Fire Retirement System of the City of Detroit, Michigan described below are common to both Component I and this Component II as in effect July 1, 2014. Those provisions are set forth in the following Articles and

Sections of Component I:

(a) Article I (General Provisions);

(b) Article II (Definitions):

Actuarial Equivalent or Actuarially Equivalent

Actuarially Equivalent Value

Administrative Board of Trustees

Administrative Rules and Regulations

Age; Attainment of

Board of Trustees or Board or Retirement Board

City

City Council or Council

Combined Plan

Component I

Component II

DFFA

DPLSA

DPCOA

DPOA

Detroit Police and Fire Retirement System or Retirement System

Fiscal Year

Internal Revenue Code or Code

Investment Committee

Medical Director

Notice to Members, Beneficiaries and Retirees;

Plan Actuary or Actuary;

Plan Document or Combined Plan Document;

Plan of Adjustment;

Plan Year;

Spouse;

Straight Life Retirement Allowance; and

Total Disability or Totally Disabled;

(c) Article 13 (Limitation on Benefits and Contributions);

(d) Article 14 (Retirement System Administration);

(e) Article 15 (Management of Funds);

(f) Article 16 (Investment of Retirement System Assets); and

(g) Article 18 (Miscellaneous).

ARTICLE B. FREEZE OF POLICE AND FIRE RETIREMENT SYSTEM AS OF JUNE 30, 2014

Sec. B-1. Freeze of Police and Fire Retirement System as of June 30, 2014.

Notwithstanding anything in Chapter 47 of the 1984 Detroit City Code, or in Chapter 54, Article II of the 1964 Detroit City Code, or any ordinances, resolutions, or orders, or parts thereof, whether codified or not codified, or any collective bargaining agreement or other documents governing terms of employment to the contrary, effective as of June 30, 2014 (the "Freeze Date"):

(a) No new employee hired by the City on or after July 1, 2014 shall become a Member who is eligible to accrue a benefit under the terms of the Police and Fire Retirement System in effect as of the Freeze Date;

(b) No employee who is rehired by the City on or after July 1, 2014 and who received a distribution of his or her accumulated employee contributions prior to July 1, 2014, shall become a Member who is eligible to accrue a benefit under the terms of the Police and Fire Retirement System in effect as of the Freeze Date; provided, however, that if a Member who is entitled to a Frozen Accrued Benefit as defined in subsection (d) of this Section B-1 and who is rehired by the City on or after July 1, 2014 repays to the Police and Fire Retirement System in accordance with a payment schedule approved by the Board of Trustees the amount of accumulated employee contributions that he or she withdrew, then such Member shall be eligible to accrue service credit under this Component II following rehire solely for the purpose of determining the Member's eligibility for payment of his or her Frozen Accrued Benefit;

(c) No Member shall make contributions to the Annuity Savings Fund under the Police and Fire Retirement System in effect as of June 30, 2014 with respect to payroll dates occurring on or after August 1, 2014 and all Member contributions made with respect to payroll dates occurring on or after August 1, 2014 shall be made to and in accordance with the terms of Component I of the Combined Plan;

(d) Benefit accruals for Members with respect to service rendered prior to July 1, 2014 will be frozen based on a Member's years of service and Average Final Compensation and the pension multiplier formulae as of such Freeze Date ("Frozen Accrued Benefit");

(e) Except as otherwise provided in this Section B-1, compensation of a Member shall be frozen effective as of the Freeze Date for purposes of determining the Member's Frozen Accrued Benefit. No compensation of any type earned by a Member after the Freeze Date shall be taken into consideration for purposes of determining the Member's Frozen Accrued Benefit under the Police and Fire Retirement System;

(f) Any Member who, as of June 30, 2014, would have been eligible to elect to use a portion of the unused accrued sick leave that he or she could have received in cash upon retirement ("Cashable Sick Leave") to increase his or her Average Final

Compensation if the Member had been eligible to retire and had elected to retire as of June 30, 2014, shall have a one-time election to have the value of twenty-five percent (25%) of the Member's Cashable Sick Leave as of June 30, 2014 included in the computation of the Member's Average Final Compensation for purposes of determining the Member's Frozen Accrued Benefit ("Sick Leave Election"); provided, however, that the amount of the member's Cashable Sick Leave at the time the completed election form is received by the Retirement System is at least equal to the value of twenty-five percent (25%) of the Member's Cashable Sick Leave as of June 30, 2014 and, provided further that the completed election form is received by the Retirement System no later than the dates established by the City. A Member's Sick Leave Election shall be made in the manner set forth by the Board of Trustees and the Police and Fire Retirement System. Notwithstanding anything in this subsection (f) to the contrary, a Member's Sick Leave Election will be void and the determination of the Member's Average Final Compensation for purposes of calculating the Member's Frozen Accrued Benefit will not take into account any of the Member's Cashable Sick Leave, if (i) the electing Member would not have been eligible to receive an immediate service retirement benefit if he or she retired as of June 30, 2014, and (ii) the electing Member's employment with the City is terminated before the electing Member becomes eligible for an immediate service retirement benefit under the Police and Fire Retirement System. In any such case, the value of twenty-five percent (25%) of the Member's Cashable Sick Leave shall be restored to such Member;

(g) Service earned after the Freeze Date shall be credited to a Member under this Component II solely for purposes of determining a Member's vesting in and eligibility for payment of his or her Frozen Accrued Benefit and to a rehired Member solely for purposes of determining the Member's eligibility for payment of his or her Frozen Accrued Benefit. Service credit for all Members for benefit accrual purposes under the terms of the Police and Fire Retirement System in effect as of the Freeze Date shall be frozen effective as of the Freeze Date and no Member shall earn service credit with respect to benefits payable under the terms of the Police and Fire Retirement System in effect as of the Freeze Date (except for vesting and benefit payment eligibility purposes) after the Freeze Date; and

(h) The Deferred Retirement Option Plan ("DROP") program shall remain in effect for all Members who have either enrolled in or elected to participate in the DROP program as of June 30, 2014. Members also may elect to participate in the DROP program after June 30, 2014 with respect to their Frozen Accrued Benefits; however, a Member's participation in the DROP program with respect to such Frozen Accrued Benefits shall be limited to five years.

The foregoing terms of Section B-1 shall be referred to as the "Freeze" of the provisions of the Police and Fire Retirement System as in effect on the Freeze Date and the provisions of Component II of the Police and Fire Retirement System shall be interpreted and construed by the Board of Trustees and the Police and Fire Retirement System to give full effect to the Freeze. To the extent that a conflict arises between this Section B-1 and the provisions of Chapter 54 of the 1964 Detroit City Code, or any Charter, ordinances, resolutions, or orders, or parts thereof, whether codified or not codified, or any collective bargaining agreement or other document governing terms of employment of an employee, the Board of Trustees and the Police and Fire Retirement System are directed to interpret any inconsistency or ambiguity to give full effect to the Freeze.

EXHIBIT A (PART 2)

ARTICLE C. DEFINITIONS

Sec. C-1. Definitions.

Unless a different meaning is plainly required by context, for purposes of this Component II the following words and phrases have the meanings respectively ascribed to them by this Section C-1:

(1) *Accrued Service* shall mean a Member's credited service for employment rendered before the date of an actuarial valuation of the Retirement System and before July 1, 2014.

(2) *Accumulated Contributions* shall mean the sum of all amounts deducted from the compensation of a Member and credited to his or her individual account in the Annuity Savings Fund, together with Regular Interest, as provided in this Component II of the Combined Plan.

(3) *Annuity* shall mean payments derived from the Accumulated Contributions of a Member.

(4) *Annuity Reserve* shall mean the present value of all payments to be made on account of any Annuity, or benefits in lieu of any Annuity, computed on the basis of such mortality tables and Regular Interest as shall be adopted by the Board of Trustees.

(5) *Average Final Compensation* shall mean:

a. With respect to an "Old Plan Member" (an employee described in Section F-2(a)) the current maximum salary for the rank(s), grade(s) or position(s) held by the Member over the sixty (60) months immediately preceding the earlier of: (i) the date his or her employment with the City last terminated and (ii) June 30, 2014. The salary shall be obtained from the official compensation schedule for the Fiscal Year in which the earlier of the dates described in (i) or (ii) occurs and an average shall be determined. A Member who retires on or after July 1, 2000 (for DPCOA and DFFA members) or July 1, 1998 (for all other Members) and in each case prior to July 1, 2014 shall have the Member's most recent full longevity payment included in his or her Average Final Compensation.

b. With respect to a "New Plan Member" (an employee described in Section F-2(b)) the current maximum salary for the rank(s), grade(s) or position(s) held by the Member over the sixty (60) months immediately preceding the earlier of: (i) the date his or her employment with the City last terminated and (ii) June 30, 2014. The salary shall be obtained from the official compensation schedule for the Fiscal Year in which the earlier of the dates described in (i) or (ii) occurs and an average shall be determined. If more than one (1) rank, grade or position has been held over the sixty (60) month period, a weighted average is determined based on time spent in each rank, grade or position during this sixty (60) month period.

(i) A Member who retires on or after July 1, 2000 (for DPCOA and fire equivalents) or July 1, 1998 (for all other Members) and in each case prior to July 1, 2014 shall have the Member's most recent full longevity payment included in his or her Average Final Compensation.

(ii) Effective July 1, 2000, Average Final Compensation shall be calculated for members of the DPCOA, executive members and their fire equivalents by using the current maximum salary for the rank(s), grade(s) or position(s) held by the Member over the thirty-six (36) months immediately preceding the earlier of: (i) the date his or her employment with the City last terminated and (ii) June 30, 2014.

c. With respect to reduced duty disability retirements occurring on or after July 1, 1992, notwithstanding the provisions of Article F, Part B, Section F-8, for those Members who receive benefits under Article F, Part B, Section F-9(a), the Average Final Compensation used in the computation of the reduced duty disability allowance shall mean the maximum salary at the earlier of (i) the date of conversion to reduced duty disability retirement for the rank(s), grade(s), or positions(s) which were held by the Member over the sixty (60) months prior to his or her duty disability retirement and (ii) June 30, 2014.

d. Subject to Section B-1(f), for purposes of computing the Average Final Compensation received by a Member who retires on or after July 1, 2008 and prior to July 1, 2014, the Member shall have the option of adding the value of the three year average of twenty-five percent (25%) of the Member's unused accrued sick leave at the time of retirement to the earnings used in computing the Average Final Compensation.

e. The Average Final Compensation for "Old Plan" and "New Plan" Members represented by DFFA retiring on or after July 1, 1992 or on or after July 1, 2000 for Members represented by DPOA is calculated pursuant to paragraph (b) above. The salary is obtained from the Official Compensation Schedule for the Fiscal Year prior to the earlier of (i) the Member's elective date of retirement and (ii) June 30, 2014 and an average shall be determined.

f. Effective July 1, 2000, for Members represented by DFFA with a parity relationship with the DPCOA Inspector, Average Final Compensation shall be calculated pursuant to paragraph (b)(ii) above. The salary is obtained from the Official Compensation Schedule for the Fiscal Year prior to the earlier of (i) the Member's elective date of retirement and (ii) June 30, 2014 and an average shall be determined.

g. For Members represented by DFFA who have a parity relationship with the DPLSA and the DPCOA Inspector, who retire on or after July 1, 1998 and for those having a parity relationship with the DPOA who retire on or after July 1, 2000 and in each case prior to July 1, 2014, the amount of the Member's most recent full longevity payment shall be included in the definition of Average Final Compensation.

h. Subject to Section B-1(f), all Members represented by DFFA who retire on or after July 1, 2008 and prior to July 1, 2014, may choose to receive the 3-year average of twenty-five percent (25%) of the unused accrued sick leave bank and have that sum included in the average compensation used to compute the Members' service Pension portion of their Retirement Allowance.

i. Subject to Section B-1(f), non-union uniformed Police and Fire executives represented by DPCOA who retire on or after January 15, 2010 and prior to July 1, 2014 may choose to receive the 3-year average of twenty-five percent (25%) of the unused accrued sick leave bank, and have that sum included in the Average Final Compensation used to compute the Members' service Pension portion of their Retirement Allowance.

j. Subject to Section B-1(f), a Member represented by DPLSA who retires on or after July 1, 2008 and prior to July 1, 2014 may choose to receive the 3-year average of twenty-five percent (25%) of eighty-five percent (85%) of his or her unused accrued sick leave bank, and have that sum included in the Average Final Compensation used to compute the Member's service Pension of their Retirement Allowance.

(6) *Beneficiary* shall mean any person or persons (designated by a Member pursuant to procedures established by the Board) who are in receipt of a Retirement Allowance or Pension payable from funds of the Retirement System due to the participation of a Member.

(7) *Decrement Probabilities* shall mean the probabilities of a Member's withdrawal from City employment, death while in the employ of the City, retirement from City employment with a Pension payable from funds of the Retirement System, and death after retirement.

(8) *Final Compensation* shall mean the annual rate of earnable compensation of a Member at the earlier of (i) the time of termination of employment or (ii) June 30, 2014. Effective July 1, 1992 and prior to July 1, 2014, compensation shall also include the value of the percentage reduction in compensation for non-union employees, pursuant to ordinance, resolution or executive order. In cases of any doubt regarding these values, the decisions of the Board of Trustees shall be

controlling to implement the intention that no non-union employee will suffer a diminution of Pension benefits computation due to reduction in compensation because of fiscal emergency and that Pension benefits with respect to Fiscal Years beginning July 1, 1992 and ending June 30, 2014 should always be computed as if no reduction in compensation occurred due to ordinance, resolution or executive order or directive.

(9) *Fire Employees* (formerly referred to as "Firemen") shall mean all employees of the Fire Department who have taken the oath of office as prescribed in Section 12 of Chapter XXI of Title IV of the 1918 Detroit City Charter employed therein prior to November 10, 1937, and who shall be in the employ of the Fire Department of the City of Detroit prior to the effective date of this amendment and restatement and, where the context requires, all persons who shall take the said oath of office and become members of the Fire Department thereafter.

(10) *Fire Fighter* shall mean the rank in the Fire Department currently or previously classified by the civil service commission as Fire Fighter.

(11) *Member* shall mean any member of the Retirement System who has not retired.

(12) *Membership Service* shall mean the total service rendered as a Police Employee or Fire Employee prior to July 1, 2014.

(13) *New Plan* shall mean the plan originally created by Title IX, Chapter VII, Article IV, Section 1(D) of the 1918 City of Detroit Charter as amended through June 30, 1974 and continued in effect through June 30, 2014 by Article 11, Section 102 of the City of Detroit Charter.

(14) *Old Plan* shall mean the plan originally created by Title IX, Chapter VII, Article IV, Section 1(A) and (B) of the 1918 City of Detroit Charter as amended through June 30, 1974 and continued in effect through June 30, 2014 by Article 11, Section 102 of the City of Detroit Charter.

(15) *Patrolman* shall mean the rank in the Police Department currently or previously known as patrolman.

(16) *Pension* shall mean the portion of a Retirement Allowance which is paid for by appropriations made by the City and contributions made by any other entity.

(17) *Pension Reserve* shall mean the present value of all payments to be made on account of any Pension, or benefit in lieu of any Pension, computed upon the basis of such mortality tables and Regular Interest as shall be adopted by the Board of Trustees.

(18) *Police Employees* (formerly referred to as "Policemen") shall mean all employees of the Police Department who have taken the oath of office as prescribed in Section 12 of Chapter XXI of Title IV of the 1918 Detroit City Charter, and who shall be in the employ of the Police Department of the City of Detroit prior to the

effective date of this amendment and restatement and, where the context requires, all persons who shall take the said oath of office and become members of the Police Department thereafter.

(19) *Prior Service* shall mean service in the military rendered prior to July 1, 2014 as provided in Section E-3.

(20) *Regular Interest* shall mean, for a period of five years from the effective date of the Retirement System interest at four per centum per annum, compounded annually. For the subsequent five year period, and each five year period beginning thereafter but prior to July 1, 2013, Regular Interest shall be such rate of interest as the Board of Trustees, in its discretion, may determine and adopt. For Fiscal Years beginning on and after July 1, 2013:

a. the annual rate of return for purposes of determining the Regular Interest to be credited to a Member's account in the Annuity Savings Fund shall not be less than zero and shall not be greater than the lesser of (i) 5.25% or (ii) the actual investment return net of expenses of the Retirement System's invested reserves for the second Fiscal Year immediately preceding the Fiscal Year in which the Regular Interest is credited; and

b. the rate(s) of Regular Interest adopted by the Board from time to time as necessary for the operation of the Retirement System on an actuarial basis shall not violate the Plan of Adjustment.

(21) *Retiree* shall mean any Member who has retired with a Pension payable from funds of the Retirement System.

(22) *Retirement* shall mean for any Member that such Member has retired, with a Pension payable from the funds of the Retirement System.

(23) *Retirement Allowance* shall mean the sum of the Annuity and the Pension.

(24) *Retirement System or System* shall mean the Police and Fire Retirement System of the City of Detroit created and established by Title IX, Chapter VII of the 1918 Charter of the City as amended through June 30, 1974 and continued in effect by the provisions of the July 1, 1974 City Charter, and as set forth in the Combined Plan effective as of July 1, 2014 and this amendment and restatement of the Combined Plan.

(25) *Salary Factors* shall mean the ratio between a Member's rate of compensation as of the date of an actuarial valuation of the Retirement System and his or her rate of compensation as of the earlier of (i) the date of his or her Retirement and (ii) June 30, 2014.

(26) *Service* shall mean service with the City as a Police Employee or Fire Employee.

The following terms shall have the meanings given to them in the Sections of this Combined Plan Document set forth opposite such term:

2023 UAAL Amortization	Section K-3(3)b
Accrued Liability Fund	Section G-4(a)
additional years	Section F-9(a)(3)
Adjusted Pension Benefit	Section K-1(1)
Annuity Reserve Fund	Section G-3
Annuity Savings Fund	Section G-2(a)
ASF Return Excess	Section G-2(f)
Authority	Section K-2(1)
cash refund annuity	Section F-11(b)(1)
Cashable Sick Leave	Section B-1(f)
Certificate of Default	Section K-2(7)
COLA	Section K-1(1)
Deferred Retirement Option Plan (DROP)	Section B-1(h), Article I
Disability Retirement Review Board/DRRB	Section F-12(b)
Eligible Pensioner	Section K-2(5)
Estimated Adjusted Annual Household Income	Section K-2(3)b
Expense Fund	Section G-7
Federal Poverty Level	Section K-2(6)
Freeze	Section B-1
Freeze Date	Section B-1
Frozen Accrued Benefit	Section B-1(d)
Funding Conditions	Section K-1(1)
Funded Level	Section K-3(2)a
Funding Proceeds	Section G-4(a)
Funding Target	Section K-3(2)a, K-3(3)a, K-3(4)a
Governor	Section K-3(5)
Income Stabilization Benefit	Section K-2(2)
Income Stabilization Benefit Plus	Section K-2(3)
Income Stabilization Fund	Section K-2(4)
New Plan Member	Section F-2(b)
Old Plan Member	Section F-2(a)
Optional Forms	Section F-23
Option 1. Modified Cash Refund Annuity	Section F-23(a)(1)
Option 2. Joint and Last Survivorship Retirement Allowance	Section F-23(a)(2)
Option 3. Joint and Seventy-Five Percent Survivor Allowance	Section F-23(a)(3)
Option 3(A). Modified Joint and Last Survivorship Allowance	Section F-23(a)(4)
Option 3(B). Joint and Twenty-Five Percent Survivor Allowance	Section F-23(a)(5)
Participant Loan Program	Section J-1
Pension Accumulation Fund	Section G-5
Pension Funding Transaction	Section G-4(a)

Pension Improvement Factor (Escalator)	Section F-14, K-1(1)
Pension Reserve Fund	Section G-6
Pension Restoration Agreement	Section K-3
Pop-up Form	Section F-23(b)(ii)
Restoration Reserve Account	Section K-3(2)a
Restoration Reserve Suspension Trigger	Section K-3(2)d, K-3(3)a, K-3(4)a
Restoration Target	Section K-3(2)a, K-3(3)a, K-3(4)a
Sick Leave Election	Section B-1(f)
Standard Form	Section F-23(b)(i)
State Treasurer	Section K-2(1)
Straight Life Retirement Allowance	Section F-23(a)
Survivors Benefit Fund	Section G-11
Transition Cost	Section G-2(f)
UAAL	Section G-4(a)
Waterfall Classes	Section K-3(1)

ARTICLE D. MEMBERSHIP

Sec. D-1. Generally.

Subject to Section B-1, the membership of Component II of the Retirement System shall consist of the following:

(a) All Police Employees and Fire Employees who were in service on or after July 1, 1941, but prior to January 1, 1969; provided, however, that any Police Employee or Fire Employee who, on or before July 1, 1941, shall have been in the employ of the Police or Fire Department for a period of twenty years, or who shall have a total of twenty years of creditable service, shall be excluded from the provisions hereof and shall retain for himself or herself, his or her wife, children, dependent mother and dependent sister all rights and privileges provided by Chapters XV and XXI of title IV of the 1918 Detroit City Charter, unless any such Police Employee or Fire Employee, on or before June 1, 1941, shall file with the City Controller his or her written election to become a Member of the Retirement System, in which event he or she shall be a Member; such excluded Police Employee not electing to become a Member, from and after July 1, 1941, while he or she remains an active member of the Police Department, shall pay five per cent of each salary payment into the fund for retired Police Employees, and any such excluded Fire Employee not electing to become a Member, from and after July 1, 1941, while he or she remains an active member of the Fire Department, shall pay five per cent of each salary payment into the Fire Department Pension and Retirement Fund, and such salary contributions shall hereafter be used toward the payments of Retirement Allowances provided for under Chapter XV, Section 14, subsections (1), (2), and (3) thereof. On retirement, the contributions of such excluded members shall cease.

(b) All persons who became Police Employees or Fire Employees on or after July 1, 1941, but prior to January 1, 1969, and who are confirmed as Police Employees or Fire Employees according to the rules and regulations of the respective Departments shall thereupon become Members of the Retirement System, subject, however, to the following provisions:

(i) Any person who shall become a Police Employee or Fire Employee at an attained Age of thirty-one years or more may become a Member of the Retirement System only by vote of the Board of Trustees who shall fix the rate of contribution of such Member on a basis recommended by the Actuary for the attained Age of such Member.

(ii) Any appointive official of the Police Department or Fire Department appointed from the membership thereof shall be permitted to remain a Member of the Retirement System, paying contributions and entitled to benefits as though he or she had remained in the rank, grade or position held at the date of his or her appointment.

(iii) Any Police Employee or Fire Employee who, prior to being confirmed, shall be killed or Totally Disabled as the result of the performance of active duty, shall be deemed to have been a Member of the Retirement System.

(c) Any Member as defined in paragraph (a) or (b) of this Section D-1 who shall be transferred to a civilian position in his or her Department shall continue as a Member, subject to all the obligations of a Member.

(d) All persons who became Police Employees or Fire Employees on or after January 1, 1969 and prior to July 1, 2014 and who are not individuals re-employed with the Police and Fire Departments on or after January 1, 1969 and prior to July 1, 2014, and who are confirmed as Police Employees or Fire Employees according to the rules and regulations of the respective Departments shall thereupon become Members of Component II of the Retirement System subject, however, to the following provisions:

(i) Any person who shall become a Police Employee or Fire Employee at an attained Age of thirty-one years or more may become a Member of the Retirement System only by vote of the Board of Trustees who shall fix the rate of contribution of such Member on a basis recommended by the actuary for the attained Age of such Member.

(ii) Any appointive official of the Police Department or Fire Department appointed from the membership thereof shall be permitted to remain a Member of the Retirement System, paying contributions and entitled to benefits as though he or she had remained in the rank, grade or position held at the date of his or her appointment.

(iii) Any Police Employee or Fire Employee who, prior to being confirmed, shall be killed or Totally Disabled as the result of the performance of active duty, shall be deemed to have been a Member of Component II of the Retirement System.

(iv) Any Member as defined in Section D-1(a), (b), or (c) who was separated from service by resignation or dismissal or discharge who subsequently again becomes a Member prior to July 1, 2014 shall be considered a Member for all purposes under this Component II under Section D-1(a), (b), or (c) and shall not be considered a Member under Section D-1(d).

(v) Any Member as defined in Section D-1(d) who shall be transferred to a civilian position in his or her Department shall continue as a Member, subject to all the obligations of a Member.

Sec. D-2. Membership election option prior to July 1, 2014.

Any person who is a Member as defined in Section D-1(a), (b), or (c) who was in active service on January 1, 1969, shall have had the option to elect to become a Member of the Retirement System as defined in Section D-1(d) by filing his or her written election with the Board of Trustees on or before January 31, 1969, or any Retiree who retired on or before

December 31, 1968, under the provisions of Article F, Part B, Section F-8, who returns to active service prior to July 1, 2014 shall have the option to elect to become a Member of Component II of this Retirement System as defined in Section D-1(d), by filing his or her written election with the Board of Trustees on or before the earlier of (i) thirty days after his or her return to active service and (ii) June 30, 2014. The election shall be effective on the date that it is filed with the Board of Trustees.

Sec. D-3. Cessation of membership.

(a) Should a Member die or become a Retiree or be separated from service by resignation, dismissal, or disability, he or she shall thereupon cease to be a Member.

(b) Any person who became a Member under Section D-1(a), (b), or (c) and ceases to be a Member, as provided in Section D-3(a), and who becomes a Police Employee or Fire Employee prior to July 1, 2014, shall again become a Member of Component II of the Retirement System, under section D-1(a), (b), or (c) subject to the provisions of Article G, Section G-2(d).

(c) Any person who became a Member under Section D-1(d) and ceases to be a Member, as provided in Section D-3(a), and who becomes a Police Employee or Fire Employee prior to July 1, 2014, shall again become a Member of Component II of the Retirement System under Section D-1(d), subject to the provisions of Article G, Section G-2(d).

(d) Any Member of the Retirement System from the Fire Department who retires as a Member of the Retirement System and who is rehired prior to July 1, 2014 as a civilian Member of the Fire Department may elect on or before June 30, 2014 to again become a Member of Component II of the Retirement System, subject to the provisions of Article G, Section G-2(d).

ARTICLE E. SERVICE CREDITABLE.

Sec. E-1. Members to file statement of service, etc.

Under such rules and regulations as the Board of Trustees shall adopt, each Police Employee and Fire Employee who shall become a Member prior to July 1, 2014 shall file a detailed statement of all prior service rendered by him or her as an employee of the Police Department or Fire Department, for which he or she claims credit, and of such other facts as the Board of Trustees may require, for the proper operation of the Retirement System.

Sec. E-2. Credit for service.

The Board of Trustees shall fix and determine by appropriate rules and regulations how much service in any year is equivalent to a year of service, but in no case shall less than six months' service constitute one year, nor shall more than one year of service be creditable for all service in one calendar year. The Board of Trustees shall not allow credit as service for any period of more than one month during which the Member was or shall be absent without pay provided that if a Member shall be transferred prior to July 1, 2014 from his or her Department payroll to the payroll of any city, county or state government or the federal government by his or her Department head during peace times, then such Member shall continue to be a Member of the System and shall be required to make regular contributions into the Annuity Savings Fund; and provided further, that if a Member, so transferred, shall fail to make such contributions for three consecutive months, he or she shall cease to be a Member of the Retirement System four months (of 31 days each) after the due date of his or her first defaulted Annuity contribution; and provided further, that any Member who was or shall be suspended from duty and subsequently reinstated to duty without further disciplinary action, shall receive total credit for the time of such period or periods of suspension, but in no case shall credit be granted for any period after June 30, 2014.

Sec. E-3. Employees in military service commencing prior to July 1, 2014.

(a) If a Member of the Retirement System was drafted, or enlisted into military, naval, marine, or other service of the United States government during time of war, or if a Member was drafted into such service during time of peace, and prior to the earlier of (i) ninety days from the date of his or her separation from such government service or from the date peace was or shall be established by treaty, whichever date was or shall be earlier, and (ii) June 30, 2014 resumed or shall resume employment as a Police Employee or Fire Employee, then such government service rendered prior to July 1, 2014 shall be credited to him or her as a Member of the Retirement System. During the period of such government service of a Member, his or her contributions to the Annuity Savings Fund shall be suspended and the balance in the Annuity Savings Fund, standing to his or her credit as of the last payroll date preceding his or her leave of absence from the service of his or her Department shall be accumulated at Regular Interest. Prior to July 1, 2014, even though the applicant may have been unable to satisfy all the foregoing requirements, the Board of Trustees had the power to grant the privileges provided for by this section in exceptional or extraordinary cases.

(b) A Member on the City payroll on or after January 1, 1979 and prior to July 1, 2014 who, prior to employment in the City service, was called to or entered any full time military service of the United States during time of war, period of compulsory military service, or period of unusual emergency as defined in an ordinance of the City, shall have the required period of active duty which occurs prior to July 1, 2014 credited him or her as Membership Service, subject to the following conditions and limitations:

(1) The Member files a written election with the Board of Trustees, before the earlier of (i) 180 days following the effective date of this provision or 180 days from the date of his or her first employment in the City service, whichever is most recent, and (ii) June 30, 2014, to claim military service credit under the provisions of this section. A Member who is included in a collective bargaining unit shall file a written election to claim military service credit with the Board of Trustees within 180 days following the date of a negotiated approval and acceptance of this section by his or her duly authorized bargaining agent as transmitted to the Board of Trustees by the Labor Relations Director or, in the case of Members hired subsequent to the transmittal of approval and acceptance by his or her duly authorized bargaining agent, within 180 days from the date of his or her first employment in the City service; provided that any such election is required to be filed prior to July 1, 2014.

(2) The Member furnishes the Board of Trustees such information as the Board of Trustees determines necessary to verify the amount of military service claimed.

(3) The Member pays to the Pension Accumulation Fund of the Retirement System an amount equal to five percent (5%) of the Member's annual rate of compensation at the time of payment multiplied by the years or parts of years of military service claimed.

(4) The required payment shall be made under one of the following options:

a. Payment in full within 30 days of the election to claim military service.

b. Payment in equal bi-weekly installments by payroll deduction over a 36 month period starting 30 days following the election to claim military service. Interest shall accrue during the period of installment payments at the compound rate of 5 percent per annum. Payments must be completed prior to application for retirement.

c. If a Member has sufficient funds in the principal portion of his or her Annuity, he or she may authorize the Board to transfer such funds to the Pension Accumulation Fund to meet the required payment.

(5) In the event a Member who has filed the required election of this benefit, and who would be eligible for a Pension in all respects except for paying the full

amount, dies prior to completion of the payment required in paragraph (4) preceding, the person otherwise entitled to a Retirement Allowance may pay the full amount due within 30 days of the Member's death to become eligible for an additional Pension credit under this section.

(6) Military service credited under the provisions of Section 54-30-3(c) of the 1964 Detroit City Code shall not be claimed or credited under the provisions of this section.

(7) Military service which is or will be the basis of service credit under any other public employee retirement program shall not be claimed or credited under the provisions of this section.

(8) In no case shall more than 3 years of pre-employment military service be credited a Member on account of military service. For the purpose of this limitation, military service credited pursuant to Section 54-30-3(a) of the 1964 Detroit City Code shall be combined with military service created pursuant to this section.

(9) The required payments made to the Pension Accumulation Fund for military service credit pursuant to this section shall, upon application by the Member or his or her estate, be returned without interest to any Member who dies or leaves City employment prior to being eligible for a Pension.

(10) Only honorable military service during the following periods shall be covered by this Section E-3(b):

World War II — December 8, 1941 to July 1, 1946.

Korean Conflict — June 27, 1950 to December 31, 1953.

Vietnam Conflict — August 5, 1964 to May 7, 1975.

(11) The military service credit pursuant to this section shall not apply toward meeting the minimum service and age requirements for vesting, for a non-duty disability Pension or for a service Pension. Such service credit may be used in meeting the minimum time needed for an automatic Option Two Pension in case of death of a Member.

(12) In no case shall benefits be based on the military service credit provided by this section unless the Member shall have been credited a minimum of eight years of service credit not including military service credit.

(13) Special service, contractual, part time, seasonal and summer camp employees are not eligible for the military service credit.

(14) In cases of doubt, the Board of Trustees will determine whether a Member is entitled to the benefits of this section consistent with the requirements and limitations herein.

(15) Any member of DFFA, DPCOA or DPLSA who performed military service prior to employment by the City and membership in the Retirement System may, prior to July 1 2014, claim service credit as a Member of the Retirement System for time spent in the military service.

(16) Effective December 15, 2008, any member of DFFA, DPCOA or DPLSA who has performed any honorable military service prior to July 1, 2014 may, prior to July 1, 2014, claim up to thirty-six (36) months service in Pension time for time spent in the military. However, the Member will be required to purchase this military service credit as provided above.

(17) Effective March 8, 2007, all DPOA bargaining unit members who have served in the military prior to July 1, 2014 may, prior to July 1, 2014, purchase a maximum of three (3) years Pension time.

Sec. E-4. Verification of service claimed.

Subject to the above restrictions and to such other rules and regulations as the Board of Trustees may adopt, the Board of Trustees shall verify, as soon as practicable after the filing of such statements of service, the service therein claimed.

Sec. E-5. Prior Service certificates.

Upon verification of the statements of service, the Board of Trustees shall issue Prior Service certificates, certifying to each Member the length of Prior Service rendered, with which he or she is credited. A Prior Service certificate shall be final and conclusive for retirement purposes as to such service; provided, however, that within one year from the date of issuance or modification of such certificate the Board of Trustees on its own motion or on the request of a Member may modify or correct the Prior Service certificate.

Sec. E-6. Creditable service at retirement.

Creditable service at retirement, on which the Retirement Allowance of a Member shall consist of the Membership Service rendered by him or her prior to July 1, 2014 and, if he or she has a Prior Service certificate in full force and effect as of July 1, 2014, the amount of service certified thereon.

ARTICLE F. BENEFITS PROVIDED TO MEMBERS

Part A - Service Retirement Allowance

Sec. F-1. Petition for retirement, mandatory age.

(a) Any Member as defined in Article D, Section D-1 (a), (b), or (c) in service may file with the Board of Trustees his or her written application for retirement setting forth the date not less than fifteen days nor more than ninety days subsequent to the filing thereof, on which he or she desires to be retired; and provided the Board of Trustees shall determine that the Member, at the date so specified for his or her retirement will have a total of twenty-five years or more of creditable service he or she shall on the date specified be retired, notwithstanding that during such period of notification he or she may have separated from service.

Provided, further, that in the case of any Fire Fighter as defined in Article D, Section D-1 (a), (b) or (c) having served twenty-five years or more of creditable service, upon recommendation of the Board of Fire Commissioners, the Fire Fighter shall be retired forthwith, by the Board of Trustees.

(b) Any Member as defined in Article D, Section D-1 (d) in service may file with the Board of Trustees his or her written application for retirement setting forth the date not less than fifteen days nor more than ninety days subsequent to the filing thereof, on which he or she desires to be retired; and provided the Board of Trustees shall determine that the Member, at the date so specified for his or her retirement, will have a total of twenty-five years (effective as of March 8, 2007, twenty years for members of DPOA and their fire equivalents) or more of creditable service and has attained Age fifty-five, he or she shall on the date specified be retired, notwithstanding that during such period of notification he or she may have separated from service.

Provided, further, that, effective July 1, 1983 for members of DPOA and fire equivalents and June 30, 1986 for DPLSA and fire equivalents and new Members, a Member described in Article D, Section D-1(d) shall be eligible to retire upon attainment of twenty-five years (effective as of March 8, 2007, twenty years for members of DPOA and their fire equivalents) or more of creditable service, regardless of Age. Effective July 1, 1998 (June 30, 2001 for DPOA members and their fire equivalents), the time on or before June 30, 2014 a Member is on layoff from service of the City shall be included in actual service rendered to the City for purposes of determining whether a Member has twenty-five years or twenty years of creditable service prior to July 1, 2014. The Pension benefit to which such Member is entitled shall be based only on his or her actual years of creditable service. Effective July 1, 1989, the minimum Age requirement for deferred Pensions payable for post 1969 Members represented by DPOA and hired before June 30, 1985 shall be eliminated.

Notwithstanding the foregoing provisions, effective October 15, 2014, a DPLSA member shall be eligible to terminate employment with the City and commence receipt of a Retirement Allowance (or make an election to participate in the DROP program as provided in Article I) under this Component II provided the Member satisfies the following requirements:

Fiscal Year	Age and Service
2015	Age 45 and 24 years
2016	Age 46 and 23 years
2017	Age 47 and 23 years
2018	Age 48 and 22 years
2019	Age 49 and 23 years
2020 and thereafter	25 years of service

(c) Effective June 30, 2001, any Member represented by DPOA and fire equivalents who has been laid off shall be eligible to retire at what would have been the Member's 25th anniversary. To determine eligibility for retirement, the Member's actual service time and time on lay off up to and including June 30, 2014 shall be combined. To calculate the Member's Retirement Allowance for members of DFFA, however, only actual service time through June 30, 2014 shall be used. For DFFA members having a parity relationship with the DPLSA and the DPCOA Inspector, only lay off time which occurred between July 1, 1973 and July 1, 1998 will be credited. Effective in accordance with the specific date and terms of the DPLSA award in Act 312 No. D98 F-0944, Members represented by DPCOA shall have the right to retire on their 25th anniversary date, notwithstanding any service time prior to July 1, 2014 they may have lost due to any layoffs, as provided in such award.

(d) Any Member represented by DPOA who was hired on or after July 1, 1985 and who leaves City employment after being vested shall not be eligible for Pension benefits until said individual reaches his or her sixty-second birthday.

(e) Any Member of the Retirement System as defined in Article D, Section D-1(a), (b), (c), and (d) who shall reach the Age of sixty years shall be retired forthwith, or on the first day of the calendar month next succeeding that in which the Member shall have reached Age sixty. On the written request of the Member and of the Commissioner of Police or the Board of Fire Commissioners, as the case may be, the Board of Trustees may continue such Member in active service for a period of two years beyond his or her sixtieth birthday, and on the expiration of such period, on like request, may continue such Member in active service for a further period of two years.

(f) Any Member of the Retirement System who satisfies the requirements for a Pension as defined in Article F, Section F-5 shall be eligible upon ninety days notice to make an irrevocable election to receive an immediate Retirement Allowance, actuarially reduced for early commencement, in lieu of a deferred Retirement Allowance.

(g) Any Member of the Retirement System who was in the service of the City on or after July 1, 1941 but prior to January 1, 1969 and who was still an active Member on July 1, 1983 for DPLSA and fire equivalents and July 1, 1986 for DPOA members and fire equivalents shall have the option of retiring under the Old Plan or the New Plan.

(h) Pursuant to Section 411(e) of the Internal Revenue Code, as in effect in 1974, an employee shall be 100 percent vested in his or her Retirement System accrued benefit upon attaining normal retirement hereunder while in service.

Sec. F-2. Old Plan/New Plan

Effective July 1, 1986, Members of the Retirement System as defined under the terms of the Retirement System in effect on July 1, 1977, who were in service on or after July 1, 1941 but prior to January 1, 1969, and are active Members on July 1, 1986 shall have the option of retiring under the Old Plan or the New Plan.

(a) *Amount of allowance – Old Plan Members*. Upon his or her retirement from service, a Member as defined in Article D, Section D-1(a), (b), or (c) ("Old Plan Member") shall receive a straight life Retirement Allowance which shall consist of the benefits provided in paragraphs (1) and (2) below; and he or she shall have the right to elect an option provided for in Part H of this Article F:

(1) An Annuity which shall be the Actuarial Equivalent of the Member's Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of his or her retirement; and

(2) A Pension which, when added to the Member's Annuity, will provide a straight life Retirement Allowance equal to two percent (2.0%) of his or her Average Final Compensation, multiplied by the number of years, and fraction of a year, of his or her creditable service through the earlier of (i) the date of retirement and (ii) June 30, 2014, not to exceed twenty-five years; provided, that the Retirement Allowance of a Police Employee shall in no case exceed fifteen twenty-seconds of the maximum earnable compensation of a Patrolman and the Retirement Allowance of a Fire Fighter shall not exceed fifteen twenty-seconds of the maximum earnable compensation of a Fire Fighter (and if either or both of the said ranks shall be hereafter abolished, the equivalent thereof), each as of the earlier of (i) the date of retirement and (ii) June 30, 2014. The foregoing Pension limitation shall not apply to any Police Employee or Fire Employee who on July 1, 1941, shall be entitled to a certificate for twenty years or more of prior service and who remains under the provisions of Chapter XV or Chapter XXI of Title IV of the 1918 Detroit City Charter.

(b) *Amount of allowance – New Plan Members*. Upon his or her retirement from service, a Member as defined in Article D, Section D-1(d) ("New Plan Member") shall receive a straight life Retirement Allowance which shall consist of the benefits provided in paragraphs (1) and (2) below; and he or she shall have the right to elect an option provided for in Part H of this Article F:

(1) An Annuity which shall be the Actuarial Equivalent of the Member's Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of his or her retirement; and

(2) A Pension which, when added to his or her Annuity, will provide a straight life Retirement Allowance equal to:

a. two and one-half percent (2.5%) of the Member's Average Final Compensation multiplied by the number of years and fraction of a year of his or her creditable service each as of the earlier of (i) the date of retirement and (ii) June 30, 2014, for the first twenty-five (25) years of such service; and

b. two and one-tenths percent (2.1%) of the Member's Average Final Compensation multiplied by the number of years and fraction of a year of his or her creditable service each as of the earlier of (i) the date of retirement and (ii) June 30, 2014 in excess of twenty-five (25) years, subject to a maximum of thirty-five (35) years.

Sec. F-3. Pension Multiplier

(a) Notwithstanding Section F-2(a)(2) and F-2(b)(2), effective July 1, 1992 each Member who retires on or after that date shall be entitled to a Pension which, when added to the Annuity, will provide a straight life Retirement Allowance equal to 2.1% of his or her Average Final Compensation, multiplied by the number of years and fraction of a year, of his or her creditable service each as of the earlier of (i) the date of retirement and (ii) June 30, 2014, not to exceed thirty-five (35) years of service for New Plan Members and twenty-five (25) years of service for Old Plan Members.

(b) Effective July 1, 1997 or for DPCOA members the effective date of the CET-DPCOA, each Member who retires shall be entitled to a Pension which when added to the Annuity will provide a straight life Retirement Allowance equal to 2.5% (or 2.1% for DPCOA members) of his or her Average Final Compensation multiplied by the number of years and fraction of year of his or her creditable service each as of the earlier of (i) the date of retirement and (ii) June 30, 2014 for the first twenty-five (25) years or, in the case of a DPCOA member of his or her creditable service earned or accrued on or after the effective date of the CET-DPCOA and prior to July 1, 2014. For Members represented by DFFA, DPCOA and DPLSA, the multiplier shall be 2.1% for each year of service through June 30, 2014 over twenty-five (25) years. Maximum years of service for Pension credit shall be thirty-five (35) years for New Plan Members and twenty-five (25) years for Old Plan Members.

(c) Effective September 1, 2011, each Member represented by DPOA who retires shall only be entitled to a Pension which, when added to the Annuity, will provide a straight life Retirement Allowance equal to 2.1% of his or her Average Final Compensation multiplied by the number of years and fraction of a year of his or her creditable service earned or accrued on or after September 1, 2011 and prior to July 1, 2014. Hence, for the first twenty-five (25) years of service accrued on or after September 1, 2011 and prior to July 1, 2014, the multiplier shall no longer be 2.5%; rather, 2.1%. Maximum years of service for Pension credit shall be thirty-five (35) years for New Plan Members and twenty-five (25) years for Old Plan Members.

Service credit accrued prior to September 1, 2011 will be unaffected by this Section F-3(c).

(d) Each DPLSA member who retires shall only be entitled to a Pension which, when added to the Annuity, will provide a straight life Retirement Allowance equal to 2.1% of his or her Average Final Compensation multiplied by the number of years and fraction of a year of his or her creditable service earned or accrued following the date of the Act 312 Award in D09 G-0786 and prior to July 1, 2014. Hence, for the first twenty-five (25) years of service accrued after the date of the Act 312 Award and prior to July 1, 2014, the multiplier shall no longer be 2.5% as stated in paragraph (b) above. Maximum years of service for Pension credit shall be thirty-five (35) years for New Plan Members and twenty-five (25) years for Old Plan Members.

Sec. F-4. Disposition of surplus benefits upon death of retired member.

In the event a retired Member dies before he or she has received in straight life Retirement Allowance payments an aggregate amount equal to his or her Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of his or her retirement, the difference between his or her said Accumulated Contributions and the said aggregate amount of straight life Retirement Allowance payments received by him or her shall be paid to such person or persons as he or she shall have nominated by written designation duly executed and filed with the Board of Trustees. If there is no such designated person or persons surviving the said deceased Retiree such difference, if any, shall be paid to his or her legal representative. No benefits shall be paid under this Section F-4 on account of the death of such a retired Member if he or she had elected Option 1, 2, 3, 3A or 3B provided for in Part H of this Article F.

Sec. F-5. Retirement allowance for certain persons leaving City employment after eight years service (40 & 8).

(a) Should any DPLSA member or any fire equivalent who (1) has attained age forty years of Age, and (2) has acquired eight or more years of credited service, or any Member who terminates employment with the City on or after August 29, 2003 with ten or more years of credited service leave the employ of the Police Department or Fire Department prior to the date he or she would have first become eligible to retire as provided in this Part A, for any reason except his or her retirement or death, he or she shall be entitled to a Retirement Allowance computed according to Section F-2 (a) or (b) of this Article F, whichever is applicable, as said Section was in force as of the earlier of (i) the date his or her employment with the City last terminated or (ii) June 30, 2014; provided, that he or she does not withdraw his or her Accumulated Contributions from the Annuity Savings Fund. The Member's Retirement Allowance shall begin the first day of the calendar month next following the month in which his or her application for benefits is filed with the Board of Trustees, on or after the date he or she would have been eligible to retire had he or she continued in City employment. Notwithstanding the foregoing, prior to March 3, 2008 the Retirement Allowance of a DPOA member or a fire equivalent hired on or after July 1, 1985 shall not begin prior to the date on which the Member reaches his or her sixty-second birthday. Unless otherwise provided in this Component II, such person shall not receive service credit for the period of his or her absence from the City Police Department and/or Fire Department employ prior to July 1, 2014, nor shall his or her Beneficiary be entitled to any other benefit afforded in this Component II, except the benefits provided in Part A, Section F-2(a) or (b) or Part F of this Article F, whichever is applicable, subject to the above provisions, notwithstanding, his or her membership has terminated.

(b) Effective August 28, 2003, DPOA members and fire equivalents who terminate employment after ten (10) years of service shall be vested and shall have all options afforded to 40 & 8 Retirees.

Sec. F-6. Reduced Early Pension Benefits (40 & 8 Vesting Retirees)

(a) Members who terminate employment and who are eligible for a Pension pursuant to Article F, Part A, Section F-5 of Component II (40 & 8) shall have the option of receiving an immediate, but reduced early Pension benefit in lieu of a deferred Pension.

(b) This reduced early Pension benefit shall not result in an increase in City contribution rates; therefore, the value of the Reduced Early Pension Benefit shall be the Actuarial Equivalent of the 40 & 8 Pension.

(c) For employees represented by DFFA in ranks or classifications with a parity relationship to employees represented by the DPLSA and employees in higher ranks or classifications, upon termination, a vested employee must within 90 calendar days make an irrevocable election as to whether or not to take this option.

(d) Individuals represented by DFFA, DPOA or DPLSA, who terminated employment prior to July 1, 1986, are not eligible for this option.

(e) An employee who receives a lump sum payment for accumulated time upon termination is not allowed to have that time count towards his or her retirement service.

(f) Since Members (other than DPOA and fire equivalents) are eligible to begin collecting their vested Pension as soon as they would have been eligible to retire had they continued their City employment, minimum retirement age (i.e., Age 55) shall not be a factor in computing the actuarially reduced Pension benefit.

(g) All DFFA members, except those members in ranks or classifications with a parity relationship to employees represented by the DPOA, electing to receive the reduced early Pension benefits shall receive from the City upon separation full pay for fifty percent (50%) of the unused sick bank amounts. This provision shall have no effect on a Member electing to receive the deferred 40 & 8 vested Pension who shall continue to be reimbursed for unused sick time in accordance with an applicable collective bargaining agreement.

Part B — Total Disability Pension and Retirement Allowances

Sec. F-7. Duty disability.

If a Member shall become Totally Disabled for duty by reason of injury, illness or disease resulting from performance of duty and if the Board of Trustees shall find such injury, illness or disease to have resulted from the performance of duty, on written application to the Board of Trustees by or on behalf of such Member or by the head of his or her Department such Member shall be retired, notwithstanding that during such period of notification he or she may have separated from service; provided, the Medical Director, after examination of such Member shall certify to the Board of Trustees his or her Total Disability. If said Member was separated from service after filing of the written application, and he or she had attained twenty-five years or more of service prior to the date of separation, the Board of Trustees, shall retire said Member, under this Part B.

Sec. F-8. Duty disability benefits; Members in service on or after July 1, 1941 but prior to January 1, 1969.

(a) A Member, as defined under Article D, Section D-1(a), (b), or (c), shall receive the following benefits:

(1) Each such Member shall receive a disability Pension of fifty percent (50%), or such other higher percentage that is in effect and applies to such Member, of the Member's Average Final Compensation at the earlier of (i) the time of disability retirement and (ii) June 30, 2014. On the date that a Member, who retired under Section F-7 and who receives benefits under this Section F-8, would have accrued twenty-five years of creditable service had the Member continued in active service, or on the date that the Member reaches age sixty, whichever comes first, the Member shall be eligible for optional benefits as provided Part H of this Article F.

(2) In addition to the disability Pension provided for in Section F-8(a)(1), any Member who receives a disability Pension pursuant to Section F-8(a)(1) and has not accrued a total of twenty-five (25) years of creditable service as of the earlier of (i) the date of the Member's disability retirement and (ii) June 30, 2014 shall receive a supplemental disability payment in the amount of sixteen and two-thirds percent (16-2/3%) of the Member's Average Final Compensation at the earlier of (i) the time of disability retirement or (ii) June 30, 2014. This supplemental payment shall terminate upon the expiration of the period when a Member who retired under Section F-7 of this Part B and who receives benefits under Section F-8(a)(1) would have accrued twenty-five years of creditable service had the Member continued in active service, or on the date that the Member reaches Age sixty, whichever comes first.

Effective July 1, 1992 for DPLSA members, the Average Final Compensation used in this computation shall mean the current maximum salary for the rank(s), grade(s) or position(s) which would have been held by the Member over the sixty months prior to the earlier of (i) the date of retirement (reduced disability/service retirement when the Member would have attained a total of twenty-five years of credited service) had he or she continued working in that classification which he or she held at the time of his or her disability or (ii) June 30, 2014. For Members who begin receiving such benefits on or after July 1, 1998 and before July 1, 2014, the amount of the Member's most recent full longevity payment shall be included in the definition of Average Final Compensation.

Effective July 1, 1992 for DFFA and DPOA members, the Average Final Compensation used in this computation shall be the highest average annual compensation that would have been received by such a Member had he or she continued working in the classification he or she held at the time of his or her disability, during any period of five consecutive years, selected by the Member, contained within the last ten years immediately preceding the earlier of (i) expiration of the period when the Member would have attained a total twenty-five years of creditable service and (ii) June 30, 2014.

Effective July 1, 2000, the Average Final Compensation used in this computation shall mean the current maximum salary, including the annual longevity payment provided above, for the rank(s), grade(s) or position(s) which would have been held by the Member over the thirty-six (36) months prior to the earlier of (i) the date of disability retirement or (ii) June 30, 2014.

(3) In the case of a Member retired under Section F-8 who receives benefits under F-8(a)(1) and F-8(a)(2), the Accumulated Contributions standing to the Member's credit at the date of retirement shall continue to be held in the Annuity Savings Fund and Regular Interest shall be credited thereto. If such Member dies before the date upon which the Member would have achieved a total of twenty-five years of creditable service had the Member continued in active service and before such Member reaches Age sixty, the balance of the member's Annuity Savings Account including interest thereon shall be paid as provided in Part D and Part E of this Article F.

(b) This Section shall be applicable only to those Members receiving benefits on the date of adoption of this Section who are not covered by the arbitration decision regarding the DPOA which became effective July 1, 1995, or the arbitration decision regarding the DPLSA which became effective June 30, 1998.

(c) This Section does not rescind any substantive rights of disability Retirees from the Retirement System who retired prior to the July 1, 1995 arbitration award, or the substantive rights of disability Retirees from the DPLSA who retired prior to the June 30, 1998 arbitration award.

(d) This Section does not amend any computations used to determine disability benefits payable under this Section F-8, or result in an increase or decrease in such disability benefits.

Sec. F-9. Duty disability benefits; Members beginning service on or after January 1, 1969 and becoming disabled prior to the dates set forth in Section F-10.

(a) A Member, as defined under Article D, Section D-1(d), who retired under Section F-7, shall receive the following benefits:

(1) Each such Member shall receive a disability Pension of fifty percent (50%), or such other higher percentage that is in effect and applies to such Member, of the Member's Average Final Compensation at the earlier of (i) the time of disability retirement or (ii) June 30, 2014. On the date that a Member who retired under Section F-7 of this Part B and who receives benefits under this Section would have accrued twenty-five years of creditable service had the Member continued in active service, or on the date that the Member reaches Age sixty, whichever comes first, the Member shall be eligible for optional benefits as provided Part H of this Article F.

(2) In addition to the disability Pension provided for in Section F-8(a)(1) of this Part B, any Member who receives a disability Pension pursuant to Section F-9(a)(1) of this Part B and who has not accrued a total of twenty-five years or more of creditable service as of the date of the Member's disability retirement shall receive a supplemental disability payment in the amount of sixteen and two-thirds percent (16-2/3%) of the Member's Average Final Compensation at the time of the Member's disability retirement. This supplemental payment shall terminate when a Member who retires under Section F-7 and who receives benefits under Section F-9(a)(1) would have accrued twenty-five years of creditable service had he or she continued in active service or on the date that the Member reaches Age sixty, whichever comes first.

(3) In addition to the disability Pension provided for in Section F-9, any Member who receives a disability Pension pursuant to Section F-9(a)(1) and who has accrued more than twenty-five years ("additional years") of creditable service as of the earlier of (i) the date of the Member's disability retirement and (ii) June 30, 2014 shall receive another supplemental disability payment equal to two percent (2%), or such other higher percentage that is in effect and applies to such Member, of the Member's Average Final Compensation as of the earlier of such dates, multiplied by the number of additional years of creditable service the Member has accrued; provided, however, that such supplemental disability payment shall not exceed twenty percent (20%), or such other higher percentage that is in effect and applies to such Member, of the Member's Average Final Compensation as of the earlier of (i) the date of the Member's disability retirement and (ii) June 30, 2014.

(4) In the case of a Member who retires under Section F-7 and who receives benefits described under Section F-9(a)(1) through (3), the Accumulated Contributions standing to the Member's credit at the date of disability retirement shall continue to be held in a separate fund in the Annuity Savings Fund and Regular Interest shall be credited thereto. If such Member dies prior

to the time when the Member would have achieved a total of twenty-five years of creditable service had the Member continued in active service and before such Member reaches Age sixty, the amount of the Member's Accumulated Contributions so set aside and interest thereon shall be paid as provided in Part D and Part E of this Article. F

(5) The amendment of Section F-9(a)(1) shall not result in an increase or decrease in the amount of disability benefits payable to Members.

(b) This Section shall be applicable to those Members receiving benefits on the effective date of this Section F who are not covered by the arbitration decision regarding the DPOA which became effective July 1, 1995, or the arbitration decision regarding the DPLSA which became effective June 30, 1998. This Section does not rescind any substantive rights of disability Retirees from the Retirement System who retired prior to the July 1, 1995 arbitration award, or the substantive rights of disability Retirees from DPLSA who retired prior to the June 30, 1998 arbitration award.

(c) This Section does not amend any computations used to determine benefits under Section F-9 of this Part, or result in an increase or decrease in such benefits.

Sec. F-10. Duty Disability benefits; DFFA, DPOA and DPLSA members beginning service on or after January 1, 1969 and becoming disabled on or after the dates set forth below.

(a) This Section F-10 shall be applicable to:

(1) DFFA employees who file applications for disability retirement on or after July 1, 1995 and who have a parity relationship with the DPOA and on or after June 30, 1998, for DFFA employees with a parity relationship with the DPLSA and the DPCOA Inspector;

(2) all DPLSA employees who file applications for disability retirement on or after June 30, 1998; and

(3) all DPOA members who file applications for disability retirement on or after July 1, 1995.

(b) A Member who retires as a result of duty disability shall receive for a period of twenty-four months the sum of:

(i) a basic benefit equal to 50% of the Member's Final Compensation at the earlier of (i) the time his or her duty disability retirement begins or (ii) June 30, 2014; and

(ii) a supplemental benefit equal to 16-2/3% of the Member's Final Compensation at the earlier of (i) the time his or her duty disability retirement begins or (ii) June 30, 2014.

Subject to Sections K-1 and K-3, on July 1st of each year, the benefits determined under paragraphs (i) and (ii) above then payable will each be increased by adding to said amounts the product of the initial amount of said benefit which was computed at the time the duty disability retirement began and the applicable Pension Improvement Factor (Escalator).

(c) After a Member receives benefits hereunder for a period of twenty-four months, the Board will determine whether the Member is disabled from any occupation. If the Member is disabled from any occupation, the Member shall continue to receive the benefit provided in paragraphs (b)(i) and (b)(ii) until such time as the Member would have attained twenty-five years of creditable service had he or she continued in active service with the City. At that time, the Member shall continue to receive the benefit described in paragraph (b)(i) above; however, benefits described in paragraph (b)(ii) above will cease. If the Member is not disabled from any occupation, he or she shall continue to receive the benefit described in paragraph (b)(i) above; benefits described in paragraph (b)(ii) will cease.

(d) Duty disability retirement benefits shall continue to be paid to a Member on duty disability retirement after the Member has attained twenty-five years of creditable service, to the earlier of (i) the Member's attainment of Age sixty-five, or (ii) termination of disability as determined by the Board. Upon termination of disability or attainment of Age sixty-five, a Member with twenty-five years of creditable service shall be eligible to receive a service Retirement Allowance. The amount of such service Retirement Allowance shall be the same amount which would have been payable if the conversion from duty disability retirement to service retirement had occurred at the date of attaining twenty-five years of creditable service. In the event that the examinations and/or investigations conducted by the Police Department result in a determination that a DPOA Member is not qualified for reappointment as a Police Employee for medical reasons, disability benefits will be continued.

(e) If a Member on duty disability retirement returns to active service and within a twenty-four month period re-qualifies for duty disability retirement for the same or related reasons he or she had been retired, then the disability shall be deemed a continuation of the prior disabling condition and the period of the return to work will not have caused the Member to be entitled to a new initial determination of benefit amounts as set forth in paragraph (b) above. Instead, such Member will return to retirement at the point he or she had reached in sub-paragraphs (b), (c) or (d) above as if there had not been a break in his or her period of placement on duty disability retirement.

(f) Disability retirement benefits shall continue to be considered benefits provided by the City pursuant to the 1918 Detroit City Charter, as amended, which are paid instead of and not in addition to any benefits under the State Workers' Disability Compensation Act.

(g) Survivor benefit coverage applicable to active Members shall be continued during the period a Member is eligible for a duty disability benefit. Upon conversion to a service Retirement Allowance as provided in paragraph (d), automatic survivor benefit coverage shall terminate. At that time, the Member shall have the right to elect an optional form of payment in the same manner as if he or she had retired from active membership on the conversion date.

(h) Pension Credit While on Duty Disability Status

(1) While a Member is eligible to receive duty disability benefits, the Member shall continue to accrue Pension service credit.

(2) The accrual of Pension service credit under paragraph (h)(1) will cease on the earlier of (i) the date the Member has twenty-five years of creditable service, or (ii) June 30, 2014.

(i) Earnings Offset

(1) In the event that a recipient of a duty disability retirement benefit receives earned income from gainful employment during a calendar year, the amount of the Member's disability benefit payable during the next subsequent Fiscal Year will be adjusted so it does not exceed the difference between (i) the Member's base salary at the date of disability, increased by 2.25% times the number of full years from the date of disability to the year in which the earnings offset is applied, and (ii) the amount of remuneration from gainful employment during the prior calendar year.

(2) The earnings test shall be based on information the Board may periodically require from a duty disability benefit recipient or has secured from other reliable sources. Furnishing such information shall be a condition for a Member's continued eligibility for a duty disability benefit. In the event a Member's Retirement Allowance was not appropriately reduced for any period in which he or she is engaged in a gainful occupation, the Board shall adjust future benefit payments to such Member until the amount of the overpayment is recouped by the Retirement System.

(j) The Annuity withdrawal provision of the Retirement System will continue to apply to Members on duty disability. If a duty disability recipient elects Annuity withdrawal after attaining twenty-five years of creditable service, the applicable benefit reduction will offset the duty disability benefit until the conversion date, after which it will offset the converted service Retirement Allowance.

Sec. F-11. Non-duty disability.

(a) On written application to the Board by or on behalf of a Member or by the head of his or her Department, a Member, who becomes Totally Disabled for duty by reason of injury, illness or disease not resulting from the performance of duty as determined by the Board of Trustees, shall be retired by the Board of Trustees. If said Member was separated from service after the filing of the written application and had attained twenty-five years or more of creditable service prior to the date of separation, the Board shall retire said Member, under this Part B.

(b) A Member retired under paragraph (a) above shall receive the following applicable benefits:

(1) If such Member has less than five years of creditable service at the time of his or her disability retirement, his or her Accumulated Contributions standing to his or her credit in the Annuity Savings Fund shall be returned to the Member, or at his or her option, he or she shall receive a cash refund annuity which shall be the Actuarial Equivalent of his or her Accumulated Contributions. For purposes of this Section F-11(b)(1), a "cash refund annuity" is an annuity that provides a death benefit equal to the positive difference, if any, between the original cost of the annuity and the sum of annuity payments received by the Member prior to his or her death.

(2) If such Member has five or more years of creditable service at the time of his or her disability retirement, he or she shall receive a disability Retirement Allowance computed in accordance with the provisions of this Article F, Part A, Section F-2(a) or (b), whichever is applicable, and he or she shall have the right to elect an Option provided for in Part H of this Article F. The Member's Straight Life Retirement Allowance shall not be less than twenty per cent of his or her Average Final Compensation as of the earlier of (i) the date of his or her disability retirement and (ii) June 30, 2014. Such Retirement Allowance shall be subject to Parts I and K of this Article F.

(3) If a Member receiving non-duty disability benefits has any Accumulated Contributions standing to his or her credit in the Annuity Savings Fund when the Member would have attained twenty-five years (effective as of March 8, 2007, twenty years for DPOA members and fire equivalents) of creditable service, such Member may withdraw the balance of such Accumulated Contributions at that time.

(4) If a Member receiving non-duty disability retirement benefits is or becomes engaged in a gainful occupation, business, or employment paying more than the difference between the disabled Member's Retirement Allowance and Average Final Compensation, the Member's Retirement Allowance shall be reduced by the amount of such difference. If the amount of the Member's earnings changes, the Retirement Allowance may be adjusted accordingly. The amount of income received by a Member shall be determined by the Board based upon information received from the Member or based upon information secured from other reliable sources. Furnishing such information to the Board at such times as the Board shall require shall be a condition for the Member's continued eligibility for non-duty disability benefits. In the event a Member's Retirement Allowance was not appropriately reduced for any period in which he or she is engaged in a gainful occupation, the Board

shall adjust future benefit payments to such Member until the amount of the overpayment is recouped by the Retirement System.

Sec. F-12. Disability retirement procedures.

(a) The Board shall establish procedures for determining whether a Member is disabled. Such procedures shall be consistent with any collective bargaining agreements between the City and the unions covering Police Employees and Fire Employees.

(b) If a Member is determined to be disabled, the Board or its designee will examine the pension file, including the submissions of the Member and the Police or Fire Department, to determine if there is any dispute as to whether the disability "resulted from the performance of duty" within the meaning of the Combined Plan. If it is undisputed that the disability did result from the performance of duty, the Board will grant duty disability retirement benefits. If it is undisputed that the disability did not result from the performance of duty, the Board will grant non-duty disability retirement benefits, provided the Member meets the other conditions of eligibility. If the performance of duty issue is in dispute, the Board will refer the matter to arbitration by a member of the Disability Retirement Review Board ("DRRB"). The decision of the DRRB member as to whether the disability resulted from the performance of duty shall be final and binding upon the Member, the Department and the Board. The DRRB shall consist of three qualified arbitrators who will be individually assigned in rotating order to decide the matters referred to arbitration by the Board. The three members of the DRRB shall be disinterested persons qualified as labor arbitrators and shall be selected in accordance with agreements between the City and the unions representing Members. The procedure for the termination of DRRB members and the selection of new DRRB members also shall be carried out in accordance with the agreements between the City and the unions representing Members.

(c) The hearing before a member of the DRRB will be conducted in accordance with the following procedures:

(1) The Member and the City will have the right to appear in person or otherwise may be represented by counsel if they wish and will be afforded an equal opportunity to present evidence relevant to the issues;

(2) A court reporter will be present and make a stenographic record of the proceedings;

(3) The hearing will be closed to the public, except that the Member may select one person to be with him or her in the hearing room; provided, however, that person may not testify;

(4) The witnesses will be sequestered;

(5) The witnesses will be sworn by the court reporter and testify under oath;

(6) The Member may not be called by the City as an adverse witness;

(7) The DRRB member will apply the rules of evidence and follow the procedures which are customarily applied and followed in labor arbitration cases;

(8) If the Member wishes to have an employee of the City released from duty to appear as a witness on his or her behalf, the Member may so inform the Board in writing which, in turn, will submit a written request to the appropriate Department for the release of the employee for the purpose of so testifying;

(9) The DRRB member will afford the parties an opportunity for the presentation of oral argument and/or the submission of briefs;

(10) The DRRB member will issue a written decision containing credibility resolutions as necessary, findings of fact and conclusions with respect to all relevant issues in dispute;

(11) The authority of the DRRB member is limited to deciding whether or not the Member's disability "resulted from the performance of duty" within the meaning of the Combined Plan. The DRRB member shall have no authority to add to, subtract from, modify or disregard the terms of the Combined Plan; and

(12) The costs associated with the hearing, including the arbitrator's fees and expenses and the court reporter's fees and expenses, will be paid by the Retirement System.

(d) If a disabled Member is determined by the Board or its delegate to no longer be disabled, he or she may appeal that determination within seven (7) days thereof by filing a written request with the Board for a re-examination. The Board shall promptly arrange for such re-examination. The Member's disability benefits will be continued pending that final and binding medical finding, and if the finding is that the Member is no longer disabled, his or her disability benefits will be further continued while the Police or Fire Department conducts such examinations and/or investigations as necessary to determine whether the Member is qualified for reappointment to active duty. In the event that the examinations and/or investigations conducted by the Police Department result in a determination that a Member represented by DPLSA is not qualified, for medical reasons, for reappointment to active duty, disability benefits will be continued.

(e) The Board shall not act upon or grant the application filed by a Member who, although he or she is not capable of performing the full duties of a Police Employee or Fire Employee, has not suffered any diminishment of his or her base wages or benefits because he or she is either:

(1) regularly assigned to a position, the full duties of which he or she is capable of performing; or

(2) assigned to a restricted duty position, unless the Member's Department advises that it intends to seek a disability retirement for the Member in the foreseeable future.

(f) The provisions in paragraph (e) above are not intended to and will not:

(1) affect the right of a Member to seek a disability retirement when no restricted duty position is available; or

(2) restrict in any way the existing authority of the Chief of Police or the Fire Commissioner to seek a duty or non-duty disability retirement for a Member or for that Member, at that time, to request a duty or non-duty disability retirement.

(g) DPCOA and DPLSA members who are retired on disability Pensions pursuant to this Part B prior to July 1, 2014 shall be entitled to lump sum payments of all accumulated time from the date that the Board of Trustees determines that they are entitled to such a Pension but not later than June 30, 2014. These members shall not be required to utilize such time delaying their retirement dates.

Part C — Escalation and Change in Compensation, Rank

Sec. F-13. Generally.

Subject to Sections K-1(1) and K-3, if hereafter the rate of compensation of the rank, grade or position on which the service Retirement Allowance, disability Pension or disability Retirement Allowance of a Member who was hired prior to July 1, 1969 or is a Beneficiary of such a Member as defined in Article D, Section D-1(a), (b), or (c) is based shall be changed, his or her service Retirement Allowance, disability Pension, or disability Retirement Allowance shall be changed proportionately, and if such rank, grade, or position shall have been abolished, his or her service Retirement Allowance, disability Pension, or disability Retirement Allowance shall be changed in proportion to the change made in the compensation of the existing rank, grade, or position most nearly approximating the rank, grade, or position so abolished.

Sec. F-14. Increase of Benefits; Pension Improvement Factor (Escalator).

On and after July 1, 1969, and the first of July of each year thereafter until July 1, 1992, the Pension portion of any Retirement Allowance or death benefit of a Member or Beneficiary of a Member as defined in Article D, Section D-1(d), which is paid or payable under this Component II shall be increased at the rate of two per cent (2.0%) per annum computed on the basis of the amount of the Pension received at the time of retirement.

Subject to Sections K-1(1) and K-3, on or after July 1, 1992 and the first of July each year thereafter, the Pension portion of any Retirement Allowance or death benefit of a Member or Beneficiary of a Member as defined in Article D, Section D-1(d), (including those Members who opt to retire under the New Plan provisions) shall be increased at the rate of two and twenty-five one-hundredths per cent (2.25%) per annum computed on the basis of the amount of the Pension received at the time of retirement.

Subject to Sections K-1(1) and K-3, effective for Members who retire on or after July 1, 1997 (July 1, 1998 for DPCOA members, DPLSA members and DFFA members with a parity relationship with DPCOA and July 1, 2001 for DPOA members and their fire equivalents), the Pension Improvement Factor (Escalator) described in this Section shall be re-computed each Fiscal Year on the basis of the amount of Pension received in the previous Fiscal Year (i.e., the 2.25% per annum escalation amount shall be compounded).

Pension benefits for DPCOA members under Component II based on service rendered after November 30, 2012 shall not be subject to any escalation amounts.

The Pension portion of any Retirement Allowance or death benefit of a Member, or Beneficiary of a Member as defined in Article D, Section D-1(d) of the Combined Plan provisions, and Article 51.G. of the DPLSA collective bargaining agreement or Article 3.K. of the DPOA collective bargaining agreement (to include those Members who opt out to retire under the New Plan provisions) earned after April 1, 2011 (for DPLSA members) or September 1, 2011 (for DPOA members), shall not be increased whatsoever, per annum or otherwise. Subject to Sections K-1(1) and K-3, the Pension portion of any Retirement Allowance or death benefit of a Member, or Beneficiary of a Member as defined herein, accrued prior to April 1, 2011 (for DPLSA members) or September 1, 2011 (for DPOA members), shall still be increased as provided herein. Hence, Pension benefits earned based on service rendered after April 1, 2011 (for DPLSA members) or September 1, 2011 (for DPOA members) will no longer receive the 2.25% per annum escalation amount. Subject to the Plan of Adjustment, the 2.25% per annum escalation amount shall continue to apply to Pension benefits earned based on service rendered before April 1, 2011 (for DPLSA members) or September 1, 2011 (for DPOA members).

Sec. F-15. Payment.

Subject to Sections K-1(1) and K-3, the escalation factor contained in Section F-14 above shall be payable to the Member or Beneficiary of a Member as defined in Article D, Section D-1(d), notwithstanding any Retirement Allowance or Pension amount limitation provisions in this Component II to the contrary.

Part D — Death Benefits.

Sec. F-16. Generally.

If a Member, or a Retiree who was a Member, is killed in the performance of his or her duty or dies as the result of illness contracted or injuries received while in the performance of his or her duty and such death, illness or injuries resulting in death, is found by the Board of Trustees to have resulted from the performance of his or her duty, the following applicable benefits shall be paid, subject to Part I, Section F-25, of this Article F.

(a) The Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of his or her death shall be paid to such person or persons as he or she shall have nominated by written designation duly executed and filed with the Board of Trustees. If there is no such designated person surviving, his or her said Accumulated Contributions shall be paid to his or her legal representative, subject to paragraph (e) of this Section F-16.

(b) A Member's surviving Spouse shall receive a Pension of five-elevenths of the maximum earnable compensation for the rank of Patrolman or Fire Fighter as the case may be determined as of the earlier of (i) the date of death or (ii) June 30, 2014. If his or her child or children under Age eighteen years also survive the deceased Member each such child shall receive a Pension of one-tenth of such maximum earnable compensation as of the earlier of (i) the date of death or (ii) June 30, 2014; provided, that if there are more than two such surviving children under Age eighteen years, each such child's Pension shall be an equal share of seven thirty-thirds of such maximum earnable compensation. Upon the death, marriage, adoption, or Attainment of Age eighteen years of any such child his or her Pension shall terminate and there shall be a redistribution by the Board of Trustees to the deceased Member's remaining eligible children, if any; provided, that in no case shall any such child's Pension exceed one-tenth of such maximum earnable compensation. In no case shall the total of the Pensions, provided for in this paragraph (b), payable on account of the death of a Member exceed two-thirds of the maximum earnable compensation for the rank of Patrolman or Fire Fighter, as the case may be, determined as of the earlier of (i) the date of the Member's death or (ii) June 30, 2014.

Effective July 1, 1986, widows of Police Department or Fire Department employees who have been receiving a flat monthly benefit of $300.00 should receive an increase of $500.00 per month thereby making the flat monthly benefit $800.00.

(c) If no Spouse survives the deceased Member or if his or her surviving Spouse dies or remarries before his or her youngest unmarried surviving child attains Age eighteen years, his or her unmarried child or children under age eighteen years shall each receive a Pension of one-fourth of the maximum earnable compensation for the rank of Police Employee or Fire Employee, as the case may be, as of the earlier of (i) the date of the Member's death or (ii) June 30, 2014; provided that if there are more than two such surviving children under Age eighteen years, each such child's Pension shall be an equal share of one-half of such maximum earnable compensation. Upon the death, marriage, adoption, or Attainment of Age eighteen years of any such child his or her Pension shall terminate and there shall be a redistribution by the Board of Trustees to the deceased Member's remaining eligible children, if any; provided, that in no case shall any such child's Pension exceed one-fourth of the maximum earnable compensation for the rank of Patrolman or Fire Fighter, as the case may be, determined as of the earlier of (i) the date of the Member's death, and (ii) June 30, 2014.

(d) If there is no surviving Spouse and if there are no children under Age eighteen years surviving such deceased Member and if he or she leaves surviving either a father or mother or both, whom the Board of Trustees shall find to be actually dependent upon such Member for financial support, such dependent father and mother shall each receive a Pension of one-sixth of the maximum earnable compensation for the rank of Patrolman or Fire Fighter, as the case may be, determined as of the earlier of (i) the date of the Member's death, and (ii) June 30, 2014.

(e) If a Member dies intestate, without having designated a person or persons, as provided in sub-section (a) of this Section F-16, and without heirs, the amount of his or her Accumulated Contributions in the Annuity Savings Fund, not to exceed a reasonable sum, to be determined by the Board of Trustees, shall be used to pay his or her burial expenses, provided he or she leave no other estate sufficient for such purpose; any balance credited to such Member in the Annuity Savings Fund, and not used for burial expenses shall remain a part of the funds of the Retirement System and shall be credited to the Pension Accumulation Fund.

(f) If the maximum earnable compensation for the rank of Patrolman or Fire Fighter, as the case may be, is subsequently changed, the Pensions provided in this Section F-16 for Beneficiaries of Members as defined in Article D, Section D-1(a), (b), or (c) shall be proportionately changed; provided, however, that no increases shall be made after June 30, 2014.

(g) The maximum earnable compensation for the rank of Patrolman or Fire Fighter, as the case may be, to be used in computing the Pensions provided in this Section for Beneficiaries of Members as defined in Article D, Section D-1(d) shall be the maximum earnable compensation of the rank of Patrolman or Fire Fighter as established by the City's budget for the Fiscal Year in which occurs the earlier of (i) the date of the Member's death, and (ii) June 30, 2014.

Part E — Nonduty Death.

Sec. F-17. Payment of Accumulated Contributions.

If a Member, or a Member who retires after June 30, 1965 under Part B, Section F-7 of this Article F, dies and no Pension or Pensions become payable under this Component II on account of his or her death, the Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of death shall be paid to such person or persons as he or she shall have nominated by written designation duly executed and filed with the Board of Trustees. If there is no such designated person or persons surviving the said Member, his or her said Accumulated Contributions shall be paid to his or her legal representative. If such Member dies intestate, without having designated a person as above provided, and without heirs, his or her said Accumulated Contributions not to exceed a reasonable sum to be determined by the Board of Trustees, shall be used to pay his or her burial expenses, provided he or she leaves no other estate sufficient for such purpose; and any balance credited to such Member in the Annuity Savings Fund not so used for burial expenses shall be transferred to the Survivors Benefit Fund.

Sec. F-18. Allowances to surviving spouses.

Upon the death of a Member, or a Member who retires after June 30, 1965 under Part B, Section F-7 of this Article F, and such death is found by the Board of Trustees not to have resulted from the performance of his or her duty, the applicable Retirement Allowances provided in paragraphs (a), (b), (c) and (d) of Section F-1 shall be paid from the Survivors Benefit Fund, to the extent of available funding, and shall be subject to paragraphs (e), (f) and (g) of Section F-1.

(a) His or her surviving Spouse shall receive a Retirement Allowance computed in the same manner in all respects as if the said Member had (1) regularly retired on the earlier of (i) the day preceding the date of his or her death, or (ii) June 30, 2014, notwithstanding that he or she might not have acquired twenty-five years of creditable service, in the case of a Member as defined in Article D, Section D-1(a), (b), or (c), or notwithstanding that he or she might not have acquired twenty-five years of service or more and had not attained age fifty-five, in the case of a Member as defined in Article D, Section D-1(d); (2) elected Option 2 provided for in Part H of this Article F; and (3) nominated his or her surviving Spouse as joint Beneficiary; provided, that in no case shall the Retirement Allowance payable to such joint Beneficiary be less than twenty per cent of said Member's Average Final Compensation as of the earlier of (i) the Member's date of death, and (ii) June 30, 2014. If a Member who had less than twenty-five years of creditable service dies prior to July 1, 2001, the Retirement Allowance payable to the surviving Spouse shall be terminated in the event the surviving Spouse remarries.

(b) His or her unmarried child or children under Age eighteen years shall each receive a Retirement Allowance of one-seventh of the annual maximum earnable compensation of the rank of a Patrolman or a Fire Fighter, as the case may be determined as of the earlier of (i) the Member's date of death, and (ii) June 30, 2014; provided, that if there are more than two such children, each child shall receive a Retirement Allowance of an equal share of two-sevenths of said annual maximum earnable compensation. Upon any such child's adoption, marriage, death or Attainment of Age eighteen years, whichever occurs first, his or her Retirement Allowance shall terminate, and there shall be a redistribution by the Board of Trustees to the deceased Member's remaining eligible children under Age eighteen years; provided, that in no case shall the Retirement Allowance payable to any such child exceed one-seventh of the said annual maximum earnable compensation.

(c) If, at the time of the said Member's death, there shall be neither a surviving Spouse nor children eligible for a Retirement Allowance provided for in this Section F-18, each of his or her parents shall receive a Retirement Allowance of one-seventh of the annual maximum earnable compensation of a Patrolman, or a Fire Fighter, as the case may be determined as of the earlier of (i) the Member's date of death, and (ii) June 30, 2014; provided, that the Board of Trustees finds that such parent was dependent upon the said Member for at least fifty per cent of his or her financial support. Upon the remarriage of any such parent, his or her Retirement Allowance shall thereupon terminate.

(d) In the event all the Retirement Allowances provided for in this Section F-18, payable on account of the death of a Member terminate before there has been paid an aggregate amount equal to the said Member's Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of death, the difference between his or her said Accumulated Contributions and the said aggregate amount of Retirement Allowances shall be paid to such persons as the said Member shall have nominated by written designation duly executed and filed with the Board of Trustees. If there are no such designated person or persons surviving the said Member such difference, if any, shall be paid to his or her legal representative.

(e) In no case shall any Retirement Allowance be paid under this Section F-18 on account of the death of a Member if any benefits are paid under Part D of this Article F on account of his or her death. The Retirement Allowance provided for in this Section F-18 shall be subject to Part I of this Article F.

(f) All benefits provided in this Part E for Beneficiaries of Members as defined in Article D, Section D-1(a), (b), or (c) shall be based on the maximum earnable compensation of the rank of Patrolman or Fire Fighter, as the case may be determined as of the earlier of (i) the Member's date of death, or (ii) June 30, 2014. Subject to the Plan of Adjustment, if a Member died before July 1, 2014 and the compensation of such rank shall be changed prior to July 1, 2014, the benefits provided shall be changed proportionately. All benefits provided in this Part E for Beneficiaries of Members as defined in Article D, Section D-1(d) shall be based on the maximum earnable compensation of the rank of Patrolman or Fire Fighter as established in the City's budget for the year of the earlier of (i) the Member's death or (ii) June 30, 2014.

(g) In the event a Member has withdrawn his or her Accumulated Contributions from the Annuity Savings Fund and has not returned in full all amounts due the fund by him or her, the survivors benefits provided in paragraphs (a), (b), (c) and (d) of this Section F-18 shall be reduced to the proportion that the Member's Accumulated Contributions standing to his or her credit in the Annuity Savings Fund, at the time of his or her death bears to the amount his or her Accumulated Contributions would have been had he or she not made a withdrawal from the Annuity Savings Fund.

Part F — Termination of Membership Otherwise than by Retirement, Death or Becoming a Beneficiary.

Sec. F-19. Payment of benefits to employees who became Members before January 1, 1969.

If the membership of a Member as defined in Article D, Section D-1(a), (b), or (c) shall terminate for any reason other than retirement, his or her becoming a Beneficiary, or death, the Member shall be paid the Accumulated Contributions standing to the credit of his or her individual account in the Annuity Savings Fund, such payment to be made within ninety days after such termination of membership; provided, however, that if a Member eligible for retirement shall resign or be dismissed from service, the Board of Trustees, on the written petition of such Member filed within one year from his or her separation from service and prior to the withdrawal of his or her Accumulated Contributions in the Annuity Savings Fund, shall grant such Member a service Retirement Allowance computed in accordance with Article F, Part A, Section F-2(a), subject to the provisions of Part G of this Article F.

Sec. F-20. Payment of benefits to employees who became Members on or after January 1, 1969.

If the membership of a Member as defined in Article D, Section D-1(d) shall terminate for any reason other than retirement, his or her becoming a Beneficiary or death, he or she shall be paid the Accumulated Contributions standing to the credit of his or her individual account in the Annuity Savings Fund, such payment to be made within ninety days after such termination of membership; provided, however, that if a Member having twenty-five or more years of service and having attained age fifty-five shall resign or be dismissed from service, the Board of Trustees, on the written petition of such Member filed within one year from his or her separation from service and prior to the withdrawal of his or her Accumulated Contributions in the Annuity Savings Fund, shall grant such Member a service Retirement Allowance computed in accordance with Article F, Part A, Section F-2(b), subject to the provisions of Part G of this Article F.

Sec. F-21. Deferred vested benefits.

A Member (i) whose employment is terminated before August 28, 2003 and who is credited with eight or more years of creditable service and has attained Age forty, or (ii) whose employment is terminated after August 27, 2003 and who is credited with ten or more years of creditable service, but in each case less than twenty-five years (effective as of March 8, 2007, twenty years for DPOA members and fire equivalents) of creditable service shall be eligible to receive a full Retirement Allowance under Component II beginning on the date upon which the Member would have been eligible to commence a full Retirement Allowance had he or she continued in the service of the City until such date. Alternatively, such Member may elect to receive an actuarially reduced early Retirement Allowance at any time following his or her termination of employment with the City.

Part G — Conviction of Felony.

Sec. F-22. Forfeiture of rights.

If a Member or Retiree as defined in Article D, Section D-1(a), (b), (c) or (d) shall be convicted of by a court of competent jurisdiction or enters a nolo contendere plea accepted by a court for a felony against the City arising out of his or her service as an employee of the City and while a Member of the Retirement System, the court may order the forfeiture of all or a portion of the rights of the Member to benefits hereunder, except the return of his or her Accumulated Contributions, as provided in the *Public Employee Retirement Benefits Forfeiture Act, MCL 38.2701, et. seq.* In such case, the Retirement System shall pay to an individual, if any, who would otherwise be a Beneficiary of the Member or Retiree whose retirement benefit is being forfeited under this Section F-22 an Actuarially Equivalent monthly Retirement Allowance at the Age that the Member or Retiree would have become eligible for unreduced retirement benefits under the Retirement System.

Part H — Option Elections.

Sec. F-23. Generally.

(a) Prior to the first payment of any Retirement Allowance normally due, except a disability Pension payable under Part B, Sections F-8 and F-11 of this article, a Member may elect to receive his or her Retirement Allowance as a Straight Life Retirement Allowance payable throughout the Member's life, or the Member may elect to receive the Actuarial Equivalent, as of the date of the Member's retirement, of his or her Straight Life Retirement Allowance in a reduced Retirement Allowance payable throughout the Member's life and nominate a joint Beneficiary, in accordance with the provisions of Options 1, 2, 3, 3(A) or 3(B) as follows:

(1) OPTION 1. *Modified Cash Refund Annuity.* Under Option 1, a Member will receive a reduced Retirement Allowance. If a Member who selected Option 1 dies before full payment of the Annuity has been received, the person or persons nominated by that Member's written designation duly executed by the Member and filed with the Board of Trustees shall receive in a single payment the difference between the present value of the Member's Annuity on the date the Member retired, minus the amount of Annuity payments already paid to the Member. If there is no such designated person(s) surviving the retired deceased Member, such difference, if any, shall be paid to the Member's legal representative.

(2) OPTION 2. *Joint and Last Survivorship Retirement Allowance.* Under Option 2, upon a Member's death, payment of a reduced Retirement Allowance shall be continued through the life of and paid the person having an insurable interest in the Member's life and nominated by written designation duly executed by the Member and filed with the Board of Trustees prior to the first payment of the Member's Retirement Allowance is due.

(3) OPTION 3. *Joint and Seventy-Five Percent Survivor Allowance.* Under Option 3, upon a Member's death, payment of seventy-five percent (75%) of the Member's reduced Retirement Allowance shall be continued throughout the life of and paid to the person having an insurable interest in the Member's life and nominated by that Member's written designation duly executed by the Member and filed with the Board of Trustees prior to the date the first payment of the Retirement Allowance is due.

(4) OPTION 3(A). *Modified Joint and Last Survivorship Allowance.* Under Option 3(A), upon a Member's death, payment of one-half (50%) of the Member's reduced Retirement Allowance shall be continued throughout the life of and paid to the person having an insurable interest in the Member's life and nominated by that Member's written designation duly executed by the Member and filed with the Board of Trustees prior to the date the first payment of the Retirement Allowance is due.

(5) OPTION 3(B). *Joint and Twenty-Five Percent Survivor Allowance.* Under Option 3(B), upon a Member's death, payment of twenty-five percent (25%) of the Member's reduced Retirement Allowance shall be continued throughout the life of and paid to the person having an insurable interest in the Member's life and nominated by that Member's written designation duly executed by the Member and filed with the Board of Trustees prior to the date the first payment of the Retirement Allowance is due.

(b) The Joint and Survivor Optional Forms of Payment provided under Options 2, 3, 3(A) and 3(B) shall be made available in either the standard form or the pop-up form, as follows:

(i) *Standard Form.* Under the Standard Form, the reduced Retirement Allowance shall be paid throughout the lifetime of the Retiree.

(ii) *Pop-up Form.* Under the Pop-up Form, the reduced allowance shall be paid throughout the lifetime of the Retiree and the designated Beneficiary. In the event of the death of the designated Beneficiary during the lifetime of the Retiree, the amount of the allowance shall be changed to the amount that would have been payable had the Retiree elected the Straight Life Form of Payment. The actuarial cost of the change in benefit shall be borne by the Member who seeks change in his or her election.

In addition, a Member may elect to have all or part of his or her Accumulated Contributions paid to the Member in a single sum or used to purchase an annuity contract from an insurance company of his or her choice in which case, any annuity payments attributable to such amount under the Retirement System shall not be payable from the Annuity Reserve fund but shall be the responsibility of the insurance company. A Member's Retirement Allowance shall be reduced by the Actuarial Equivalent of the amount so paid or used.

(c) This Section does not rescind any substantive rights of disability Retirees from the Retirement System who retired prior to the arbitration decision regarding DPOA members that became effective on July 1, 1995, or the arbitration decision regarding DPLSA members that became effective on June 30, 1998.

(d) This Section does not amend any computations used to determine benefits under Part B, Sections F-8 and F-11 of this Component II, or result in an increase or decrease in such benefits.

(e) Retirees of the Retirement System shall be entitled to change their Pension option from either Option 2, Option 3, Option 3(A) or Option 3(B) to a Straight Life Retirement Allowance after they have commenced collection of the Pension if the Member's Beneficiary predeceases the Member. The actuarial cost of the change in benefit shall be borne by the Member who seeks change in his or her option election. The pop-up option shall be based upon the investment return assumption as recommended by the Plan Actuary and adopted by the Board of Trustees.

Sec. F-24. Disposition of surplus benefits upon death of Member and Beneficiary.

In the event a Member elected Option 2, 3, 3(A) or 3(B) provided for in Section F-23 of this Part H and both the Member and his or her designated joint Beneficiary die before there has been paid in Retirement Allowances an aggregate amount equal to his or her Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of his or her retirement, the difference between his or her said Accumulated Contributions and the said aggregate amount of Retirement Allowances paid shall be paid to the said retired Member's Beneficiary or legal representative.

Part I — Pension Offset by Compensation Benefits.

Sec. F-25. Generally.

Any amounts which may be paid under the provisions of any workmen's compensation, or pension, or similar law to a Member, or to the dependents of a Member on account of any disability or death, shall be offset against and payable out of funds provided by the City under the provisions of the Retirement System on account of the same disability or death. In case the present value of the total commuted benefits under said workmen's compensation, pension, or similar law, is less than the Pension Reserve or benefits otherwise payable from the funds provided by the City under this Retirement System, then the present value of the commuted payments shall be deducted from the Pension Reserve, and such benefits as may be provided by the Pension Reserve, so reduced, shall be payable under the provisions of the Retirement System.

Part J — Monthly Payments.

Sec. F-26. Generally.

Unless otherwise herein provided, all benefits payable under this Retirement System shall be paid in equal monthly installments.

Part K — Re-Examination of Beneficiaries.

Sec. F-27. Authority of Board.

(a) Once each year during the retirement of a Member on a disability Pension or a disability Retirement Allowance and at least once in every three year period thereafter the Board of Trustees shall require any disability Retiree, if he or she would not then be eligible for a service Retirement Allowance had he or she remained in active service, to undergo a medical examination at a place to be fixed by the Board of Trustees. If the Retiree shall be required to travel more than twenty miles to reach such place, the Board of Trustees shall pay his or her reasonable traveling expenses. Should such disability Retiree refuse to submit to such examination, his or her disability Pension or disability Retirement Allowance may be discontinued until he or she shall submit to such examination and should such refusal continue for one year, all of the Member's rights in and to a Pension may be revoked by the Board of Trustees. If, on medical examination of a Beneficiary, the Board of Trustees determines that the Retiree is physically able and capable of resuming active duty, he or she shall be restored to such duty and his or her other disability Pension or disability Retirement Allowance shall cease. Such Member so restored to active duty shall be returned to duty in a rank or grade equivalent to or higher than the rank or grade in which he or she was serving at the time of his or her last retirement and his or her compensation shall be that provided for the rank or grade in which he or she is restored to service. It shall be the duty of the Commissioner of Police or the Board of Fire Commissioners to restore such Member to duty forthwith.

(b) If the Board of Trustees determines that a disabled Old Plan Member is engaged in a gainful occupation, paying more than the difference between his or her Final Compensation as of the earlier of (i) the date of disability or (ii) June 30, 2014 and his or her disability Pension, or disability Retirement Allowance, the amount of his or her Pension or Retirement Allowance shall be reduced to an amount, which together with the amount earned by the Member, shall equal the amount of such Final Compensation. If the Board of Trustees determines that a disabled New Plan Member is engaged in a gainful occupation, paying more than the difference between his or her base salary at the earlier of (i) the date of disability or (ii) June 30, 2014, increased by two and twenty-five one hundredths percent (2.25%) for each full year from the date of disability and prior to July 1, 2014 and his or her disability Pension, or disability Retirement Allowance, the amount of his or her Pension or Retirement Allowance shall be reduced to an amount, which together with the amount earned by him or her, shall equal the amount of such base salary. Should his or her earnings be later changed, the amount of his or her Pension or Retirement Allowance may be further modified in like manner.

(c) A disability Retiree who shall be reinstated to active service prior to July 1, 2014 as provided in this Section, shall from the date of such restoration again become a Member of the Retirement System, and he or she shall contribute to the Retirement System thereafter in the same manner and at the same rate as he or she paid prior to his or her disability retirement. A disability Retiree who shall be reinstated to active service after June 30, 2014, shall from the date of such restoration become an active Member of the Retirement System and shall accrue future benefits pursuant to Component I. He or she shall contribute to the Retirement System at the rate required of active Members pursuant to Component I. Any Prior Service and Membership Service on the basis of which his or her service was computed at the time of his or her disability retirement shall be restored to full force and effect, and he or she shall be given service credit under Component I or Component II, as applicable, for the period of time he or she was in retirement due to such disability, except in the case of non-duty disability.

Part L — Withdrawal of Accumulated Contributions

Sec. F-28. Member With Twenty or Twenty-Five Years of Service.

Effective July 1, 1982, a Member with twenty-five years or more of creditable service (effective as of March 8, 2007, twenty years for DPOA members and fire equivalents) shall be allowed to withdraw either a portion or the full amount of his or her Accumulated Contributions, one time only, whether or not the Member retires. A Member shall make such election prior to the receipt of his or her first retirement benefit check.

Sec. F-29. Disabled Member

A Member who is receiving disability benefits (duty or non-duty) from the Retirement System and who has twenty-five years (effective as of March 8, 2007, twenty years for DPOA members and fire equivalents) or more of creditable service shall have the right to withdraw the full amount of his or her Accumulated Contributions. If such Member withdraws his or her Accumulated Contributions, his or her Retirement Allowance shall be actuarially reduced to reflect such withdrawal.

Sec. F-30. Optional Annuity Withdrawal

(a) A Member shall have the right to elect to receive on the effective date of his or her service retirement a partial or total refund of his or her Accumulated Contributions. If a Member makes such an election, an Annuity payable under any Retirement Allowance or reduced Retirement Allowance shall be reduced proportionally. If the total Accumulated Contributions are withdrawn, no Annuity shall be payable.

The limitation of fifteen twenty-seconds of the maximum earnable compensation of a Police Employee and Fire Employee continues in effect. For purposes of determining the fifteen twenty-seconds limitation, a computation based on the Annuity which is an Actuarial Equivalent of the Accumulated Contributions standing to a Member's credit in the Annuity Savings Fund prior to any partial or total refund will be used.

On or after July 1, 1974, Members or former Members who are entitled to begin to receive the 40 & 8 benefit provided under Section F-6 will be entitled to the Annuity refund withdrawal option.

On or after July 1, 1974, non-duty disability Retirees represented by DFFA, DPCOA and DPLSA who retired pursuant to Article D, Section D-1(a), (b) or (c) prior to having twenty-five years of service credit, shall be entitled to the Annuity refund withdrawal option on the date he or she would have had twenty-five years of service credit had he or she continued as an active employee. Said option shall only apply to the balance of Accumulated Contributions, if any, remaining to such Retiree's credit in accordance with the existing Annuity refund provisions.

Survivor benefit beneficiaries as defined in Title IX, Chapter VII, Article VI, Part E, Section 2, parts (a), (b) and (c) of the 1918 City Charter in effect as of June 30, 1974, and continued in effect by Section 11-102 of the City Charter shall be entitled to the Annuity withdrawal refund option subject to the same rules that would have been applicable to the deceased Member had he or she not died. Said option shall only apply to the balance of Accumulated Contributions, if any, remaining to the applicable Member's credit.

In any case of doubt, the Board of Trustees shall decide whether a Member or Beneficiary is entitled to an Annuity refund withdrawal option.

(b) A Member shall have the right on or after the effective date of his or her becoming eligible for a full service Retirement Allowance (Members who have either twenty or twenty-five years of creditable service depending upon the applicable bargaining unit) to elect to receive a partial or total refund of his or her Accumulated Contributions to the Annuity Savings Fund. If a Member makes such an election, an Annuity payable under any Retirement Allowance or reduced Retirement Allowance shall be reduced proportionally. If the total Accumulated Contributions are withdrawn, no Annuity shall be payable.

If a Member makes such an election, the Retirement Allowance shall be reduced to reflect the value of the Annuity withdrawn. The amount of the Annuity at the time of such election shall be the amount used at the time of retirement for purposes of computing the Retirement Allowance.

All members (except DPOA members retiring prior to July 1, 1982) who complete their required years of service, shall have the right to withdraw all or part of their Accumulated Contributions whether they choose to retire or not.

Effective July 21, 2000 for DFFA members having a parity relationship with the DPOA and for the DPCOA Inspector, and effective July 1, 2003 for DPLSA members, and effective July 21, 2000 for DPOA members, a Member who has elected to retire and elected to withdraw his or her Annuity for the purposes of calculating his or her Retirement Allowance (thereby lowering the Retirement Allowance), may nevertheless choose to leave the Annuity in the Retirement System collecting Regular Interest with the option of a one-time withdrawal of the Annuity funds at a later date.

For a DPCOA, DPLSA or DFFA member or an employee with a parity relationship with the DPLSA and for the DPCOA Inspector who retires on or after July 1, 1990, and who has made or makes an election to receive a total or partial refund of his or her Accumulated Contribution to the Annuity Savings Fund, there shall be no reduction of Retirement Allowances due to the portion of withdrawal representing interest credits. For members of DFFA and DPLSA, this subsection shall be controlled by the requirements of the Act 312 arbitration award issued June 25, 1990 (MERC Case No. B89 C-0622, page numbers 22 and 23).

Effective January 15, 2010 for members of DPCOA and fire equivalents, or December 15, 2008 for DPLSA and fire equivalents, or March 8, 2007 for DPOA members and fire equivalents, a Member who retires and elects to leave a balance in the Annuity Savings Fund shall have the option of receiving a quarterly payment of interest earnings only or to take periodic withdrawals of principal, in addition to a one time complete withdrawal. Members of DPCOA and DPLSA and their fire equivalents must make their elections a minimum of thirty days before the beginning of a quarter; the beginning of a quarter is defined as March 1, June 1, September 1, and December 1.

An employee represented by DFFA, DPCOA or DPLSA who is entitled to a Retirement Allowance under Article F, Part A, Section F-5 of the Retirement System and who leaves the employ of the Police or Fire Department of the City on or after July 1, 1982 shall have the right to elect to receive on the effective date of termination a partial or total refund of his or her Accumulated Contributions. The Pension portion of his or her Retirement Allowance shall be computed as if the Member had not withdrawn his or her Accumulated Contributions from the Annuity Savings Fund until the date he or she was eligible to retire had he or she continued in City employment.

(c) Effective in accordance with the specific date and terms of the DPOA award in Act 312 No. D98 E-0840 (Chairman Donald F. Sugerman, dated July 21, 2000), a DPOA member shall have the right to leave his or her withdrawn Annuity in the Retirement System and accumulating Regular Interest, as provided herein.

(d) Effective July 1, 1974, a Member who holds the rank of police inspector and above and who is not covered by a collective bargaining agreement shall, notwithstanding any other provisions of Component II to the contrary, have the right to elect to receive on the effective date of his or her service retirement a partial or total refund of his or her Accumulated Contributions. Effective as of March 8, 2007, a DPOA and fire equivalent Retiree who elects not to withdraw his or her Accumulated Contributions as of the effective date of his or her service retirement shall have the option of receiving a quarterly payment of interest credited to his or her Accumulated Contributions or to receive periodic withdrawals of the contributions such Retiree made to Component II of the Retirement System. If a Member makes such an election, an Annuity payable under any Retirement Allowance or reduced Retirement Allowance shall be reduced proportionately. If the total Accumulated Contributions are withdrawn no Annuity shall be payable with respect to such withdrawn amounts.

ARTICLE G. METHOD OF FINANCING.

Sec. G-1. General.

The funds of Component II of the Retirement System shall be the Annuity Savings Fund, Annuity Reserve Fund, Pension Accumulation Fund, Pension Reserve Fund, Deferred Retirement Option Plan Fund, Expense Fund and the Survivors Benefit Fund.

Sec. G-2. Annuity Savings Fund.

(a) The Annuity Savings Fund shall be the fund in which shall be accumulated at Regular Interest, in accordance with the limitations that are contained in Section C-1(20) of this Component II, the contributions deducted from the compensation of Members prior to the first payroll date occurring in August 2014 to provide for their Annuities. Subject to Section B-1(c), the contributions of a Member as defined in Article D, Section D-1(a), (b) or (c) shall be five percent of a Member's compensation until the Member has acquired twenty-five years of creditable service. Subject to Section B-1(c), the contribution of a Member as defined in Article D, Section D-1(d) shall be five percent of his or her compensation until he or she has acquired at least twenty-five years of creditable service (effective as of March 8, 2007, twenty years for DPOA members and fire equivalents) and attained age fifty-five. No Member shall have the option of choosing to receive the compensation required to be contributed hereunder directly instead of having such amounts paid by the City to the Annuity Savings Fund.

(b) The City shall cause the contributions provided for in paragraph (a) above to be deducted from the compensation of each Member on each and every payroll, for each and every payroll period, from the date of his or her entrance in the System to the earlier of (i) the date he or she ceases to be a Member or (ii) the last payroll date occurring in July 2014.

(c) The deductions provided for herein shall be made notwithstanding that the minimum compensation provided by law for any Member shall be reduced thereby. Every Member shall be deemed to consent and agree to the deductions made and provided for herein, and payment of his or her salary or compensation, less said deduction, shall be a full and complete discharge and acquittance of all claims and demands whatsoever for the services rendered by such person during the period covered by such payments, except as to the benefits provided under this Retirement System. The amounts to be deducted shall be deducted by the City Treasurer and when deducted shall be paid into the Annuity Savings Fund and shall be credited to the individual account of the Member from whose compensation said deduction was made.

(d) If, under the provisions of this Component II, any person shall withdraw or be paid any part or all of his or her Accumulated Contributions and shall thereafter again become a Member on or before June 30, 2014, he or she shall, in addition to the contributions provided for in paragraph (a) above, redeposit in the Annuity Savings Fund, by an increased rate of contribution to be determined by the Board of Trustees, or by a single payment, such amount that his or her Accumulated Contributions at the date of his or her eligibility for retirement will be the same amount it would have been had no withdrawal or payment been made therefrom.

(e) Except as is otherwise provided in this Component II, upon the death or retirement of a Member, his or her Accumulated Contributions shall be transferred from the Annuity Savings Fund to the Annuity Reserve Fund.

(f) In any Plan Year during the period beginning on or after July 1, 2014 and ending June 30, 2023 in which the annual rate of return credited to the accounts of Members investing in the Annuity Savings Fund as provided in paragraph (a) is less than the actual rate of return net of expenses of the Retirement System's invested assets for the second Plan Year immediately preceding the Plan Year in which the annual rate of return is credited ("ASF Return Excess"), an amount equal to the value of the ASF Return Excess shall be transferred to the Pension Accumulation Fund maintained under Component I of the Combined Plan and shall be used to fund the Transition Cost relating to Component I. The Transition Cost is a measure of the liability that Component I of the Retirement System has at its inception; due to the fact that, at its inception, Members in Component I of the Retirement System receive vesting and eligibility credit under Component I for service that was earned prior to July 1, 2014 and is otherwise credited to Members under Component II of the Retirement System, as such Transition Cost is calculated by the Plan Actuary. In the event there is an ASF Return Excess for a Plan Year following the Plan Year in which such transfers have fully funded the Transition Cost relating to Component I, fifty percent (50%) of such ASF Return Excess shall be transferred to the Pension Accumulation Fund maintained under Component II and the remaining fifty percent (50%) of such ASF Return Excess shall be transferred to Component I and credited to the Rate Stabilization Fund maintained under Component I. "Transition Cost" shall be determined by the Plan Actuary.

Sec. G-3. Annuity Reserve Fund.

The Annuity Reserve Fund shall be the fund from which shall be paid all Annuities payable as provided in this Component II, except Annuities which are payable from the Survivors Benefit Fund. Should a disability Retiree be restored to active service, his or her Annuity Reserve at the time shall be transferred from the Annuity Reserve Fund to the Annuity Savings Fund and credited to his or her individual account therein.

Sec. G-4. Alternative Financing Method.

Except as provided regarding the Survivors Benefit Fund, the Pension Accumulation Fund shall be the fund in which shall be accumulated reserves for the Pensions and other benefits payable from contributions made by the City and other third-party entities, and from which transfers shall be made as provided in this section.

(a) *Accrued Liability Fund.* Pursuant to *Ordinance No. 05-05*, which authorized the creation of the Detroit Police and Fire Retirement System Service Corporation, the

City entered into a transaction ("the Pension Funding Transaction") to obtain funds as an alternative to those available through the traditional funding mechanism described in Section G-5. The proceeds generated by the Pension Funding Transaction (or any Additional Pension Funding Transaction) that were deposited into the Retirement System will be termed the "Funding Proceeds." The Funding Proceeds were deposited into a new Fund in the Retirement System called the Accrued Liability Fund. The purpose of the Funding Proceeds is to fund all or part of the theretofore unfunded accrued liabilities ("UAAL") of the Retirement System. The Funding Proceeds are assets of the Retirement System and will be applied, together with all other assets of the Retirement System, to fund the Retirement System's obligation to pay accrued benefits, as adjusted in the Plan of Adjustment.

This Accrued Liability Fund shall contain only the Funding Proceeds of the Pension Funding Transaction, the Additional Pension Funding Transaction and any earnings thereon. Prior to Fiscal Year 2013, funds were transferred each Fiscal Year (or monthly portion thereof) from the Accrued Liability Fund to the Pension Accumulation Fund as provided in the documents governing the Retirement System, including *Ordinance No. 5-05*.

(b) As soon as practicable following the effective date of the Plan of Adjustment, any amounts remaining credited to the Accrued Liability Fund shall be transferred to the Pension Accumulation Fund and the Accrued Liability Fund shall cease to exist.

Sec. G-5. Contributions to and payments from Pension Accumulation Fund.

Contributions to and payments from the Pension Accumulation Fund shall be made as follows:

(a) For Fiscal Years commencing prior to July 1, 2014, upon the basis of such assumptions as to future financial experiences as the Board of Trustees shall from time to time adopt, the Actuary annually computed the City's contribution, expressed as a percent of active Member contributions, to provide the Pension Reserves covering the Pensions or other City-financed benefits to which Members might be entitled or which might be payable at the time of their discontinuances of City employment under this Component II; provided, such contribution percents shall not be less than amounts which, expressed as percents of active Member compensation, will remain level from generation to generation of Detroit citizens. Upon the retirement or death of a Member, the Pension Reserve for any benefits payable on his or her behalf shall be transferred from the Pension Accumulation Fund to the Pension Reserve Fund, to the extent of there being assets in the Pension Accumulation Fund.

(b) Subject to the Plan of Adjustment, for Fiscal Years commencing prior to July 1, 2014 and on and after July 1, 2023, the Board of Trustees annually ascertained and reported to the Mayor and the Council the amount of contributions due the Retirement System by the City, and the Council shall appropriate and the City shall pay such contributions to the Retirement System during the ensuing Fiscal Year. When paid, such contributions shall be credited to the Pension Accumulation Fund.

(c) For Fiscal Years commencing after June 30, 2014 and prior to July 1, 2023, the City shall make contributions to the Pension Accumulation Fund only as provided in the Plan of Adjustment.

Sec. G-6. Retiree payments from Pension Reserve Fund; reinstatement of disability Retirees to active service.

Except as to the Survivor's Benefit Fund, the Pension Reserve Fund shall be the fund from which shall be paid Pensions on account of Members. Should a disability Retiree be reinstated to active service, the Member's Pension Reserve, at that time, shall be transferred from the Pension Reserve Fund to the Pension Accumulation Fund.

Sec. G-7. Expense Fund.

The Expense Fund shall be the fund to which shall be credited all money provided by the City, if any, to pay the administration expenses of Component II, and from which shall be paid the expenses necessary in connection with the administration and operation of Component II.

Sec. G-8. Deferred Retirement Option Plan Fund.

The Deferred Retirement Option Plan Fund shall be the fund in which shall be accumulated the amounts credited to the DROP Accounts of Members who have elected to participate in the DROP Program pursuant to Article I, together with earnings thereon, provided that the DROP Accounts are held and invested within the Retirement System.

Sec. G-9. Appropriations prior to July 1, 2014 and after June 30, 2023.

(a) The Board of Trustees shall certify to the City Council the amount of the appropriation necessary to pay to the various funds of Component II of the Retirement System the amounts payable by the City as enumerated in this Component II, according to legal budget procedure.

(b) To cover the requirements of Component II prior to July 1, 2014 and after June 30, 2023, such amounts as shall be necessary to cover the needs of Component II shall be paid into the Pension Accumulation Fund and the Expense Fund by special appropriations or transfers to the Retirement System; provided, however that no transfers can be made from the Accrued Liability Fund other than the annual transfer of the scheduled amortizing amount, or transfers under special circumstances pursuant to Section G-4 (as in effect prior to July 1, 2014).

Sec. G-10. Maintenance of reserves.

The maintenance of the Annuity Reserves in the Annuity Reserve Fund and the Pension Reserves in the Pension Reserve Fund are hereby made obligations of the Pension Accumulation Fund. Except as provided in Section G-2(f), all income, interest, and dividends derived from deposits and investments authorized by this Component II, which are not required for the allowance of interest to the funds of the Retirement System as provided herein, shall be credited to the Pension Accumulation Fund. Prior to July 1, 2014, the moneys credited to the Accrued

Liability Fund were credited to the Pension Accumulation Fund only to the extent authorized pursuant to the terms of the Retirement System as in effect prior to July 1, 2014. Any contributions by the City to the Retirement System from any fund impressed by law with a certain and definite purpose shall be accounted for separately.

Sec. G-11. Survivors Benefit Fund.

(a) The Survivors Benefit Fund shall be the fund in which shall be accumulated, at Regular Interest, the reserves for survivors benefits provided for in Article F, Part E, Section F-18, hereof, and from which such benefits shall be paid, but only to the extent sufficient assets are credited to the fund at the time a claim for benefits is made. In the event there are insufficient assets credited to the Survivor's Benefit Fund to pay the benefits provided under this Section G-10, such benefits thereafter shall be payable from the Pension Reserve Fund.

(b) After June 30, 1965 and prior to July 1, 1986, each Member shall contribute to the Survivors Benefit Fund one per cent of his or her compensation paid by the City until he or she has acquired twenty-five years of creditable service. The City shall cause the said contributions to be deducted from the Member's compensation, on each and every payroll, for each and every payroll period so long as he or she remains a Member and has not acquired twenty-five years of creditable service. Each and every Member shall be deemed to consent and agree to the said deductions. Said contributions, when deducted, shall be credited to the Survivors Benefit Fund and shall in no case become a part of the said Member's Accumulated Contributions, nor be subject to refund.

(c) Each Member who retires after June 30, 1965, under Part B, Section F-7 of Article F shall, prior to July 1, 1986, contribute to the Survivors Benefit Fund one per cent of his or her final compensation as defined until he or she would have had a total of twenty-five years of creditable service had he or she continued in active service. The Retirement System shall cause the said contribution to be deducted from the Pension of each such retired Member on each and every retirement roll, for each and every retirement roll period, so long as he or she is receiving a Pension under Part B, Section F-8(a) of Article F. Each and every such retired Member who is receiving a Pension under Part B, Section F-8(a) of Article F shall be deemed to consent and agree to said deductions. Said contributions, when deducted, shall be credited to the Survivors Benefit Fund and shall in no case become a part of said Member's Accumulated Contributions, nor be subject to refund.

(d) Effective July 1, 1986, the contributions, required by Article G, Section G-10(b) and G-10(c), to the Survivors Benefit Fund were eliminated for union members. For Fiscal Years ending prior to July 1, 2014, the City shall make the contributions necessary to maintain the benefit level by contributing that amount necessary to replace the contributions of members of DFFA and DPOA to the Survivor's Benefit Fund.

(e) For Fiscal Years ending prior to July 1, 2014, upon the basis of such mortality and other tables of experience, and Regular Interest, as the Board of Trustees shall from time to time adopt, the Actuary shall annually compute the liabilities for benefits being paid from the Survivors Benefit Fund. The Board of Trustees shall report to the Mayor and the City Council the amount of contributions to be made by the City to the Survivors Benefit Fund, and the City Council shall appropriate and the City shall pay such amount to the Retirement System during the ensuing Fiscal Year. When paid, such appropriations shall be credited to the Survivors Benefit Fund. For Fiscal Years commencing prior to July 1, 2014, if the balance in the fund is not sufficient to fully cover the liabilities so computed, the City shall appropriate and pay, in the ensuing Fiscal Year, the amount of such insufficiency. For Fiscal Years commencing on and after July 1, 2014, the City shall not make any contributions to the Survivor's Benefit Fund.

(f) Upon the death of a Member on whose account survivors benefits become payable as provided in Article F, Part B, Section F-8, hereof, his or her Accumulated Contributions standing to his or her credit in the Annuity Savings Fund at the time of his or her death shall be transferred from the Annuity Savings Fund to, and shall become a part of, the Survivors Benefit Fund, notwithstanding any provisions in this Component II to the contrary.

Sec. G-12. Computation of Annuity and Pension Reserve liabilities for Members, Retirees and Beneficiaries.

In computing the Annuity and Pension Reserve liabilities for Members, Retirees and Beneficiaries, the Board of Trustees shall cause the following annual Decrement Probabilities, Salary Factors and interest assumption to be used.

(a) The annual Decrement Probabilities and Salary Factors to be used in evaluating the Annuity and Pension liabilities for Members shall be as shown in Tables 1 and 2 hereinafter set forth.

(b) The total of active Member annual compensation shall be assumed to increase three percent per annum, compounded annually.

(c) The mortality assumption for Retirees and Beneficiaries shall be the mortality rates contained in the 1971 group annuity male mortality table, without setback for men and set back five years for women.

(d) The investment return assumption shall be five percent per annum, compounded annually, for Fiscal Years commencing prior to July 1, 2014.

(e) For Fiscal Years commencing on or after July 1, 2014, the Annuity and Pension Reserve liabilities shall be calculated in a manner which is consistent with the Plan of Adjustment.

TABLE 1.

City of Detroit Policemen and Firemen Retirement System Active Member Annual

Probabilities and Salary Factors

Age	Withdrawal from Service	Death in Service	Salary Factors
18	.04120	.00098	.10561
19	.04090	.04099	.11327
20	.04030	.00100	.12126
21	.04000	.00101	.12988
22	.03960	.00102	.13913
23	.03910	.00103	.14913
24	.03890	.00104	.15971
25	.03840	.00105	.17068
26	.03800	.00107	.18204
27	.03700	.00108	.19347
28	.03600	.00111	.20527
29	.03480	.00113	.21712
30	.03340	.00117	.22916
31	.03200	.00121	.24124
32	.03000	.00126	.25321
33	.02730	.00133	.26522
34	.02370	.00143	.27753
35	.01990	.00154	.29015
36	.01500	.00168	.30306
37	.01160	.00184	.31637
38	.00850	.00204	.32995
39	.00600	.00227	.34405
40	.00390	.00252	.35851
41	.00210	.00281	.37333
42	.00090	.00313	.38861
43	.00000	.00348	.40435
44	.00000	.00387	.42051
45	.00000	.00429	.43709
46	.00000	.00475	.45395
47	.00000	.00526	.47144
48	.00000	.00582	.48929
49	.00000	.00643	.50750
50	.00000	.00710	.52639
51	.00000	.00783	.54560
52	.00000	.00864	.56535

Age	Withdrawal from Service	Death in Service	Salary Factors
53	.00000	.00953	.58548
54	.00000	.01051	.60612
55	.00000	.01157	.62711
56	.00000	.01270	.64867
57	.00000	.01392	.67066
58	.00000	.01520	.69319
59	.00000	.01656	.71610
60	.00000	.01802	.73939
61	.00000	.01959	.76316
62	.00000	.02133	.78747
63	.00000	.02322	.81211
64	.00000	.02526	.83715
65	.00000	.02750	.86258
66	.00000	.03000	.88848
67	.00000	.03277	.91514
68	.00000	.03584	.94264
69	.00000	.03919	.97094
70	.00000	.04278	1.00000

TABLE 2.

City of Detroit Policemen and Firemen Retirement System Annual Probabilities of Age and Service Retirement Applicable to Members Who Are Eligible to Retire

Age	Probabilities of Retirement
45	25%
46	25
47	25
48	25
49	25
50	25
51	25
52	25
53	25
54	20
55	20
56	15
57	10
58	15
59	30
60	100

Sec. G-13. Determination of City's annual contribution — Disability Pension liabilities.

For Fiscal Years commencing prior to July 1, 2014 and after June 30, 2023, the City's annual contribution, expressed as a percent of active Member compensation, to finance disability Pensions shall be determined by dividing the average of the Pension Reserve liabilities for disability retirements incurred during the three Fiscal Years ending with the date of the valuation by one percent of the active Members' annual compensation used in the valuation.

Sec. G-14. Determination of City's annual contribution — Death Pension liabilities.

For Fiscal Years commencing prior to July 1, 2014 and after June 30, 2023, the City's annual contribution, expressed as a percent of active Member compensation, to finance death-in-service Pensions shall be determined by dividing the average of the Pension reserve liabilities for death-in-service claims incurred during the three Fiscal Years ending with the date of the valuation by one percent of the active Member's annual compensation used in the valuation.

Sec. G-15. Determination of City's annual contribution — Actuarial evaluation of annuity and Pension Reserve liabilities.

The Annuity and Pension Reserve liabilities for Members, Retirees and Beneficiaries shall be actuarially evaluated as set forth in this Article G and the Plan of Adjustment.

Sec. G-16. Determination of City's annual contribution — Service Pension liabilities for Fiscal Years commencing prior to July 1, 2014 and after June 30, 2023.

(a) The service Pension liabilities for Members shall be determined using the entry age-normal cost method of actuarial valuation.

(b) The City's annual contribution, expressed as a percent of active Member compensation, to finance the prospective service Pension liabilities shall be determined by dividing the total of the individual annual normal costs of the active Members by one percent (1%) of the active Members' annual compensation used in the valuation.

(c) The City's annual contribution, expressed as a percent of active Member compensation, to finance any unfunded Accrued Service Pension liabilities, including instances in which assets exceed liabilities, shall be determined by dividing such unfunded Accrued Service Pension liabilities by one percent (1%) of the present value of future compensation payable during a period of future years. Such period of future years shall be thirty years for the actuarial valuation as of June 30, 1974, decreasing one (1) year at each subsequent June 30th until a twenty year period is reached, which twenty year period shall be used in each subsequent actuarial valuation until June 30th, 2004 when the period shall again be thirty years.

Sec. G-17. Board of trustees to compute City's annual contribution.

Based upon the provisions of this Article, including any amendments, the Board of Trustees shall compute the City's annual contributions for Fiscal Years commencing prior to July 1, 2014 and after June 30, 2023, expressed as a percent of active Member compensation, to the Retirement System for the Fiscal Year beginning July 1, 1975, using actuarial valuation data as of June 30, 1974, and for each subsequent Fiscal Year prior to July 1, 2014 and after June 30, 2023 using actuarial valuation data as of the June 30th date which date is a year and a day before the first day of such Fiscal Year. The Board shall report to the Mayor and to the City Council the contribution percents so computed, and such contribution percents shall be used in determining the contribution dollars to be appropriated by the City Council and paid to the Retirement System. For each Fiscal Year beginning July 1, 1975 and each Fiscal Year thereafter ending prior to July 1, 2014 and for each Fiscal Year beginning after June 30, 2023, such contribution dollars shall be determined by multiplying the applicable contribution percent for such Fiscal Year by the Member compensation paid for such Fiscal Year; provided that for the one Fiscal Year beginning July 1, 1975 and ending June 30, 1976, such Member compensation so used shall not exceed 106.09 percent of the active Members' annual compensation used in the actuarial valuation determining such contribution percent.

Sec. G-18. Employer Contribution

Effective January 1, 1987 for members of DFFA and DPLSA or upon issuance of the 1986-89 Act 312 Award for members of DPOA, the employee contributions to the Annuity Fund, although designated as employee contributions, shall be paid by the City in lieu of contributions by the employee. The employee shall not have the option of choosing to receive the contributed amount directly instead of having them paid by the City to the Annuity Fund. There shall be no additional contribution expense to the City, and the amounts so contributed by the City on behalf of the employee shall be treated, for tax purposes, as employer contributions and thus shall not be taxable to the employee until these amounts are distributed or made available to the employee.

This provision shall not affect the amount or benefit level of the Retirement Allowance, or the City's obligation with respect thereto.

ARTICLE H. MISCELLANEOUS.

Sec. H-1. Recall of Retirees during emergencies.

During an emergency declared by the Commissioner of Police or the Board of Fire Commissioners, the Commissioner or the Board of Fire Commissioners, as the case may be, shall have power, with the consent of a Retiree, to recall to active duty a Retiree for such period of service as the commissioner or the Board of Fire Commissioners shall deem advisable; provided, however, that the foregoing power shall not apply in the case of a Retiree who has reached the age of sixty-four years, and provided further, that any Retiree so recalled may, at any time, separate from active duty on his or her own application or by order of the Commissioner or the Board of Fire Commissioners. A Retiree so recalled shall serve in the rank at which he or she retired, or a higher rank, and shall receive the pay of such rank without deduction. On subsequent separation from active duty, such Retiree shall resume the Retiree status held by him or her prior to such recall.

ARTICLE I. DEFERRED RETIREMENT OPTION PLAN.

Sec. I-1. General provisions.

For periods on and after July 1, 2014, the Deferred Retirement Option Plan ("DROP") Program under Component II shall be available to Members who are covered by collective bargaining agreements with the City that permit such Members to participate in the DROP program and non-union executives of the Police Department and the Fire Department.

(a) In lieu of terminating employment and accepting a Retirement Allowance under the Component II, any Member of the Retirement System who is eligible for the DROP program and who is eligible to immediately receive an unreduced Retirement Allowance may elect to participate in the DROP program and defer the receipt of his or her Retirement Allowance in accordance with the provisions of this Article I. Any such election shall be irrevocable.

(b) Participation in the DROP program for Members for who elected to participate in the DROP program prior to July 1, 2014 shall be limited to ten years. Participation for Members who elect to participate in DROP program after June 30, 2014 shall be limited to five years. At the end of such five (or ten) year period of participation in the DROP program, the Member shall be retired from employment with the City.

Sec. I-2. Conversion to Retirement Allowance

Upon the effective date of a Member's participation in the DROP program, the Member shall cease to accrue a Retirement Allowance under Component I and shall elect a form of payment for his or her Retirement Allowance pursuant to Part H of Article F. Seventy-five percent (75%) of the monthly Retirement Allowance (including applicable variable Pension Improvement Factor (Escalator) increases) that would have been payable, had the Member elected to terminate employment with the City on the effective date of his or her DROP election and receive an immediate Retirement Allowance, shall be paid into a DROP Account established on behalf of the Member under the Retirement System or in an entity selected by the Board.

Sec. I-3. Investment of DROP assets

(a) ING was previously selected by the Board as the DROP administration and investment entity for Members who elect to participate in the DROP program. ING shall continue to be the DROP administration and investment entity, unless and until such time as the Board terminates the agreement with ING as provided in paragraph (d) or determines that it is administratively feasible for the DROP program to be administered and invested under the Retirement System.

(b) As soon as possible after July 1, 2014, the Board shall determine whether it is administratively feasible for the DROP program to be administered and the assets in DROP accounts to be invested under the Retirement System. If the Board determines that it is feasible to administer the DROP program under the Retirement System, the Board shall promptly take appropriate steps to implement such decision.

(c) If amounts credited to DROP accounts are invested under the Retirement System, such amounts shall be comingled with the assets of the Retirement System for investment purposes and shall be invested by the Trustees. A Member's DROP account shall be credited with annual earnings at a rate equal to seventy-five percent (75%) of the actual net earnings rate of the assets of the Retirement System; however, in no event shall the earnings rate applied to a Member's DROP account for any Plan Year be less than zero percent (0%) nor greater than seven and three-quarters percent (7.75%).

(d) The Board of Trustees previously entered into an administrative services agreement with ING. Such agreement shall remain in effect until such time as it is terminated by the Board as provided therein.

(e) The Board of Trustees may replace ING with a trust-type vehicle or the Board may determine that amounts subject to a DROP election will be invested with Retirement System assets as provided above.

(f) Any fees associated with the maintenance of DROP Accounts outside of the Retirement System shall be paid by the Members by means of deduction from their DROP Accounts.

Sec. I-4. Distribution of amounts credited to DROP Account

A Member shall not receive a distribution of amounts credited to his or her DROP Account prior to his or her termination of employment with the City. Upon termination of employment, a Member who is a participant in the DROP program shall receive, at his or her option either a lump sum payment from the DROP Account equal to the amount then credited to the DROP Account or an annuity based upon the amount credited to his or her DROP Account. Any such annuity shall be subject to market rates of interest return and other market-related assumptions as adopted by the Board upon recommendation of the Investment Committee. In addition, one hundred percent (100%) of the Member's monthly Retirement Allowance that otherwise would have been paid as of the date the Member's participation in the DROP program commenced (together with any applicable variable Pension Improvement Factor (Escalator) increases) shall commence to the Member in accordance with the form of payment selected by the Member at the commencement of his or her participation in the DROP program. Termination of employment includes termination of any kind, such as resignation, retirement, discharge or disability.

Sec. I-5. Death of Member while participating in the DROP program

If a Member dies while participating in the DROP program, a lump sum payment equal to the Member's DROP Account balance shall be paid to the Beneficiary named by the Member, or if no Beneficiary has been designated, to the Member's estate; provided, notwithstanding anything to the contrary herein, the Member's adjusted DROP Account balance under Component II upon the Member's death while participating in the DROP program shall not be less than total system DROP payments into his or her account (not including earnings and losses). In addition, one hundred percent (100%) of the Member's Retirement Allowance (together with any applicable variable Pension Improvement Factor (Escalator) increases) that would have been paid to the Member but for the Member's decision to participate in the DROP program will be restored. Survivor benefits, if any, shall be paid in accordance with the payment option elected by the deceased Member at the time the Member elected to participate in the DROP program.

Sec. I-6. Disability of Member While Participating in the DROP Program

If a Member becomes Totally Disabled while participating in the DROP program and while still an Employee and his or her employment with the City is terminated because he or she is Totally Disabled, such Member (a) shall be immediately retired and one hundred percent (100%) of the Retirement Allowance that would have been paid to the Member as of the date the Member's participation in the DROP program commenced (together with any applicable variable Pension Improvement Factor (Escalator) increases) will commence in accordance with the payment option selected by the Member at the commencement of the Member's participation in the DROP program as provided in Section I-2, and (b) shall be entitled to receive payment of the funds in his or her DROP Account (in the form of a lump sum or other Actuarially Equivalent form of payment described in Part H of Article F). Such Member shall not be entitled to disability retirement benefits under Article F hereof.

Sec. I-7. Cost Neutrality

(a) The DROP program shall be effective only for as long as it is cost-neutral to the City, provided however, that the DROP program shall continue during the pendency of proceedings, described in paragraph (2) below, designed to restore the Retirement System to cost neutrality.

(b) If the City contends that the DROP program is not cost-neutral, including, but not limited to, making the City's annual contribution to the Retirement System higher than it would be if the DROP program was not in effect, the Board and the City, along with the Plan Actuary and an actuary appointed by the City (who will be an associate or a fellow of the Society of Actuaries and a member of the American Academy of Actuaries) shall meet and confer in good faith regarding the cost. If the Board and the City are unable to reach an agreement as to cost, the matter shall be submitted to a third, independent, actuary, chosen or agreed upon by the Plan Actuary and the City's actuary. This actuary, when rendering a decision, will be limited to ordering implementation of changes necessary to make the DROP program cost-neutral. Upon the implementation of changes necessary to make the DROP program cost-neutral, Members shall have thirty days to elect to either (a) retire from active employment with the City, or (b) withdraw from the DROP program and resume active participation in Component I of the Retirement System. The Board shall notify DROP participants of these changes prior to implementation. Those DROP participants resuming participation in Component I of the Retirement System shall not accumulate Credited Service for any time that they were participating in the DROP program (under either Component I or Component II). Those not making either election shall continue to participate in the DROP program.

(c) In the event the DROP program cannot be changed to restore cost neutrality, it shall be discontinued and Members participating in the DROP program at that time shall have the option to either (i) retire, or (ii) continue active employment with the City and resume active participation in Component I of the Retirement System. DROP participants resuming participation in Component I of the Retirement System shall not accumulate Credited Service for the time during which such DROP participants participated in the DROP program (under either Component I or Component II).

ARTICLE J. PARTICIPANT ANNUITY SAVINGS FUND LOAN PROGRAM

Sec. J-1. Participant Annuity Savings Fund Loan Program

A Participant Annuity Savings Fund Loan Program (Participant Loan Program) will be established and available to bargaining unit Members. Its terms will be as follows:

(a) Any loans granted or renewed shall conform to the requirements of Section 72(p) of the Internal Revenue Code and the regulations thereunder. Such loan program shall be established in writing by the Board of Trustees in conformity with the terms of the Combined Plan Document and applicable collective bargaining agreements, and must include, but need not be limited to the following:

(1) The identity of the administrator of the Participant Loan Program;

(2) A procedure to apply for loans, the amount of loan that will be approved or denied, and limitations, if any, on the types and amount of loans offered;

(3) The procedure under the program for determining a reasonable rate of interest;

(4) The events constituting default and the steps that will be taken to preserve plan assets.

(b) The Participant Loan Program shall be contained in a separate written document copies of which shall be made available in the offices of the Retirement System for Members. The Board of Trustees is authorized to adopt rules and regulations, from time to time, to govern the administration and the operation of this program. Copies of the rules shall also be made available to prospective participating Members of the Retirement System in the offices of the Retirement System.

(c) Subject to the rules and procedures established by the Board, loans may be made to Members from such Member's contributions to the Annuity Savings Fund. Former Members, Spouses of Members, and Beneficiaries are not eligible to receive any loans from the Retirement System. Subject to rules and procedures established by the Board, a Member who has been in the Retirement System for twelve months or more is eligible to apply for a loan. No Member shall have more than two outstanding loans from the Retirement System (Component I and/or Component II) at any time. A Member who has previously defaulted on a loan under either Component I or Component II of the Combined Plan shall not be eligible for a loan from the Retirement System.

(d) A Member who has satisfied applicable rules and procedures may borrow from his or her Annuity Savings Fund account an amount, which does not exceed fifty percent (50%) of the Member's vested accumulated balance, up to fifteen thousand dollars ($15,000.00) reduced by: (1) the highest outstanding balance of loans from the Retirement System during the one year period ending on the day before the date on which the loan is made (under both Component I and Component II), or (2) the outstanding balance of loans from the Retirement System on the date on which the loan is made (under both Component I and Component II), whichever is less. The minimum loan amount shall be one thousand dollars ($1,000.00).

(e) In addition to such rules and procedures that are established by the Board, all loans shall comply with the following terms and conditions:

(1) Loan applications shall be in writing.

(2) All loans shall be memorialized by a promissory note made to the Retirement System and properly executed by the Member.

(3) Loan shall be repaid by equal payroll deductions over a period not to exceed five years, or, where the loan is for the purpose of buying a principal residence, a period not to exceed fifteen years. In no case shall the amount of the payroll deduction be less than twenty dollars ($20.00) for any two-week period.

(4) Each loan granted under Component II shall be made against the assignment of the Member's entire right, title, and interest in and to the Annuity Savings Fund supported by the Member's collateral promissory note for the amount of the loan, including interest payable to the order of the Board of Trustees.

(5) Each loan shall bear interest at a rate determined by the Board. The Board shall not discriminate among Members in its determination of interest rates on loans. Loans initiated at different times may bear different interest rates, where, in the opinion of the Board, the difference in rates is supported by a change in market interest rates or a change in the Retirement System's current assumed rate of return. The loan interest rate shall bear a reasonable relationship to market rates for secured loans of a similar duration and shall bear a reasonable relationship to the costs to the Retirement System of administering the Retirement System. The loan interest rate shall be calculated in a manner that will not negatively affect the City's costs relating to the Retirement System or the return to Members.

(6) Loan repayments shall be suspended under this Retirement System as permitted by Section 414(u)(4) of the Internal Revenue Code. A Member who has an outstanding loan balance from the Retirement System who is absent from employment with the City, and who has satisfied the requirements of Section 414(u) of the Internal Revenue Code shall not be required to make loan repayments to the Retirement System during said periods of absence.

(f) A Member's outstanding loan balance shall be considered a directed investment by the Member and interest payments shall be credited to the Member's account balance (provided that the interest credited shall be reduced appropriately to cover the administrative cost of the loan program and avoid negatively affecting the City's costs or the Retirement System's investment returns), and shall not be part of net investment income or part of the Member's account balance for the purpose of allocation of net investment income under Article G.

(g) No distributions shall be made to a Member, former Member, or Beneficiary until all loan balances drawn on the applicable vested accumulated balance and applicable accrued interest have been repaid or offset against the distributable Annuity Savings Fund account balance.

(h) The Retirement System shall include, in its annual report to all Members, an accounting of the loan program established by this Component II, which contains the number and amount of loans made, the costs of administering the program, the amount of payments made including interest received by the Retirement System, the amount of loans outstanding, including any defaults or delinquencies, and an evaluation as to whether the interest charged in the Fiscal Year covered the costs of administering the loan program.

ARTICLE K. SPECIAL PLAN OF ADJUSTMENT PROVISIONS

Sec. K-1. Benefit Changes implemented in accordance with the terms of the Plan Of Adjustment

Notwithstanding anything in Articles A, C, D or E to the contrary, as of the effective dates set forth below and during the period that ends no earlier than June 30, 2023, the following changes in benefits provided under Component II of the Combined Plan shall be implemented:

(1) Reduction in Escalation. With respect to all Pension benefits payable on or after July 1, 2014, the Escalation or Pension Improvement Factor (for purposes of this Section K-1(1) each a "COLA") provided in Part C of Article F of this Component II that will be applied to the monthly Pension benefit of a Member, Retiree, surviving Beneficiary or vested former employee will be 45% of the COLA provided for in Part C of Article F of this Component II, any collective bargaining agreement applicable to Members, other contracts or ordinances; provided, however, that the Board and the Investment Committee shall determine on the effective date of the Plan of Adjustment and not less frequently than annually thereafter that the "Funding Conditions" as defined herein have been satisfied, and in the event that such Funding Conditions have not been satisfied then the COLA that will be applied to the monthly Pension benefit of a Member, Retiree, surviving Beneficiary or vested former employee will be reduced in proportion to the funding which is not received by the Retirement System ("Adjusted Pension Benefit").

For purposes of this Section K-1, the term "Funding Conditions" shall mean that (i) Class 10 and Class 11 voted in favor of the Plan of Adjustment in accordance with the procedures for such vote under the Plan of Adjustment, (ii) the Plan of Adjustment is confirmed by the U.S. Bankruptcy Court, and (iii) the funds that are pledged to be contributed to the Retirement System pursuant to the terms of the State Contribution Agreement and the DIA Settlement Documents have been received.

(2) Effect of Payment Default. In the event that all or a portion of the funds pledged to be contributed to the Retirement System pursuant to the terms of the DIA Settlement Agreement are not received by the Retirement System, the Board shall proportionately reduce the COLA to be applied to the monthly Pension benefit of any Member, Retiree, surviving Beneficiary, employee and former employee to the extent of such default.

Sec. K-2. Income Stabilization Benefits

(1) The provisions of this Section K-2 shall become effective only if each of the Conditions Precedent (as that term is defined in the State Contribution Agreement) have been met to the satisfaction of the Authority and the State Treasurer (each as defined in the State Contribution Agreement), unless any one

or more of such conditions are waived in writing executed by the Authority and the State Treasurer.

(2) Beginning not later than 120 days after the effective date of the Plan of Adjustment, Component II of the Combined Plan shall pay, in accordance with this Section K-2, an annual supplemental pension income stabilization benefit ("Income Stabilization Benefit") to each Eligible Pensioner (as defined in Section K-2(5)) equal to the lesser of either (i) the amount needed to restore an Eligible Pensioner's reduced annual pension benefit to 100% of the amount of the annual pension benefit that the Eligible Pensioner received from the Retirement System in 2013; or (ii) the amount needed to bring the total annual 2013 household income of the Eligible Pensioner up to 130% of the Federal Poverty Level for 2013. The Income Stabilization Benefit as determined under this Section K-2(2) will not increase after the date on which the Income Stabilization Benefit is determined. The Income Stabilization Benefit payable to an Eligible Pensioner will terminate immediately at such time as the Eligible Pensioner ceases to qualify as an Eligible Pensioner.

(3) To the extent an Eligible Pensioner's Estimated Adjusted Annual Household Income (as defined in this Section K-2) in any calendar year after the first year that the Eligible Pensioner receives a benefit under this Section K-2 is less than 105% of the Federal Poverty Level in that year, the Eligible Pensioner will receive an additional "Income Stabilization Benefit Plus" benefit commencing as of the next following July 1.

a. The Income Stabilization Benefit Plus benefit for a calendar year will be equal to the lesser of either (i) the amount needed to restore 100% of the Eligible Pensioner's Pension benefit, as increased by any Pension Improvement Factor (Escalator), under Component II of the Combined Plan; or (ii) the amount needed to bring the Eligible Pensioner's Estimated Adjusted Annual Household Income in that calendar year up to 105% of the Federal Poverty Level in that year.

b. An Eligible Pensioner's "Estimated Adjusted Annual Household Income" for any year will be the sum of (i) the Eligible Pensioner's 2013 total household income (per his or her (or in the case of a minor child, his or her legal guardian's) 2013 income tax return or equivalent documentation), less the Pension benefit paid to the Eligible Pensioner by the Retirement System in 2013, as adjusted for inflation or Social Security COLA increases; (ii) the Adjusted Pension Benefit that is payable to the Eligible Pensioner for that year as determined under Section K-1, (iii) any pension restoration payment to the Eligible Pensioner as determined under Section K-3; and (iv) the Eligible Pensioner's Income Stabilization Benefit.

(4) A separate recordkeeping fund called the "Income Stabilization Fund" shall be established by the Board for the sole purpose of paying the Income Stabilization

Benefits and Income Stabilization Benefits Plus to Eligible Pensioners. Any funds received by the Retirement System that is designated by the City as UTGO Bond Tax Proceeds or a contribution to the Income Stabilization Fund shall be credited by the Board to the Income Stabilization Fund. The assets credited to the Income Stabilization Fund will be invested on a commingled basis with assets of the Retirement System and will be credited with a pro-rata portion of the earnings and losses of the Retirement System. Amounts credited to the Income Stabilization Fund may not be used for any purpose other than the payment of Income Stabilization Benefits and Income Stabilization Benefit Plus benefits to Eligible Pensioners, except as expressly provided in Section K-2(7).

(5) For purposes of this Section K-2, an "Eligible Pensioner" is a Retiree or surviving Spouse who is at least 60 years of age or a minor child receiving survivor benefits, each as of the effective date of the Plan of Adjustment, whose benefit will be reduced as provided in Section K-1, and who is eligible to receive Income Stabilization Benefits because (i) such individual is receiving monthly pension benefits from the Retirement System as of the effective date of the Plan of Adjustment, and (ii) such individual has a total annual household income equal to or less than 140% of the federal poverty level in 2013 (per his or her (or in the case of a minor child, his or her legal guardian's) 2013 income tax return or equivalent documentation).

a. An eligible individual must apply for an Income Stabilization Benefit in accordance with procedures established by the Authority and provide such substantiation of the individual's aggregate annual household income as is required by the State in its sole discretion.

b. The initial determination of Eligible Pensioners, and amount of the Income Stabilization Benefit payable to each Eligible Pensioner shall be made by the State in its sole discretion. The State shall transmit the list of Eligible Pensioners to the Investment Committee and the Board. The Board, with the assistance of the Investment Committee shall be responsible for administering the Income Stabilization Fund and annually certifying to the State Treasurer that it has administered the requirements for eligibility and payment of benefits with respect to Eligible Pensioners in accordance with the terms of the State Contribution Agreement.

c. After the initial determination of Eligible Pensioners is made, no new individuals will be eligible to receive an Income Stabilization Benefit or an Income Stabilization Benefits Plus benefit at any time in the future.

d. An Eligible Pensioner will cease to be an Eligible Pensioner as of the earlier of (i) the Eligible Pensioner's death or (ii) with respect to any minor child receiving survivor benefits, the date the minor child reaches the Age of 18 years.

(6) For purposes of this Section K-2, the "Federal Poverty Level" means the poverty guidelines published each year in the Federal Register by the United States Department of Health and Human Resources.

(7) In the event that, in 2022 (provided that the State has not issued a Certificate of Default (as defined in the State Contribution Agreement) with respect to the Retirement System at any time prior to 2022), it is the opinion of at least 75% of the independent members of the Investment Committee that the assets of the Income Stabilization Fund exceed the Income Stabilization Benefits and Income Stabilization Benefits Plus benefits anticipated to be made to Eligible Pensioners by the Retirement System in the future ("Excess Assets"), the Investment Committee may, in its sole discretion, recommend to the Board that all or a portion of the Excess Assets, in an amount not to exceed $35 million, be used to fund the Adjusted Benefits payable by the Retirement System. The Investment Committee shall have the right to engage professional advisers to assist in making this determination and such expenses shall be paid by the Retirement System.

(8) In the event that any funds remain in the Income Stabilization Fund on the date upon which there are no Eligible Pensioners under the Retirement System, such funds shall be used to fund the Adjusted Benefits payable by the Retirement System.

Sec. K-3. Restoration of Pension Benefits

The following rules shall govern how COLA benefits (as described in Section K-1(1)), that are reduced as part of the Plan of Adjustment, shall be restored during the thirty year period following the confirmation order issued by the Bankruptcy court in *In Re City of Detroit, Michigan,* Case No. 13-53846. The pension restoration process shall be supervised, and restoration decisions undertaken by the Investment Committee and in accordance with the pension governance provisions set forth in the State Contribution Agreement and exhibits thereto. The pension restoration program shall be deemed a part of this Component II, but in the event of any conflict between the language set forth herein and the pension restoration agreement attached to and made a part of the Plan of Adjustment ("Pension Restoration Agreement"), the terms of the Pension Restoration Agreement will govern.

(1) *Waterfall Classes.*

There will be three Waterfall Classes:

a. Waterfall Class 1 – Retirees, in retirement benefit pay status as of June 30, 2014, and their surviving Spouses and Beneficiaries.

b. Waterfall Class 2 – Retirees, who entered into retirement benefit pay status after June 30, 2014, and their surviving Spouses and Beneficiaries, and who are in pay status as of the end of the Fiscal Year prior to the year in which the restoration decision is made.

c. Waterfall Class 3 – All Retirees, surviving Spouses, and Beneficiaries in pay status and all other Members who as of June 30, 2014 are not in retirement benefit pay status.

(2) *Restoration of Benefits Through June 30, 2023.*

a. Each year in conjunction with the annual actuarial valuation report, the Plan Actuary will project the funded ratio of the Retirement System as of 2023 based upon the market value of plan assets relative to the actuarial accrued liabilities (the "Funded Level"). This projection will be further based upon a 6.75% assumed rate of investment return which is net of expenses (administrative and investment), future employer contributions as set forth in the Plan of Adjustment (subject to conditions in the Plan of Adjustment), and such other actuarial assumptions as utilized by the Plan Actuary. For purposes of restoration of benefits through June 30, 2023, the Funding Target will be a 75% funded ratio, and the Restoration Target will be a 78% funded ratio, both projected to June 30, 2023. For purposes of calculating the funded ratio, the assets in the Restoration Reserve Account will be excluded. Each year, if the Plan Actuary projects that the Funded Level as of 2023 (excluding Restoration Reserve Account assets to avoid double counting) exceeds the Restoration Target (i.e., exceeds 78%), a credit of assets for bookkeeping purposes will be made into a new notional Restoration Reserve Account. The notional credit will be an amount equal to the excess of assets above the amount projected to be needed to satisfy the Restoration Target. Once the Restoration Reserve Account is established, each year thereafter, Restoration Account assets will be credited with interest in an amount equal to the net return on Retirement System investments but capped at the actuarially assumed rate of investment return (i.e., 6.75% for the period through June 30, 2023). In the event of net losses, the credited asset value of the Restoration Reserve Account will be diminished to reflect such losses and any required transfer to the PFRS Pension Reserve Fund as provided herein.

b. Actual restoration payments and restoration credits will work as follows: each year, in conjunction with the preparation of the annual actuarial valuation report and following establishment of the Restoration Reserve Account, the Plan Actuary will determine whether there are sufficient funds in such account to restore COLA benefits in a minimum incremental amount of 10% or more. For example: if a Retiree's then current COLA benefit is a 1.0% annual compounded COLA, the minimum incremental restoration would increase the COLA benefit to 1.225%. COLA restoration only will occur if the funding level in the Restoration Reserve Account can fund 100% of the COLA increase over the actuarially-projected lives of the eligible recipient Waterfall Class. If the Plan Actuary certifies that the Restoration Reserve Account as of the end of the prior Fiscal Year satisfies the required funding level for one or more increments of restoration, then in the next immediate Fiscal Year actual

COLA restoration payments will be made to PFRS Waterfall Class 1 members in such increments until an amount sufficient to fund 66% of the value of their future COLA payments (e.g., a 1.5% compound COLA, or as otherwise applicable) has been funded. At that juncture, and to the extent that additional assets in the Restoration Reserve Account would fully fund COLA restoration in at least one minimum 10% increment (i.e., amounts equal to 10% of the value of future COLA payments), Waterfall Class 2 members will receive COLA restoration, until an amount sufficient to fund 66% of the value of their future COLA payments has been funded. At that juncture, and to the extent that additional assets in the Restoration Reserve Account would fully fund COLA restoration in at least one minimum 10% increment (i.e., amounts equal to 10% of the value of future COLA payments), Waterfall Class 3 members will receive COLA restoration on a pro-rata basis. For Waterfall Class 3 members who are in pay status at that time of restoration, they will receive COLA payments; for active employees at the time of restoration, they will receive credits granting them a right upon retirement to receive COLA restoration equal to the 10% increments that are fully funded to Waterfall Class 3 members. For example: assume there are sufficient assets credited to the Restoration Reserve Account as of the end of a Fiscal Year to fully fund 66% of the value of the COLA for all Waterfall Class 1 and Class 2 members for their actuarially projected lives. To the extent additional assets remain in the Restoration Reserve Account to fully fund at least a 10% COLA increment for Waterfall Class 3 members for their actuarially projected lives, then (i) all Retirees would receive a restoration payment of 76% of the value of their COLAs (their having already received by virtue of their membership in Waterfall Classes 1 and 2 an increase to 66% of the value of their COLAs) and also a 10% COLA increment would be credited to eligible active employees which would be included in their benefit payments upon retirement (thus causing their COLAs to increase in value from 45% to 55%). Restoration amounts actually paid from the Restoration Reserve Account will be debited from such account. Restoration payments will be calculated and paid on a prospective basis only.

c. Once restoration payments and credits begin, as long as the Restoration Reserve Account continues to have assets to fund 100% of an incremental COLA restoration amount for such Waterfall Class for their actuarially projected lives, the restoration payments and credits will continue; provided, however, that in the event the Restoration Reserve Account, after having sufficient assets to fund 100% of two or more increments, falls below 100% for the second or greater increment, the annual amounts to pay such second or greater increment can continue until the Restoration Reserve Account lacks any assets to fund such additional increment. For example, assume a 10% increment in Waterfall Class 1 requires $10 million in assets to be fully funded for the Waterfall Class members' actuarially projected lives, and that based on Fiscal Year 2018 results the

Restoration Reserve Account has assets of $22 million so as to fund two increments of restoration in Fiscal Year 2019. Assume further that in the following year the Restoration Reserve Account drops in value to $17 million; in such event two increments could still be paid, and the second increment would cease being paid only if the value of assets in the Restoration Reserve Account dropped to or below $10 million (in the event they dropped below $10 million, the first increment also would cease being paid). For purposes of restoration reduction, restoration increments will be taken away in reverse order in which they were granted (i.e. last in, first out).

d. If the Funded Level (excluding Restoration Reserve Assets) projected to 2023 falls below 76% (hereinafter, "Restoration Reserve Suspension Trigger"), then, until such time as the projected Funded Level in 2023 is 76% or above, further interest credits to the notional Restoration Reserve Account will cease notwithstanding the actual net Retirement System investment returns for the Fiscal Year in question. Furthermore, if the Funded Level projected to 2023 falls below the Funding Target (i.e., 75%) then restoration payments to Retirees and credits to active employees in the following year will be modified in the following manner: (1) funds previously credited to the Restoration Reserve Account will be notionally transferred and credited to the Pension Reserve Fund in sufficient amounts to restore the projected Funded Level in 2023 to 75%; (2) following such transfer, the remaining assets in the Restoration Reserve Account shall be applied to make restoration payments in accordance with and pursuant to the same mechanism described in paragraph c.

e. In connection with preparation of the actuarial report for Fiscal Year 2023, the Plan Actuary will determine whether the Retirement System has satisfied the Permanent Restoration Target, which shall be 78%. Transfers from the Restoration Reserve Account for credit to the Pension Reserve Fund may be made in such amounts as are necessary to satisfy the Permanent Restoration Target. If following such transfers, the Funded Level as of June 30, 2023 has satisfied the Permanent Restoration Target (i.e., 78%), then the residual amounts, if any, in the Restoration Reserve Account (which will necessarily represent excess not necessary to satisfy the Permanent Restoration Target), and which fully fund one or more increments of COLA restoration payments for one or more Waterfall Classes for their actuarially projected lives, shall be transferred from the Restoration Reserve Account and credited to the Pension Reserve Fund and the applicable incremental COLA payments shall be permanently restored for the applicable Waterfall Class and shall no longer be variable from year to year.

f. Following receipt of the actuarial reports for 2019, and in the event that the projected Funded Level of the Retirement System as of 2023 is less than 76%, the Plan Actuary shall revisit the restoration calculations that it made during each of the prior four (4) years. It shall recalculate each such prior year's Funded Level projection, this time by assuming the lesser of (i) $4.5 million in annual administrative expenses until 2023, or (ii) an amount of annual administrative expenses until 2023 equal to the average annual normal course administrative expenses in the prior four (4) years applicable to Component II, in addition to a net 6.75% annual investment return. If such retrospective recalculation indicates that fewer amounts would have transferred to the Restoration Reserve Account than actually were transferred during such look back period, then the Restoration Reserve Account shall be debited by the lesser of (i) this difference (plus interest at a rate equal to the rate that was credited to the Restoration Reserve Account during the look-back period or (ii) the dollars that were actually paid out in restoration payments during such look-back period (plus interest at a rate equal to the rate that was credited to the Restoration Reserve Account during the look-back period); or (iii) the amount required to increase the projected 2023 Funded Level to 76%.

(3) *Restoration of Benefits from July 1, 2023 to June 30, 2033.*

a. If and to the extent that all COLA payments have not been restored as of June 30, 2023 pursuant to Section (2)(e), then during this period and for purposes of variable restoration, the Funding Target, the Restoration Target, the Permanent Restoration Target and the Restoration Reserve Suspension Trigger shall be as set forth below, all projected as of June 30, 2033:

2023 Funded Level	2033 Funding Target/Restoration Target
78%	81%/84%
77%	80%/83%
76%	79%/82%
75%	78%/81%
74% or lower	3% >than 2023 Funded Level %/81%

2033 Permanent Restoration Target - Same as 2033 Restoration Target

2033 Restoration Reserve Suspension Trigger – 1% higher than the projected Funding Target for all time periods

b. The same rules for restoration payments that applied during the period ending June 30, 2023 shall apply (including ceasing interest credits in the event of a Restoration Reserve Suspension Trigger, and making Restoration Account asset transfers to the Pension Reserve Fund in the event the 2033 Funded Level falls below the 2033 Funding Target), except as follows. For purposes of determining whether the 2033 Restoration Target has been satisfied, the Plan Actuary shall project investment returns through June 30, 2033 using the then current investment return assumption which is assumed to be net of expenses (administrative and investment), and the then applicable actuarial assumptions as utilized in the annual actuarial valuation. Further, the Plan Actuary shall assume, merely for purposes of determining whether the Restoration Target is satisfied, that the annual City contribution amount shall be the annual amount necessary to fund the Retirement System based upon an amortization of the actual 2023 UAAL (using the market value of assets) over 30 years (hereinafter, the "2023 UAAL Amortization") and in such manner that the resulting annual contributions would achieve the applicable Funding Target (pursuant to paragraph b) as of 2033. Such projected, hypothetical contributions shall be for purposes only of making restoration determinations, and shall not necessarily be the actual contributions made or required to be made by the City or recommended during such period; all of which shall be determined independent of the restoration calculation process. For purposes of calculating the funded ratio, the assets in the Restoration Reserve account will be excluded.

c. To the extent that the City's actual contributions to the Retirement System in any of the Fiscal Years 2024 (i.e., the year ending June 20, 2024) through 2033 are greater than the projected annual contribution under the 2023 UAAL Amortization, such amounts, and any investment earnings thereon, shall be notionally credited to a new bookkeeping account in the Retirement System called the Extra Contribution Account. In determining pension restoration during the period from Fiscal Year 2024 through 2033, none of the amounts in the Extra Contribution Account shall be considered for purposes of determining the projected Funded Level for purposes of determining whether the Retirement System has attained the Restoration Target or the Permanent Restoration Target. To the extent that the City's actual contributions in any of the Fiscal Years 2024 through 2033 are less than the City's projected annual contribution under the 2023 UAAL Amortization, such difference and any investment earnings thereon shall be notionally allocated to the Pension Reserve Fund.

d. Each year, in addition to the notional credit of amounts that exceed the amount necessary to satisfy the Restoration Target, existing notional Restoration Account assets will be credited with interest equal to the net return on Retirement System investments; however, such interest shall not exceed the then investment return assumption. In the event of net losses on the Retirement System's investments, the notional assets credited to the Restoration Reserve Account will be reduced to reflect such losses.

e. In connection with preparation of the actuarial report for Fiscal Year 2033, the Plan Actuary will determine whether the Retirement System has satisfied the applicable Permanent Restoration Target (i.e., the 2033 Restoration Target). Transfers from the Restoration Reserve Account for credit to the Pension Reserve Fund may be made in such amounts as are necessary to satisfy the Permanent Restoration Target. If following such transfers the funding level as of June 30, 2033 has satisfied the applicable Permanent Restoration Target, then the residual amounts in the Restoration Reserve Account, if any (which will necessarily represent excess not necessary to satisfy the Permanent Restoration Target), and which fully fund one or more increments of COLA restoration payments for one or more Waterfall Classes, shall be transferred from the Restoration Reserve Account and credited to the Pension Reserve Fund and the applicable incremental COLA payments shall be permanently restored for the applicable Waterfall Class and shall no longer be variable from year to year.

f. Following receipt of the actuarial report for 2028, and in the event that the projected Funded Level as of 2033 is less than 79%, the Plan Actuary shall revisit the restoration calculations that it made during each of the prior four (4) years. It shall recalculate each such prior year's Funded Level projection, this time by assuming the lesser of (i) $4.5 million in annual administrative expenses until 2033, or (ii) an amount of annual administrative expenses until 2033 equal to the average annual normal course administrative expenses in the prior four (4) years applicable to Component II, in addition to a net 6.75% annual investment return. If such retrospective recalculation indicates that fewer amounts would have transferred to the Restoration Reserve Account than actually were transferred during such look back period, then the Restoration Reserve Account shall be debited by the lesser of (i) this difference (plus interest at a rate equal to the rate that was credited to the Restoration Reserve Account during the applicable look-back period) or (ii) the dollars that were actually paid out in restoration payments during such look-back period (plus interest at a rate equal to the rate that was credited to the Restoration Reserve Account during the applicable look-back period); or (iii) the amount required to increase the projected 2033 Funded Level to 79%.

(4) *Restoration of Benefits from July 1, 2033 to June 30, 2043.*

a. If and to the extent that all COLA payments have not been restored pursuant to Section (3)(f) as of June 30, 2033, then during the period ending June 30, 2043 and for purposes of variable restoration, the Funding Target, the Restoration Target, the Permanent Restoration Target and the Restoration Reserve Suspension Trigger shall be as set forth below, all projected as of June 30, 2043.

2023 Funded Level	2043 Funding Target/Restoration Target
78%	84%/87%
77%	83%/86%
76%	82%/85%
75%	81%/84%
74% or lower	3% > than 2023 Funded Level %/84%

2043 Permanent Restoration Target - Same as 2043 Restoration Target

2043 Restoration Reserve Suspension Trigger – 1% higher than the projected Funding Target for all time periods

b. The same rules for restoration that applied during the period ending June 30, 2033 shall otherwise apply (including ceasing interest credits in the event of a Restoration Reserve Suspension Trigger, and the making of notional asset transfers from the Restoration Reserve Account to the Pension Reserve Fund in the event the 2043 Funded Level falls below the 2043 Funding Target) and shall be rolled forward. For example, for purposes of determining whether the 2043 Restoration Target has been satisfied, the Plan Actuary shall project annual contributions using the same 2023 UAAL Amortization. For purposes of calculating the funded ratio, the assets in the Restoration Reserve account will be excluded, and no Extra Contribution Account assets shall be included for purposes of determining whether the Funded Level meets the Restoration Target or Permanent Restoration Target, including any additions to such account after 2033.

c. In connection with preparation of the annual actuarial valuation report for Fiscal Year 2043, the Plan Actuary will determine whether the Retirement System has satisfied the applicable Permanent Restoration Target, as set forth in paragraph a above. Transfers from the Restoration Reserve Account for credit to the Pension Reserve Fund may be made in such amounts as are necessary to satisfy the Permanent Restoration Target. If following such transfers the Funded Level as of June 30, 2043 is equal to or greater than the applicable Permanent Restoration Target, then the residual amounts in the Restoration Reserve Account, if any (which will necessarily represent excess not necessary to satisfy the Permanent Restoration Target), shall be transferred from the Restoration Reserve Account and credited to the Pension Reserve Fund and the applicable incremental COLA payments shall be permanently restored for the applicable Waterfall Class and shall no longer be variable from year to year.

(5) *Modification of the Pension Restoration Program.*

If at any time after July 1, 2026, the Investment Committee by vote of five of its seven Members, or the Board of Trustees by a greater than 66% vote, determines that a change in relevant circumstances has occurred, or there was a mutual mistake of fact in developing the Pension Restoration Agreement attached to and made a part of the Plan of Adjustment, such that the continued operation of the Pension Restoration Agreement and this Section K-3 without amendment will: (a) materially harm the long-term economic interests of the City or Retirement System; (b) materially impair the City's ability to fully fund over a reasonable period the then existing frozen benefit liabilities; or (c) materially hinder the Restoration Program, if as of that juncture (and for purposes of applying this subsection K-3(5) annual funding levels (excluding the Extra Contribution Account) had materially exceeded the applicable Restoration Targets for a substantial period yet without any material actual restoration of benefits as contemplated herein having been made, the Investment Committee or the Board, as the case may be, shall provide written notice to the other entity of such a determination and of the need to amend the Pension Restoration Agreement and this Section K-3 (it being understood that the post-Chapter 9, 40-year amortization period (to 2053) to fully fund frozen liabilities is, unless the relevant facts demonstrate otherwise, presumptively reasonable). The Investment Committee and the Board shall then meet to negotiate amendments to the Pension Restoration Agreement that address the identified risk of harm or impairment, but which also considers the Agreement's objective of providing pension restoration. Such negotiations shall take into account reasonable actions the City has pursued or could pursue to mitigate such harm or impairment. Any such amendments shall require the approval of a majority vote of the combined members of the Investment Committee and Board (persons who sit on both the Board and Investment Committee shall have one vote). Such parties shall consult with the Mayor, City Council and the Governor in connection with such negotiation.

If the Board, acting through a majority, and the Investment Committee, acting through a majority, cannot agree to such amendments with the 90-day period following the provision of such notice by the determining party, then the Board and Investment Committee shall proceed to mediation upon demand from either the Board or the Investment Committee. In this regard, within 30-days following expiration of the 90-day period the Board and the Investment Committee shall each select a mediator from the list of approved mediators for the United States District Court for the Eastern District of Michigan. The two selected mediators shall appoint a third neutral mediator from the approved list. Each party shall furnish a written statement to the mediators within 30 days of selection of the neutral mediator. Representatives of the Mayor and the Governor shall be consulted in connection with such mediations. If following a 90-day mediation period following submission of the written statements the matter is not settled, then either the Investment Committee or the Board can file an action in the United Stated District Court for the Eastern District of Michigan asking it to declare, *inter alia*, whether or in what manner to amend the Pension Restoration Agreement and this Section K-3.

APPENDIX A

The following provisions shall also have general applicability to the Combined Plan for the Police and Fire Retirement System of the City of Detroit, Michigan:

MCLS Const. Art. IX, § 24 (2003)

§ 24. Public pension plans and retirement systems, obligation.

Sec. 24. The accrued financial benefits of each pension plan and retirement system of the state and its political subdivisions shall be a contractual obligation thereof which shall not be diminished or impaired thereby.

Financial benefits arising on account of service rendered in each Fiscal Year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities.

**Relevant Provisions of
January 1, 2012
City of Detroit Charter**

**ARTICLE 11.
RETIREMENT PLANS**

Sec. 11-101. City's Duties.

1. The City shall provide, by ordinance, for the establishment and maintenance of retirement plan coverage for city employees.

2. Financial benefits arising on account of service rendered in each Fiscal Year shall be funded during that year and that funding shall not be used for financing unfunded accrued liabilities.

3. The accrued financial benefits of active and retired city employees, being contractual obligations of the city, shall in no event be diminished or impaired.

Sec. 11-102. Continuation of Existing Plans.

The retirement plans of the city existing when this Charter takes effect, including the existing governing bodies for administering those plans, the benefit schedules for those plans and the terms for accruing rights to and receiving benefits under those plans shall, in all respects, continue in existence exactly as before unless changed by this Charter or an ordinance adopted in accordance with this article.

**Relevant Provisions of the
Detroit City Code**

Sec. 47-1-2. Detroit Police and Fire Retirement System.

Notwithstanding any collective bargaining agreement or other documents governing terms of employment to the contrary, effective as of July 1, 2014, the Detroit Police and Fire Retirement System shall hereinafter be memorialized in a separate written document entitled "Combined Plan for the Police and Fire Retirement System of the City of Detroit, Michigan," which shall comprise the exclusive terms of the Detroit Police and Fire Retirement System and be kept in the Office of the City Clerk for the City of Detroit.

Collective Bargaining Agreements.

Except to the extent otherwise provided in the Plan of Adjustment, under Michigan Law if there is any conflict between the Retirement System provisions and collective bargaining agreement provisions, the terms of the collective bargaining agreement control.

(a) The Board of Trustees shall administer the Retirement System consistent with the pension provisions of the 2014-2019 collective bargaining agreement between the City of Detroit and the Detroit Police Officers Association with respect to police officers covered by said collective bargaining agreement.

(b) The Board of Trustees shall administer the Retirement System consistent with the pension provisions of the 2014-2019 collective bargaining agreement between the City of Detroit and the Detroit Police Lieutenants and Sergeants Association.

(c) The Board of Trustees shall administer the Retirement System consistent with the pension provisions of the 2014-2019 collective bargaining agreement between the City of Detroit and the Detroit Police Command Officers Association.

(d) The Board of Trustees shall administer the Retirement System consistent with the pension provisions of the 2014-2019 collective bargaining agreement between the City of Detroit and the Detroit Fire Fighters Association.

CLI-202268614v2

EXHIBIT B

GLENN BOWEN

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE EASTERN DISTRICT OF MICHIGAN

In re) Chapter 9
CITY OF DETROIT, MICHIGAN,) Case No. 13-53846
Debtor.) Hon. Steven W. Rhodes

____

The Videotaped Deposition of GLENN BOWEN, VOLUME II,
Taken at 1114 Washington Boulevard,
Detroit, Michigan,
Commencing at 9:00 a.m.,
Tuesday, July 1, 2014,
Before Rebecca L. Russo, CSR-2759, RMR, CRR.

GLENN BOWEN

APPEARANCES:

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GLENN BOWEN

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GLENN BOWEN

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GLENN BOWEN

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ALSO PRESENT:
Liaw Huang - Terry Consulting, LLC
Joseph Esuchanko - Actuarial Service Co.
Rob Girkin - Video Technician

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GLENN BOWEN

Detroit, Michigan
Tuesday, July 1, 2014
9:00 a.m.

VIDEO TECHNICIAN: We are now on the record. This is the continuation of the videotaped deposition of Glenn Bowen, being taken on Tuesday, July 1st, 2014. The time is now 9:00 a.m.

Counsel may proceed.

MR. BALL: Okay.

MR. MONTGOMERY: Before we get started, Counsel, I would just like the transcript record to reflect that yesterday we sent an email to counsel involved in yesterday's deposition regarding Bowen Exhibit 10 as having been produced erroneously by the city.

It was delivered to the mediators on April 9th, the date that's on the letter, and we would request that the parties agree not to engage in any further questioning with respect to that document, and we'd further ask yesterday's counsel to agree to remove references from the record with respect to that letter.

MR. MILLER: And Evan Miller, for the City

GLENN BOWEN

of Detroit.

I concur that the document in question, which is POA98715 through 98718, was indeed provided to the city by Mr. Montgomery, pursuant to a mediation order, and consequently, it falls within the confidentiality protection set forth in Judge Rhodes' mediation order of August 2013.

The city supports the request of the Retiree Committee that the document be withdrawn and the questions of Mr. Bowen in connection with the document be stricken from the record.

MR. BALL: Let's start by taking a roll call of who's in attendance.

This is Robin Ball, from Chadbourne & Park, representing Assured.

If I could ask the others present to identify themselves for the record.

MR. HUANG: Liaw Huang, from the Terry Group, with Mr. Ball.

MR. NEAL: Guy Neal, Sidley Austin, for National Public Finance Guarantee Corporation.

MR. WEISBERG: Bob Weisberg, for Oakland County.

MR. ESUCHANKO: Joe Esuchanko, for Oakland

GLENN BOWEN

County.

MS. GREEN: Jennifer Green, on behalf of the General Retirement System for the City of Detroit and the Police and Fire Retirement System for the City of Detroit.

MS. SAAD: May Saad, on behalf of Financial Guaranty Insurance Company.

MS. COPLEY: Dawn Copley, for the State of Michigan.

MR. MONTGOMERY: Claude Montgomery, Dentons US, for the Retiree Committee.

MR. DAVIDSON: Paul Davidson, Waller Lansden, for U.S. Bank.

MR. EATON: Miguel Eaton, from Jones Day, on behalf of the city.

MR. MILLER: Evan Miller, Jones Day, on behalf of the City of Detroit.

MR. MUTH: Tim Muth, Reinhart Boerner Van Deuren, on behalf of Mr. Bowen.

GLENN BOWEN,

was thereupon called as a witness herein, and after having first been previously duly sworn to testify to the truth, the whole truth and nothing but the truth, was examined and testified as follows:

GLENN BOWEN

EXAMINATION

BY MR. BALL:

Q. Good morning, Mr. Bowen.

A. Good morning.

Q. Welcome back.

A. Thank you.

Q. You understand that you're still under oath?

A. Correct.

Q. Today we'll observe the same ground rules that you went through with counsel yesterday, in regards to breaks, and if I ask a question that you don't understand, you'll let me know; all of those same ground rules, are those acceptable to you?

A. Yes.

MR. MILLER: Robin, excuse me, before you begin, I'm sorry to interrupt, can we have identification of the individuals who are listening and participating by telephone?

MR. BALL: Yeah, if I could ask those on the line to identify themselves, please.

MR. KOOB: Paul Koob, from Ballard Spahr.

MR. BALL: And I believe we have at least one other party on the line.

BY MR. BALL:

GLENN BOWEN

Q. All right. Mr. Bowen, you discussed yesterday that you have served, or serve as the system actuary for several pension systems?

A. Yes.

Q. Okay. And those include the Puerto Rico Government Employees Pension System, Puerto Rico Teachers Pension System, and the Puerto Rico Judiciary Pension System?

A. Those are three of the biggest, yes.

Q. Okay. And are there other pension systems for which you serve as the system actuary?

A. Not at the -- not at the moment that I'm a lead actuary on another system.

Q. What's the lead actuary, what's that mean?

A. Lead consultant, as opposed to being a member of the project team.

Q. And what system is that?

A. The Social Insurance Scheme of the Kingdom of Saudi Arabia.

Q. And what's the difference between being -- well, first, what's the difference between being a system actuary and serving in a consultant role as you've served here?

A. The distinction I'm drawing is, if you will, for Puerto Rico, I'm the first point of contact and work

GLENN BOWEN

with the client to set the scope of the engagement, and I'm responsible for every single aspect of the engagement, attending meetings.

My work on the Kingdom of Saudi Arabia differs, in that I'm on the project team.

Q. And I asked you a slightly different question, I apologize. It was a little confusing because I shifted from Kingdom of Saudi Arabia to what you're doing here.

What's the difference between being a system actuary and playing the role of a consultant to the city, as you've played here?

A. Absolutely. A system actuary is a retained actuary who will perform valuations; for instance, every year we perform valuations for the three Puerto Rico retirement systems that you mentioned. We do other work where we are retained by sometimes a retirement system and/or sometimes a legislative oversight body. For instance, we do work for the state of Pennsylvania and we do actuarial valuations of the systems, not for purposes of producing the valuation report but for purposes of advising the state, in much the same way we've performed valuations of the City of Detroit's retirement systems for the purpose of further advising

the City of Detroit.
Q. Okay. And in terms of the role with respect to the system itself, if you're a consultant, as you are here, do you have any role with respect to the system itself?
A. No, we don't have a relationship with the system itself.
Q. Okay. And in making actuarial recommendations -- strike that.
Do you have -- in addition to your work on the public pensions that you've talked about, do you have experience with working on transactional matters?
MR. BALL: Could we ask whoever just joined to identify themselves for the record, please?
MR. BRILLIANT: Allan Brilliant.
MR. BALL: Thank you.
BY MR. BALL:
Q. I'm sorry, let me -- I'll start that question over.
Do you have experience working on transactional matters as an actuary?
A. Could you describe more specifically what you mean by transactional matters?
Q. Something involving the purchase or sale or acquisition of either an entity or a book of business

or liabilities, anything involving the purchase or sale of a business or a part of a business.
A. I can't say I've been involved in any M and A.
Q. Is there any part of your business that you would describe as transactional?
A. Within Milliman, potentially; within my practice, we may have worked on M and A engagements, but it's not a standard -- you know, it would be if it arose based on a client being acquired. I know that has happened in the past. I'm not sure to what extent we've been involved in the transactional aspects of it.
Q. But you personally haven't been involved in any transactional matters?
A. I don't recall.
Q. Do you have an understanding as to whether there is a difference in the nature or level of rigor involved in transactional matters as opposed to the kind of consulting matters that you're involved in?
A. Well, within the actuarial aspect of it, there are certain different accounting rules for purchases.
Q. And I'm not trying to ask about the governing accounting rules, but the level of rigor required in either the kind of data you use to make decisions, or the examination of the data, anything involving the

level of rigor that attaches to your work.
A. I can give you one example, which may or may not answer your question, but I was involved in the merger of two pension plans within one plan sponsor several years ago, and there was a requirement that the data be retained for either a five or seven-year period, so that the starting position of each entity could be recreated if it was needed.
Q. There was some discussion yesterday of a disparity of 300 members in the, in the -- among the beneficiaries or potential beneficiaries of the GRS retirement system. Do you recall that?
A. I do.
Q. Do you know whether, in a transactional matter -- you said that you didn't believe that that 300-member difference would end up being material, essentially, do you recall that?
A. I do.
Q. Do you know whether the same conclusion would apply if you were looking at that analysis in the context of a transaction?
A. My role as an actuary would be to bring it to the attention of our client, as we did, setting forth our results in the letter at the request of the retirement

system. We laid out our complete analysis of their data. Since we were not able to use the same data as was prepared by Gabriel Roeder Smith for their evaluation, we had to do our own work. At the end of the day, our replication of Gabriel Roeder Smith's valuation was within five to ten million dollars out of 3.6 billion.
So given that result, I'll say I imputed the difference in head count was based on records, which would have had a very minor impact.
Q. 300 employees out of how many people? What was the workforce?
A. I don't have that number, off the top of my head. It would be in our letter.
Q. All right. And would you -- or if your reviving transactional client had recommended that that difference be reconciled?
A. My original recommendation was that all three actuarial firms that were doing the work start from the same edited census data, and as an actuary, I was not able to force that to happen.
Q. So, optimally, you would have been working with the same set of data, all three firms that were involved?
A. That was my view as to what would have been optimal.

GLENN BOWEN

Q. Has your entire tenure at Milliman been in Philadelphia?
A. Yes.
Q. Okay. And is there a particular focus or expertise of the Philadelphia office of Milliman?
A. Well, the Philadelphia office of Milliman has four divisions: Health actuarial consulting, life insurance and financial services, property and casualty, and the employee benefits discipline, where I work.
Q. Okay. Yesterday you identified several other Milliman actuaries who had been involved, or their names came up during the course of the day. Suzanne Taranto, who did health work. You also -- there was also mention of Ms. Warren? Can you tell me what -- who she is and what her role is?
A. Yes, she's an employee benefits consultant, as well.
Q. And is she a principal, does she work under you? What's the relationship?
A. She's a principal.
Q. Okay. And does she report to you?
A. She does report to me, yes.
Q. Okay. And you mentioned Allen Perry, I believe?
A. Yes.

GLENN BOWEN

Q. And what is Mr. Perry's position, what is his role?
A. He's a principal. I'm not sure of his exact title, but he is the head of our asset liability management practice.
Q. Okay. Were there any other -- other than those four that we've mentioned, were there any other Milliman principals or consulting actuaries who worked on -- who have worked on City of Detroit projects, to your knowledge?
A. I mean, we certainly have a staff that has been assigned to prepare various analyses and run valuations, et cetera. I couldn't name, over the past two years with certainty, who has worked on various assignments. The simple characterization is that Kathy and I are the two who are ultimately responsible for every assignment.
Q. Including those done by Mr. Perry?
A. Well, for every pension assignment. Mr. Perry has been working with the city on investment consulting issues over time.
Q. He worked with you on the November 4th letter?
A. He did.
Q. And apart from that, what other projects has Mr. Perry undertaken on behalf of the city?

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A. I know that he put together an analysis of ASF accounts with projection. Mr. Perry has come to me over the course of time, where, you know, he'd say, "I have an assignment to do, you know, and help me understand the larger context of what we're working within." And, to my knowledge, there has been stops and starts. So I don't know all of his projects off the top of my head.
Q. What projects do you know, besides the analysis of ASF accounts, that he has undertaken?
A. He's been working with investment consultants in our San Francisco office. I'm trying to think of what the original assignment was. I guess it was developing what less-risky portfolios would look like.
Q. Okay. Do you know when that project began?
A. General impression is around the turn of this year, early 2014.
Q. Do you know whether they generated any written work product as part of that project?
A. I don't know.
Q. Were you involved in collecting documents for responses to the parties' discovery in this case?
A. When you say collecting, in terms of -- we received a request for documents, and our IT department handled

GLENN BOWEN

the moving documents off of our network and presenting them to whoever they were to be presented to, so...
Q. Okay. Were you involved in any other way in retrieving documents from Milliman in response to the parties' discovery in this case?
A. I did have a conversation with Jones Day to let them know which documents would have personally identifiable information for plan participants in them.
Q. Okay. Did you conduct any search of your own files, not IT, not electronic files, but of your own files for documents in this case?
A. That wasn't necessary, because they were all filed where the IT department could lift them simply.
Q. So you're saying you have no hard copy files related to this case?
A. We have hard copy files.
Q. Okay. And did you search those documents for production of materials responsive to the parties' discovery requests in this case?
A. I did not.
Q. Did anybody?
A. I'm not aware.
Q. So far as you're aware, nobody did that?

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GLENN BOWEN

A. Yeah, so far as I'm aware, nobody did that.
Q. Do you know whether anybody searched for hard copy files of any Milliman personnel in connection with the parties' discovery request in this case?
A. I don't know.
MR. BALL: We'd ask that Mr. Bowen's and the rest of the Milliman personnel's hard copy files be searched. We've made a previous request in response to a disclosure that Mr. Buckfire's hard copy files had not been searched, and that your experts and your consultants -- not experts, your consultants' hard copy files be searched. It sounds as if that has not happened. We'd ask that that occur.
MR. EATON: This is Miguel Eaton, for the city. We should probably talk outside of the presence of the witness, but --
MR. BALL: I understand. I'm just making, for the record, my request, and I understand you'll respond.
MR. EATON: Understood.
MR. MILLER: And to clarify, I think the witness' testimony was he is not aware, one way or the other.
BY MR. BALL:

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Q. Mr. Bowen, has anybody come to you and asked to search your hard copy files?
A. No.
Q. And where are they located?
A. They would be in the office.
Q. In your office?
A. Yes.
Q. And would you -- and in order for somebody to search them -- do you know whether anybody has searched them -- strike that.
So they're physically located in your office. Does anybody have access other than you?
A. When I say the office, the Philadelphia office, not my personal space.
Q. All right. So they're maintained in files in the Philadelphia office?
A. Yes.
Q. And to the best of your knowledge -- did you tell anybody where your files related to this matter are located so that they could be searched?
A. I wasn't asked to point out which file cabinet they're in.
Q. Milliman documents have been produced in several different tranches over the course of document

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production in this case. Do you have any understanding of why they were produced in several different ways?
A. No.
Q. Who at Milliman would know that?
A. I don't know.
Q. Let's go to what was marked as Exhibit 1 yesterday. And you testified about this a bit. I have a couple of questions about it. Exhibit 1, for the record, is the July 6th, 2012, letter from you and Ms. Taranto to Chris Brown of the city.
And this overlaps with some testimony you've given in a prior deposition, and I just want to confirm that your position has not changed.
First, there's a discussion here of an asset smoothing methodology that was employed by Gabriel Roeder. Do you recall that being the case? And you're welcome to look at the letter to refresh yourself if you need to.
A. I see the section on asset smoothing.
Q. Okay. And my understanding from your prior deposition testimony is that you have not opined or are not opining that Gabriel Roeder's use of asset smoothing, in the fashion that they implemented it, was improper

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GLENN BOWEN

or in some way not within actuarial standards, is that correct?
A. I was not asked to make that opinion.
Q. All right. Have you ever rendered that opinion?
A. I have not.
Q. And has -- and have you ever formed that opinion?
A. I have not.
Q. There's also a discussion here in connection with asset smoothing of a corridor being used in connection with the asset smoothing. Do you recall that?
A. I do.
Q. Okay. And you note that a 20 percent corridor is a very common corridor. Do you see that?
A. I do.
Q. And do you recall -- I mean, what's the basis for your conclusion that 20 percent is a commonly used corridor?
A. Experience.
Q. Okay. And what experience are you talking about?
A. Working with various systems over time.
Q. Have you seen higher corridors used than 20 percent?
A. I have.
Q. And are there other corridors that are commonly used besides 20 percent?

GLENN BOWEN

A. I noted 20 because in my experience it was the most common that I've seen.
Q. Okay. And I understand it may be the most common. I'm just asking whether there are other corridors besides 20 percent that are commonly used.
A. I'm not sure if there's one that's in second place.
Q. What's the range of what you've seen, in terms of corridors that have been used?
A. I think the highest I've seen has been maybe 40 percent.
Q. And again, the corridor application is part of the smoothing methodology that Gabriel Roeder employed, correct?
A. I'd have to take a minute to read this to see exactly what they were employing.
Q. The point of my question is just to make sure that that is encompassed within your testimony, that you're not offering an opinion that Gabriel Roeder's smooth -- application or implementation of smoothing methodology was improper or contrary to actuarial standards. I want to make the sure that that includes the corridor that they employed.
A. That was -- that's not the purpose of this, these three paragraphs.

GLENN BOWEN

Q. I understand that. But I'm asking a further question, which is -- confirmed that your testimony about not having an opinion that what Gabriel Roeder did was inconsistent with actuarial standards or improper in some way, that that encompasses their implementation of the corridor.
A. I was not asked to perform a review to make opinions on that issue.
Q. And you have not formed an opinion on that issue?
A. I have not.
Q. There's also a discussion in this letter of the amortization methodology that Gabriel Roeder employed. Do you recall that?
A. I do.
Q. And you, again, are not offering an opinion and have not formed an opinion that the amortization methodology that Gabriel Roeder employed was improper or inconsistent with actuarial standards, correct?
A. Correct.
Q. Okay. And there's a reference here to 30-year maximal amortization periods under then governing GASB rules; do you see that?
A. I do.
Q. Has there been a change or is there about to be a

GLENN BOWEN

change in GASB rules concerning amortization methodologies?
A. There is.
Q. Okay. Can you tell me what that is, what the change is that's occurring?
A. In one sense -- and I'll preface this by saying this is accounting. GASB handles accounting, not funding. The new GASB standard, GASB 67/68, removes everything that existed under 25 and 27 in terms of quantities that are calculated, sets up an entire new matrix of rules, and is a significant shift towards a corporate-style accounting, a more market-based accounting, significantly shorter amortization rules and significantly more constrained liability reporting rules.
Q. Are there rules under the new -- first of all, when did those rules become effective?
A. Fiscal year '14.
Q. So they would be becoming effective now for the GRS and the PFRS, correct?
A. It phases in over two years for the plans and the plan sponsors. So, yes, basically now.
Q. And how do the new rules, in lieu of the 30-year max that existed previously, how do the new rules address

GLENN BOWEN

amortization for UAAL?
A. The period is significantly shorter in terms of the expense calculation, and I just don't know the numbers off the top of my head.
Q. Do you know if there are rules about how you should determine the appropriate amortization period for UAAL under the new GASB rules?
A. As I said, it's very constrained. There are rules for everything.
Q. I understand that. I'm asking you if you know what the rule is and what is -- what the rule specifies about how to determine amortization periods for UAAL under the new GASB rules.
A. Yeah, as I mentioned, I don't know the number off the top of my head.
Q. All right. And do you know what the methodology is for determining, as opposed to the number? Is it your understanding there's a specific number that's the cap, or is it that there's a methodology? Explain to me what your understanding of it is.
A. There are very low numbers, I mean, in five, seven, ten-year time frame, and amortization is a net present value, mortgage-style calculation.
Q. Do you know what the rules are for determining how the

GLENN BOWEN

amortization period is selected?
A. I don't think there's any flexibility in selecting the amortization period for financial reporting purposes.
Q. I understand that. I'm just asking you if you understand what the methodology is for determining what the rule is, what the amortization period is.
A. Other than it's mandated, and I don't recall off the top of my head what the number is.
Q. Is there anything more that you can recall, as you sit here, about how the new GASB rules work, in terms of determining amortization periods for UAAL?
A. No.
Q. Okay. You did not make particular recommendations in this letter about -- and I'm referring to the July 6th letter that is Exhibit 1 -- about the applicable amortization period or the appropriate amortization period, is that right?
A. I'd have to read to see, but I doubt that we did.
Q. You have made recommendations about amortization periods to other clients, haven't you?
A. To answer your first question, I do not see a recommendation in this letter. This is informational in nature.
Q. Yeah, I don't think there's controversy about that,

GLENN BOWEN

I'm just trying to get to where we are.
A. Sure.
Q. But you have made recommendations to other clients about amortization periods, is that right?
A. Recommendations I would say is a little strong. When we have worked with clients on this issue, there are different ways to prepare an amortization, and our job, in my mind, has been to illustrate the options and allow a plan sponsor to be cognizant of the impact of making a selection.
Q. Have you made recommendations about changes in amortization periods to clients?
A. Again, the word recommendations is strong. Take, for example, this letter. This was pointing out that the payments going towards the unfunded were less than the interest on the unfunded, and the unfunded liability could grow unbounded. It's an important piece of information. I don't know that -- that's not a recommendation for a change necessarily, but it's an important piece of information that I might expect a plan sponsor to ask further questions about.
Q. I understand that. I'm asking a more particular question. Have you made recommendations to any of your clients about amortization periods?

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A. I would characterize my work as I just did, in that when we're consulting on the issue of amortization periods, we'll prepare amortization schedules and explain the impact of the various types of amortizations. The plan sponsor can choose how they wish to fund the plan.
Q. What amortization period is used by the Puerto Rico Government Employees Pension Plan?
A. That is a closed 30-year level dollar amortization for accounting purposes.
Q. And for funding purposes, you're drawing that distinction?
A. They have a statutory contribution rate.
Q. What about the Puerto Rico teachers?
A. That is a shorter period, to my recollection, and is a level percent of payroll as opposed to level dollar.
Q. And by shorter period, what do you mean?
A. In the range of 20 years.
Q. And the Puerto Rico judiciary system?
A. I believe that is the same as the employees retirement system.
Q. So, closed 30-year?
MR. MUTH: You need to answer audibly.
A. Yes.

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Q. Sorry, I should have repeated that one.
A. Fair enough.
Q. And I saw you shaking your head and didn't say anything.
Thank you, Counsel.
And the Texas County District Retirement System?
A. That has a varied amortization period. When systems have losses, they're recognized over a faster pattern than when they have gains.
Q. And what are the alternatives in that varied system?
A. Again, going off the top of my head, I believe losses are recognized over a 15-year period and gains are recognized over a 20 or 30-year period.
Q. And for the New Jersey state teachers system that your office serves as the system actuary for, what's the amortization period for that?
A. I don't know the amortization period for accounting.
Q. If you look at Exhibit 13 that was marked yesterday, if you look at the third page of that document, which is POA -- I'm sorry, let me know when you have it and I'll tell you where to go.
A. I have the document.
Q. Okay. If you go to the third page of it, at the very

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bottom, so that's at POA6 -- 00600121, there's a reference there in an email from Ms. Warren to Mr. Porter about a 30-year amortization period for New Jersey. Do you see that?
A. Yes.
Q. Does that refresh your recollection as to whether the amortization period employed for the New Jersey plan is 30 years?
A. Well, I don't work on that client's valuation, so rather than refreshing my recollection, it provides me the piece of information that I assume the way the question is phrased, they're using a 30-year amortization period.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 25
9:36 a.m.

BY MR. BALL:
Q. Mr. Bowen, I'm showing you what has been marked as Exhibit 25, which is a letter dated July 18th, 2012, Bates number is POA00261017. And my first question is, do you recognize that letter?
A. I do.
Q. Okay. And that's a letter you signed?
A. It is.

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Q. And it makes a proposal under pension on page -- on the second page of the letter, that there be a DGRS five-year projection. Do you see that?
A. I do.
Q. Why are you proposing a five-year projection there?
A. Well, I would say this entire proposal was in response to questions that were asked of us by the city at the time.
Q. So the city requested a five-year projection?
A. Yes.
Q. Okay. And there is, on the third page of the letter, a discussion of a potential phase three, end of the first full paragraph. Do you see that?
A. I do.
Q. Can you -- and there's a reference there to phase three addressing changes in pension accounting will occur under the new GASB standards. Do you see that?
A. I do.
Q. Did you ever do that?
A. No.
Q. Why not?
A. We were never asked to.
Q. But that's something that Milliman could have done?
A. Had we been asked, we could have.

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Q. There's also a discussion in that paragraph about the kind of estimate you're going to be able to do in the phase two discussion -- in the phase two that you're discussing here. Do you see that?
A. I do.
Q. And that kind of discussion says, it says that you'll be based -- it will be based on the annual valuation reports, actuarial techniques and rules of thumb that won't involve full valuations using actual census data. Do you see that?
A. I do.
Q. Did you ultimately obtain -- did you ultimately perform a full valuation using actual census data?
A. We did.
Q. All right. And when did you do that?
A. That was this year, 2014.
Q. And is that in the April 2014 time frame?
A. I believe that was when the letters were issued. It was -- there was a runup to that, but, yes, in the 2014 time frame.
Q. So you'd gotten the census data at some point before that, but the actual letters issued containing the results of your analysis were issued in the April 2014 time frame, or the initial ones, is that right?

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A. Yes.
Q. And so all of the analyses that you did until that time all have -- are all based on the information available in the Gabriel Roeder reports and your application of actuarial techniques and rules of thumb?
A. Correct.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 26
9:40 a.m.

BY MR. BALL:
Q. Having marked Exhibit 26, which is a November 16th, 2012, letter with Bates number POA00260237, is this the -- first, Mr. Bowen, do you recognize this document?
A. I do.
Q. And it's a letter that you authored?
A. Yes.
Q. And you signed it?
A. Yes, I signed it.
Q. Okay. Is this the five-year projection that was the subject of the July proposal we just looked at?
A. It seems to follow that it is, yes.
Q. Okay. And can you explain the timing of it, why it

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took from July until November for you to perform this valuation? And maybe it didn't take you the entire time. I just want to understand the timing of the response.
A. Certainly. The project was not that time intensive, given the time period you mentioned. I don't recall when we were hired to perform phase two.
Q. Okay. And so as I understand that, you don't know when you actually got retained. You don't think the project took you that long. Is that -- am I understanding your answer correctly?
A. I know the project didn't take that long, yes.
Q. Okay. There is a reference in the first paragraph of the letter, first you say your modeling is based on valuation results, actuarial assumptions and methods as set forth in the preliminary June 30th, 2011 DGRS actuarial valuation prepared by Gabriel Roeder Smith & Company.
And so that's the latest version of the Gabriel Roeder report that you had available to you at that point, is that right?
A. We would have used the most recently available report to conduct the study.
Q. All right. And then the next sentence says:

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Recursive formulas in actuarial judgment and rules of thumb were applied to project current results to future years.
Can you explain what you mean by recursive formulas?
A. Sure. A recursive formula, for instance, is you have a liability at one date, recursive formula is used to project liability to future dates, and estimates are needed in terms of demographic movements, benefit payments, benefit accruals, in order to move the liability from one date to the next date.
Q. Okay. So, essentially, it's the methodology you use to project from one -- the status at one date to a future date?
A. Yes.
Q. Okay. And you still did not have the actual census data at this point?
A. We did not.
Q. Okay. There's a discussion, the last sentence of that paragraph says: Our projection is suitable for explaining emerging trends and cost in liabilities but is significantly less robust than a projection based on full valuation.
Do you see that?

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A. I do.
Q. And can you explain what that means?
A. What that means is that we were using recursive formulas where a significant amount of judgment was needed in each quantity, as opposed to a valuation where we would have collected census data and been able to do individual projections and capture the full demographic spectrum of the population.
Q. In the last sentence that begins at the end of the page, there's a reference to the market value of assets and the actuarial value of assets, under two, at the bottom of the first page. Do you see that?
A. I see it.
Q. How did you obtain information about the market value of assets that were, that were in the plan? And I'm focusing specifically on DGRS.
A. My supposition is that we would have taken the, both quantities from the 2011 preliminary valuation report.
Q. Okay. So you took the numbers that were reflected in the Gabriel Roeder report?
A. To the best of my recollection, that would have been what we did.
Q. And that's true for both the market value and the actuarial value?

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A. Yes.
Q. And later you did further analyses when you had later versions of the Gabriel Roeder report. My general question is, did you ever change how you derived the market value of assets or the actuarial value of assets? In other words, did you ever do anything other than taking them from the most current version of the Gabriel Roeder report?
A. I can't definitively say that we did or didn't. If we had been provided at some point in time with an asset statement from the city which was more recent than what the valuation reflected, we would have incorporated that information into our models and it would be noted in the letter that we provided the analysis for.
Q. Okay. So either you took the value from Gabriel Roeder reports, or in some circumstances a value may have been provided to you by the city directly, as opposed to you using the Gabriel Roeder reports. But you did one of those two things in every case?
A. Those are the, those are the two things I can think of that we would have done.
Q. Okay. Do you recall ever doing anything other than that?

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A. I do not.
Q. Okay. Do you know how Gabriel Roeder derived the information in its reports about the market value of the assets involved?
A. I cannot say this with one hundred percent certainty, but typically the system actuary is provided an asset statement by the plan sponsor and accepts the numbers as presented.
Q. And you don't recall one way or the other how it happened here?
A. I never had occasion to ask that question.
Q. Okay. At various points you did analyses that focused specifically on the DWSD, do you recall that?
A. Yes.
Q. And in those circumstances, your analysis looked at a market value and maybe an actuarial value, but at least a market value for assets for the DWSD, specifically. Do you recall that?
A. I do.
Q. And how did you derive those values, the ones that you used for the DWSD, specifically?
A. The inputs that we had were the overall actuarial value of assets for the entire system, the overall market value of assets for the entire system, and a

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ratioed actuarial value of assets for each component employer that had its own separate contribution calculation. And as set forth in our various letters, we ratioed the overall actuarial value -- we used the overall actuarial value and overall market value to ratio the reported component actuarial values to the component market values.
Q. Okay. Do you know how the reported actuarial values were derived? And by that -- let me back up. The reported actuarial values that you used, where did you get them?
A. The valuation report.
Q. From Gabriel Roeder?
A. Yes.
Q. Okay. And do you know how those values were derived?
A. I do not know exactly how the historical valuations have been done on the assets.
Q. And I just want to make sure I understand. In the -- there is in the Gabriel Roeder reports an actuarial valuation for each of the city divisions, or at least several city divisions, including DWSD, broken up -- the entire actuarial values broken into those components, correct?
A. The actuarial value of assets is split across the

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components, yes.
Q. Okay. And you used the actuarial value split to derive a market value split?
A. Yes.
Q. Okay. In the same ratios as the actuarial value split?
A. Yes.
Q. And then -- but you do not know how the actuarial value split that Gabriel Roeder provided was derived?
A. I do not.
Q. Okay. Did you ever discuss that issue with anyone from Gabriel Roeder or anyone from the city?
A. I don't recall a discussion with Gabriel Roeder. Discussions with the city were basically along the lines of what was presented in our letter.
Q. Meaning along the lines of deriving a market value split that was in the same ratios as the actuarial value split between the different city divisions?
A. Correct.
Q. Okay. Did the city ever provide you with -- you said in some circumstances that you were provided asset -- market value asset values from the city to perform your analysis. Do you recall that?
A. I said it's potential that that happened.

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Q. Okay. All right, fair enough, and we'll get into some individual letters.
A. Okay.
Q. But do you recall whether the city ever provided a market value split for DWSD? In other words, they may have provided an overall value, market value for the assets in the system. Did they ever provide you information that split the DWSD assets from the remaining assets of the system, other than giving you copies of the Gabriel Roeder report?
A. I don't recall ever receiving a market value split.
Q. Okay. There are in the November 16th letter that we were looking at several different scenarios that you examined. And the first one, I take it, the amortization period that you're employing is the same as the Gabriel Roeder amortization period. Would I be correct in assuming that?
A. I can review it to confirm --
Q. Sure.
A. -- but given that it's baseline, that's my supposition, so a moment, please.
Q. Take a minute, because I have a few questions about it.
A. Yes, that appears to be the case.

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Q. Okay. And then the second scenario applies an 18-year amortization period. Do you see that?
A. I do.
Q. And how did you come to apply an 18-year closed amortization period in scenario two?
A. A moment, please.
Okay. The request was to take the 30-year level percent of pay amortization which was used in determining the employer contributions, and develop a lower amortization period where the contribution toward the unfunded liability at least covered the interest on the unfunded liability in the initial year and grew from there.
The period that was necessary to do that in this case was 18 years.
Q. So Milliman calculated the 18 years on, on -- using those parameters to calculate an amortization period?
A. Yes.
Q. Okay. And in the third scenario -- well, first, let me ask, the parameters that were provided, did you discuss those with the city in advance of determining those would be the parameters used?
A. To my recollection, the discussion would have been: In your July letter you stated that the contribution

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doesn't cover the unfunded liability interest; please find us one that does.
Q. So they asked you to come up with a methodology to find one that met that requirement?
A. The same methodology as shorter amortization period with the same methodology.
Q. And so the particular parameters were ones that Milliman chose to reach that result, is that right?
A. I wouldn't say Milliman chose the parameters. Milliman used the parameters that were given and did a calculation.
Q. Well, the parameter that was actually given to you was give us an amortization that does cover the unfunded liability, right, the unfunded liability interest?
A. We were given that parameter, to the best of my recollection, to produce this result.
Q. Okay. So using that overarching parameter of giving them something that produced the result of an amortization period that covered the unfunded liability interest, you developed further parameters that resulted in the 18-year amortization period, correct?
A. I wouldn't say we developed further parameters. We used the parameters you mentioned --

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Q. Well, that's one --
A. -- and did a calculation. Well, the additional parameters were that it was a level percentage of payroll amortization method which was in existence. We were asked to tweak one parameter.
Q. In the third scenario, there's an adjustment to the expected investment return, do you see that?
A. Yes.
Q. And you -- this is where you tell them that your expected rate of return, or it's a discussion of your expected rate of return at that point being 6.3 percent. Do you see that?
A. I do.
Q. It's actually 6.8 percent, but 6.3 percent net of admin and interest expense, correct?
A. Correct.
Q. So the 6.3 percent rate that you use here is net of admin and interest, just to be clear?
A. Yes, it is.
Q. And you note at the end of the second paragraph under scenario three that a decrease in the investment return assumption causes an increase in the plan's liability and annual accruals.
Do you see that?

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A. Yes.
Q. And there was some discussion of that yesterday, but basically the relationship is that if you decrease the investment return rate, the unfunded liability goes up. Is that right?
A. True.
Q. All right. On page 4 of the letter, in the second paragraph under Basis For Analysis, your first sentence says: A projection model can be used to understand the pattern of emerging costs and liabilities of a retirement system -- I think it says systems but should be system -- but should not be relied upon as a guarantee of actual costs being incurred by the city.
And that's similar to the discussion we saw earlier about the kind of analysis that you were doing here and the limitations there are, correct?
A. I view this as actually different.
Q. Okay. In what way?
A. This sentence that you read to me recently is used in the context of regardless of the inputs and the robustness of the inputs to the projection model, this sentence still holds true. It's not a guarantee of actual costs, it's a projection into the future to

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show emerging trends.

Q. All right, fair enough. I understand your point. Future fund -- the second sentence says: Future funding and accounting obligations will be determined by an actuarial valuation of the systems as of each future valuation date, to be prepared by the systems actuary.

And can you explain to me what you mean by that?

A. In this situation, we are serving as a consultant to the city, providing them with responses to the questions that they've asked. Milliman will not be preparing the future valuation reports that determine the city's contributions. The system actuary will be doing that.

Q. And that's part of the difference between the role of a consultant to a sponsor as opposed to the system actuary for the system itself, correct?

A. Exactly.

Q. Okay. And so, ultimately, those judgments are left to the system's actuary, correct?

A. Yes.

Q. All right.

MARKED FOR IDENTIFICATION:

GLENN BOWEN

DEPOSITION EXHIBIT 27

9:59 a.m.

MR. BALL: This is 27.

BY MR. BALL:

Q. Mr. Bowen, for the record, I've asked you to look at a document that's been marked as Exhibit 27, which is a November 16th, 2012, letter, Bates-stamped POA00260318, and it's of the same date as the prior letter, but the prior letter we were looking at is a DGRS letter and this letter is about the PFRS. Do you see that?

A. I do.

Q. And this is another letter that you authored and signed?

A. Yes.

Q. And to the extent it's about pension matters, that's within your bailiwick, correct, between you and Ms. Taranto?

A. Correct.

Q. And in this letter, in scenario two -- so take a minute and look at it. I want to talk to you about scenario two.

A. Okay. I've read scenario two.

Q. And in scenario two, you propose a -- or you discuss a

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15-year closed amortization period and analyze a 15-year closed amortization period for the PFRS plan, correct?

A. We do discuss that.

Q. All right. And that proposal, or that amortization period has been proposed and has been recommended by the system actuary, because the PFRS plan is a closed plan, is that right?

A. That is what is stated in the paragraph here, yes.

Q. All right. And in the last -- in particular, that amortization period has been recommended because it is in line with the, quote, the expected future working lifetime of the remaining active members.

Do you see that?

A. I do.

Q. And can you explain what that means?

A. That recommendation by the system actuary means that the concept is to fund the liability over the lifetime of the remaining active working members to match the allocation of costs to the period where the service is being rendered by those members to the city.

Q. Okay. And is that a concept that is important in determining the period over which funding will take place for a closed plan?

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A. In my mind, yes, it is an important concept.

Q. Okay. And there's a reference here to promoting intergenerational equity. Can you explain what that means?

A. To repeat my last answer, that is the, the taxpayers who are funding the plan sponsor, who make contributions to the pension plan, are the ones who are receiving the services for the participants who are benefitting under the plan accruing benefits.

Q. So the concept is, in general, that you're matching the amortization period, and the funding in particular, to the people who have received the benefit of the services that are -- that the pension benefits relate to, is that right?

A. Yes.

Q. And why is that important, or is that -- strike that.

Is that an important concept in looking at funding periods in your work as an actuary?

A. It's an important concept.

Q. Is it one you agree with?

A. It is one that I agree with, yes.

Q. And the basic idea is that the burden associated with the pension benefits should be borne by those who have benefitted from the services provided by the employees

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who are receiving the pension benefit, is that right?
A. That is.
Q. And so does that same issue -- so we've been talking about the funding period. Does that same issue apply in consideration of whether you're choosing an appropriate investment return rate? And to be more particular, what I mean is if you choose a rate that is too high, then the period -- then the payment of the liabilities will be over one period of time. If you choose a rate that's too low, it will be over another period of time, the impact of the payments.
So does the investment return rate raise the same sort of intergenerational equity issue?
A. One could argue that it does, but mechanically I don't understand your question about the, how the investment rate of return stretches or shrinks the amortization period.
Q. Not the amortization period, but the timing at which the costs are borne or who bears the costs.
MR. MILLER: Object to form.
A. I will attempt to answer your question as follows: The higher the assumed rate of return, the less likely the rate of return is met, the more likely losses will emerge over time and have to be funded, as opposed to

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being recognized up front.
Q. All right. So people in later years wind up paying for it instead of people in early years, correct?
A. If experience does not bear out to the assumed rate of return.
Q. And if the rate is too low, what happens? If you set a rate that's too low, what happens?
A. If the rate is set lower than what experience turns out to be, the plan sponsor benefits from additional investment return beyond that expected, which would lower future cash and employer contributions into the plan.
Q. And result in greater contribution -- in early years, what happened to the people in early years?
A. They would have paid more than had they known that there would be returns in excess of what was anticipated.
Q. So it shifts the burden from people in later years to people in early years, if the rate is set too low?
A. Once you know what happens in the future, you can determine --
Q. Right.
A. -- who paid more or less than what was expected.
Q. Of course, all investment return projections are

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projections, and I understand that, but if you set a rate that is overly conservative, it could have that impact, correct?
A. If the rate that you set is less than what is achieved, it will have that impact.
Q. And if the rate you set is unduly conservative, it will have that impact. In other words, if you know, going in, that you've set a rate that by your prior description is less than the 50 percentile, for example, it will have that impact, right?
A. Not necessarily.
Q. It depends on what actually happens --
A. Correct.
Q. -- but your projection would be that it would have that impact, right?
A. If you set a rate below your expected 50th percentile return, you would expect that somewhat more than half the time it would be met.
Q. And by "be met," you mean have the impact that we talked about of shifting the burden to people in early years instead of in later years?
A. Yes.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 28

GLENN BOWEN

10:09 a.m.
BY MR. BALL:
Q. Mr. Bowen, for the record, I'm showing you what has been marked as Exhibit 28, which is a letter dated January 28th, 2013, Bates-stamped POA00258685, and this is again a letter about DGRS, or the GRS. First it is -- do you recognize this letter?
A. I do.
Q. And it's a letter that you authored and signed?
A. It is.
Q. And I have particular questions about a couple of the scenarios, particularly scenario two and scenario three.
So the first question is, does your reference in scenario two to the multiplier, can you explain what that means?
A. In a final average salary pension plan, the benefit will be determined by using the final average salary of the participant, the length of their service, and a multiplier, some percentage of that amount.
Q. And how does the multiplier work, can you explain to me how that works?
A. Sure. If you have -- if the plan were to be two percent times service times final average pay, and you

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had 25 years of service, your benefit would be two percent times 25 years times your final average salary.
Q. And so scenario two looks at an open 30-year amortization as a level percent of payroll, do you see that? It's in the next-to-the-last paragraph under two.
A. I do.
Q. Okay. Scenario three, if you look at it, changes to a closed 30-year amortization. Do you see that?
A. I do.
Q. All right. And it also goes from a level percent of payroll to a level dollar contribution funding plan, do you see that?
A. I do.
Q. And you say, in the second full paragraph on page 3, that the change from open to closed amortization and level percent of payroll to level dollar payroll for this scenario is based on our expectation of changes that the system actuary might make in response to the closing of the plan to new hires.
Do you see that?
A. I do.
Q. Can you explain what you meant by that?

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A. The level percent of payroll amortization develops a payment pattern in dollars, where the dollars are smaller today than they are in the future, and basically increase geometrically over time as payroll increases. So it's a significantly backloaded way to pay off a debt. In the existing case, the debt actually grows for a number of years before any principal is retired.
The level dollar payment is akin to your mortgage, if you will, if you have a traditional mortgage where you have a level dollar payment and you're writing down principal immediately.
Q. Okay. So you say going from open to closed -- you talked about level percent to level dollar, and you're also going from open to closed, correct?
A. Yes.
Q. Okay. So those are two changes that this scenario discusses?
A. Yes.
Q. Okay. And you say it's based on your expectation of changes that the system actuary might make in response to the closing of the plan to new hires. Can you explain what you meant by that?
A. Other than the words that were used there, that's --

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Q. Okay.
A. -- that's explanatory.
Q. What you were attempting to do is project what the system actuary might do, correct?
A. Yes.
Q. Okay. And why are you trying to project what the system actuary might do?
A. We were asked to value the particular scenario which was closing the plan to new hires. So with a finite future, given our expectation of what the system actuary would do, this represents the -- these results represent the information that we would expect that the system and the plan sponsor would see if the actuary took those steps.
Q. And it's also a reflection, isn't it, that ultimately the decision is going to be made by the system actuary about how to deal with these things?
A. Yes.
Q. And, in fact, you say in the next sentence, they might choose not to make any change or could make a different change.
Do you see that?
A. Yes, I do.
Q. And so ultimately how -- you're giving them your best

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estimate here, but how this will actually work out will depend on what the system actuary decides, correct? Or they decide in, the plan decides in consultation with the system actuary?
A. That is exactly what I was going to say.
Q. Okay. And then you go on and say: Milliman's recommendation in this instance would be to make both changes and also to decrease the term of the amortization period.
Do you see that?
A. I do.
Q. Okay. And so, first, you are recommending here that there be a less than 30-year amortization period in the event that the plan is closed, correct?
A. Yes, we are.
Q. Okay. But you're not saying particularly what it is, what amortization period you recommend?
A. We don't say in this letter.
Q. All right. But you do, then, it appears, sometimes make recommendations to your clients about the appropriate amortization period, don't you?
A. In the event of this discrete change, yes, we made a recommendation.
Q. Okay. Have you made other similar recommendations --

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I'll go back to my question from earlier.
A. Sure.
Q. Have you made other -- are there other scenarios where you have made recommendations to clients about amortization periods? Is this the only time you've ever done it?
A. I appear to be tripped up on the word recommendation here. Had I written this knowing we'd have this discussion, I might have written: Milliman recommends you consider.
We've been asked by clients when they do -- when they have a discrete event. That's where I would say this arises. As an example, a client puts in an early retirement incentive, and the impact of that early retirement incentive is a very short-term impact, we'll be asked by the client and/or their auditor, what should we use as an amortization period. And 30 may be inappropriate, five or ten may be more appropriate.
Q. Okay. So in those circumstances, where you're asked, and you have a view about whether an amortization period is appropriate or inappropriate, you make a recommendation, don't you?
A. Yes.

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Q. Now, I take it here, however, you were trying to project what you thought the system actuary would do, and so notwithstanding your recommendation that there might be a lower amortization period, your expectation would have been that the system actuary would maintain a 30-year amortization period, is that right?
A. That's what we've written here.
Q. Okay. And that's what you thought at the time?
A. We thought that at the time.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 29
10:20 a.m.
BY MR. BALL:
Q. Mr. Bowen, I don't think you'll wind up needing to spend a lot of time on this because I'm not going to ask a lot of detailed questions, but this Exhibit 29 is a letter dated April 18th, 2013, with Bates stamp POA00221957. Do you see that?
A. I do.
Q. And this is a letter, again, that you authored and signed?
A. Yes.
Q. And this is the first correspondence, at least that I was able to find, between you and Jones Day, as

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opposed to you and an employee or representative of the -- an employee of the city. And you spoke yesterday about at some point beginning work with the pension task force.
Can you tell me when you began work with the pension task force as opposed to directly with the city?
A. It was early in 2013.
Q. Okay. And so even -- do you recall how far before April of that year you began work with the pension task force?
A. I don't recall exactly how far before.
Q. All right. Can you explain how the change came about that you were working with the pension task force and not directly with the city? From your perspective, at least, how did that happen?
A. From my simplistic perspective, we were told to be on the pension task force.
Q. So you're actually on the pension task force?
A. Yes.
Q. And did Milliman -- so what role did Milliman play on the pension task force?
A. Milliman would join conference calls on a weekly basis and we would prepare measurements that were requested

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of us.
Q. Okay. In participating in the pension task force, did Milliman make recommendations to the pension task force about what tasks Milliman should undertake?
A. No, Milliman did not.
Q. Okay. Did Milliman make recommendations about investment rate as part of the pension task force?
A. We were asked to prepare an investment rate analysis, which is somewhere in this pile which we --
Q. Would be in the November 4th letter, but I'm not asking about the various analyses that wind up being embodied in the letter. Your general testimony is that you got instructions from the pension task force about scenarios to run or the ways to -- you know, what scenario to look at, what assumptions to make and what scenario to look at. Is that basically right, that that's the way it worked?
A. Yes.
Q. Okay. And what I'm trying to understand is whether, because of your role on the pension task force, you did more than simply receive instructions, but provide input to the pension task force about what your instructions should be, what scenario should be chosen, what parameters, what assumptions you made,

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any of those things?

A. I don't believe that we played that role. We received, as you mentioned, many different plan design scenarios to model. We received many different investment returns to run those scenarios at. And we performed the modeling as requested.

Q. Okay. So your participation on the task force was one of receiving assignments, not designing the assignments, but receiving assignments and then executing the assignments, and those were reflected in your letters to the -- to Jones Day in connection with your work on the project?

A. Yes.

Q. So there's no circumstance where you ever recommended an amortization period, for example, other than what we've just seen?

A. To the best of my recollection, no.

Q. Okay. And apart from the November 4th letter that we looked at yesterday that analyzed an appropriate rate of return, did you make any recommendations about the investment rate that should be used in your analyses?

A. Apart from that letter, no. And to put a fine point on it, we didn't recommend the rates that should be used in our analyses. We were provided with a range

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of rates. That letter was a different request.

Q. You analyzed an appropriate investment return assumption based on a set of asset mandates in the investment policy, is that fair?

A. For the purposes of that letter.

Q. And in the various analyses that you ran for the pension task force, did you have an understanding about how or for what purpose the numbers and the analyses Milliman was providing were going to be used?

A. My understanding is that we were asked for a vast array of scenarios to model over time, and that the analyses were reviewed by the city so they could understand the sensitivity of the results to the various inputs they provided and would further be used in their negotiation.

Q. All right. So I guess I'm asking -- you understood that the city would be using the analyses you provided for purposes of negotiation with various parties?

A. I understood that.

Q. All right. And did you understand which negotiations particular scenarios were going to be used for?

A. Not in any -- there wasn't a standard thing that I was informed of.

Q. All right. So I'm just trying to understand. When

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you got the instructions, say, to perform a valuation of the DWSD as a spinoff, for example, that happened several times, right?

A. We performed some analysis of DWSD, yes.

Q. And did you have an understanding, when you got those assignments, about what purposes those assignments were going to be used for, those analyses were going to be used for?

A. Other than the fact it seemed self-evident that it would be used in conjunction with negotiations regarding DWSD, I didn't ask for or receive any other information.

Q. And just to be clear, that was your assumption based on the nature of the project, or were you told that that's what it was going to be used for? I'm trying to understand generally how it works, and this is a particular example.

A. I'm not sure that once given an assignment regarding DWSD I would have asked the question, are you going to use this in negotiations regarding DWSD. I don't think any further conversation occurred after I was asked to perform a certain project.

Q. So when you got projects, you weren't told specifically what the purpose for the project was, you

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were just given the project and you might have been able to estimate or make an informed guess about what the purpose was, but you weren't specifically told what the purpose was?

A. That's a fair characterization.

Q. All right. Did it matter, for purposes of your analyses, to know what the purpose of the analysis was, to know what use it was going to be put to?

A. I can't recall any projects where I was confused as to what the project description was and asked questions, other than here is how we interpret your request, so that we could prepare the analysis, as opposed to what are you guys going to do with this once we give it to you, who are you going to talk to.

That would have been necessary to prepare the analysis.

Q. So it did not matter to you what the purpose was, all you needed to know was what the parameters were that were being assigned?

A. Well, I mean, I'll just take objection to the first part when you say it did not matter, it makes it sound as if we were blast and didn't think about what we were doing, and I don't think that's a fair characterization.

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Q. And that's not what I'm trying to suggest. What I am trying to ask about is not whether you cared about your work, and I do not mean that at all. I'm sure you care very deeply about it. I'm trying more to understand whether it was important for purposes of your analysis to know with any particularity what use was actually going to be made of the analysis?

A. To the extent that we had questions or were unclear on developing the assignment, we asked the city questions and may have given examples and said, do you mean A, B, or C by this.

We asked questions necessary to complete our work and respond to the city's questions, and that's how we conducted our projects.

Q. Okay. But my question is not what did you ask questions, my question is, was it significant or important, for purposes of your analysis, to understand what the purpose was that the analysis was being undertaken for? Not do we need to know, do we have questions about what amortization period you use or anything like that, I'm not asking about the assumptions you're being assigned or the parameters you're being assigned.

I'm asking, is it significant, or was it

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significant to you, to understand the use that was going to be made, the specific use that was going to be made of a particular analysis that you were being assigned?

A. I'm having trouble with the question, just because there's not a clear-cut yes or no. When it was important for us to have more understanding in terms of doing our project, that was conveyed to the city with the questions that we asked them.

Q. Okay. Did you ever go back to the city and say, what are you going to do with this analysis, what is the purpose for which you're having us prepare it?

A. I never asked that particular question.

Q. Okay. Was it significant to you to know what the purpose was or what the use was that the city was planning to make of any of the particular assignments that you were given?

A. Yes, it's significant in the fact that we had to make sure we understood the request and respond to the city, and perhaps I can give you one example.

We discussed yesterday various cash inputs from foundations from the state, et cetera. It was self-evident to me that those matters were being discussed via pension task force, city, all the

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parties. When we were provided the number as an input, to put into our model, the financial situation of the system does not change whether the dollar came from the institute or whether it came from the state.

So while we would have looked at that and been aware that this was what was being discussed, we did not feel the need to say, are you sure these dollars are from the state or are you sure these dollars are from some other funding source.

To our work, it was important to know that the dollars were coming in.

Q. Okay. Again, that's, I think, not responsive to the question.

A. Okay.

Q. And the question is just was it significant or important to you to know the use that was going to be made of the analysis that you were undertaking, on any of the analyses that you were undertaking?

A. To reduce it to its simplest form and combine all of those answers, yes.

Q. Okay. And did you ever ask the city specifically what use it was going to make of any of the analyses that you were undertaking?

A. We never felt the need to ask the specific question

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that you used a few moments ago, as to what are you going to do with this.

Q. Why not?

A. Because it was either rather self-evident, or the particulars, as in the example I gave you, were sufficient for us to prepare our analysis, and the city could use that to further their negotiations without us asking which day are you going to talk to the institute, which day are you going to talk to the foundations, which day are you going to talk to the state. We knew -- we assumed they would have taken that information and gone forth with it.

Q. So you assumed you understood the purposes for which your analyses were going to be used, without being told and without asking?

A. To go back to my earlier point, I think you're asking me if we had some very explicit conversations, which I think would have been gratuitous. We did not receive an assignment regarding DWSD and receive an extra statement from the city: This regards DWSD, we're going to use it to discuss with DWSD.

So there is some difficulty I have with answering your question the way it's posed, because, as I said, we didn't feel the need to ask if a DWSD

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assignment was regarding DWSD.

MR. MUTH: We've been going an hour-and-a-half, so ...

MR. BALL: Sure. We can take a break.

MR. MUTH: Okay, great.

VIDEO TECHNICIAN: The time is 10:34 a.m. We are off the record.

(Off the record at 10:34 a.m.)

(Back on the record at 10:53 a.m.)

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 30
10:53 a.m.

VIDEO TECHNICIAN: We're back on the record. The time is 10:53 a.m.

BY MR. BALL:

Q. Okay. Welcome back, Mr. Bowen.

A. Thank you.

Q. And you should have in front of you what has been marked as Exhibit 30, which is a letter dated May 20th, 2013, Bates-numbered POA0022046. Do you see that?

A. I do.

Q. And that, again, is a letter that you authored and signed?

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A. Correct.

Q. And it's a -- in it you are analyzing a scenario involving you're providing a DGRS simple ten-year projection of plan freeze and a future COLA, is that right?

A. Correct.

Q. And the ten-year projection, why are you performing a ten-year projection here?

A. We were requested to perform a ten-year projection.

Q. Did you have any understanding of why ten years, as opposed to five years, which we saw previously, or 20 years or 30 years, why you were requested in particular to provide a ten-year projection?

A. I don't remember the specific reason why ten.

Q. Okay. And it's not the amortization period that's used here, right?

A. This is a ten-year projection.

Q. Right. But you're looking at -- but the amortization period that you're looking at, in looking at a ten-year projection, is not a ten-year amortization period, correct?

It's, for example, the first scenario is an 18-year amortization. I'm just trying to draw a distinction between the projection and the

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amortization period.

A. Absolutely, yes, the projection period is the amount of time that results were calculated for, given all of the underlying parameters.

Q. So you looked at what was going to happen over ten years, but you used different scenarios involving amortization periods that were longer than ten years?

A. Correct.

Q. Okay. And there are -- in the first scenario, you apply an 18-year amortization period. Was that based on a recommendation by Milliman?

A. This would seem to follow from a letter we looked at recently where we were asked to determine what amortization period would be needed, such that the amortization payments would cover interest on the unfunded liability in the very first year.

Q. Okay. And so over the life of the project, you perform a number of analyses that use an 18-year amortization period, which we saw calculated in the letter that we looked at earlier. Was that always based, to your understanding, on your initial calculation of that 18-year amortization period?

Did the reasons for the use of an 18-year amortization period change? I'm just trying to

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understand, because it reappears numerous times, I'm trying to understand if anything changed to prompt it.

A. Understood. I would say that in the particular letter you're asking me about right now, it seems logical that the 18 would have been reused for the exact purpose that we just described it, and I have done enough scenarios that I can't recall. We may have been asked at some point in time to do a scenario where the result was also 18 given a different set of parameters. I can't rule that out, but this particular analysis appears to be following directly from the previous one we reviewed.

Q. Okay. So your best recollection -- do you recall specifically, or you're just assuming, based on what you're seeing and the timing in this letter, that it's based on the prior analysis?

A. Yes, based on the prior, based on the prior analysis, yes.

Q. Okay. And so you're assuming, you're assuming that that's the reason for it?

A. Without reading the entire letter, yes.

Q. Okay. Well, you're welcome to read it. I just want to understand what's going -- I'm trying to understand what's going on and what the history of the use of the

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18-year amortization period is and why it gets used.
A. Yeah, for the purpose of this letter, that appears to be the case. It's based on the prior letter.
Q. And is there something in particular you're seeing here that makes you think that, or is it just the context in which this is -- the circumstances?
A. It's the context.
Q. Okay. And you don't have a specific recollection about it, but it's from the context you're concluding that must be the case?
A. Yes.
Q. In the second scenario, you change from an 18-year level percent of payroll to a 15-year level dollar payment beginning with the June 30th, 2013, valuation. Do you see that?
A. I do.
Q. It's in the second paragraph.
A. I do.
Q. Okay. And so the 18-year amortization period you believe was wrong from your prior letter?
A. Yes.
Q. Why are you looking at a 15-year amortization period in this scenario?
A. I don't specifically state why in this letter, other

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than the difference between scenario one and scenario two is the plan being frozen.
Q. Okay. And we looked earlier at the analysis for a PFRS amortization, where the PFRS had been closed and a 15-year amortization period was closed -- was chosen for the closed PFRS plan. Is a similar thought process producing the 15-year proposal here, where the assumption is the plan's closed for DGRS?
A. It's logical to assume that's where this 15-year level dollar arose from.
Q. Okay. And in the PFRS circumstance, that was based on consideration of the average working lifetime of the workforce, and the concerns about intergenerational equity that we talked about, is that right?
A. The average working lifetime, I believe, was stated as the reason by the system actuary in their valuation report, and then we would have added the comment, I believe, about the intergenerational equity to further explain that to our client.
Q. Okay. So just to make sure I understand that, there was -- the comment about intergenerational equity is not something you took from the Gabriel Roeder report, but something that you added by way of explanation to your client about why that made sense?

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A. That is my recollection.
Q. And so here, the choice to use a 15-year level dollar amortization for a closed plan would have been prompted by the same sort of considerations, is that fair?
A. The same sort of considerations, yes.
Q. Okay. And had you actually undertaken an analysis of the average working lifetime of the DGRS employees at this point?
A. At this point, we would not have done that.
Q. Did you do it eventually?
A. I don't recall if we did or not.
Q. So, sitting here today, you don't recall whether you ever analyzed the average working lifetime of the beneficiaries under the DGRS plan. Eventually, it's proposed to be a closed plan, you didn't, you didn't analyze what the average working lifetime of the remaining beneficiaries in the plan was, the actives?
A. I'll state it this way. When we did our replication valuation, that would have been an output. I don't recall that we were ever asked to do any analysis where we had to use that output to prepare any further results.
Q. Okay. So it may be in your work papers, and it may

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even be in one of your letters, but it's not something you ever did anything with?
A. That's, that's my recollection.
Q. In both of these scenarios that you're running here, you look at alternate investment return rates, a 6.3 rate and a seven percent rate, do you see that?
A. I do.
Q. And those are both net investment and admin expense, correct?
A. The 6.3 was developed as net of admin and investment. The seven was requested by the city. I believe we would have treated it the same way.
Q. Okay. So both, in both cases, your analysis treated it as net of investment and admin expense?
A. That's what I believe from reading this letter, yes.
Q. You can put that one aside.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 31
11:04 a.m.
BY MR. BALL:
Q. Okay, Mr. Bowen -- and I actually only have a couple of questions about this, but this is a letter that is dated June 3rd, 2013. So a few weeks after the letter we just looked at. And it's Bates-stamped

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POA00260055. So my first question about this is if it is a letter that you authored and signed?
A. Yes.
Q. Okay. And I was trying to figure out, and I'm not sure I ever did figure out, what the difference is between the analysis that you're doing here and the one that you did in the letter we just looked at, both DGRS simple ten-year projections of plan freeze and no future COLA.
Do you have an understanding about what the difference was between these two analyses, why you're doing them separate?
A. I do.
Q. Okay. Can you tell me what that is?
A. In the prior letter, Exhibit 30, the benefit payment projection which we used in the course of our recursive formulas was based upon Milliman judgment and noted under the rule of thumb adjustments.
In the interim, we received a valuation report, whether preliminary or final, that Gabriel Roeder had prepared for the system as of 2012. In that valuation report, they had several projections based upon 2011 valuation results, and based upon the quantities they showed in those projections, we were

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able to impute the benefit payments that they were projecting.
Q. Okay. So you had more up-to-date Gabriel Roeder information that allowed you to look again at the benefit analysis?
A. Correct.
Q. And if you look on page, pages 4 to 5, there's a discussion there about expected benefit payments. Do you see that?
A. Yes.
Q. Okay. And in the first full paragraph on page 5, there's a discussion there about the anticipated benefit payments developed by Gabriel Roeder Smith & Company in projections for the 2011-2012 fiscal year, or 225.5 million; however, the actual benefit payments for the 2011-2012 fiscal year 394.2 million, a difference of 168.7 million.
Did you ever learn what the reason for that disparity was?
A. We never learned specifically the reason.
Q. Okay. And in undertaking your analysis, did -- at least at this point, how did you deal with that disparity, what did you do?
A. We did not specifically deal with the disparity beyond

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reporting it here.
Q. Okay. And so did you assume that the higher Gabriel Roeder -- I mean, the Gabriel Roeder number was correct, as opposed to the higher number -- I mean, how did you, what did you use, what numbers did you use to determine your analysis of the benefits or projections?
A. Our projections would have started at 2012's. We wouldn't have used the trailing number.
Q. Can you explain what you mean by that? When you say they would not have used the trailing number, what do you mean?
A. We started -- we seeded our model with 2012 liabilities and projected forward from there, to the best of my recollection. Just give me a moment to confirm that, make sure we're looking at that letter.
So when we started, as noted in the first paragraph, with June 30, 2012, liabilities, we moved forward from June 30, 2012, based upon the assets and liabilities as reported for that date, and the note here was our -- basically, the purpose of the table was to show that we looked at the 2011 projections that were included in the 2012 valuation report and prepared these benefit payments.

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And the reason why we put this table in is because while several quantities were shown in the projection in the valuation report, the benefit payments were not. However, they were a solve-for item. The projections started at 2011 forward. We had to solve each year to be able to impute the benefit payments.
However, in our projection, we started at June 30, 2012, and moved forward. So trailing numbers from 2011-12 did not directly make it into our model.
Q. I'm trying to figure out why, then, you have the numbers listed for 2011-12 in your table and why you have the discussion about the disparity here. Can you explain that? If we're doing this starting with the next and using that as the jumping-off point for your analysis, why do you have listed the 2011-2012 number?
A. We're starting with 2011-12 in this table because that's what we had to do to impute the numbers to draw out the benefit payments from the projections in the Gabriel Roeder valuation report which started with 2011. So this was informational.
Q. So did you use the 225.5 million in your analysis in any way?
A. We would have started with the assets as of 2012 that

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were reported in the valuation report.
Q. Okay. So I think you just said assets, and I'm not sure that's what you meant. Did you mean to say assets there?
A. Yeah.
Q. As opposed to the payments?
A. We would have seeded our projection system with the assets and liabilities that were stated as of June 30, 2012, in the valuation report.
Q. So in projecting the benefit, how does that -- I'm trying to understand how that connects to the benefit payments piece.
A. In our earlier letter, we would have estimated benefits prospectively based upon Milliman's rule of thumb adjustment that was stated in the letter. In this letter, prospective to 2012, we used the benefit payments that were imputed and are listed in this table prospective to 2012.
Q. One last question about this. Did you ever discuss with Gabriel Roeder what the reason was for the disparity?
A. Did not discuss that with Gabriel Roeder.
Q. Is there a reason why you didn't?
A. Did not feel it was necessary to discuss it with them

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to complete the assignment that we were given.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 32
11:12 a.m.

BY MR. BALL:
Q. This is 32. Mr. Bowen, I'm showing you what's been marked as Exhibit 32, which is a letter dated June 14th, 2013, Bates number is POA00221998. And my first question -- and it's got an attachment, which is another letter dated June 4th, so those are both included in the package.
First, is the June 14th letter a letter you authored and signed?
A. Yes, it is.
Q. All right. And is the June 4th letter a letter you authored and signed? It starts at POA00222002.
A. Yes, it is.
Q. Okay. And this -- the June 14th letter uses a seven percent investment return assumption and a closed 30-year level dollar amortization period. Do you see that?
A. I do.
Q. And the decision to use those parameters for the analysis, whose decision was that?

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A. In a letter that we reviewed recently, seven percent was noted as the city's request. So I will assume that, in addition to the rest of the parameters, were all provided to us as inputs for our modeling in the June 14th and June 4th letter.
Q. Okay. So are you assuming it, or do you know that that was what happened here?
A. I know that that's what happened here.
Q. Okay. And how do you know it?
A. Because I remember running multiple scenarios, as is evidenced in the July, or June 4th letter, and I didn't go asking the city, let me run 20 scenarios for you. But it was defined for me and we prepared those results.
Q. Okay. And if you look -- is this a plan-freeze scenario? It's a follow onto the June 4th letter, which appears to be a plan-freeze scenario. I'm just trying to understand if this is a plan-freeze scenario, as well.
A. Sure. And I haven't reviewed every scenario here yet. If you are referring to Exhibit 2D on Bates 222001, that is not a plan-freeze scenario.
Q. Okay. So is that the analysis that you're performing in the June 14th letter, is for an open plan, I mean,

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a -- without a plan freeze?
A. Correct.
Q. In the June 4th letter, the analysis is of a plan freeze, correct?
A. There are ten or 12 scenarios in that letter and there are some of each. There are 14 scenarios in the letter, there are some of each.
Q. Okay. Fair enough. There are -- in scenario two, does scenario two assume a plan freeze, in the June 4th letter?
A. There are seven scenario ones and seven scenario twos. Each scenario two is labeled as plan freeze.
Q. Okay. And the -- in scenario two, you looked at multiple amortization periods, correct?
A. In the various scenario twos, there appear to be different amortization periods.
Q. Okay. And that includes a 15-year scenario, a 20-year scenario, and a 30-year scenario, correct?
A. I didn't actually see the 20, but that does sound familiar. I'm going to check.
Q. I'm looking at 222005.
A. Okay. The table. I'm with you, yes, 15, 20 and 30, and 18.
Q. And so we've talked about a 15-year amortization

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scenario previously for a frozen plan?
A. Mmm-hmm.
Q. Here you are advising -- I mean, analyzing not only that, but a 20 and 30-year amortization period. Do you see that?
A. Yes.
Q. And did you advise the city that the use of a 20 or 30-year plan -- amortization period in connection with a frozen plan would be inappropriate or advisable in any way?
A. In the context of this letter, I don't recall we made those -- that type of analysis, other than doing the mechanical analysis.
Q. Is there -- you said in the context of this letter, so I'd like to understand whether you told the city that a 30-year amortization period for a closed plan, with a closed, 30-year closed amortization period, would be inappropriate?
A. I never recall using the word inappropriate, but you did point out a letter earlier where we said we would recommend some changes in the event of a freeze or close.
Q. Okay.
A. That's what I was referring to.

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Q. And I think that's a fair point. I'm just -- you recommended a lesser period than 30 years. My question is, did you tell them that it was inappropriate or improper in any way?
A. I don't recall using those words.
Q. All right. Other than what we saw in the earlier letter where you recommended a shorter period, did you tell them, did you ever tell the city that a 30-year period for amortization for a closed plan would be contrary to good practice or contrary to actuarial standards?
A. Well, there are two separate questions there.
Q. Okay. Let's start with good practice and then we'll do actuarial.
A. Okay. Good practice is a significantly broad topic, funding a pension plan. It can be done in many, many different ways. As an actuary, my -- I'm generally happy when plan sponsor say, we'd like to contribute to the pension plan. I also realize there are other uses for plan sponsors' money.
So if a plan sponsor were to conclude that we are closing our plan but we're going to fund over 30 years because that's what our budget permits, I can't tell them not to do it. I would wish they would

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do something shorter, but that's not my decision to make.
In terms of actuarial standards of practice, I know of nothing that says 30 years is an unreasonable amortization period.
Q. So I assume that what you just said about 30 years, and having not told the city that it was contrary to good practice or contrary to actuarial standards would apply equally to the use of a 20-year amortization period?
A. I'm not -- sorry, I'm missing --
Q. It's a complicated way to ask the question. I apologize. Did you tell the city at any point that use of a 20-year amortization period would be contrary to best practices?
A. I don't recall using those words, no.
Q. In sum or substance?
A. I'm not sure exactly what that means, but in general, the reason why I say I don't recall doing that is because I'm more inclined to make statements that a shorter amortization period will cost more but will secure pension benefits sooner and will set the plan in a better position. If you choose to use a longer period, you'll have more, more risk of downside

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experience, to the extent you don't have the money in the plan to support the benefits. That's the way that I would typically address that type of situation.
I would find it odd if I had typed a letter that said this is inappropriate.
Q. Okay. And the point of my question was just to see, even though you hadn't used those words, whether you were going to say that you had said something to similar effect, right, as opposed to inconsistent with best practices. That means the same thing even if not phrased the same way.
MR. MONTGOMERY: Objection to form.
BY MR. BALL:
Q. So, with that understanding, do you have any different answer?
A. No, I do not.
Q. In the summer of 2013, did you have meetings with Gabriel Roeder?
A. In the summer of 2013, I attended a meeting in the city of Detroit, Gabriel Roeder attended, Jones Day, Conway MacKenzie, various other parties. I don't recall the date of the meeting.
Q. Okay. Sometime in the summer of 2013?
A. Sometime in the summer.

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Q. Okay. And apart from that meeting, have you attended other meetings with Gabriel Roeder?
A. There was a subsequent meeting, and let me characterize that first meeting. That was not a meeting between Milliman and Gabriel Roeder. It was a large, large meeting. There was a meeting of the actuaries that was mandated by the Court, and I cannot recall whether that was summer or fall of 2013.
Q. So that was in connection with the mediation, correct?
A. Correct.
Q. Okay. So leaving aside the meeting in connection with the mediation, you have attended a single meeting with Gabriel Roeder that was not -- at which other people were present, is that right?
A. In the summer of 2013, I attended a meeting as described. Do you have further questions?
Q. Yeah. I think I asked, but maybe I didn't.
A. Okay.
Q. Other than that meeting and the mediation --
A. Mmm-hmm.
Q. -- and a related meeting, have you attended other meetings with Gabriel Roeder?
A. I've not attended meetings with Gabriel Roeder that were not connected to mediation, other than the

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meeting in the summer of 2013.
Q. Okay. Have you had calls with Gabriel Roeder, conference calls or telephone calls with Gabriel Roeder or representatives of Gabriel Roeder, other than the meeting from the summer of 2013 or calls in the context of the mediation?
A. The calls we had were in the context of mediation.
Q. Okay. So are the only direct communications you've had with -- first of all, did you have any communications at that first meeting with Gabriel Roeder?
A. I don't believe we had -- hello, how are you, nice to meet you. Beyond that, I don't -- it was not a meeting where the actuaries were presenting.
Q. Okay. Other than in the mediation, then, and the introductions at that first meeting, have you had any direct communications with Gabriel Roeder?
A. Not that I recall, no.
Q. All right. Have you, with the exception of those introductions at the first meeting and the mediation, have you had any direct communications with representatives of Gabriel Roeder, including counsel?
A. I don't recall that I have, other than the gentleman is here today and I spoke to him in the hallway.

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Q. And so attendance at your deposition I would exclude.
A. Okay.
Q. The others -- have you ever had -- so you said you. Are you aware of whether other Milliman personnel have had communications with Gabriel Roeder, excluding the introductions at the first meeting, mediation, and the, you know, saying hello or shaking hands at your deposition? Excluding those things, any communications by any Milliman personnel with Gabriel Roeder that you're aware of?
A. Not that I'm aware of.
Q. So far as you're aware, Ms. Warren had no communications with Gabriel Roeder, excluding the ones we've --
A. The ones that we have discussed?
Q. Excluding the ones we've discussed.
A. Excluding the ones we've discussed, I don't believe she has.
Q. Okay. And at the meeting that you attended with Gabriel Roeder in the summer of 2013, what was discussed?
A. To the best of my recollection, there was no presentation by Gabriel Roeder and no presentation by Milliman, and I don't recall the rest, other than the

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other pension task force experts and other attorneys speaking about whatever they spoke about.
Q. So what was discussed at the meeting by the people who did speak?
A. I don't recall.
Q. Do you recall anything anybody said at that meeting?
A. My recollection is I walked out and said there was no need for me to be there. And so I did not -- I did not recollect, I did not put into my long-term memory anything that was discussed at the meeting.
Q. Okay. And do you recall who spoke at all or what the topics were that you were not really on point for?
A. It would have been non-actuarial issues that did not concern any projects that we were working on.
Q. So when you have obtained materials from Gabriel Roeder -- well, first of all, have you at various points obtained materials that came from Gabriel Roeder, and if so, how did you get them?
A. The valuation reports are -- one's complete publicly available on the websites of the retirement systems. We have been provided with draft valuation reports at points in time that are mentioned in our letters, and they, I believe, would have come to us via Jones Day.
I'm not sure that Gabriel Roeder -- when we

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received our census data, it was directly from the system. I'm not sure Gabriel Roeder provided us directly any materials.
Q. Okay. My next set of questions is about the system. What meetings -- how many meetings, if any, have you attended with representatives of the retirement system?
MR. MILLER: Outside of mediation?
MR. BALL: Outside of mediation.
A. Outside of mediation, no meetings.
BY MR. BALL:
Q. Okay. What communications have you had with representatives of the systems, the retirement systems, other than any communications in mediation?
A. Well, the retirement systems provided us census data, so I'm not sure if that's considered inside or outside of mediation.
Q. Did you use it for non-mediation purposes? You used it in some of the analyses here which have been provided to us, so I assume you used it.
A. We used it to prepare replication valuations that were discussed yesterday in this, in this room. So I don't know if that's inside or outside of mediation, but we certainly had conversations with the retirement system

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during the process of collecting the census data and understanding it.
Q. Okay. And apart from collecting the communications in the context of collecting the census data and mediation, have you had any other communications with, directly with the retirement system or its representatives?
A. Not that I can recall.
Q. Okay. And did you have discussions with representatives -- or communications with representatives of the retirement system about issues related to the census data?
MR. MILLER: Outside of mediation?
MR. BALL: Outside of mediation.
THE WITNESS: So I'll ask, is our collection of census data considered to be outside of mediation?
MR. MILLER: The position of the city is, no, it is not outside of mediation.
MR. MONTGOMERY: The position of the Retiree Committee is also, at least as far as we are concerned, the only information came via mediation directions of Eugene --
MR. BALL: Right, and so are you taking the

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position, then, that his use of the census data and the things that are said about the census data in all his various letters to you in which he performs analyses are covered by the mediation? Because you've produced a ton of documents that have discussion about the census data, communications with Clark Hill, and other communications related to issues with the census data that are in the analyses, including the April 10th analysis and the April 25th analysis, and I believe the April 17th analysis he's done.
Are you taking the position that all of those things are covered by the mediation privilege?
MR. MILLER: No, we are not.
MR. BALL: Okay. So can you explain to me how he can disclose those communications, or you can disclose to them -- them in the context of producing those documents and using those documents, but still claim that any communications he had about -- with Clark Hill about them are subject to the mediation?
MR. MILLER: If he had communications with Clark Hill, and those communications were in the presence of a mediator or ordered by a mediator, those are protected.
MR. BALL: But you've waived it by

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producing -- at a minimum, you've waived it by producing them and using them in the analyses that are a part of -- significant part of the -- what you rely on in the report and you've produced in this case.
MR. MILLER: And I believe the Court made quite clear just last week that the confidentiality that attaches to mediation is not waivable.
MR. BALL: So you're using it -- just to be clear, you want to use it for some purposes and disclose it there, but if I have further questions about anything concerning those communications beyond what is actually in the documents, you will object based on mediation --
MR. MILLER: I think we've made our position quite clear. We're trying to be very forthcoming, and we are not drawing an unnecessarily broad cloak for this confidentiality.
What we have said is that in connection with communications that were made in the course of mediation or ordered by a mediator, those communications are confidential and will not be disclosed.
To the extent that there were communications between Milliman and the city, that

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were outside of mediation, those we have, we have disclosed.

MR. BALL: All right. There are -- but you're taking the same position -- you're saying the position that communications with Clark Hill about the census data are subject to the mediation privilege?

MR. MILLER: If those communications occurred either in the presence of a mediator or directly pursuant to an order of a mediator that said communications take place.

MR. BALL: There are -- well, it will be simpler when I get to the documents, so I'll wait and get to that. But I think the -- I'll just do it then.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 33
11:37 a.m.

BY MR. BALL:

Q. I'm back, Mr. Bowen. I'm asking you to look at what has been marked as Exhibit 33, which is a letter dated October 3rd, 2013, Bates-stamped POA260193.

And first, is this a letter that you authored and signed?

A. Yes.

Q. And if you look at the discussion on page 2 --

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actually, page 3, about the requested baseline, there's a discussion toward the end of the page about the amortization period being reduced to 18 years. And then in the last bullet on the page, there's a discussion about the UAAL being -- amortizations being layered. Do you see that?

A. I do.

Q. Can you explain to me what that means?

A. Sure. The word amortization, just in general, has the overall connotation of paying down debt and the myriad ways to accomplish that. The existing method that was being used was an open amortization period, which meant that every year, the debt was effectively refinanced, not exactly at all, but akin to refinancing a mortgage every year. That's one way to perform an amortization.

Earlier we discussed closed amortization, where the unfunded liability was written down over a schedule that was not re-amortized every year. Layers is each year you write down the unfunded liability on schedule, but any new, newly emerging gains or losses from experience which deviates from assumptions are set up in their own layer as opposed to being rolled into the existing amortization.

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So you'll have a whole series of amortizations, as opposed to one overall amortization of the existing unfunded.

Q. And why would you approach it that way? Why would you use layering as opposed to not using layering? What's the rationale for doing it one way or the other?

A. Well, the rationale for a plan sponsor using it would be to say that we are going to, over a finite period, pay down the debt of each -- and we're dealing with that so much, there are surpluses, so you can take credits if you have better experience. But over a finite period of time, the experience that emerges each year, which is different from what is expected, is set on its own schedule and recognized, and the process is repeated and you're not at the risk of, under a closed scenario, say, moving from 30, and by the time you're down to five you have a huge gain or loss which you're amortizing over five.

So it's a way of developing an amortization schedule which in the aggregate can be smoother and easier to budget than using a closed amortization schedule, where you're at risk of having a significant deviation when you have a short term left in your amortization schedule.

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Q. And did you use layered amortization in your analysis, all of your analyses after this, or some or none? How did, how did things develop after this?

A. Well, in this particular letter, as I was reviewing it, there's over 20 scenarios. I stopped counting. So each scenario, we should be able to find the description in the letter as to what methods and parameters were based on that scenario.

I don't believe that level amortization was used in every single case in this letter, but I'd have to read the letter to confirm.

Q. There are three different investment return rates referenced on page 4. 6.3, 7, and 7.5, do you see that?

A. I do.

Q. And those, I take it, again, are all net of admin and investment expense?

A. I assumed that to be the case here, yes.

Q. And back on page 2, there was a discussion yesterday about the caveats in your reports about the use that could be made of them and who could rely on them. Do you recall that?

A. I do.

Q. Okay. And the general intent is that the city be able

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to rely on them, but that third parties not be able to rely on them. Is that fair?
A. That's a fair characterization.
Q. And just to be clear, do you have an intent or an understanding about whether that means that the Court should be able to rely on them, as opposed to the city and various objecters and other parties?
A. I don't know the law around the Court relying on product we prepared for our client.
Q. Okay. But the directive here is that -- not to be relied upon by any third parties other than the city, is that fair?
A. That is what is written here.
Q. And that was Milliman's intent, as you understand it?
A. Yes.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 34
11:45 a.m.

BY MR. BALL:
Q. Mr. Bowen, I'm asking you to look at what has been marked as Exhibit 34, and my first question to you about this again is whether it is a letter that you authored and signed?
A. Yes, it is.

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Q. And for the record, it's a letter dated November 19th, 2013, and Bates page is POA00260270. And the "re" line on this says that it is a DGRS rough plan termination estimate. Can you explain to me what that is?
A. Well, it's a rough estimate of the cost of plan termination, and I'd have to read further to see exactly the parameters of the termination.
I mean, as stated, it's a rough estimate of the cost of plan termination.
Q. And can you tell me what that means, what you mean by the cost of plan termination?
A. Sure. Plan termination is, in concept here, the city, or the system's, or whoever, purchasing annuities from a private carrier paying a market based annuity rate.
Q. Okay. And in the project description, there's a reference to being directed to use a 3.5 and five percent interest rate scenario. Do you understand what the basis for those directions were?
A. I understand the 3.5. I don't necessarily recall the reason for the five.
Q. Okay. What do you recall about the 3.5?
A. It's in the, it's in the area of an interest rate that we would expect an insurance carrier to use in valuing

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a liability for such a termination.
Q. And how's that determined?
A. General knowledge of what insurance carriers are using to cost out group annuities.
Q. So other, other companies in the industry, what insurance carriers would use in the industry?
A. Yeah, not actuarial companies.
Q. And is there an amortization period imbedded in this analysis in any way?
A. There is not.
Q. Okay. And did you have an understanding of what the purpose was for undertaking this analysis?
A. The purpose was to answer the question of what would a market based price be to terminate these pension plans, retirement systems.
Q. And did you have any further understanding besides that?
A. None that was needed to conduct this project.
Q. Okay. That's not my question. My question was, did you have any understanding besides that?
A. I did not feel I had the need to ask any additional questions to respond to this, so I had no understanding other than I was answering the question of what is a market based price for plan termination.

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Q. And that may all be fair, but my question is, did you have any understanding of what the purpose was, beyond the one that you stated?
A. I have a broad understanding, as we note in the beginning of all of our letters, of our service to the city being in conjunction with the proposed restructuring and negotiations that they're entering in. I did not on any individual letter necessarily need to have a more detailed understanding.
Q. Again, that's not my question. My question is, did you have any understanding about the purpose, other than the one you've stated, for this letter, for this analysis?
A. The purpose being that we were answering a question that could potentially be used in mediation at the city's discretion was my understanding.
Q. Okay. And how did you have that understanding?
A. They asked me in this particular engagement to value the cost of the plan termination, and our broad service to the city was based upon providing them information that they could potentially use in mediation at their discretion.
Q. Okay. So your analyses at this point are all being performed for mediation purposes?

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A. I did not say that.

Q. Okay. So what you said was: Our broad service to the city was based upon providing them information that they could potentially use in mediation at their discretion.

A. That is accurate.

Q. Okay. And were you providing them analyses for purposes other than use in mediation?

A. No.

Q. Did that change at any point?

A. Not to my recollection.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 35
11:52 a.m.

BY MR. BALL:

Q. Mr. Bowen, I'm asking you to look at what's been marked as Exhibit 35, which is a letter dated November 26, 2013, Bates-stamped POA26047.

My first question is, is this a letter that you authored and signed?

A. Yes.

Q. And the "re" line here says that this is about the DGRS estimated liability reduction in 2013 to have 70 percent funded status in 2023 under various scenarios.

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Do you see that?

A. I do.

Q. And so the -- so the various scenarios that you're looking at here, you're looking at having a result of having the GRS 70 percent funded in 2023, is that fair?

A. That is the target of the projections, yes.

Q. The idea of the DGRS having 70 percent funded status, the use of the 70 percent threshold, where did that come from?

A. It was provided to us by the city.

Q. Did you have any understanding of what the basis for choosing 70 percent as opposed to another threshold was?

A. My understanding is that it was as a result of mediation.

Q. So it's a result of mediation the city is in, it's not a result of any analysis performed by you or by Milliman, is that right?

A. Correct.

Q. All right. And the choice of 2023 as a date to achieve that status, do you have an understanding about what that's based on?

A. The same thing.

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Q. All right. So the use of 2023 as a date for achieving that status is not a product of any analysis or any recommendation by you or by Milliman, is that fair?

A. Correct.

Q. Do you know what mediation those numbers, 70 percent and 2023, are the result of?

A. No, I do not know what particular mediation.

Q. And I take it that so far as you are aware, that those numbers, 70 percent, or the 2023 target date, those are not the product of -- they're not based on any accounting standards you're aware of, is that fair?

A. Yeah, I have no awareness of that.

Q. And if you look at Exhibit 1 to the letter, which is on page 260253, you analyze a variety of investment return rate assumptions, do you see that?

A. Yes.

Q. And they range from 5.75 up to a high of the level Milliman had originally recommended of 6.3. Do you see that?

A. I do.

Q. Okay. How were those numbers derived or determined?

A. They were requests made by the city.

Q. Okay. Other than the fact that the city asked for them, do you have any basis, I mean, any understanding

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about how those numbers were -- what the basis is for those numbers, where they came from?

A. Not the particular numbers.

Q. Okay. And you had -- this is November 26, 2013. You had, in the letter we saw yesterday, dated November 4th, provided Milliman's analysis of what the expected investment return would be, the 50th percentile and the range up to -- from 25 up to 75, as well, were the asset allocation that existed at that point in the GRS, right?

A. The November 4th sounds like the right date.

Q. Okay. You've only done one such analysis. We can pull it back out, but it's the -- I believe it's in the fourth letter. Is there a reason why -- do you have an understanding about why the analysis that Milliman performed three weeks before this is not used as the basis for the interest rate, I mean, the investment rate assumption here?

A. Other than the fact that various interest rates were requested, which is very common to prepare sensitivities, I don't have a reason why the city did not request an additional rate.

Q. All right. Fair enough. I was just trying -- I understand the city requested these particular rates.

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You had provided an analysis that would support a different rate. I'm just trying to understand if you know anything about why they chose rates other than one that was contained in your -- that was provided through the analysis conducted in your November 4th letter.
A. The context I just mentioned, sensitivity analysis shows results under different rates.
Q. But not including the rate that you had suggested, right?
A. That is not included in this exhibit.
Q. Okay. And again, I'm just trying to make sure that I know what you know. Do you know why the rate that you had proposed or had -- that was the product of your analysis in the November 4th letter was not used as one of the rates here?
A. It wasn't used because it wasn't requested.
Q. Okay. I know why you didn't do it. Do you know why the city didn't request it? Do you have any understanding of why it wasn't requested?
A. I do not.
Q. And, in fact, in all the analyses you performed after this, that rate is never used in any of those analyses, is that right?

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A. To the best of my recollection, that is right.
Q. There is no analysis here about funding levels after 2023, is that right?
A. In this letter, the target was 2023.
Q. For 70 percent funding?
A. Yes.
Q. Is there any analysis here -- and I believe the answer is no, but I just want to make sure I'm not missing something -- of what the amortization period will be for the remainder of the UAAL after 2023? Anything to show how the remaining 30 percent is going to be amortized?
A. I'll check just to make sure. I don't see any mention in this letter.
Q. And can you tell me what the funding level is currently -- well, strike that.
In the fall of 2013, what was the funding level for the Puerto Rico Employees Retirement System, the various Puerto Rico systems for which you are the system actuary?
A. Off the top of my head, I will say the employees retirement system was five percent funded. The other two systems are probably in the 20s. I don't recall the exact numbers.

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Q. All right. Is that -- that was in the fall of 2013, is that what you're answering?
A. That's based on my recollection of the 2013 valuation results, which we didn't have done by the fall of 2013, but would have been the funded status had we been able to measure it sooner.
Q. I was just trying to understand the timing of it. So have those numbers changed substantially since that time?
A. Valuations are conducted once a year, so we don't do interim measurements of funded status, but I would expect they would be constantly changing if we measured more often.
Q. Okay. And so the most recent data you have, that's the most recent data you have?
A. Yes.
Q. And do you have an understanding, under the current parameters that have been set for the plan, what the current plan is for those plans, what you anticipate the funding level for those plans will be in 2023?
A. We have not projected future funding levels for those systems.
Q. Okay. So you don't know what the level will be for those plans in 2023, if your current projections and

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analyses and the plans that are in place hold form?
A. As I said, we did not project funded status in future years for those plans.
Q. What about the New Jersey State Teachers Fund. Do you know what the current funding level is for that?
A. Not off the top of my head.
Q. Any idea what the, what the ballpark is?
A. I wouldn't want to venture a guess and be incorrect, so, no, I don't really know the ballpark.
Q. Do you know whether it's more or less than 70 percent? I'm just trying to get -- if you know, you know, and if you don't, you don't. I'm just trying to find out what you know.
A. I don't know the specific number.
Q. Okay. And I'm not asking a specific number, I'm asking do you know if it's more or less than 70 percent?
A. I believe it is less than 70 percent.
Q. Okay. Is it less than 50 percent?
A. I don't believe that.
Q. Okay. So your best understanding is it's somewhere between 50 and 70 percent currently?
A. With not a tremendous amount of certainty, that's my best understanding.

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Q. Okay. What about the Texas County -- I'm going to not remember what the full name of the plan is, but the Texas County District Retirement System?
A. It is in the high eighties, to my recollection.
Q. And the Saudi system that you're involved with, do you know what the funding level is for that?
A. I do not.
Q. And I can't remember what the name of it was, it was quite interesting, but can you tell me what was the name of it again?
A. General Organization For Social Insurance.
Q. Okay. Do you know whether it's over 50 percent?
A. I believe it's fairly well, I just, again, don't have the funded status number off the top of my head.
Q. Do you know if it's over 70 percent?
A. I have less certainty about that than the New Jersey system.
Q. Okay.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 36
12:06 p.m.

BY MR. BALL:
Q. Mr. Bowen, I'm showing you what's been marked as Exhibit 36, which for the record is a document

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Bates-stamped POA00604157. It is -- the date is updated December 2013, and you were shown yesterday a NASRA issue brief public pension plan investment return assumptions document that was updated as of March 2013. I only have a few questions about this.

This was identified in the document production set we saw as having you -- with you being the custodian of this document. And so my question to you is, what you were doing with it? Why did you have this document?
A. NASRA is the industry trade group for state retirement systems, and in my business I read their issue briefs.
Q. Okay. And it was in among the files that were produced to us as being responsive to our document request about this case. Was there a use you were making of this document that was related to your work for the City of Detroit?
A. I don't recall specific use for this document.
Q. Okay. Do you recall any context in which you reviewed it?
A. As I mentioned, I review NASRA issue briefs just in the normal course of staying abreast of the discipline.
Q. So it would be part of your ordinary reading to make

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sure you knew what was going on in the discipline in the industry?
A. Yes.
Q. And you don't recall using it for any particular purposes in connection with your work for the City of Detroit?
A. I do not.
Q. Any idea why it would have been produced in response to our document requests that related to your work for the City of Detroit?
A. I do not.

MR. BALL: We're at like 12:10. I'm happy to keep going, but if people would like, I'm also completely flexible about lunch break. So you guys tell me.

MR. MONTGOMERY: Keep our eye on the ball game?

MR. BALL: I'm deferential to those things, as well.

MR. MILLER: Take a 35-minute break, begin at 12:45?

MR. BALL: Good with everybody else?

VIDEO TECHNICIAN: The time is 12:10 p.m. We are off the record.

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(Off the record at 12:10 p.m.)
(Back on the record at 12:53 p.m.)

VIDEO TECHNICIAN: We're back on the record. The time is 12:53 p.m.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 37
12:53 p.m.

BY MR. BALL:
Q. Mr. Bowen, welcome back.
A. Thank you.
Q. So you have been handed what has been marked as Exhibit 37, which is a letter dated December 7th, 2013, and its Bates stamp is POA00260356, and I have just a couple of questions about this before we look at the next document.

If you look on the second page, within the project description, there's a -- the project looks at whether the -- asks you to look both at whether it would be necessary -- strike that.

What the estimated additional reduction in liability would be that would be necessary to achieve a 70 percent funded ratio and an 80 percent funded ratio on -- in 2023.

Do you see that?

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A. I do.
Q. Okay. And this is the only analysis I've seen anywhere that asks for an 80 percent funded ratio as opposed to a 70 percent funded ratio, and my question is, do you have an understanding about why this letter asks for 70 and 80 percent? Do you have any knowledge about what the origin of that request is or the basis for it is?
A. The origin of the request is that it came from the city.
Q. Fair enough. But the basis for it. Before we talked about what your understanding was for the basis for the 70 percent request, and now this one asks for both 70 and 80. I'm just trying to understand if there's anything else to be said about what the basis for the 80 percent request is in addition to the 70 percent.
A. Well, the basis is that it's tougher to get to 80 than 70, and this calculation shows how much so.
Q. Okay. So is it a sensitivity analysis, comparing 80 to 70, is that what you understood the purpose to be?
A. That's my understanding of this assignment, yes.
Q. Okay. And the 70 percent was still a number derived from the results of a mediation, from what you said earlier, right?

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A. Yes.
Q. And this looks at a five percent, 5.5 percent city specified investment return assumption. Do you see that?
A. Yes.
Q. And I assume that is net of admin and investment expense, correct?
A. I would assume at this point that that is the case, but I don't definitively see it written in the letter.
Q. Okay. Well, over the course of the letters we've looked at so far, you've employed a variety of investment return assumptions, and my understanding of each of them so far has been that it has been net of investment and admin expense, and I just want to confirm the same, to the best of your understanding, is true here?
A. That's correct so far, and thus I assume here, as well.
Q. Okay. Don't let that one stray too far.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 38
12:57 p.m.
BY MR. BALL:
Q. Mr. Bowen, you've been handed what's been marked as

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Exhibit 38, which is a letter dated December 18th, which is Bates-stamped POA0 -- strike that.
December 18th, 2013, it is Bates-stamped POA00260345, and --
A. Excuse me, that's not the letter I've been handed.
Q. Sorry. Got ahead of myself, I apologize. Leave it marked, I'll come back to it. We'll ask about this one first. I pulled the wrong folder, so I apologize for that.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 39
12:58 p.m.
BY MR. BALL:
Q. So sorry about that, Mr. Bowen. You've now been handed an exhibit that's marked Exhibit Number 39, which is a letter dated December 18th, 2013, and the Bates stamp is POA00260345. Are we on the same page now?
A. Yes.
Q. Okay. And this again is a letter that you authored and signed?
A. Yes.
Q. And this letter uses, again uses a 5.5 percentage -- a 5.5 percent investment return assumption, if you look

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at page 3?
A. Yes.
Q. Okay. And it adds language in this letter, which I think is the first time it appears, and correct me if you believe otherwise, but it says: Our understanding is that the city specified investment return assumption of 5.5 percent is not reflective of expected returns for the current portfolio, but rather is due to the city's plan to reduce risk by investing more conservatively.
Do you see that?
A. I do.
Q. Now, if you'll look at the letter preceding this, that is Exhibit 37, on December 7th, it doesn't contain that language, although it's talking about the same investment return rate.
Am I right about that?
A. I don't see it in the December 7th letter.
Q. Okay. When and how did you learn that the basis for the 5.5 percent rate that was being proposed here was a city plan to reduce risk by investing more conservatively?
A. I would not say that we learned that fact definitively with this letter, as you've seen the variety of

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letters which are all variations on a theme of different discount rates. My best recollection is that sometime in between December 17th and December 18th we thought that would be a good phrase to put into our letter to make clear what the interest rate assumption is and what it is not.
Q. And so you were trying to reflect accurately that the 5.5 percent rate was not a rate that you believe reflected the expected rate of return on the existing portfolio, is that fair?
A. It would be fairer to say that the city was not telling us to use that rate because that was what they believed the city was telling us that, for the specific reason that they were looking at investing more conservatively, thus a lower rate be used in the analysis.
Q. Okay. So when did you -- when were you told that the reason for the lower rates that were being evaluated was the city had a plan to reduce risk by investing more conservatively? When and how?
A. Prior to December 18th, 2013.
Q. Okay. Do you recall anything more about when it was you learned that?
A. It was obviously prior to this letter, and I can't

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recall specifically how much prior to this letter.
Q. Do you recall how you learned it?
A. It would have been in discussions with the city.
Q. Okay. And what discussions with the city?
A. In the context of receiving the assignments to model these various scenarios.
Q. Okay. So are you saying that when you got an assignment, the assignments to model scenarios, that's something they told you?
A. Yes.
Q. Okay. And when they told you that, was it in the context of this assignment or in the context of earlier assignments?
A. Well, what I was saying earlier is it potentially could have been in the context of earlier assignments and we did not think to add the phrase to the letter to provide additional description. It's also possible it happened between December 17th and December -- or December 7th and December 18th. I don't know exactly what phone call.
Q. Fair enough. So you don't know if it was before the December 7th letter or after the December 7th letter, but at least by the time of the December 18th letter?
A. Correct.

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Q. Okay. And those discussions would have been with the pension benefit task force, pension plan task force?
A. Yes.
Q. Okay. And do you recall any discussion in the pension plan task force prior to receiving the assignment where that -- where you were told that that was the basis for lowering the interest rate about why or what the basis was for the plan to reduce risk by investing more conservatively?
A. I have to apologize, I didn't follow the arc of that question.
Q. Okay. It may not have been a felicitously phrased one, so I will rephrase.
My question is just, before they -- at the time or before you were told that that was the basis for the reduced interest rate, were you privy to any discussions of the pension plan task force or any discussions with any other representative of the city that explained what the basis was or the rationale was for the plan's reduced risk by investing more conservatively?
A. Again, I'll have to state that the reason the rationale is as expressed here, so I'm not sure what else you may be asking me to state.

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Q. I'm not asking about the reason for the 5.5 percent, I understand that you're saying you've been told that the city plans to reduce risk by investing more conservatively, right --
A. Yes.
Q. -- I understand that. What I'm asking is, do you have any understanding about what the rationale or the basis was for the city's reported decision to reduce risk by investing more conservatively? Do you know why they had decided to do that?
A. A desire to reduce a volatility.
Q. And where did you have those discussions?
A. Within the pension task force.
Q. Okay. And who said that?
A. It could have been several parties on the pension task force. I'm not sure who stated it, exactly.
Q. And what was said about a desire to reduce volatility?
A. The city has no ability within the next ten years to have contributions respond to investment experience, thus we wish to investigate lower volatility.
Q. All right. And did you undertake any measurement of the comparative volatility of the existing investment portfolio or investment and the city's proposed investment portfolio?

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A. No, that was not this assignment.
Q. All right. And has Milliman done that?
A. I know it's been discussed. I can't say for sure whether it was completed or was a project that was stopped and started.
Q. What do you mean by a project that was stopped and started?
A. In the course of, you know, an engagement such as this, not every project that is requested sees its way through to fruition, because the changes are so frequent, and the project that you're discussing would have been handled by our investment consultants, so...
Q. By Mr. Perry?
A. He would have been involved in that project.
Q. All right. And when you say stopped and started, do you know whether it has been restarted if it was stopped?
A. As I said, I don't know conclusively whether it was completed or what the status of it is.
Q. Okay. Now let's go to what was marked previously as Exhibit 38, and that should be a letter dated December 19th, 2013, Bates page POA00260371. Is that right?
A. Correct.

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Q. Okay. And so, again, is that a letter that you authored and signed, Mr. Bowen?
A. Yes.
Q. Okay. And I want to look at a couple of things in this letter. First, on page 4, there was some discussion yesterday about what the impact of the investment rate, or higher or lower investment rate, was on and how it affects the projected funded status of a plan, and I think maybe this is a more crisp way of putting it, but I just want to make sure that I have it right. But there's a paragraph about a third of the way down the page that begins: Note that the investment return assumption. Do you see that?
A. Yes.
Q. Okay. And it says: Note that the investment return assumption impacts the projected funded status for two reasons. One, the assumption forms the basis for the assumed asset returns for the ten-year period from July 1 through June 20 -- June 30, 2023. And, two, the assumption is used for measuring the liabilities by discounting future benefit payments at the rate of the assumed investment return.
Are those statements accurate?
A. Yes.

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Q. Okay. And the first statement, can you explain what it means, the assumption forms the basis? How does that -- can you explain what it means and how it affects the projected funded status?
A. Certainly. We start with a July 1, 2013, asset value, and through the projection period the asset value will change as contributions are made, benefits are paid, and investment income is realized.
Q. Okay. And so if you use a higher rate of return, the UAAL will go up as a result of this, correct? I mean, the UAAL will go down as a result of this -- sorry, strike that. Start that one over again.
If you use a higher rate of return as your assumption, then the asset returns will increase and the unfunded status of the plan will decrease, correct, the UAAL will decrease?
A. You will have more money by using a higher rate of return.
Q. All right. And that affects the projected funded status by reducing the amount, the unfunded liabilities if the plan is not fully funded, correct?
A. The funded status is assets in the numerator and liabilities in the denominator. So if the investment term is higher and the numerator grows, the funded

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status of the plan will increase.
Q. Okay. And the second part, the assumption is used for measuring liabilities by discounting future benefit payments, can you explain now that affects the funded status of the plan?
A. Certainly. Once the actuarial valuation has produced a stream of future benefit payments, a present value is determined by discounting at a certain rate, and the higher the investment return used to discount those benefit payments, the lower the current measure of liability; vice versa, the lower the discount rate used to discount those payments, the higher the current measure of liability, and the resulting liability goes into the denominator of the funded status equation.
Q. Okay. On the next page, under baseline expected benefit payments, do you see the chart similar to the one we looked at earlier today?
A. Yes.
Q. Okay. And there's a discussion there about the disparity again between the Gabriel Roeder projection for 2011 and 2012, to 2012, and the actual benefit payments during that time period? Do you see that?
A. I'm sorry --

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Q. The sentence is just under the chart.
A. Okay, yes.
Q. The anticipated benefit payments developed by Gabriel Roeder -- and we discussed this issue earlier today. Gabriel Roeder had projected benefit payments of 225 million, and actual payments were over 394 million, and there's a difference between the projected and the actual of 168.7 million. Do you see that?
A. Mmm-hmm. Yes, I do.
Q. Okay. And there's a sentence that follows this that says: This is potentially due to lump sum distributions of annuities savings fund balances to members who retired during 2011 and 2012.
Do you see that?
A. I do.
Q. What's the basis for that statement?
A. I believe that would be due to an observation that the active population was decreasing rapidly year over year.
Q. Okay. So, based on that, you thought this was a possible explanation for the disparity?
A. Yes, it's a possible explanation.
Q. Okay. And did you do anything to verify whether or not it was in fact the explanation for what had

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happened?
A. We did not.
Q. Okay. You can put that one aside.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 40
1:14 p.m.
BY MR. BALL:
Q. Mr. Bowen, you've been handed what has been marked Exhibit 40, which is a letter dated January 8th, 2014, and Bates-stamped POA00258717. And my first question to you, is this a letter that you authored and signed?
A. Yes, it is.
Q. Okay. And I only have a couple of questions about this. This letter asks you to evaluate three different investment return assumptions, 5.75, 6.25 and 6.75 percent, under various other parameters.
Do you see that?
A. I do.
Q. Okay. And all three rates are listed as reflecting the city's plan to reduce risk.
Do you see that? It's on the second page.
A. Yes.
Q. Okay. And not being reflective of current expected returns, right?

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A. That's what it says here, yes.
Q. Okay. Do you have an understanding of why -- well, first of all, all three of these rates are net of investment and admin expense, correct?
A. I would believe that to be the case here.
Q. Okay. And do you have an understanding of why those three different rates were being evaluated at this point?
A. To repeat myself, sensitivity analysis to review the results under varying rates.
Q. Okay. Had the city, to your knowledge, at this point determined what rate was commensurate with -- was the rate that it wanted to develop any offset portfolio to provide a reduced level of risk for?
A. I cannot tell you which date the city settled on the rate in the plan of adjustment.
Q. Had it happened at this point?
A. I cannot tell you what they, the city settled on the rate they used in the plan of adjustment.
Q. All right. I know you may not be able to tell me a precise date. I'm asking if you know whether it occurred before January 8th, 2014.
A. I don't know the date that the city settled on the rate in the plan of adjustment, and I thus don't know

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whether it was prior or after January 8th of 2014.
Q. So you not only don't know the specific date, but you can't tell me whether it had already occurred by January 8th, 2014. Is that fair?
A. That is fair.
Q. Or after that date? You just don't know with any specificity when the city decided?
A. I do not know with specificity when the city decided.
Q. Do you recall being told at some point that the city had decided on the rate?
A. I'm not certain that I received a phone call that said we've decided on the rate.
Q. Okay.
A. I don't recall that communication.
Q. Do you recall any communication in which you were told the city had settled on a rate for the plan of adjustment?
A. Potentially in context with the preparation of ballot data when we were told the rate to use, it became evident that the rate had been settled on.
Q. Okay. So maybe when you were told, maybe at that point, but you're not entirely sure. Is that fair?
A. That is fair. It runs together.
Q. And do you know when you were told to prepare data for

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the ballot?
A. The letters are dated. I believe it was the April and May time frame that we were working on that analysis.
Q. Okay. And do you know whether Milliman -- strike that.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 41
1:19 p.m.
BY MR. BALL:
Q. Mr. Bowen, you've been handed what has been marked as Exhibit 41, and I will tell you that it consists of two documents, two copies of the same letter, separated by a four-inch separator page. It's a letter dated January 9th, 2014. The Bates page is on the first letter, first version of POA00258696, and on the second letter it's Bates-stamped MCOPW021051. And there's a redaction out of the first letter, but otherwise I believe they are the same letter.
And so my first question to you about it is, is this a letter you authored and signed?
MR. MUTH: Which one?
MR. BALL: Both of them. It's the same letter.
A. I signed both of them.

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BY MR. BALL:
Q. One of them has -- one version has Ms. Warren's signature, as well. Do you see that?
A. I would say for some reason Ms. Warren's signature is not appearing in several of the documents, neither is the Milliman logo. So I'm not sure if there's some issue with the copying or printing.
Q. Okay. So it's your understanding that she would have signed at the same time as you, and it may just be some production problem that's resulting in her signature not appearing on the various letters where she's listed as a signatory?
A. That is my guess, sitting here these past two days.
Q. Okay. So let's just focus on the first one, the first version of it. This version, this letter asks you to -- or it says it's Re: DGRS unfunded liability for DWSD members in June 30, 2012, actuarial valuation report prepared by Gabriel Roeder Smith & Company.
As I understand it, this is the first analysis we've seen prepared by you that specifically focuses on the DWSD. Is that right, or do you recall whether there were any prior analyses that focused specifically on the DWSD?
A. This time frame seems right on to me.

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Q. Okay. And did you have an understanding of what the purpose of conducting an analysis that was specific to the DWSD was?
A. I was at a mediation session in New York, at the Jones Day office, for the majority of a week in early January, and it came to my attention.
MR. MILLER: Glenn, let's stop you right there. Do not reveal anything that occurred during the course of that mediation session.
BY MR. BALL:
Q. Apart from any communications to you in the context of mediation, do you have any understanding of why you were being asked to provide an analysis that was specific to the DWSD?
MR. MILLER: Can you repeat the question?
(The following portion of the record was read by the reporter at 1:23 p.m.:
Q. "Apart from any communications to you in the context of mediation, do you have any understanding of why you were being asked to provide an analysis that was specifically to the DWSD?")
MR. BALL: Specifically about the DWSD, or specific to the DWSD.

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A. Not apart from the mediation.
BY MR. BALL:
Q. Did you have any understanding, leaving aside anything you were told in mediation -- and for the next several questions, just assume that you're not going to tell me anything about communications in the course of mediation -- did you -- did anyone tell you why this was being requested?
A. Not outside of mediation.
Q. Okay. Did you have any understanding of what purpose this document was going to be used for, or this analysis was going to be used for?
A. Based upon what I was told in mediation.
Q. Okay. So you had an understanding, but it was based on what you learned in mediation?
A. Yes.
Q. Did you understand that the information you were generating was going to be shared with the counties? And by that I mean Oakland, Macomb, and potentially Wayne?
MR. MONTGOMERY: Again I'd ask you to make sure his understanding is outside of the mediation.
MR. BALL: I will accept that as a predicate for all these questions about what the

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purpose of this letter is, so that you know.
A. Not outside of mediation.
BY MR. BALL:
Q. Okay. This letter asks for an analysis about amortization over 40 years. Do you see that on page 3?
A. I'm on page 2 under project description.
Q. It's also there, too.
A. Okay. So are you in a different place?
Q. But I'll take it from whichever -- I was just trying to help you with a location, but 2 is as good as 3. Do you see that it asks for amortization on the level annual basis over 40 years?
A. Yes.
Q. Did you have an understanding about why you were looking at it over a 40-year period?
A. The understanding was gained during mediation.
Q. Okay. Was that 40-year amortization period consistent with GASB rules applicable at the time?
A. The 40-year period for amortization is not applicable to GASB funding rules at that time, or, I'm sorry, GASB accounting rules.
Q. GASB accounting -- I'm sorry.
A. GASB accounting standard.

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Q. I'll ask it again.
A. Yes.
Q. Was a 40-year amortization period consistent with GASB accounting rules in place at the time?
A. No, it was not.
Q. Okay. And I think we've seen earlier that the maximum, maximum amortization period permissible under GASB rules at the time was 30 years?
A. That is correct.
Q. Okay. Did you advise the city or any other recipient of this information that the 40-year period being requested was inconsistent with GASB rules?
A. It would have been a discussion in mediation, so I will say if I did, it was within mediation.
Q. Apart from communications in mediation, in this letter itself you do not say that, is that correct?
A. Right.
Q. And did you -- did you advise the city that the 40-year period discussed in this letter was inconsistent with GASB rules?
A. I did not advise them in this letter.
Q. Did you advise them of that fact?
A. I do not recollect doing so.
Q. Mr. Bowen, you recall we discussed earlier the value

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of the assets that were attributed to the system and to the DWSD, in particular?
A. Yes.
Q. And that you took that information from the Gabriel Roeder reports?
A. The actuarial smooth value of assets was taken from the reports, yes.
Q. And then you develop the market value based on the actuarial value?
A. Correct.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 42
1:30 p.m.
BY MR. BALL:
Q. In the letter we were just looking at, your reference of the June 30th, 2012, Gabriel Roeder reports, do you see that, the as-of date for the Gabriel Roeder reports?
A. I do.
Q. Okay. So is what has been marked as Exhibit 42 the June 30th, 2012, Gabriel Roeder valuation report, annual actual -- strike that.
The June 30th, 2012, Gabriel Roeder report you're referring to?

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A. Yes.
Q. Okay. And in analyzing the allocation of accrued liabilities between the DWSD, analyzing what share of the accrued liabilities are allocable to the DWSD, how did you do that?
A. One moment, please. On page 2 of Milliman's letter under results, it refers to page B3 of the valuation report where the actuarial accrued liabilities are broken out for four different groups within the DGRS.
Q. Okay. So let's look at that page, B3.
MR. MONTGOMERY: Do you have a Bates number?
MR. BALL: I do. There are multiple versions of it, but the Bates page for the Gabriel Roeder report, the version I'm looking at is MCOPW018381, and if you could go to page B3, which I have as Bates page MCOPW018411.
So is the information that appears there allocating the accrued liabilities, is that the information you used?
A. Yes.
Q. Okay. And did you ever do Milliman's own calculation of how the accrued liabilities should be allocated among different parts of the city?

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A. We did.
Q. Okay. And how did you do that?
A. We received census data from the retirement systems and performed a valuation of DGRS.
Q. Okay. So that would be in the April time frame when you had the census data?
A. That was when the results were issued, yes.
Q. Okay. You got the census data you discussed previously, and then you -- and is there also information here -- so for this analysis you accepted what Gabriel Roeder had done, for the later analysis you did your own, your own analysis based on the census data?
A. Correct.
Q. Okay. On the asset side, did you ever do your own analysis of the allocation?
A. When you say our own --
Q. I mean, in each case did you take the smooth value of the assets from the Gabriel Roeder report, and the allocation that the Gabriel Roeder report reflected, and over to then analyze the market value attributable to DWSD, or did you ever do your own analysis or own calculation of the asset value, smooth or -- the smooth asset value attributable to the DWSD?

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A. I don't recall doing anything other than the former.
Q. Okay. So in every case you took the smooth value of the asset -- the smooth value asset allocation from the Gabriel Roeder report and then used that to calculate a market value allocable to the DWSD?
A. That's my recollection.
Q. But the basis was always the Gabriel Roeder report's allocation of the assets under the smoothing methodology?
A. That's my recollection.
Q. Okay. And do you know how Gabriel Roeder calculated or how anybody calculated the allocation of the assets for the smooth asset valuation that they undertook?
A. I do not know with specificity.
Q. Okay. What do you know about it?
A. I know what is presented in the valuation report, and as indicated in our letters, we used that ratio consistent.
Q. All right. And I'm trying to make sure I understand what you know about how the numbers in the Gabriel Roeder report were derived. Do you know anything about how they were derived?
A. I'm not sure how to respond to your question, what do I know. I'll say my understanding is that they have

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been, for some historical period of time, receiving separate rollups of asset value to attribute assets and incorporate cash flows for each of the various systems so that they can have their own unfunded liability and contribution rates developed.
Q. Okay. And how do you know that?
A. This exhibit has appeared in several valuation reports.
Q. Okay. But the exhibit doesn't say what you just said, right? It just provides a breakdown, correct?
A. This exhibit provides a breakdown of one point in time.
Q. If you -- all right. Would you look at page B2 with me, which is MCOPW018410? And you see that this is an exhibit reflecting the allocation of assets between the different -- totaling them up for different components of the city?
A. Yes.
Q. Okay. And if you look at the totals for the sewage component, do you see that if you add each of those up, and in particular the pension accumulation fund is a significant negative number, that the total for the sewage side is negative? Do you see that?
A. It would be negative or close to being so.

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Q. Okay. Well, it's 14 -- as of June 30, 2012, it's 14 million plus 2.6 million, minus 112 million, plus 74, plus 13. Looks to me like it's substantially negative if you add those numbers up.
A. It is negative, yes.
Q. Okay. Do you have an understanding of why that's case?
A. I don't have an understanding of this exhibit.
Q. Okay. And so the water/sewer numbers that are provided later are a combination of the water and sewer components of this, is that your understanding?
A. They're a combination of the smooth value of assets reported for the water and sewer departments.
Q. Okay. If you look with me at page A5, and there's a discussion there, the funding value of assets. Do you see that?
A. I do.
Q. And is it -- my understanding, and I just want to know if it's your understanding, is that the funds here -- in fact, there's a single fund, and they are -- they're not segregated, the funds themselves are not actually segregated by division and it's all in one trust. Is that consistent with your understanding?
MR. MILLER: Can you repeat the question?

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There was a lot of --

MR. BALL: There were some interruptions.

MR. MILLER: -- interruptions.

BY MR. BALL:

Q. My understanding of the GRS system is that the funds are held in a single trust, is that right?

A. I have not been informed otherwise.

Q. All right. And it's not, the funds themselves are not actually segregated by division, is that right?

A. I've not been informed otherwise, yes.

Q. That's your best understanding, right?

A. That's my best understanding.

Q. And the last paragraph here says: The current method of allocation of investment income between divisions, and it's provided by retirement system staff, results in each division recognizing a rate of return that may differ from the fund in total.

Do you see that?

A. I do.

Q. Do you have an understanding of how it is that there is a disparate rate of return applied to different divisions for the funds held by the system which are held in a single fund?

A. I don't have specific knowledge of the allocation

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methodology.

Q. Okay. Do you know why it would be the case, do you have any understanding why it would be the case that different rates of return would be applied to different divisions of the city?

A. As I said, I don't know the specific policy of the city, but depending upon how interest is credited throughout a year to a system where allocations are made to different divisions with different cash flows, I could understand different investment returns resulting for different divisions.

Q. All right. So you could conceive of that scenario, but you don't know how the city actually did it here, is that fair?

A. Yes.

Q. Okay. Do you know whether the city -- I'll ask first about the city, and GRS -- strike that -- whether the GRS or Gabriel Roeder, in their allocation of assets between the divisions, looked solely to the current employment status of a particular employee in the census rolls or whether they took a count of what portion of the employee's career had been spent in other portions of the city?

A. I never asked Gabriel Roeder that specific question.

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Q. When you did it, when you did an analysis, did you understand -- did you do an analysis of whether, for example, the unfunded liabilities associated with particular employees were predicated on portions of their careers spent in other divisions besides, for example, in the case of the DWSD, from employees who spent time in other portions of the city besides the DWSD?

A. I'm sorry, could you repeat that?

Q. Yeah, it got long.

You did an analysis, as you said earlier, of the allocation of assets among the different divisions of the city when you had the census data, right?

A. You just asked about assets and liabilities.

Q. I'm sorry, you're right. It's the afternoon. I'll try this one over again.

You did an analysis, as you testified a few minutes ago, once you had the census data, about attribution of unfunded liabilities between different components of the city, including the DWSD versus other components of the city, correct?

A. To be precise, I would say we allocated liabilities in that analysis you're referring to.

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Q. Okay. And in allocating liabilities, did you predicate the allocation purely on the current employment status of active employees, for active employees, did you do it purely on their current employment status or did you look and see what portion of their career had been spent in other portions of the city?

A. We valued active employees based upon the department code, if you will, that came to us in the census data.

Q. Okay. And your best understanding is that the department code that came to you in the census data was the code for their current employer. Is that fair?

A. That is our best understanding.

Q. And for retired employees, did you do it based purely on the department they were in when they retired?

A. We based our analysis on the department code that was in the census data.

Q. Okay. And your best understanding of the department code in the census data was that the department code of the department that employed them when they retired?

A. That's our best understanding.

Q. All right. And so did you -- you did not, as I

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understand it, undertake any analysis to see whether any portion of the unfunded liabilities associated with those employees arose at a time when they were not -- arose in connection with service they provided when they were not employees of the DWSD, is that fair?
A. We did not.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 43
1:47 p.m.
BY MR. BALL:
Q. Okay. Mr. Bowen, let me ask you to look at what has been marked as Exhibit 43, which is a letter dated January 16th, 2014. And it is Bates-stamped POA00258700. And my first question to you is whether it is a letter that you authored and signed?
A. Yes.
Q. Okay. And this again looks at DWSD as a -- on a stand-alone basis, right?
A. Yes.
Q. Okay. And it looks at potentially being spun off DWSD, do you see that?
A. I see that on page 2, yes.
Q. And did you have any understanding about what the

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purpose was for providing this analysis?
A. To answer the question of the DWSD employer contributions during the ten-year period to reach a 70 percent funded status under the specified scenarios and the specified investment return assumption.
Q. Right. That's the analysis they're asking you for, correct?
A. Yes.
Q. Okay. And my question is, did you have an understanding of what purpose or use was going to be made, what use was going to be made of this analysis?
A. Again, I'll reply as I did earlier. We had a broad understanding that the work we were doing for the pension task force would potentially be used in mediation at their discretion. I did not have a specific understanding of each and every letter to know if it was informational or if it was something that they were specifically negotiating. So I can't answer specifically the genesis of the request for this particular letter.
Q. Okay. So you had the general understanding you testified about earlier, but you don't have a specific understanding of what the purpose of this particular analysis was, is that fair?

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A. That's fair.
Q. Okay. And this is still looking at a 70 percent -- this is, for DWSD, is looking at a 70 percent funded level as of January 2023, right?
A. Yes.
Q. It's not a hundred percent funded level, correct?
A. This analysis is 70 percent.
Q. And, in fact, you also provide an analysis for what would happen after those ten years, correct? If you look on page 4.
A. Yes.
Q. All right. And, in fact, you looked at potential amortization of the remaining unfunded liability over an additional ten years, an additional 20 years, and an additional 30 years after June 30th, 2023, correct?
A. Yes.
Q. And did you have an understanding of why you were looking at those additional amortization periods for the DWSD liability?
A. My answer is exactly the same as I gave a moment ago. Should I try to repeat it in its entirety, or is it --
Q. Well, are you saying that that request about those amortization periods was specifically requested by the city?

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A. Yes.
Q. Okay. Can you show me where that request is in the project description?
A. That was not typed in the project description --
Q. Okay.
A. -- in this letter.
Q. Do you have a specific recollection that the city actually asked you to perform that analysis in connection with this letter?
A. No, I do not.
Q. Okay. And so my question again is what's the basis on which you decided to look at the period of amortization reflected on page 4?
A. The basis would be a city request. I have no recollection of inventing an additional assignment.
Q. Okay. So you don't actually recall the city requesting it, but your assumption is they must have, even though you don't say it in the letter?
A. I would characterize this as an oversight for not including further description of this in the project description section of the letter.
Q. But you don't actually recall getting the request, you're just assuming that that's the case, is that fair?

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A. I am, because I cannot imagine another scenario where this would have occurred.
Q. Do you have an understanding of why it was -- I just want to -- and the answer may be no, and that's fine, but I want to understand if you know why you're looking at those specific periods, other than it came from, you know, a city request. If it came from a city request, do you have an understanding of why those periods or what's being looked at?
A. Well, my understanding, not based on just this letter, but on other letters I remember authoring, was that if there's an unfunded liability existing in 2023, it needs to be paid off, what options exist for us to pay that off over various periods of time.
Q. Okay. So you would be looking at an option of a full amortization ending 20 years, 30 years, and 40 years out, is that fair?
A. That is this particular letter, yes.
Q. And this again is 70 percent in 2023. I take it your answers to me previously about what the origin of the 70 percent level and the 2023 date would apply equally to this letter?
A. Yes.
Q. That is, if they were -- stemmed from mediation?

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A. They would.
Q. And just to be clear, they were not the product of a Milliman analysis, correct?
A. They were not.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 44
1:56 p.m.

BY MR. BALL:
Q. Mr. Bowen, you've been handed another letter that is like the one we just looked at, dated January 16th, 2014. This one has Bates numbers POA00258748, but it's a different analysis. And in this case, the "re" line says: DGRS ten-year level dollar payments to have 70 percent funded status in 2023 subsequent to a spinoff of DWSD under two specific additional reduction scenarios with 6.25 percent investment return assumption.
So, first question is, is this likewise a letter that you authored and signed?
A. Yes, it is.
Q. Okay. And is this essentially a companion piece with the letter that we just looked at? One shows the DWSD on a stand-alone basis with a spinoff, and this shows -- this addresses what the remainder of the

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retirement system looks like with a spunoff DWSD under certain scenarios?
A. It appears to be the case.
Q. Okay. In fact, you did a number of such letters over the time where you would -- over time where you would look at a separate DWSD and the city without the DWSD, is that right?
A. We did a number of letters, I absolutely agree with.
Q. If nothing else today?
A. I'm not sure how many times we did a companion piece as such here, I don't recollect that. I'm sure, you know, you have them.
Q. I was trying to short-circuit some of it, but it happened several times, is that fair?
A. I recall doing a significant number of letters in the January time frame. So I believe that's probably true.
Q. And this -- well, I have sort of a basic question. At the end of the day, this uses a, this uses a 6.25 percent investment rate, as does the letter we just looked at. At the end of the day, one should use, when you're looking at the DWSD by itself, presumably, the same investment return rate as for the system as a whole. If you're going to calculate the overall

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unfunded liability, and DWSD shared that unfunded liability, you should be using the same investment return rate to calculate those two things, is that fair?
A. That was rather long, if you could please --
Q. Okay. I assume that in calculating the overall UAAL, and the investment rate you used to calculate the overall UAAL, you should use, as you've done in these two letters, the same investment rate for the overall UAAL and for the DWSD, unless somebody tells you there's going to be a different asset allocation, that you would use the same investment rate to calculate those two things?
A. I'm not clear whether you're talking about a -- when you said different asset allocation, I'm not sure whether you're asking about a spinoff or not with two separate plans.
Q. Okay. Let's do it -- assume they're not spun off, because at the end of the day that's probably what we care about the most. But if you're going to look at the DWSD's share of unfunded liability in a scenario where they're not spun off, and so we're still talking about the same asset pool with the same investment policy governing it, presumably, you would use the

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same investment return rate to calculate DWSD's share of the unfunded liability as you would to calculate the unfunded liability itself, correct, the overall unfunded liability?
A. That would be a logical starting point.
Q. Okay. And so one would assume that -- well, fair enough.
And if, in a scenario where the DWSD hasn't been spun off and is still part of the system, you would, if you used a different rate to calculate the total unfunded liability for the system as a whole, and used a lower rate to calculate the DWSD's share of the -- in a calculation -- the DWSD's share of the unfunded liability, that would result in a higher assessment of the DWSD's share than if you used the same rate for both. Is that right?
A. I tried to follow all the pieces, and if what you're saying is if you valued the entire system at X, including DWSD, and then went back and valued DWSD at Y --
Q. Y is --
A. -- the pieces wouldn't add up, if Y differed from X.
Q. That's I think right, and if you used a lower investment rate of return for -- in the Y calculation

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of DWSD alone, that would result in a statement of its share of the liabilities, or the liabilities attributable to it that's bigger, because you've used a lower investment rate than for your analysis of the system as a whole, is that right?
A. If you used X as the system as a whole and didn't use Y to develop DWSD's portion for some reason.
Q. All right. So I'm just trying to make sure that if you use a -- in general, if you use a higher rate, you wind up with lower UAAL, right?
A. For a given asset amount, yes.
Q. Okay. And if you -- say if you used a higher rate in calculating the overall UAAL, and a lower rate when you went back and tried to calculate DWSD's share of the UAAL, that would result in DWSD's share of the UAAL being higher than if you'd used the same rate as the original analysis of the whole system?
A. Again, I'm having trouble with your concept of --
Q. Using different rates?
A. -- why you would measure twice under the same rate in that question. So I could state, you know, if you use a different -- if you measure, if you measure a plan at one rate and measure a plan at a different rate, you'll have a different liability, all else equal.

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That is true.
Q. And if you use the measurement at the higher rate, to the system as a whole, and then go back and do a calculation using a lower rate, and then out of that derive DWSD's liability, you'd wind up with a higher share for DWSD than you would if you'd used the higher rate scenario throughout. Does that make sense?
A. I'm having trouble figuring out the basis for the question, but you've measured DWSD two different ways and got two different liabilities.
Q. Right. Let's say you use seven percent to calculate the overall UAAL, and you do that set of calculations, and that's -- that will result in an overall UAAL that's smaller than if you used 6.75, correct?
A. Yes, I agree, all else equal.
Q. Okay. And so if you use the seven percent to determine what the total unfunded liability is, but you go back and do a separate set of calculations at 6.75 percent when you said about determining what the DWSD's share is, that will result in the DWSD's share being stated as being higher than it would have been if you'd used seven percent, correct?
A. I would say that, again, the premise is difficult to comprehend. If you're going and measuring DWSD under

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a different rate, you would get a different answer. I wouldn't characterize that as their share on the seven percent basis.
Q. Right. It would be incompatible, because you should be using the same rate for both the overall and the DWSD share, correct? You shouldn't use two different sets of calculations?
A. I don't see the relation. I think you're trying to get at some relation which I'm just not grasping, but you would get a different number if you used a different rate.
Q. And I assume that the 6.25 rate that we saw in those two letters is net of admin and administrative -- of administrative expense and investment expense, is that right?
A. I believe that is correct.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 45
2:07 p.m.
BY MR. BALL:
Q. I'm just going to give you two to look at together.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 46
2:07 p.m.

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BY MR. BALL:
Q. All right. Mr. Bowen, I've asked you to look at what have been marked as Exhibits 45 and 46. Exhibit 45 is -- they're both letters dated February 28th, 2014. Exhibit 45 is POA00258956, and Exhibit 46 is POA00259001. And my first question is, for Exhibit 45, is this a letter that you authored and signed?
A. Yes.
Q. And for Exhibit 46, is the same true?
A. Yes.
Q. Okay. And I asked you a few minutes ago about whether you'd done additional analyses that were DWSD spinoffs and looking at a DWSD spinoff under a set of circumstances, and using the same set of circumstances analyzed DGRS absent -- or in connection with the DWSD spinoff. And is this another example of your doing that kind of analysis?
A. Based on the titles on the various letters, that certainly seems to be the case.
Q. Okay. And did you have an understanding of why you were doing these analyses?
A. As specific as my understanding is, that there was ongoing DGRS mediation occurring during this time

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period --
Q. Okay. And I'm not asking you about what you learned in mediation. You can say, "I have knowledge from mediation," and I don't want to know the details. But apart from knowledge you have from mediation, is there anything else you know, know about, besides mediation, about why you were doing these analyses?
A. No.
Q. Okay. And were you aware that at some point there were discussions between the DWSD and the counties about the creation of a regional authority, sometimes called the GLWA, or Great Lakes Water Authority? Were you aware of that, separate from anything you know about mediation?
A. No.
Q. Okay. So, all right, then. The only other questions I have here is, these letters reflect a 6.75 percent investment return. I take it that, again, is net admin and investment expense, is that fair?
A. I believe in that case, yes.
Q. And this is late February. Do you know whether you had learned by that point that the city had settled on an investment rate that was a more conservative -- reflecting a more conservative portfolio?

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A. I do not know that they, that the city settled on the rate in the plan of adjustment.
Q. All right. And I understand that that was your answer previously, I'm just -- having shown you these, does this refresh your recollection in any way about when you learned that, that information?
A. No.
MR. MILLER: Can we take a ten-minute break?
MR. BALL: Sure. I'm trying to condense the number that I'm using so I don't belabor the point unnecessarily.
VIDEO TECHNICIAN: The time is 2:11 p.m. We are off the record.
(Off the record at 2:11 p.m.)
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBITS 47 and 48
2:18 p.m.
(Back on the record at 2:25 p.m.)
VIDEO TECHNICIAN: We are back on the record. The time is 2:25 p.m.
BY MR. BALL:
Q. Mr. Bowen, you've been handed what have been marked as Exhibits 47 and 48, both of which are letters dated

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March 28th, 2014. And the first is -- Exhibit 47 is Bates-stamped POA00259255 and Exhibit 48 is Bates-stamped POA00259277.
So my first question is, are both of these letters that you authored and signed?
A. Yes, I did.
Q. Okay. And they're both on the same date, right?
A. They are.
Q. And they're another set of companion letters looking at a spunoff DWSD and a DGRS with a spunoff DWSD, correct?
A. Yes.
Q. Okay. And this is about a month later than the last set of letters we looked at, and I'm not saying there aren't others in the interim, but are you still looking at that -- strike that.
Do you have any different understanding of the purpose of these letters or analyses than you've answered with respect to the prior letters in this series?
A. No different understanding.
Q. Okay. And there is a 6.75 percent investment rate assumption in these letters, as well, right?
A. There is.

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Q. Okay. And does this refresh your recollection as to when you learned that the city intended to use a 6.75 percent investment rate assumption to derive a set of assets, an asset allocation that was more conservative for use in the plan?
A. No, it does not.
Q. Okay. And do you know whether you had learned it by this time, on March 28th, 2014?
A. I do not know anything beyond what I've said already.
Q. Okay. Fair enough. I just want to make sure that if something prompts your recollection, because you see a later letter that gives you some greater certainty about when you understood that, that I get it, so ...
A. Understood.
Q. Okay.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 49
2:29 p.m.

BY MR. BALL:
Q. Mr. Bowen, you've been handed what's been marked as Exhibit 49, which is a letter dated March 31, 2014. So three days later than the letters we just looked at. The Bates stamp is POA00259245.
My first question is, is this a letter you

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drafted and signed?
A. Yes, it is.
Q. Okay. And this letter -- prior letters we looked at about a spunoff DWSD have all looked at a 70 percent funded DWSD as of 2023, correct?
A. I believe that's the case, yes.
Q. All right. So I believe this is the first letter that looks at a hundred percent funded status for DWSD in 2023. Is that correct, your understanding?
A. I'll say it's correct based upon the letters you've shown me. I can't definitively state there aren't interim letters.
Q. At least of the ones we've looked at, this is the first, and I'll tell you, I've looked, and it looks to me like it's the first, but I understand you may not recall that.
What prompted -- first, I assume, did the city give you, or the pension plan task force give you the instruction to do an analysis that used -- that looked at a hundred percent funded status in 2023?
A. Yes.
Q. Okay. And was the decision to use a hundred percent funded status in your analysis based on any Milliman recommendation or analysis?

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A. No.
Q. Okay. What's your best understanding of why the request was made, or what prompted the request that you look at a hundred percent funded status?
A. What prompted my request to look at a hundred percent funded status is that we were asked to look at a hundred percent funded status.
Q. No-no, I'm asking not what prompted your request. I'm asking if you have an understanding of what prompted the request to you. Why was the request made to you, to your understanding, that you look at a hundred percent funded status?
A. I don't have particular understanding of that.
Q. Okay. Do you have any information about why that request was made?
A. I don't have any information.
Q. Okay. And so no explanation was given to you, at the time the request was made, about why you were being asked to look at a hundred percent funded status?
A. Not to my recollection.
Q. This hundred percent funded status in 2023 is effectively, given this is written in March of 2014, effectively a nine-year amortization period for the DWSD liabilities, is that fair?

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A. This letter, in the title, says July 1, 2013, to June 30, 2023. So this was based upon a ten-year period.
Q. All right. Although the July 1, 2013, period had already begun and you were near the end of the fiscal year for 2013 at the time this was written, right?
A. That is correct.
Q. Okay. So you're doing some retrospective analysis here in assuming contributions for the 2013-2014 fiscal year?
A. In this analysis, that period is included.
Q. Okay. So, effectively, it would be a ten-year amortization period under this analysis?
A. Yes.
Q. Okay. But if you shifted the date to July 1, 2014, and did the same analysis, that would make it a nine-year amortization period?
A. If you kept the end date the same --
Q. Right.
A. -- yes.
Q. And I take it Milliman had never recommended a nine or ten-year amortization period for either the plan as a whole or for the DWSD assets, is that fair?
A. Yes.

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Q. And I think I've asked this, but just to make sure, that nine or ten-year amortization period, to your knowledge, is not based on any Milliman analysis or recommendation, is that right?
A. That is correct.
Q. And are you aware of any actuarial or accounting basis for the nine or ten-year amortization period employed here?
A. No specific actuarial or accounting basis.
Q. Did you ever make a determination that a nine or ten-year amortization period for either the DWSD liabilities or liabilities of the -- for the plan as a whole, that a nine or ten-year amortization period was more appropriate or desirable in any way than a 15-year period?
A. I did not make a specific determination on that in this case.
Q. Did you make a general determination on that in this case?
A. As a pension actuary, I'm happy to have more money come into the pension plan, always, other than I recognize that plan sponsors have competing uses for their funds.
Q. So other than that generalized desire, nothing, is

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that fair?
A. Yes.
Q. Had Milliman undertaken any research or analysis about whether a nine or ten-year amortization period is employed by any other public pension plans?
A. We did not research other public pension plans in conducting this assignment.
Q. Okay. So under prior GASB rules, assuming the ones that are currently in effect, as opposed to the ones that are about to phase in, there's no reason why a nine or a ten-year period is more appropriate under applicable actuarial or accounting standards than the 30-year period that Milliman had employed, correct?
A. You said the 30-year period that Milliman had employed.
Q. I'm sorry. Getting my actuarial firms confused. All right. Let's just talk about actuarial standards and accounting standards, I'll try not combine in it one question, make it a little simpler and get the right names.
There's no matter -- no actuarial standard that would dictate that nine or ten years is more appropriate than a 30-year closed amortization period, is there, under current actuary -- under actuarial

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standards?
A. There is no standard that states it in that fashion.
Q. And under -- let's talk about current GASB rules as opposed to those that are about to phase in. There's no reason why a nine or ten-year period for amortization is more appropriate under those GASB rules than the 30-year period that those rules permitted, correct?
A. GASB provides a range up to 30, as we've discussed, and I do not know anything in the standard which recommends a specific interim period as the most appropriate.
Q. Okay. And you haven't conducted an analysis of what the application of the new GASB rules would be to the amortization period here, correct?
A. Well, we mentioned earlier today that -- can I say strike that?
Q. Yes. You can say. It doesn't happen. It doesn't happen when I say it, either, but ...
A. We've not performed a GASB 67/68 valuation for the Detroit retirement systems.
Q. Okay. And just to ask again, the 6.75 investment return rate in this letter is net of administrative and investment expense, correct?

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A. I believe that to be the case here.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 50
2:40 p.m.
BY MR. BALL:
Q. Mr. Bowen, you've been shown what is marked as Exhibit 50, which is a letter dated April 10th, 2014, which has Bates numbers POA00259558. And again, my first question about this letter is whether it's a letter that you authored and signed?
A. Yes.
Q. Okay. And if you look at pages 3 to 5, we'll start with page 3, there's a discussion there about actuarial assumptions and methods?
A. Yes.
Q. All right. So let me ask, back up and ask a first question. At this point had you received the census data?
A. Yes.
Q. Okay. And is the analysis here based on your -- is it an actuarial valuation based on the census data you were provided?
A. Yes.
Q. Okay. And in -- on page 3, there's a discussion of

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post-retirement mortality. Do you see that?
A. I do.
Q. All right. And there's a discussion there about Gabriel Roeder Smith & Company. In the second sentence it says: Gabriel Roeder Smith & Company, the actuary for DGRS, has indicated that there is uncertainty surrounding the extent, if any, of allowance for future mortality improvement in this assumption.
MR. MONTGOMERY: Excuse me. Do you have a copy of that letter? I'd like to know if that's a document that was shared with the GRS and the retirement committee as part of the mediation process.
MR. BALL: Maybe counsel can pass one down. It's not addressed to you. It does, however, and it is going to get to the census data, because it does have a discussion of exchanges with Clark Hill. And this is the letter I was referencing earlier when I --
MR. MILLER: Well, it exchanges with Gabriel Roeder.
MR. BALL: Actually with Clark Hill, I think, if you look at Exhibit 3.
MR. MILLER: It's dated April 10th.
MR. BALL: Let me know when you're ready,

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Counsel.
MR. MONTGOMERY: I've handed the document to counsel for the retirement system.
MS. GREEN: I don't know by looking at it if it was part of the mediation clause or--
MR. MONTGOMERY: Okay, then I will say that it is not, because it was quite -- the date is quite similar, but I think this may actually be a different document, so ...
MR. BALL: Okay. I'll ask some questions and we'll see if we can figure it out.
MR. MILLER: Not quite yet.
MR. BALL: You're still looking, okay.
MR. MILLER: No. This document was not prepared in -- it was not a document that was ordered by the mediator to be distributed to other parties, and in the absence of such order would not have been.
However, page 3, and the particular paragraph that I believe you're about to question the witness on, memorializes certain conversations that occurred in mediation. And as I indicated earlier, the city's position as it relates to the scope of the mediation confidentiality is essentially as follows:
Conversations that occurred in mediation

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are confidential. Documents that were prepared and exclusively used in mediation would be confidential, and documents that were prepared and distributed to mediation parties as a consequence of the mediation order, and in the absence of such order would not have been communicated, also fall within the confidentiality protection.
Let me make this suggestion to the parties on the record. I think the way we can solve this problem is if the parties were willing to destroy the copies of this April 10th, 2014, letter that they have, and the city would be prepared to provide a version of this April 10th letter that redacts, I believe, one sentence that is the offending sentence and discusses --
MR. BALL: Which sentence?
MR. MILLER: The sentence that begins, Gabriel Roeder Smith & Company has indicated.
That is the sentence that reflects and memorializes a conversation and a communication that was made in mediation.
I think the remainder, from the standpoint of the city, the remainder of that paragraph does not reveal what went on in mediation and would therefore

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not be subject to redaction.
Does the retirement system or Retirees Committee have any additional observations to make on the subject?
MR. MONTGOMERY: For the record, co-counsel, after examination of the letter, I don't believe it's something the Retiree Committee received in the context of mediation, and we have no difficulty with an exclusion or redaction of that sentence.
MS. GREEN: The retirement systems do concur with the city that the portion of the letter that was quoted by Mr. Miller was indeed the subject of some mediation discussions, and counsel for Gabriel Roeder is also present here today and concurs that this is indeed something that arose out of mediation.
We have no objection to redacting the letter as Mr. Miller has set forth.
MR. BULLOCK: Whether it was stated or not, the context was mediation. So that's to be clear.
MR. BALL: Are there any other -- I want to consider that and let me talk with co-counsel about it, but are there any other portions of this letter, because there are certainly other portions I intend to ask about, because it is the assumptions here, the

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analysis here, used in several succeeding analyses and are specifically referenced there, and so I would like to know in advance whether there's anything else in this letter that you guys looking at it believe are subject to a mediation privilege. And we can take a few minutes --

MR. MUTH: Fairly asked, and so I suggest in the interest of time, let's take a five, ten-minute break. Each of the mediation parties that have an interest in this letter will look at it more carefully, and then when we can get back on the record, we'll identify if there are any other language elements that memorialize confidential statements in the mediation, and, concurrently, you can mull over the suggestion that I made in terms of how to handle the letter going forward for questioning. Great.

MR. BALL: Okay. Let's go off the record.

VIDEO TECHNICIAN: The time is 2:48 p.m. We are off the record.

(Off the record at 2:49 p.m.)

(Back on the record at 3:15 p.m.)

VIDEO TECHNICIAN: The time is 3:15 p.m. We're back on the record.

MR. MILLER: Okay. During the course of

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the break, I had an opportunity to speak with counsel for the Retiree Committee and the retirement systems, as well as counsel for Gabriel Roeder, and our collective judgment is that in connection with the letter that's been tabbed as Exhibit 50 in the exhibits, the only language in the body of the letter that reveals communications that occurred in mediation is the one sentence on page 3 that I previously mentioned. And so the city would be desirous of redacting that sentence.

MR. BULLOCK: It was the paragraph.

MS. GREEN: The whole paragraph.

MR. BALL: The whole paragraph?

MR. MILLER: No, that's not the judgment of the city.

MS. GREEN: Oh.

MR. MILLER: It is not the judgment -- let me finish and then you can go on the record.

The judgment of the city is that there is one sentence, the sentence that begins "Gabriel Roeder Smith & Company, comma, the actuary for DGRS," that reveals mediation communications, and the rest of that paragraph is not in conflict with the mediation order by the Court.

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In connection with the exhibits, however, I have been advised that Exhibit 2 was information that was expressly ordered by one of the mediators, Mediator Dryker, to be provided by the general retirement system to Milliman in a mediation session. And so we're going to take the position that Exhibit 2 is -- falls within the mediation order.

And in connection with Exhibit 3, similarly, that was the subject of discussion among actuaries at a mediation session, and the explanation and the description that is set forth in Exhibit 3 also is material that was ordered by the mediators to be provided to, to Milliman, and it was provided through Clark Hill.

And so we will also take the position that Exhibit 3 is mediation protected.

So the request of the city, to sum up, is that Exhibit 50 be destroyed, and the city is willing to provide a new redacted version of Exhibit 50 consistent with my remarks.

MR. BALL: Okay. So -- and I guess I should let the others involved in the mediation say what they have to say.

MR. BULLOCK: Speaking on behalf of Gabriel

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Roeder, I stand corrected with respect to the single sentence. That is subject to the confidentiality order. In the event, however, because of the expeditious nature of this review process where we stepped out into the hallway, if there is anything else within the body of the document that is subject to confidentiality order, we are not waiving the right to claim confidentiality protection or mediation protection.

MR. BALL: Okay. So the difficulty that that poses is that, as I understand it from reviewing each of Mr. Bowen's subsequent analyses, including those that are used to generate the numbers that appear in the plan for the UAAL payments to be made by the DWSD, they are derived from analyses using this data, and subject to the descriptions he provides in this letter. And so it's the position here that the information contained in those exhibits, which among other things discuss problems with the data and limitations with the data, and the extent to which it is reliable for the purposes for which it is being used are not to be subject to question or examination here today.

I would take it that the answer to that is

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you're going to object if I have questions, for example, about Exhibit 3.

MR. MILLER: That's right. We will, we will object.

MR. BALL: So I will say, for the record, that that's completely unacceptable, and to the extent that the -- I don't see how you can rely on the analyses he's performed and use them in the plan if they are dependent, as it appears they are, on information he's obtained purely in mediation and which we do not have the ability to cross-exam him about.

So I will talk to Mr. Neal for a few minutes about how best to proceed here today, but I don't understand how we can fairly examine the analyses that he has done without being able to question him about the limitations in the data that are recited in this letter.

MR. MILLER: Let's do the following. Why don't you speak with Mr. Neal, and I will also speak with the retirement systems and the Retiree Committee.

MR. JAMES: This is Mark James, on behalf of Financial Guaranty. At the last hearing on June 26, Judge Rhodes invited any issues arising

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during discovery to call his chambers. In the name of expediency, may I suggest that a call be made to Judge Rhodes' chambers? It's only 3:20.

MR. MILLER: I'm fine with that. The city does not want to unfairly impede this, this deposition. But -- and so I think that getting guidance from the Court is the right way to proceed, and I'd be -- I'd welcome that guidance. These are not easy issues. It's not easy to draw the line here.

So let's see if we can ring up the judge and get a quick ruling, and obviously the city will abide by it.

MR. BALL: Give us a couple minutes to consult.

MR. MUTH: Yeah, sure.

VIDEO TECHNICIAN: Off the record at 3:22 p.m.

(Off the record at 3:22 p.m.)

(Back on the record at 3:38 p.m.)

VIDEO TECHNICIAN: We're back on the record. The time is 3:37 p.m.

MR. BALL: The concert of Vienna has completed its negotiations.

Counsel off the record have discussed the

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letter, which is Exhibit 50, and the issues related to the mediation privilege and have reached this arrangement, and I'll state it for the record. If I get anything wrong, you'll correct me.

With respect to the single sentence in -- on page 3, under post retirement mortality, it has been objected to as revealing mediation discussions.

I will not ask questions today about that particular sentence. The rest of the paragraph is fair game, but I will not ask questions about that particular sentence.

With respect to Exhibits 2 and 3, we will ask the reporter to separate and seal the portion of the transcript that involves any questions I may ask about those portions of the letter, and we will attempt in the fashion we've discussed off the record to present the issue for resolution. If we can't work it out among ourselves, present that issue for resolution by the Court at an appropriate time, I assume as reasonably possible, and the exact timing is -- we haven't settled on, because we're going to try to see if there is something additional we can do to reach an informal resolution, but if we can't, it will be presented to the judge.

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The sealed portion of the transcript will be made available only to counsel who are present -- for the parties who are present at this deposition until the issue is further resolved, and I will say on the record when I'm about to ask questions about those portions of the exhibit and let you know when I'm done with those portions so it will be clearly demarcated.

Is that fair?

MR. MILLER: Yeah, that's a fair description of what the lawyers agreed to off the record, and indeed, as soon as practicable following the deposition, there will be a formal meet and confer, and the parties will work in good faith to try to reach a resolution on the subject without the necessity of judicial intervention.

MR. BALL: And we are, there's a possibility that other sources of evidence may moot some or all of the issue, and we'll see how that pans out, as well.

MR. MONTGOMERY: Counsel for the Retiree Committee agrees with the description.

MS. GREEN: Counsel for the Retirement Systems also agrees with the description.

MR. BULLOCK: So, too, does counsel for

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Gabriel Roeder.
BY MR. BALL:
Q. Okay. So let's go back to the letter, Mr. Bowen. Do you recall that we were discussing a letter dated April 10th, 2014, which is marked as Exhibit 50?
A. I do.
Q. Okay. And we had gotten to page 3, to the section that's headed post-retirement mortality. Do you see that?
A. Yes.
Q. Okay. And the results you prepared in this valuation were based -- prepared based on the post retirement mortality assumption used in Gabriel Roeder's June 30, 2012, actuarial valuation of DGRS, is that right? It's the first sentence, I believe.
A. Yes.
Q. Okay. And, however, Milliman had not been provided with historical data necessary to conduct an experience study in order to opine on the applicability of that mortality assumption for use in these analyses, is that right?
A. That is true.
Q. And, in fact, you recommend at the end of the last sentence that an updated experience study be conducted

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to develop a current best estimate of the expected future mortality experience of DGRS members. Is that right?
A. That is true.
Q. Okay. Did Milliman ever get the historical census data necessary to conduct the experience study you mention in this paragraph?
A. We did not.
Q. Okay. And did you ever perform or were you ever provided an updated experience study such as that you recommend in the last sentence of the paragraph?
A. We were not.
Q. Okay. And there's a reference in the next-to-the-last sentence, it says:
To the extent that members live longer than what is anticipated in the valuation mortality assumption, there will be a downward pressure on the future funded status of the system and a decreased likelihood of any benefit restoration to members.
Do you see that?
A. I do.
Q. What is the reference to benefit restoration to members about?
A. In the plan of adjustment, there is some provision for

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benefit restoration in the event of a significantly positive experience, better than expected.
Q. Okay. And had you seen the plan of adjustment -- at the time that you wrote this letter, had you seen versions of the plan of adjustment or the disclosure statement at this point?
A. I cannot recall at this point in time if it was verbal or an email direction in this assignment, but we had prepared letters. I don't know which came first.
Q. Okay. Was Milliman involved in any way in designing the provisions for benefit restoration that wound up appearing in the plan?
A. No.
Q. Okay. Did you have any involvement in developing the proposals that resulted in the benefit restoration provisions?
A. No.
Q. Okay. Do you know who developed those provisions?
A. I don't know specifically who developed them.
Q. Do you know generally who developed them?
A. Other than I imagine it was a group of people that I could not name all of in a negotiation process.
Q. Okay. Is there anybody in particular whom you know was involved in designing those provisions on behalf

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of the city?
A. I know that Mr. Miller was involved in that process.
Q. Okay. Anybody else?
A. With certainty, no.
Q. Okay. And was Milliman ever asked for input on the design -- were you ever requested to provide any input on the design of those provisions?
A. Not input on the design, no.
Q. What were you -- were you requested to provide input on something else related to those provisions?
A. We were requested to make measurements regarding how the design -- how things may occur.
Q. So the design was presented to you, and then you were asked for evaluations of what results would obtain with that design in place?
A. Yes.
Q. Okay. So it was provided to you as a parameter, is that --
A. Yes.
Q. -- what you're saying?
A. Yes.
Q. This letter is dated April the 10th. A Gabriel Roeder's June 30th, 2013, valuation was issued -- strike that.

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Gabriel Roeder's 75th annual actuarial valuation of the GRS as of June 30th, 2013, was issued on April the 4th, about a week earlier. Had you seen Gabriel Roeder's latest report at the time you prepared this letter?
A. I do not, I do not believe -- at the time I prepared this letter, I'm not certain, but I don't recollect whether I had or hadn't.
Q. Okay. The reason I ask, of course, is it says in this letter that you're relying on the June 30th, 2012, actuarial valuation. And so I was trying to figure out whether if at this point you already had the 2013 in hand or not.
Does that refresh your recollection in any way?
A. Yeah, to the extent that it's possible we received a draft copy, that's a possibility. I can't place all the dates exactly in sequence.
Q. Did you go back and modify your analysis in any way -- well, let's start with the post-retirement mortality point. Did you modify your analysis in any way after receipt of the June 30th of 2013 actuarial valuation?
In other words, you're relying here on this version. Did you perform an analysis that updated

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this post -- this portion of your analysis on post-retirement mortality based on the June 30th, 2013, actuarial data?
A. I do not remember doing that.
Q. Okay. And so there are a number of subsequent analyses that you performed that incorporated the analysis of the data that's presented in this April 10th letter. Do you recall that? I mean, I can show them to you, but there are a number of --
A. Yes, I do recall.
Q. Okay. And so when you did those subsequent analyses, your recollection is that you did not go back and update this portion of the analysis to reflect the 2013 Gabriel Roeder report, is that fair?
A. That's correct.
Q. Have you ever looked at whether any modification of your analysis would be warranted if you used the June 30th, 2013, valuation instead of the June 30th, 2012, valuation? In other words, would it make a difference if you had used the later report or not, do you know?
A. I think in terms of this overall analysis, the phrase "used the valuation" is not an appropriate characterization. This analysis is based upon census

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data provided by the valuation system and an independent valuation by Milliman. These pieces that are listed in the letter are pieces that we have taken from the Gabriel Roeder valuation.
Q. All right, fair enough. So I was imprecise in the question, and I apologize for that. My question is, here you used a particular assumption from the June 30th, 2012, version of the Gabriel Roeder report, correct?
A. That is correct.
Q. Okay. And I'm asking whether you looked at the subsequent version to see if that warranted any change in the assumption that you used when you did this analysis using the 2012 version of the report.
A. I reviewed the 2013 valuation report for DGRS, prepared by Gabriel Roeder.
Q. Okay. I know you reviewed the report. I'm asking whether you analyzed whether the June 30th, 2013, report, and the assumptions it used about post-retirement mortality, whether those warranted any change in the assumption you used in relying on the June 30th, 2012, version of the report.
A. My review of 2013 did not indicate any change was warranted.

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Q. Okay. So did you look at it specifically to see whether a change was warranted based on the 2013 report or -- I'm just asking whether you looked at that issue, specifically.
A. The review of the report was many fold, and that issue was looked at as a portion of the review of the report.
Q. Okay. So you looked at it, and you concluded after review of the June 30th, 2013, report that it did not warrant that you revise the post-retirement mortality assumption that you used in this April 10th analysis?
A. That's correct.
Q. Okay. If you look at compensation, it also says that you -- which is at the bottom of page 3 and on to page 4, it also says that you used the June 30th, 2012, actuarial valuation, and then you estimated compensation for the 2013-2014 year, fiscal year using the June 30th, 2012, actuarial valuation.
Did you go back and look at that set of assumptions in light of the June 30th, 2013, actuarial report issued by Gabriel Roeder to see whether there was -- that report, for example, provided you -- provided information that warranted a change in your assumptions?

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A. The development of this methodology, assumption set, was a result of mediation discussions between the actuarial firms.
Q. Okay. What I see it saying here is that you used the June 30th actuarial valuation and that you estimated it, the 2013-2014, based on the June 30th, 2012, actuarial valuation. Is that what you did, or did you do something else based on mediation?
A. We did what is stated here as a result of mediation discussions between the actuarial firms.
Q. All right. So does that mean you did not go back and look at those assumptions in light of the June 30th, 2013, Gabriel Roeder report to determine whether any alteration in your assumptions was warranted?
A. This analysis we're looking at is not a 2013 valuation by Milliman, to the best of my recollection. And so, to that extent, there was no reason to go back and look at that for this analysis.
Q. Okay. It does say, does it not, at the top of page 4 that you're estimating compensation for the 2013-2014 fiscal year, doesn't it?
A. Yes, it does.
Q. Okay. And that you did that using the 2012 actuarial valuation?

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A. Using the merit and seniority salary increase assumption in the 2012 valuation, not using the 2012 valuation.
Q. All right, so using the assumptions. Again, I apologize for saying valuation instead of the assumptions from the valuation. I'm just asking, did you look at the 2013 report to see whether your reliance upon the assumptions used in the 2012 report were still warranted?
A. I did not, because those are apples and oranges.
Q. Okay. And you are looking for estimated liabilities as of June 30th, 2014, correct?
A. In this analysis, yes, 2014.
Q. And did you look at -- when you received the 2013 valuation, did you look at what the actual salary increases had been in the additional year of experience that you had?
A. The 2013 valuation would not have provided compensation for 2013-2014.
Q. Right. It would have provided it for the year preceding that, right?
A. It would have provided the change from '11-'12 to '12-'13.
Q. Right, which you did not have until you saw that

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report, right, saw the 2013 report?
A. We had census data as of June 30, 2013, from the system, which we relied on in our analysis.
Q. Then why are you saying that you relied on -- you used -- compensation for the 2013-14 fiscal year was estimated, using the merit and seniority salary increase, if you actually had that data?
A. I'm guessing that we did not have 2013-14 compensation in the 2013 data and had to estimate it for this purpose.
Q. I'll see if there are other questions I want before I get to the --
Okay, the next question will relate to Exhibit 2, at least the portion of the tax reference in Exhibit 2, so I would ask that we start the sealed portion of the transcript here.
(At this point in the proceedings a portion of the record was excised, made a separate record, and put under seal)
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 51
4:27 p.m.
BY MR. BALL:
Q. Okay, Mr. Bowen, you're being shown what has been

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marked as Exhibit 51, which is a letter dated April 14th, 2014, and is Bates-stamped POA00259476. And so my first question to you is, is this a letter that you authored and signed?
A. Yes.
Q. And it is an analysis for the DGRS, and for what it would take in certain parameters for the DGRS to have 70 percent funded status in 2023, do you see that?
A. I do.
Q. And it asks you to assume that the DWSD will not be spun off, but will reach -- but will make contributions sufficient to reach a hundred percent funded status for the DWSD as of 2023. Do you see that?
A. If you could point me to it, I ...
Q. Sure. In the project description and -- on page 2, and then DWSD contribution projection on page 3.
A. Okay. It says DWSD contribution projection is discussed in more detail below, so page 3.
Q. Right.
A. Okay, I see that on the top of page 3.
Q. All right. And so the concept is that the DWSD will contribute the full amount of its allocated unfunded liability on the market value assets basis over a

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nine-year period, right?
A. That is correct.
Q. And that would be through June 30 of 2023 under this analysis, right?
A. Yes.
Q. So -- and there are other specified contributions here from other sources, from non-DWSD sources. Do you see that?
A. Contributions from non-DWSD, I do see that.
Q. Okay. This is the first analysis that I've seen, or the earliest analysis I've seen in which there's a concept of DWSD not being spun off but DWSD, separately from the rest of the city, making contributions that fund its entire UAAL, allocated UAAL by 2023. Is that consistent with your recollection?
A. I can't guarantee you this is the first, but there was a first.
Q. Okay. Can you explain whose idea it was to have -- or do you know whose idea it was to have DWSD make contributions over a nine-year period without the rest -- and reach a hundred percent funded basis over a nine-year period without the rest of the city and the remainder of the contributors to the GRS make

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similar funding, so that there is a disparate amortization period for DWSD and the rest of the city?
A. I do not know the individual who had the original idea.
Q. Okay. How did you learn about it?
A. Upon the request to complete this project.
Q. Okay. And do you have any understanding about why you were being asked to analyze a scenario in which there would be that kind of disparate amortization period between the DWSD and the rest of the city?
A. I can't say that I had specific information as to why this request was initiated.
Q. Okay. Did you have an understanding at the time?
A. I find it difficult to answer that question, which is in the style of similar questions. The assignment was provided to us and the assignment was self-evident, if you will, and, beyond that, had an understanding as needed to complete the assignment and completed the assignment as requested.
Q. Were there any specific communications to you about the purpose of the structure such as that and why you were being asked to analyze a structure such as that?
A. Again, when I say it's self-evident, I mean that we were told -- or, you know, the request is that you

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model DWSD paying their full unfunded liability over nine years, and my response was, okay, I understand the request.
Q. Okay. And I understand that you understood what parameters were being provided to you. I'm asking if you understood the purpose for which those parameters were being requested.
A. It's very difficult to answer yes or no. Obviously, the description of the project request itself indicates what's under consideration. In terms of any particular mediation or negotiation session that may have arisen from, I was not involved.
Q. And were there any commune -- apart from just telling you what the parameters are, and I understand that carries a certain amount of information with it, did you get any other communication about what the purpose of the analysis was?
A. Not that I recall.
Q. And we've talked before about the market value of the assets and how you used Gabriel Roeder information to analyze the share of the assets that were attributed to the DWSD. Do you recall that?
A. I do.
Q. Okay. And in this analysis, did you take the same

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approach as you've discussed previously in earlier analyses?
A. I think it was one step more complex. It was based on the same approach, but then we had to project forward to 2014.
Q. 2023?
A. No, 2014.
Q. 2014?
A. Yes.
Q. And so the numbers you were using at this point were Gabriel Roeder numbers in the June 30th, 2013, report?
A. That was the initial numbers used in the first part of the analysis.
Q. Okay. And how did you roll those forward to 2014?
A. The bottom of page 3, the second, second-to-the-last sentence in the big paragraph discusses the estimated market value of assets as of June 30, 2014, attributable to DWSD was 477 million. This amount was estimated in the same manner as the estimated market value of assets for the entire system.
So we were provided with an estimate of actual market returns during 2013-14 used to roll the entire system's asset forward, and then an allocation was done to DWSD to get a 2014 estimated starting

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point.

Q. Okay. Do you know whether that method of rolling forward and the resulting allocation to DWSD is consistent with the allocation methodology that had been used by Gabriel Roeder and/or the city to allocate assets between DWSD and other components of the city that you had relied on in your prior analyses?

A. I don't know.

Q. Okay. And did you ever discuss with anyone from Gabriel Roeder or from the retirement system or anyone else whether that, that roll forward of the analysis and the method that you used was consistent with what -- the historically-used methodology for allocating assets between divisions in the city?

A. I don't recall those conversations.

Q. Okay. So the best of your recollection is you did not have such conversations, is that fair?

A. That is fair.

Q. All right. Did you attempt to undertake any analysis of whether or not the methodology you're using here is consistent with the methodology that had been used historically to allocate assets between different divisions of the city?

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A. I did not.

Q. If you look at the first couple of pages, it references that you're applying a 6.75 percent investment return assumption. Am I correct that that is net of admin and investment expenses?

A. In this letter, it appears it is net of investment expenses.

Q. And admin expenses?

A. Not net of admin expenses.

Q. Okay. And can you show me where in the letter it reflects that the 6.75 is net only of investment and not admin expenses?

A. The bottom of page 2 states the amount of administrative expenses that were applied, and, actually, the sentence prior to that states that it is net of investment expenses.

Q. Okay. Until this point, every iteration of the investment return assumption has provided or as you've understood to be net of both admin and investment expenses, is that fair?

A. That is fair.

Q. Okay. What prompted --

A. I'm sorry, this letter states what's done in this letter. I cannot specifically guarantee that there's

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not a interim letter out of a whole series of letters.

Q. And I will say to you that --

A. This is the first one you found.

Q. This is the first one I've seen, and we've looked at a number, including the April 10th letter, which was four days before this, that still specifies a rate that is net of admin and investment expenses, and everyone we've looked at so far has involved that. If there's an earlier one, I'm happy to see it.

But my, my question to you is, what has prompted the change? Why is it now that the 6.75 percent rate that you've looked at repeatedly, in a way that was net of both admin and investment expense, is now being presented as net only of investment expense and not admin?

A. This was a request from the city that came along with this project.

Q. And so other than knowing that that's what the city requested, do you have any understanding of why it is that a shift has occurred so that the investment return assumption is to be net only of investment and not admin expense?

A. No particular reason for any of the shifts, including this one.

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Q. All right. I assumed that's the case, but I have to ask the question.

A. Understood.

Q. Okay. And in the result section, can you show me where it reflects the addition of admin expenses?

A. If you look at the exhibit, which is Bates 259485, at the bottom of the exhibit there is a vector of expected benefit payments, and they're indicated as a negative because they're a cash outflow, and a vector of expected administrative expenses by fiscal year.

Q. Okay. So those are all in parentheses, indicating that there's been a -- there's an outflow for admin expense in addition to the, so that you're actually subtracting it from the results here?

A. Correct.

Q. Okay. And so if I wanted to see whether any of the earlier analyses involved a rate that was net of admin expense or in addition to, would I see a similar kind of entry in the charts for prior letters?

A. I'm sorry, you'll have to take that from the top again, please.

Q. In other words, you have charts like this in most of the letters. I assume if I wanted to know whether the rate that you proposed -- that you analyzed was

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intended to be net of admin expense or to not be net of admin expense, a way of checking that would be to look at any such chart and see whether it reflects a charge for admin this way?
A. I believe that's reasonable to assume, yes.
Q. All right, and -- and so the admin expense would be part of the contribution from DWSD in this scenario, where the investment rate is not net of admin expense?
A. I'm sorry, could you repeat that again?
Q. Sure. When you were analyzing DWSD's contributions here, is the result of excluding admin expense from -- providing an investment return assumption that is not net of admin expense, that DWSD would wind up paying a component of admin expense as part of its contributions, separate from -- as a separate part of its contributions?
A. It doesn't note in this letter, unless I'm missing it, that DWSD was assigned a portion of administrative expenses.
Q. Okay. So in this letter, the investment return assumption is not net of the admin expenses, but there's no reference here to the funding that DWSD is required to make, including an additional component for admin, is that fair?

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A. Just give me one second to confirm that, please.
I don't see any specific reference in this letter to assigning a portion of administrative expenses to DWSD.
Q. There is a results section on page 6. It says it's based on a city-specified iteration methodology. Do you see that?
A. Yes.
Q. Can you explain what that means?
A. I cans. I'll need to refresh my memory, momentarily. At the top of page 3 describes the iteration process.
Q. Okay. Can you explain what you mean by "iteration"?
A. Sure, and I will. Just let me finish the paragraph, please.
Q. Sure, go ahead.
A. The -- to get to the end -- the iteration is moot, but I'll describe the process to you. The concept as stated in the initial paragraph on page 2 was that DWSD would be charged the full amount of their unfunded liability over the nine-year period, and an iterative process would be set up such that we would run that analysis, but those assets would be available to all members to support benefit payments for all members.

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Then the process would be run again, and again, and again, and again, until DWSD was -- reached their, reached the limit which was their unfunded liability, and that was the way the project was described to us. The result of that is, is there is no iteration. We figured DWSD's entire unfunded liability, and it was amortized over a nine-year period. And in the very first step they were at their limit, and there was no further iterations needed.
Q. Okay. The nine-year period here, we've discussed an earlier version of a review of DWSD as a spinoff, in which we talked about the nine year, the nine or ten-year amortization period.
I take it the same answers would hold here as did in our prior discussion, that the nine-year period is not a product of a Milliman analysis or an actuarial analysis, is that fair?
A. That is fair.
Q. And it is not the product of a Milliman recommendation, is that fair?
A. That is fair, as well.
Q. And you just mentioned in -- can you tell me what the amortization period is for the city under this analysis -- for the rest of the city, other than DWSD?

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A. I'm not sure that that's included in this analysis, but I'll take a look and see if it happens to be.
Q. I think it may not be, but that's --
A. Okay. I see nothing in here that indicates that the rest of the city was subject to any particular amortization period in this analysis.
Q. And, in fact, the concept is that the city, other than DWSD, is not going to be contributing towards paydown of the UAAL during this nine-year period at this point, right?
A. There is -- there's a contribution in the first year which is larger than the subsequent eight, and I'd have to check and see if we have indicated in the letter what that contribution represents.
Q. Is it consistent with your understanding that that was coming from other sources besides the DWSD?
A. I'll just -- if you give me a moment, I'll check and see if I can find where we would have mentioned that.
Yeah, there is a contribution labeled as non-DWSD, but I don't see anywhere in this letter where we specifically stated what the source of that non-DWSD contribution was, unless I'm missing it still.
Q. Okay. You eventually did another -- other analyses

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that involved DWSD's hundred percent amortization by 2023, correct?
A. We did additional analyses, yes.
Q. And those -- and is it your understanding under the plan that ultimately gets proposed as to whether -- that that involves a contribution by DWSD, contributions which result in amortization of its entire unfunded liability over nine years, correct?
A. I do recall doing subsequent letters with that parameter for DWSD.
Q. And do you have an understanding that under the plan as proposed by the city, that the city itself, the rest of the city, as opposed to private sources and the state, and other sources besides the city would not contribute towards UAAL during the first nine years?
A. You may be putting them front of me soon, but I do recall letters where we listed by bullet point the source of the contributions, and there were some acronyms that I recall that I'm not sure who they were, and we listed them -- we used the dollar amounts. We ran the analysis.
Q. Okay. But, in general, the effect of what's being proposed here is that contributions by the DWSD and

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some private sources, principally, and perhaps state sources, will fund the entire UAAL for the first nine years and have the system as a whole reach 70 percent funded without equal contributions on a similar amortization period by the balances, is that fair?
A. As I said, we have letters where we have illustrated a variety of sources of non-DWSD contributions. I can't exclusively say that none of them were a city source.
Q. All right. Until this, until this period -- until this letter, in general, your analyses had assumed the same amortization period for the city as a whole and for the DWSD, is that fair?
A. If you could refer me to a particular letter or a particular subset of letters ...
Q. We've seen a number of them earlier today, where we looked at -- those companion letters we looked at, which looked at getting both the DWSD and the GRS to a 70 percent funded level in 2023. Do you recall that?
A. Yes.
Q. Okay. And here what's being proposed is that the DWSD would be at a hundred percent funded level and that the remainder of the city, the fund as a whole, will only be at a 70 percent funded level. Is that right?
A. You've got --

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Q. The system as a whole would only be at a 70 percent funded level.
A. We did letters of that variety.
Q. Well, in fact, this one says that DGRS estimated liability reduction -- you were analyzing the liability reduction they would need in order for the system as a whole to have 70 percent funded status in 2023, and the contemplation is that DWSD will be a hundred percent funded at that point, right?
A. Yes.
Q. Okay, and so -- and that the funds contributed by DWSD are going to be available not just to satisfy obligations with respect to DWSD retirees or actives, but with respect to anybody in the system, correct?
A. That was the origin of the iterative methodology requested in this letter.
Q. Right. And was there any justification provided to you for treating DWSD and the rest of the city differently?
A. There was no justification provided to me for that.
Q. All right. Did you ever analyze whether it was appropriate to treat the DWSD differently from the balance of the city in terms of amortization period or the point at which it reached a hundred percent funded

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level or 70 percent funded level? Did you ever analyze that?
MR. MILLER: Object to form.
A. I don't deem that analysis as within the actuarial sphere.
BY MR. BALL:
Q. Okay. Isn't the result of this that, that disparity in amortization period between DWSD and the city, at the point at which they reach a hundred percent funded status, that DWSD rate payers in early years will be responsible for funding the liabilities associated with non-DWSD personnel, because those funds are going to be available to satisfy claims for anybody?
MR. MILLER: Object to form.
A. I have a couple issues that I'll say are unclear from your question. In this analysis, there is no amortization mentioned for the rest of the city, and beyond the first year I'm -- beyond the first year it appears there's no city contribution; what, if anything, is represented by the contribution in the first year is not listed in this letter and may not have been provided to us in any bullet point detail.
Your question about rate payers is, in my mind, beyond the actuarial analysis of developing a

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contribution stream and saying that it is on behalf of a liability in a subgroup of the system.
Q. Okay. Let me ask about that. We discussed earlier the notion of intergenerational equity, right?
A. Mmm-hmm.
Q. And we discussed the idea -- what is an important actuarial concept, right?
A. I agree.
Q. Okay. And part of the derivation of that is the concern that those who have benefitted from the services should -- provided by the people whose retirement benefits in question should fund those services, those benefits, correct?
A. That is the concept.
Q. Okay. And so in a scenario where DWSD is -- so let's back up to the amortization period.
In this scenario, DWSD is going to be a hundred percent funded in 2023, correct?
A. Given future experience matching the assumptions used in the scenario, yes.
Q. But that's what you're projecting here?
A. That is the target of the ...
Q. And the target here is that the system, as a whole, is only going to be 70 percent funded, right?

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A. That is correct.
Q. Okay. So for the balance of the city, it is obviously the case that the amortization period is going to be longer than nine years, would you agree with me about that? Since they're only going to be 70 percent funded in 2023, presumably they're not going to reach a hundred percent funded status until sometime after that, if ever?
A. Then just to put a fine point on it, so I can let you know where some of my confusion is, I'm not sure the city has an amortization period that I would recognize as such during this nine-year period if they're not making payments, so ...
Q. Right, that's fair. But, at a minimum, they will not have reached -- while the DWSD will have paid out over a nine-year amortization period, the city, if it's paying at all, is going to reach a hundred percent funded status, at a minimum, at some point later, at a minimum at some later date, right?
A. That is this analysis, yes.
Q. Okay. And so isn't it true, in that analysis, that the DWSD is funding liabilities, effectively funding liabilities, because the amounts it's contributing are going to be available to pay claims for the entire

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system, that it is funding liabilities that are associated with services provided by other parts of the -- by employees of other parts of the city under this contract?
MR. MILLER: Object to the form.
MR. MUTH: Object to the form.
A. I think it's important to parse that. DWSD is contributing on behalf of liabilities that arose due to past service of DWSD members. The statement in the letter would have been based upon conversations or emails that developed in the project description that the money is going in and is not going to be segregated in a DWSD account. That's my understanding of this letter.
Further, my understanding, which I did not have to generate in terms of this analysis, is that the DWSD would be assigned their employer contributions in their asset roll forward in the four subcomponent breakout, and that would be, that would be what it is.
BY MR. BALL:
Q. I agree with that, and I believe I understand that, but, in the meanwhile, in fact, the assets that are in the system that would have been contributed by DWSD

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would be available for and be used for liabilities associated with employees of the other divisions of the city, correct? That's part of the assumption here.
A. That is stated in the letter, yes.
Q. Okay. And so in 2023, in a scenario in which the city is unable to contribute further because it has further financial difficulties, DWSD would be left having funded the benefits associated with services provided by employees in the other parts of the city, and the remaining funds to pay benefits for DWSD employees would be impaired, right? It would be less than the full contribution available to fund DWSD's own employees, right?
MR. MILLER: Object to form.
A. I do not know what the resolution would be in the scenario that you describe.
BY MR. BALL:
Q. All right.
MR. MUTH: Counsel, do you know how much more you have? Because if it's not going to be, you know, five or ten minutes, I'd like to take a break.
MR. BALL: It is probably about fifteen or twenty minutes.

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MR. MILLER: Yeah, can we take a quick break?

VIDEO TECHNICIAN: The time is 5:02 p.m. We are off the record.

(Off the record at 5:02 p.m.)

(Back on the record at 5:13 p.m.)

VIDEO TECHNICIAN: We are back on the record. The time is 5:13 p.m.

BY MR. BALL:

Q. Mr. Bowen, have you undertaken any analysis of whether it's appropriate as an actuarial matter to apply different amortization periods to DWSD than to the balance of the participants under the GRS plan?

A. No.

Q. Okay. And are you aware of any actuarial basis for applying different amortization periods to the DWSD than to other portions of the -- other participants in the GRS plan?

A. No.

Q. Okay. And if you were advising an employer who's participating in a multi-employer benefit plan, where the other employers involved in the plan were not economically or financially stable, and the fund assets were not segregated by employer, and there was

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a proposal made that your client assume all funding obligations for the first nine years for an outstanding UAAL balance, with the other employers deferring any contributions towards the UAAL until after that, what would you advise your client?

MR. MUTH: Object to the form. You're asking an opinion question of a lay witness.

MR. BALL: Okay.

BY MR. BALL:

Q. You can answer.

A. I don't consult on multi-employer plans, so that's the first piece of your question. And you asked what -- your question was what would my advice be?

Q. To the employer that you represent in those circumstances.

A. Beyond providing the calculation, if that was my task in such a construct as you have set forth, I'm not sure whether there's any further actuarial advice to that employer.

Q. Okay. So you wouldn't provide any advice about that topic to the employer in that scenario, other than just running the calculation?

A. From an actuarial perspective, I don't know that I would have additional advice to provide beyond.

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Q. And without the limitation from an actuarial perspective, would you have advice to provide?

MR. MUTH: Same objection.

THE WITNESS: And that means I ...

MR. MUTH: You may answer if you've got an opinion. You respond to his hypothetical.

BY MR. BALL:

Q. You gave the qualification from an actuarial perspective, and I just want to know if you eliminated anything from your answer as a result of that qualification.

A. No, I'm trying to just make sure I understand what I can and cannot answer. If I am hired as an actuary, I would provide advice from my perspective as a pension actuary. If the matter moved into a legal realm, I would advise that my client seek the advice of their counsel.

Q. Okay. Other than that, any other advice that you would provide?

A. I think the advice beyond the actuarial advice all falls outside of an area that I could practice in.

Q. In the exhibit we've been looking at, which is Exhibit 51, the April 14th letter, if you would look with me at page 8, is the analysis here based on the

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actuarial valuation that is reflected in your April 10th letter?

A. Well, it says under basis for analysis: Except as indicated above, this analysis is based upon the plan provisions, actuarial assumptions, methods, and census data set forth in the April 10th letter.

Q. Okay. And there's a copy of the April 10th letter attached?

A. Yes, it is attached.

Q. And so there are places in this letter where it specifically says you're not doing what you did or relying on the April 10th letter, but with that exception, your actuarial assumptions, methods, and census data and plan provisions that you're relying on are set forth in the April 10th letter?

A. That's the construct, yes.

Q. Okay.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 52
5:19 p.m.

BY MR. BALL:

Q. Mr. Bowen, you've been provided what has been marked as Exhibit 52, which is a letter dated April 25, 2014, and the Bates number is POA00259371, and my first

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question to you is, is this a letter you drafted and signed?
A. Yes.
Q. And if you look at page 8, do you see the similar incorporation of your analysis from April 10th that we just discussed from -- that was reflected in your April 14th letter, this letter, too, relies on the April 10th letter in the same fashion, is that right?
A. Yes, except for as indicated.
Q. Okay. And in this letter, you again are analyzing getting -- how the DGRS, as a whole, can get to a 70 percent funded level from 2014 to 2023, is that right, over that period?
A. Yes.
Q. Okay. And there are various other parameters specified, but one of them is a 6.75 investment return. Do you see that?
A. Yes.
Q. And the 6.75 percent investment return here is, again, net of investment expenses but not admin expenses? And if you look at pages 2 to 3, I think you'll see that.
A. I see that.
Q. Okay. And in this letter there's still an analysis --

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there's still the concept here is that the DWSD is going to contribute to reach a hundred percent funded status on the DWSD share of unfunded liability over a nine-year period, so by 2023, correct?
A. I mean, yes, but that's not the entire picture.
Q. Okay. What's not the entire picture about it?
A. In this April 25th letter there are additional benefit changes made that were not included in the April 14th letter.
Q. Fair enough, and there -- each of these letters had some different analyses about benefit reductions or treatment of recoupment of the ASF funds, and things like that, other things that are going on on the liability side besides the DWSD's contribution. Is that fair?
A. That is fair.
Q. Okay. But the idea is still that the DWSD is going to contribute and going to pay a full amount of its allocated unfunded liability on a market-value basis over nine years, correct?
A. That is correct.
Q. And that in addition to that, it's going to pay another 2.5 in administrative, 2.5 million per year in administrative expenses, correct?

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A. That is at the top of page 3.
Q. Okay. What is the additional 2.5 million per year in administrative expenses? What is that?
A. That is a rough proxy of the DWSD portion of the overall system administrative expenses.
Q. Okay. And is that -- had there been any charge before this letter to DWSD for those expenses contemplated in the prior letters?
A. Again, we wrote letters very frequently, so on April 14th there was not that explicit charge to DWSD. In the April 25th letter, there was.
Q. Okay. Can you explain how it came to be that you included that expense in the April 25th letter as an item to be charged to the DWSD?
A. We were requested to include an allocation of the expenses to DWSD.
Q. And had you done any analysis or made any recommendation that prompted the use of the 2.5 million dollar figure for administrative expenses here?
A. We were requested to allocate expenses to DWSD. It was not Milliman's suggestion to do so.
Q. Okay. And were you directed specifically to use the 2.5 million dollar figure for those expenses?

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A. To the best of my recollection, we were requested to do some fractional allocation, and upon looking at the fractional allocation, we said let's use a flat 2.5 for simplicity instead of trying to use numbers that vary very little over the nine-year period.
Q. Okay. Is there anything in this letter that reflects you're doing that calculation as opposed to being directed by the city to use that contribution schedule that specified a 2.5 million figure? And the reason I'm asking is, as I read the first sentence under DWSD contribution projection, it says the city's specified contribution schedule is based on a concept of, and then it says plus 2.5 million.
So I'm just trying to figure out if that's something you derived or something you were told to do.
A. Well, let me address what I believe may have been the scenario. As I probably mentioned over the course of the past two days, projects don't come in complete and/or clear. So we'll have a back and forth with the pension task force to define and/or ask for clarification as to what we propose to do, and the way this may have arisen was assign some percentage of the overall administrative expenses to DWSD, and in the

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process of developing the project scope, we noted you're going to have a large DWSD contribution on behalf of the unfunded liability and a relatively much smaller contribution on behalf of their administrative expense.

And we can parse -- or we can try to fine-tune what might be 2.45 million, 2.47, 2.49, 2.51, 2.53, something of that nature, or for simplicity, how about we just use 2.5. And if I had asked that and the city said yes, I don't know that we can specifically say it's a Milliman recommendation to assign 2.5 million in expenses, but in the back-and-forth of the defining the project description, we may have said we have a simpler way of accomplishing the same goal.

Q. All right. My only question about that is, are you assuming that that's what may have happened, or do you recall that's what happened?

A. I do recall that that, that type of conversation is something that I had. I cannot specifically say this particular letter, but when the numbers are for administrative expense small relative to the contributions and the liability, it didn't seem to make sense to say let's go to another decimal place.

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Q. Okay. Now, are these administrative expenses that are being covered here things that would have been embraced with the investment return assumption, when the investment return assumption that was being provided was net of investment and admin expense?

A. Yes.

Q. Okay, so -- and did you do any comparison of what -- there was a specified level of assumed administrative expenses, a percentage of assumed investment return, do you recall that? In the November 4th letter, for example, you adjusted down from an expected rate based on a presumed level of administrative expense.

A. Yeah, I'm mixed up --

Q. It was a number of basis points that --

A. For -- I'm sorry, please continue and then I'll respond.

Q. I'm sorry. I didn't mean to interrupt you, and it's getting late in the day, so I apologize. But do you recall that in your November 4 letter, there was a specific basis point load for administrative expense that was deducted from a gross investment return to reach the net investment return, along with several other items that were deducted?

A. I don't recall that being the case in the November 4th

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letter.

Q. Okay. And that's the letter that analyzes the investment return?

A. Yes, that's the one I'm thinking of.

Q. All right, let me ask you to looking at what was marked as Exhibit 2, and look at page 3, in particular -- actually, page 5 of the letter.

A. Okay.

Q. All right. In this letter there is an assumption that administrative expenses would be added to the normal cost for the fiscal year. Do you see that?

A. Yes.

Q. Okay. And do you know whether administrative expenses were contemplated in subsequent analyses to be included in the normal cost for the year as opposed to payment for UAAL?

A. We looked at -- in the progression of the last several letters you've shown me, at one point in time they weren't and then at one point in time they were.

Q. Okay. There's been two letters, I think, the last, this one and the one before it --

A. Okay.

Q. -- that, that were -- where admin expense was -- the interest was not net of the admin expense. So the

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assumption at least until the last couple of letters that we've looked at was that admin expense would actually be included in the normal cost, is that right?

A. I'm, I'm very sorry, that was -- I wasn't able to follow it. Between the November 4th letter -- could you just please repeat?

Q. It's fine. I think we've got it, anyway. But at this point you are adding in as a part of UAAL an additional payment for admin expense that hadn't been reflected until the last -- until this letter, in fact. This is the first letter we've seen where you were adding in an additional payment for admin expense as part of UAAL, is that fair?

A. It's not added in as part of UAAL, and it effectively is a re-characterization of what the numerical, the denominal numerical amount of the investment assumption means.

Q. Fair enough. You are specifying an amount in this letter as an amount to be paid for UAAL amortized over nine years for the DWSD, is that fair? Among other things, you analyzed that, right?

If you look at results on page 6, there's a 42.9 million per year that you analyze being the

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annual contribution for DWSD using the nine-year amortization period, is that right?
A. Yes.
Q. Okay. And that's a payment on behalf of -- in respect of UAAL, is that fair?
A. Yes.
Q. Okay. And then the 2.5 million you add in here, but you're saying it's for admin expenses, not actually part of the UAAL, is that fair?
A. That is.
Q. Okay. And so the result is 45.4 million added to -- I mean per year, inclusive of the UAAL payment, and 2.5 million of admin expense?
A. Correct.
Q. And the total payment that the DWSD winds up making under this analysis is 408.6 million for the nine-year period?
A. That's what's stated, yes.
Q. Okay. We have discussed the market value of assets previously, and there's a -- I just want to understand how you derive the market value of assets you used for the purposes of this analysis, and I believe that's set forth on page 7?
A. I'm not sure if I can ask you questions, but I'll say

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the 2014 assets?
Q. Right. So you do an analysis that assumes the market value of the assets has increased by 11.3 percent in the 2013-14 fiscal year?
A. Yes.
Q. And then you apply 6.75 percent as an investment return rate thereafter?
A. Yes.
Q. Okay. And in terms of the allocation between DWSD and other components of the city, did you do the same sort of analysis here that we discussed you having done in prior letters?
A. Yes, as on page 3.
Q. Okay, and the difference -- in this case you used the June 30th, 2013, Gabriel Roeder report, is that fair?
A. Yes, we did, the June 30, 2013, report.
Q. And you got to the numbers for 2014, the roll forward that you did here, in the same way as in the letter we looked at earlier, is that fair?
A. Yes.
Q. And you again have not done any analysis of whether that methodology squares with the asset allocation methodology that was used by Gabriel Roeder or the retirement systems to develop their allocation of

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assets, is that fair?
A. That is correct.
Q. Okay. Have you done -- since the time of this April 25th letter, have you done any further analyses of the amount that DWSD would be required to contribute over a nine-year period to reach a hundred percent funded status?
A. I'm not sure.
Q. Okay. These, as I understand it, are the numbers that actually appear in the plan, and so my question is whether you've revisited this analysis since.
MR. MUTH: By "these," you're referring to Exhibit 52?
MR. BALL: I'm referring to Exhibit 52, and, in particular, the numbers that are shown on page 6 under the results with respect to the DWSD contributions.
A. I'm sorry, I mean, I don't know if I answered your question, if you want to ask it again.
Q. I'm just trying to make sure, have you done any further analyses beyond those in this letter of the annual contributions that DWSD would be required to make to reach a hundred percent funded status in 2023?
A. I cannot definitively state that we did not do any

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further analyses.
Q. Okay. You don't know, one way or the other?
A. I don't have a demarcation line in my mind as to when the last letter was.
Q. I want to probe that just a little bit, just to make sure. Were you aware that numbers you were providing for contributions by DWSD were going to be incorporated in the plan?
A. I'll say I was aware that there was a possibility that that could happen.
Q. Okay. And did you at some point learn that it had happened?
A. The plan adjustment was discussed with me last week.
Q. Okay. And was there any discussion -- okay, is that the first time it was discussed with you?
A. I'm sorry, the plan document was set in front of me, if you will, during that period of time. I have not read the entire plan document, or much of any of it.
Q. Okay. Do you know whether you've done any analysis -- here's all I'm trying to figure out, is whether you know whether you've done any analysis of the DWSD contribution subsequent to the analysis that is reflected in the plan.
And maybe you don't know enough facts to

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know that. I'm just asking whether or not -- whether you have any understanding about that.

A. Well, saying understanding is, I'll say, a word I would object to. You're asking me if I remember out of a series of a dozen letters or so that I wrote over the course of a short period of time which one was the final one. I cannot definitively say that this one was the final one, just because this one happened to appear in the plan.

It is entirely possible that a subsequent analysis could have been done, and along with all prior analysis was discarded by the city, and this one was selected and reached in mediation. I cannot answer the particular question you're asking more specifically than that.

Q. Okay, fair enough. I'm just trying to make sure there's not something there that if I help you with the knowledge that this is what -- these are the numbers that appear in the plan, whether that gives you anything further to go on whether you've done any later analysis. And I'm hearing the answer is no, so I'll move on to the next question.

If you would --

MARKED FOR IDENTIFICATION:

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DEPOSITION EXHIBIT 53

5:39 p.m.

BY MR. BALL:

Q. Mr. Bowen, you've been provided what's been marked as Exhibit 53, which is a letter dated May 7th, 2014, with Bates number POA00259896.

My first question to you is whether this is a letter that you authored and signed?

A. Yes, it is.

Q. Okay. And you'll see that it attaches copies of both the April 25th letter that we were just reviewing and the April 10th letter that we looked at earlier. And if I ask you to look at page 2, is it fair to say that this letter incorporates by reference the scenario analyzed in the April 25th, 2014, letter?

A. Given the phrase as a follow-up to our April 25th, 2014, letter, it would appear to be a follow-on letter.

Q. All right. And if you look on the next page, on page 3, you see that it says that the investment return assumption -- except for the investment return assumption mentioned above, plan provisions, actuarial assumptions and methods, and census data used in this analysis are all as set forth in our letter regarding

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DGRS liabilities, dated April 10th, 2014. Do you see that?

A. I do.

Q. Okay. And so those are all matters incorporated by reference from the 2014 letter, is that fair?

A. Yes.

Q. Okay. And this letter provides an estimate of the funded status for the system as a whole in 2033 and 2043, right?

A. It does.

Q. And it assumes the DWSD contributions that were anticipated in the April 25th letter, is that fair?

A. I can take a few minutes to compare, but I don't see anything here that says we have made a revision to DWSD from the prior attached letter.

Q. And my understanding is that it incorporates that scenario, but I want you to be --

A. Sure, okay. Bottom of page 2, please refer to attached letter, the DWSD contribution projection. So I'll believe that not seeing else regarding change in DWSD, this would directly follow on from the attached April 25th letter for that parameter.

Q. All right. And so, first, as I understand it, this letter reflects that under the scenario that's being

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analyzed, that as of June 2033, the plan as a whole still will not be fully funded, is that fair?

A. That is.

Q. And as of 2043, it still will not be fully funded?

A. Correct.

Q. Okay, and so -- and as of 2053, is it fully funded?

A. Yes.

Q. Okay. So it is -- and in what year does it become fully funded?

A. Best of my recollection, slightly before 2053.

Q. All right. So that would be a period of amortization of almost 40 years for the city as a -- for the DGRS as a whole, is that right?

A. Yes, it would be a period -- yes.

Q. Okay. And, in fact, the funding level reaches 70 percent in June 2023, right? That's at the bottom of page 3.

A. Excuse me one moment. Can you continue with the question, please?

Q. My question was the -- I was going to ask about the funding levels at various points under the scenario, but in 2023 it would be 70 percent, which was the target of the original analysis, correct?

A. At 2023, it will be 70 percent under this scenario.

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Q. All right. And then the funding level actually declines after that, right?
A. Just as it had declined prior to that, yes.
Q. Okay. And so it declines to 64 percent as of June 2040, is that right? I'm looking, in particular, at the bottom of page 3.
A. Yes.
Q. And it remains 64 percent for several years after that?
A. It bottoms out at 64 percent.
Q. And so during the period where the city is making contributions and after DWSD has reached a hundred percent analysis, under the scenario provided here, it's not going to be maintained, the funding is not going to be maintained at a 70 percent level, is that right?
A. It will go below 70 percent.
Q. Okay. In the paragraph, second paragraph at the top on page 3, the last sentence says: Beginning with the 2023 fiscal year, administrative expenses were limited to no more than five percent of the estimated benefit payments for the respective fiscal year.
So that is an assumption about admin expenses that is imposed for the year, first year when

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the city becomes -- when the DWSD has completed its contributions and the city begins to make contributions. Is that right?
A. It is imposed but not -- does not necessarily apply.
Q. Okay, explain what you mean by that.
A. The administrative expenses, as noted in the middle of that paragraph, are assumed to increase 2.5 percent per year beginning with the current dollar amount, and ultimately there is an annual test. When the prior year administrative expenses are increased 2.5 percent per year, that dollar amount is compared to five percent of the estimated benefit payments for that year, and if that dollar amount exceeds five percent, the five percent of the estimated benefit payments is used as the administrative expense assumption that year.
Q. Okay. And is there a reason why you imposed that cap as of 2023 as opposed to some earlier or later period?
A. Beyond the request to limit the growth in administrative expenses at the far-out year, when the system is shrinking, there was no particular specific reason that said 2023, 2024, is the best year to begin applying that test.
Q. Okay. And so you did that because you were directed

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to by the city, but not because it was a recommendation by Milliman. Is that fair?
A. Again, I'll say this falls into the gray area that I had discussed earlier where there was a limit on administrative expenses that was desired because of the knowledge that the plan would be winding down and administrative expenses would not continue, or not be expected to continue to grow on the current basis for a frozen, winding-down plan.
I believe the way that this arose was we said, currently, administrative expenses are a certain percentage of benefit payments, and it may have been two-and-a-half or three or four, some number less than five, and in the context of setting the project scope, there was an agreement upon five percent.
Q. Okay. And the timing of the five percent?
A. Well, the timing of the five percent is twofold, as we just discussed. There was a, a period of when the test would first be implemented whether or not it applies in a given year is then -- depends upon the results of the particular test as described here.
Q. Okay. Back to the questions about the funding level and the funding level declines from 70 percent after 2023, is there a reason, a principal reason that

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you're aware of for setting a funding level at 70 percent as opposed to 65 percent or 62 percent or 78 percent in 2023?
A. My understanding of the 70 percent was that it arose out of mediation. I believe that's the same question as previously.
Q. Okay.
MR. BALL: All right, I may be done. Give me a few minutes.
VIDEO TECHNICIAN: The time is 5:50 p.m. we are off the record.
(Off the record at 5:50 p.m.)
(Back on the record at 5:51 p.m.)
VIDEO TECHNICIAN: The time is 5:51. We are back on the record.
BY MR. BALL:
Q. Mr. Bowen, do you know whether you have undertaken any further analyses with respect to the DWSD since May 7th, 2014? And again, I understand you may not. I just want to make sure that having seen this document, whether that jars your recollection one way or the other.
A. Let me say this, just out of some way to hopefully give you a better answer than I have previously. I

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don't have my computer here with access to all of my letters arranged in numerical order, so -- and any question of that variety as to is this the last or first or middle letter is not something that I have sufficient recollection to provide you an absolute answer to.

So I apologize for not being able to do so, but I cannot say definitively whether there were letters of this variety subsequent to May 7th, and that's not meant to imply that there were and I'm forgetting them or that there weren't. I just simply do not remember that level of chronological detail.

Q. And I asked the question only because this looks to us to be essentially the last letter from you that has analysis with respect to these issues, at least.

If there were such a letter, would it have been produced to us as a result of the document searches that have been undertaken by Milliman?

A. Yes, our IT department just went on to our network and lifted all the letters.

Q. Okay. And since that happened, since the IT department went on the network and lifted all the letters, have you generated any additional letters reflecting your work on behalf of the city? In other

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words, they did it at some point in time. Since that point in time, have you done anything else?

A. Again, I mean, it's possible. That happened two, three weeks ago. We could have issued another letter or two.

Q. All right. Can I ask that you look to see whether you have issued any further letters to the city or in connection with your work for the city since that search was performed, and that those be provided to us?

MR. MILLER: Yes, we will provide them.

MR. BALL: Okay, I don't have further questions. Anyone else?

MR. WEISBERG: I know you're disappointed.

MR. BALL: Thank you very much, Mr. Bowen.

THE WITNESS: You're welcome.

VIDEO TECHNICIAN: The time is 5:53 p.m. We are off the record.

(Deposition concluded at 5:53 p.m. Signature of the witness was requested.)

GLENN BOWEN

In re) Chapter 9
CITY OF DETROIT, MICHIGAN,) Case No. 13-53846
Debtor.) Hon. Steven W. Rhodes

____

VERIFICATION OF DEPONENT

I, having read the foregoing deposition consisting of my testimony at the aforementioned time and place, do hereby attest to the correctness and truthfulness of the transcript.

____

GLENN BOWEN
Dated:

GLENN BOWEN
ERRATA SHEET

PAGE	LINE	READS	PAGE	LINE	SHOULD READ

____

GLENN BOWEN
Dated:

GLENN BOWEN

CERTIFICATE OF NOTARY

STATE OF MICHIGAN)
) SS
COUNTY OF KENT)

I, REBECCA L. RUSSO, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to, either party nor interested in the event of this cause.

REBECCA L. RUSSO, CSR-2759
Notary Public,
Kent County, Michigan.
My Commission expires: 6-3-2017

EXHIBIT C

JUDITH KERMANS

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE EASTERN DISTRICT OF MICHIGAN

In re) Chapter 9
CITY OF DETROIT, MICHIGAN,) Case No. 13-53846
Debtor.) Hon. Steven W. Rhodes

____

The Videotaped Deposition of JUDITH KERMANS,
a 30 (b)(6) witness,
Taken at 500 Woodward Avenue, Suite 3500,
Detroit, Michigan,
Commencing at 9:06 a.m.,
Friday, August 8, 2014,
Before Rebecca L. Russo, CSR-2759, RMR, CRR.

JUDITH KERMANS

APPEARANCES:

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ALSO PRESENT:
Ben Solorzano - Video Technician

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Detroit, Michigan
Friday, August 8, 2014
9:06 a.m.

VIDEO TECHNICIAN: We are now on the record. This is the videotaped deposition of Judith Kermans, being taken on Friday, August 8th, 2014. The time is now 9:06 a.m.

We are located at 500 Woodward Avenue, Detroit, Michigan.

We are here in the matter of the City of Detroit bankruptcy case. This is Case Number 13-53846. This matter is being held in the United States Bankruptcy Court for the Eastern District of Michigan.

My name is Ben Solorzano, video technician.

Will the court reporter swear in the witness and the attorneys briefly identify themselves, for the record, please.

JUDITH KERMANS,

was thereupon called as a witness herein, and after having first been duly sworn to testify to the truth, the whole truth and nothing but the truth, was

examined and testified as follows:

MR. BULLOCK: My name is Charles Bullock, of the firm Stevenson & Bullock, PLC, on behalf of Gabriel Roeder Smith & Company.

MS. GREEN: Jennifer Green, Clark Hill, on behalf of the General Retirement System for the City of Detroit and the Police and Fire Retirement System for the City of Detroit.

MR. KING: Ron King, with Clark Hill, on behalf of the Detroit Retirement Systems.

MR. GORDON: Robert Gordon, Clark Hill, on behalf of the Detroit Retirement Systems.

MR. BHARGAVA: Mark Bhargava, Chadbourne & Parke, on behalf of Assured Guaranty Municipal Corporation.

MR. EATON: Miguel Eaton, from Jones Day, on behalf of the City of Detroit.

MR. JAMES: Mark James, Williams, Williams, Rattner & Plunkett, on behalf of Financial Guaranty Insurance Company.

MR. HOWELL: Rush Howell, with Kirkland & Ellis, on behalf of Syncora Guarantee, Inc., and Syncora Capital Assurance, Inc.

I believe there are also several people on

the phone. So if the people on the phone could please put in their appearance, for the record.

MR. ALBERTS: Sam Alberts, from Dentons, on behalf of the Official Committee of Retirees.

MR. PLOTKO: Gregory Plotko, Kramer Levin, on behalf of COPs holders.

MR. CROWDER: Elliot Crowder, from the law firm of Stevenson & Bullock, PLC, also appearing on behalf of Gabriel Roder Smith & Company.

MR. GALLAGHER: Sean Gallagher, from Clark Hill, on behalf of the Detroit Retirement Systems.

MR. HOWELL: Evan, I think that was perfect timing. We were in the middle of having people put appearances on. Would you mind putting your appearance on, for the record?

MR. MILLER: Thanks so much, yes, Evan Miller, Jones Day, on behalf of the City of Detroit.

EXAMINATION

BY MR. HOWELL:

Q. Good morning, Ms. Kermans.
A. Good morning.
Q. Could you please state your full name, for the record?
A. Judith Ann Kermans.
Q. My name is Rush Howell. We met very briefly before we

went on the record, but I represent Syncora Guarantee and Syncora Capital Assurance, and I may refer to them collectively as Syncora, okay?
A. Yes.
Q. Have you ever been deposed before?
A. Yes.
Q. So I know that you know kind of the ground rules, but I'm still going to go over a few, just to make sure for the ease of our conversation that we're on the same page, okay?
A. Okay.
Q. First, I want to talk about a couple of acronyms that can get confusing. Specifically, when I use the term GRS today, I'm referring to the General Retirement System of Detroit, okay?
A. Yes.
Q. And I'll try to say Gabriel Roeder or Gabriel Roeder Smith rather than GRS for Gabriel Roeder, okay?
A. Yes.
Q. If I use the term PFRS, I'm referring to the Police and Fire Retirement Systems of the City of Detroit, okay?
A. Okay.
Q. If I use the term OPEB, I'm referring to other post

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employment benefits, okay?
A. Okay.
Q. Now, Ms. Kermans, a couple of other things that I think will help us out. The first is, both for the ease of our conversation and because we have a court reporter taking down the record, I would ask that you let me finish my question before you begin your answer even if you think you know where I'm going with the question, okay?
A. Okay.
Q. And I'll try to do you the same courtesy and not interrupt your answer with my next question, and if I do, you know, please let me know and I'll make sure that you're able to give a complete answer, okay?
A. Okay.
MR. ALBERTS: Just as an FYI for the folks there, the witness's statements are not really audible, so you may want to, you know, hop on the mikes for people on the phone.
MR. BULLOCK: She is miked, but let's do this, let's move that over.
THE WITNESS: I can speak more loudly if that's helpful.
MS. GREEN: Well, and I think to your

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questions she was just kind of saying yes and nodding in agreement with you, so ...
MR. BULLOCK: Just speak up. If there's still a problem, anyone on the phone, obviously, can interject and we'll try to take some remedial or corrective measures.
BY MR. HOWELL:
Q. In fact, you anticipated the next point I was going to, which is, you need to make sure that you give a verbal answer to any question. If you nod or shake your head or give kind of an uh-huh or nuh-uh, that can be hard for the court reporter and for everyone to pick up, okay?
A. Okay.
Q. And I'm naturally pretty loud, but I'll ask you, as was just requested on the phone, to try to keep your voice up, just because we do have several people listening on the phone, as well, okay?
A. Okay.
Q. If you don't understand the question that I've asked, I would ask you to let me know that and ask me to restate or rephrase the question, okay?
A. Okay.
Q. And if you do go ahead and answer a question, I'm

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going to assume that you did understand the question. Fair enough?
A. Yes.
Q. I understand that you are testifying here today in your capacity as a 30(b)(6) representative for Gabriel Roeder Smith, is that correct?
A. Yes.
Q. Ms. Kermans, are you on any medication this morning that would prevent you from being able to testify truthfully and accurately today?
A. No.
Q. Any other reason that you can think of that you would be unable to testify truthfully and accurately today?
A. No.
Q. If you want to take a break at any time, just let me know. The only thing that I would ask is that if there's a question pending, you answer that question before taking a break, okay?
A. Okay.
Q. Okay. I'm going to hand you what I've premarked as Kermans Exhibit 1.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 1
9:16 a.m.

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MR. HOWELL: For identification purposes, Kermans Exhibit 1 is the notice of 30(b)(6) deposition of Gabriel Roder Smith & Company, Docket Number 5786, filed July 7, 2014.
BY MR. HOWELL:
Q. Ms. Kermans, do you recognize this document?
A. Yes.
Q. And did you review this document in advance of your deposition?
A. Yes.
Q. And did you understand that pursuant to this 30(b)(6) request, Gabriel Roeder Smith was to designate someone who had knowledge of and was adequately prepared to testify concerning the topics listed in the deposition topic section of this 30(b)(6) notice?
A. Yes.
Q. And I just want to briefly go through the topics, which we'll cover in more detail later, just to make sure that you either have knowledge or are adequately prepared to testify on those topics.
So beginning with topic one, actuarial valuations performed by Gabriel Roeder of the DGRS and DPFRS, first of all, you were involved in the actuarial valuations performed by Gabriel Roeder for

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GRS and PFRS for the period ending June 30, 2013, correct?
A. Yes.
Q. Okay. And you have knowledge regarding the actuarial valuations performed by Gabriel Roeder of the GRS and PFRS over the last several years, correct?
A. Yes.
Q. And turning to topic three: Analysis performed by Gabriel Roeder relating to projections of investment rates of return of the GRS and PFRS.
Have you had an opportunity to prepare on that topic, as well?
A. I don't know of any particular such assignments.
Q. You don't know of any analysis done by Gabriel Roeder relating to projections of investment rates of return for the GRS or PFRS?
A. No.
Q. And did you take the opportunity to inquire of others at Gabriel Roeder as to whether anyone at Gabriel Roeder had performed an analysis relating to projection of investment rates of return for the GRS or PFRS?
A. I don't understand what this topic is asking for.
Q. Okay. Let me ask you, did you, did you review the

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target investment rates used by Gabriel Roeder to discount actuarial liability for the GRS and PFRS in the most recent actuarial valuation?
A. I don't understand the question.
Q. You understand that as part of the actuarial valuations performed by Gabriel Roeder Smith for the GRS and PFRS, there's an investment return assumption included?
A. Yes.
Q. And did you review the particular investment return assumptions included in the recent actuarial valuations for GRS and PFRS?
A. Yes.
Q. And are you aware of the fact that Gabriel Roeder Smith has on occasion conducted experience studies that relate to assumptions used in the actuarial valuations for GRS and PFRS?
A. Yes.
Q. And did you have occasion in preparation for this deposition to review any of those experience studies?
A. Yes.
Q. And is there anything else that you can think of that you did in preparation for this deposition that related to investment return assumptions that have

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been used by GRS or -- excuse me, that have been used by Gabriel Roeder Smith in connection with actuarial valuations of GRS or PFRS?
A. No.
Q. The fourth topic is analyses and reviews performed by Milliman with respect to GRS and PFRS, as well as any review by Gabriel Roeder of such analyses or reviews and any communications concerning such analyses or reviews.
So let me start by asking, have you yourself prior to preparation for this deposition analyzed -- or reviewed -- excuse me, reviewed any analyses or reviews performed by Milliman of the work that Gabriel Roeder Smith has done for either the GRS or the PFRS?
MR. BULLOCK: Rush, objection, to the extent that it violates the mediation confidentiality order.
MR. HOWELL: Okay.
BY MR. HOWELL:
Q. I think it may be helpful, your counsel can tell me if he disagrees, but I think it may be helpful to just put on the record early on, for the ease of our conversation for the rest of the day, that I'm not

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going to be asking you to divulge material that is subject to any mediation privilege in this case.
If there are questions that you cannot answer due to mediation privilege, I would like you to make that clear. However, it should be understood that I'm not asking you to provide any information that you believe to be subject to the mediation privilege. I'm sure your counsel will step in throughout the day when he believes that may be a concern, but I think we should make that clear.
Is that fair enough?
A. Yes.
Q. So let me go back and subject to your counsel's instruction ask, prior to your preparation for this deposition, had you ever reviewed any analysis or reviews performed by Milliman that related to work that Gabriel Roeder Smith had done for the GRS or PFRS?
A. We did not, outside of mediation, do any of that type of work.
Q. And in preparation for this deposition, did you review any analysis or review of Gabriel Roeder Smith's work for the GRS or PFRS that had been performed by Milliman?

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A. I don't understand the question.
Q. Did you look at any Milliman documents in which anyone at Milliman reviewed work done by Gabriel Roeder Smith in its capacity as system actuary for the PFRS or GRS?
A. Could you repeat the question, please?
Q. Sure.
MR. HOWELL: Would you mind reading that back?
(The following portion of the record was read by the reporter at 9:24 a.m.:
Q. "Did you look at any Milliman documents in which anyone at Milliman reviewed work done by Gabriel Roeder Smith in its capacity as system actuary for the PFRS or GRS?")
MR. BULLOCK: Mr. Howell, I think it's simply the form of the question, and rather than lodging a formal objection, I think she's struggling with analysis and review, because you said looked at anything, and I think that there's a distinction between the two, and I'm happy to work our way through the question.
MR. HOWELL: Okay. Well, let me try to address the form objection.

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BY MR. HOWELL:
Q. All I'm trying to figure out is, are you aware that there came a time where Milliman began to do work for the City of Detroit in which Milliman provided opinions/comments on the work that Gabriel Roeder Smith had done as system actuary?
A. Yes.
Q. And have you had occasion to review any documents from Milliman reflecting that work that Milliman did regarding the work that Gabriel Roeder Smith had done?
A. We have not been asked to perform any professional reviews or analysis of the Milliman work outside of mediation.
Q. And I am not -- so here's maybe where we're talking past each other. I'm not asking whether Gabriel Roeder Smith has done any kind of formal review or formal analysis. I'm asking whether you have had the opportunity to review analysis or review done by Milliman that related to work that Gabriel Roeder Smith had done.
A. We have not done any professional reviews or analysis of any of the Milliman work.
Q. Okay. But you have in preparation for this deposition at least been able to review -- to look at those

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Milliman documents without performing any sort of formal analysis or review, correct?
A. Yes.
Q. With respect to topic number five, assumptions underlying Gabriel Roeder's actuarial valuations, including information provided to Gabriel Roeder by the DGRS, DPFRS, or the City, is that a topic that you have knowledge of?
A. Yes.
Q. With respect to topic number six, information provided to Gabriel Roeder regarding the DGRS and DPFRS investment policies, is that a topic which you have knowledge of?
A. I have knowledge of the DGRS policy.
Q. So I take it from your answer, you do not have, you do not have -- well, let me strike and go back.
So I take it from your answer that you do not have knowledge of the PFRS investment policy?
A. Correct.
Q. And were you able to speak with others at Gabriel Roeder Smith to confirm that Gabriel Roeder Smith does not have access to the PFRS investment policy?
A. No.
Q. In topic number seven, any work done by Gabriel Roeder

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relating to health care benefits provided to retiree participants of GRS and PFRS, do you have knowledge regarding that topic?
A. Yes.
Q. And, finally, any analysis performed by Gabriel Roeder relating to the City's plan of adjustment, do you have knowledge regarding that topic?
A. We've not been asked to do a formal evaluation or review of the plan of adjustment.
Q. Okay, thanks. So you kind of anticipated my next question there, but in addition to not having reviewed the City's plan of adjustment, is it also fair to say that Gabriel Roeder Smith was not involved in the drafting or creation of the City's plan of adjustment?
A. We have not done any work on the plan of adjustment outside of mediation.
Q. Have you ever been asked by the City -- and when I say you, I mean Gabriel Roeder Smith -- has Gabriel Roeder Smith ever been asked by the City to assist with the drafting or creation of any of the various amended plans of adjustment in this case?
A. We have not done any analysis or drafting, or otherwise, outside of the mediation process.
Q. I understand that you haven't done any analysis or

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done any drafting outside of the mediation process, but outside of the mediation process, have you been asked by the City to do any analysis or any drafting or any assistance with the creation of any of the plans of adjustment?
A. No.
Q. And is that something that Gabriel Roeder Smith would have been able to do if, if requested, specifically, to assist with work regarding the claim for the GRS or PFRS retirement systems as listed under the plan of adjustment?
MR. BULLOCK: I'm going to object to the form of the question. There's an awful lot, I believe, in the plan of adjustment. So for purposes of Gabriel Roder Smith & Company, I don't believe my witness is able to respond to that question unless it's asked more specifically.
MR. HOWELL: Well, let me --
BY MR. HOWELL:
Q. Did you understand the question?
A. No.
Q. Okay. Gabriel Roeder Smith has conducted multiple actuarial -- Gabriel Roeder Smith has conducted multiple actuarial valuations for the GRS and PFRS,

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correct?
A. Yes.
Q. And as part of those actuarial valuations, GRS -- or excuse me, Gabriel Roeder Smith has calculated a UAAL for the GRS and PFRS for many years, correct?
A. Yes.
Q. And are you aware that as part of the plan of adjustment, a UAAL was calculated for both the PFRS and GRS?
A. We've not been asked to do a formal analysis or review of the plan of adjustment.
Q. I think my question was a little bit different, which is, are you aware that in the plan of adjustment, there has been a calculation done for the UAAL for the PFRS and GRS as of June 30, 2013?
A. I can't tell you whether it's a UAAL that's in the plan of adjustment.
Q. But you understand that there has been a calculation of a claim amount for the PFRS and GRS retirement systems that's included in the various versions of the plan of adjustment, correct?
A. Yes.
Q. And do you have an understanding as to which actuarial firm provided those calculations?

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A. No.
Q. But it was not Gabriel Roeder Smith, correct?
A. It was not.
Q. How long has Gabriel Roeder Smith worked with the PFRS?
A. For over 70 years.
Q. How long has Gabriel Roeder Smith worked with the GRS?
A. For over 70 years.
Q. And it's fair to say that Gabriel Roeder Smith has a long history of a working relationship with both PFRS and GRS, correct?
A. Yes.
Q. And, to your knowledge, have there been any complaints from the PFRS or GRS related to the actuarial valuation performed by Gabriel Roeder Smith for the PFRS and for the GRS as of June 30, 2013?
A. Could you repeat the question?
Q. Sure. So -- let me ask it a little bit better.
So Gabriel Roeder Smith performed an actuarial valuation for the PFRS as of June 30, 2013, correct?
A. Yes.
Q. And that was completed in around April of 2014, is that correct?

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A. Yes.
Q. And since submitting that actuarial valuation of the PFRS, has Gabriel Roeder Smith received any complaints from the PFRS regarding the accuracy of the work done by Gabriel Roeder Smith in its annual actuarial valuation for the PFRS as of June 30, 2013?
A. No.
Q. Gabriel Roeder Smith also conducted a June 30, 2013, actuarial valuation for the GRS, correct?
A. Yes.
Q. Gabriel Roeder Smith also submitted that actuarial valuation for the GRS around April of 2014, correct?
A. Yes.
Q. Have there been any complaints from the GRS regarding the accuracy of the actuarial valuation for the GRS performed as of June 30, 2013?
A. No.
Q. Any other complaints that you are aware of that the GRS has made regarding the annual actuarial valuation as of June 30, 2013, for the GRS?
A. No.
Q. Any other complaints that you're aware of -- or any complaints that you're aware of from the PFRS regarding Gabriel Roeder Smith's June 30, 2013, annual

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actuarial valuation for the PFRS?
A. No.
Q. Would you say that Gabriel Roeder Smith or Milliman has more knowledge of the history of the PFRS and GRS systems?
A. Gabriel Roeder Smith.
Q. Would you say that Gabriel Roeder Smith or Milliman has more extensive history of work with the PFRS?
A. Gabriel Roeder Smith.
Q. The same for the GRS?
A. Yes.
MR. BULLOCK: Right, I'd like to make sure our record is accurate. If you're moving off the notice now, I suspect, where you've referenced the notice of the 30(b)(6) deposition of Gabriel Roder Smith & Company, found at Docket 5786, filed on 7-7 of 2014, we're actually here on the second amended notice, found at Docket 6439.
And although Ms. Kermans has, I think, adequately and accurately recited the breadth of her knowledge and will continue to testify, the second amended notice, which provided at exhibit, or schedule A the subject matter --
MR. HOWELL: Yes.

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MR. BULLOCK: -- there is no schedule A and no subject matter on the second amended notice.
You may continue.
MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 2
9:38 a.m.
BY MR. HOWELL:
Q. I'm going to hand you what I've marked as Kermans Exhibit 2.
MR. HOWELL: For identification purposes, Kermans Exhibit 2 does not have a Bates range, however is labeled Gabriel Roder Smith & Company, a document entitled the Police and Fire Retirement System of the City of Detroit, 72nd Annual Actuarial Valuation, June 30, 2013, and was produced in this case.
I'm not sure of the entity due to the lack of a Bates number.
BY MR. HOWELL:
Q. Ms. Kermans, do you recognize this document?
A. Yes.
Q. And is this document the annual actuarial valuation as of June 30, 2013, for the PFRS that we've referenced a couple of times?
A. Yes.

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Q. Now, if you turn to page 2 of an April 4 -- well, I guess if you turn to the third page of this document, do you see a letter from April 4, 2014, to the board of trustees of the Police and Fire Retirement Systems that's from Gabriel Roeder Smith?
A. Yes.
Q. And if you turn to the second page of this letter, you were one of the signatories to this letter, correct?
A. Yes.
Q. Now, kind of in general terms, can you tell me what the purpose of performing an annual actuarial valuation for a pension system is?
A. The purpose is to determine the contribution rate for the fiscal year that is lined up with the valuation.
Q. Could you also walk me through the process that generally would go into the creation of an annual actuarial valuation for a pension system?
A. The general process would be that we would request information from the retirement system, and then we would receive that information, including census data, financial information, and plan provisions.
Then we would review that information, ask any questions, receive responses to the questions, process the data, and calculate the contribution rate,

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draft a report, meet with the retirement system trustees. That would be it.
Q. Would you typically meet with the retirement system trustees before or after issuing a draft report?
A. I don't understand the question.
Q. Well, two of the steps that you laid out, one was Gabriel Roeder Smith will typically draft a report, correct?
A. Yes.
Q. And another step you said was that Gabriel Roeder Smith will typically meet with retirement system trustees, correct?
A. Yes.
Q. Is the meeting -- in kind of a general sense, is the meeting with retirement system trustees typically before or after Gabriel Roeder Smith has issued a -- its report to the retirement systems?
A. We issue a draft report to the retirement systems. Then we meet with the retirement systems to review the report with them, and then afterwards we issue a final report.
Q. And what is the purpose of the meeting with the retirement system trustees after you've submitted a draft report but before you have submitted the final

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report?
A. To go through the results of the valuation.
Q. And if the retirement system trustees have issues that they see with the draft report, is that an opportunity for them to raise those issues with Gabriel Roeder Smith?
A. Yes.
Q. And from time to time will Gabriel Roeder Smith make adjustments to its draft report that will be reflected in the final report based on the conversation, the meeting with a pension plan's board of trustees?
A. Rarely, but yes.
Q. Can you recall whether there was a meeting with the PFRS retirement system trustees between issuing a draft report and the final report of this 72nd annual actuarial valuation for the period ending June 30, 2013?
A. I believe there was a meeting.
Q. And do you recall whether as a result of that meeting there were any changes between the draft report submitted to the PFRS and the final report submitted to the PFRS?
A. Well, the draft report is actually only a portion of the final report.

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Q. What, typically, would be added between the draft stage and the final stage to this sort of annual actuarial valuation?
A. The draft report only has three or four key pages from the full report.
Q. And which are the key pages from a draft -- or from what will become a final report that are usually included in the draft report?
A. I don't recall all of the pages, but the -- page 3 would have been included in the draft.
Q. And when you say page 3, you're referring to the page marked 3 of Kermans Exhibit 2 that says Employer Contribution Rates Computed Payable Last Day of Fiscal Year at the top?
A. Yes.
Q. Other than that page 3, are there any other pages here that you would recognize as being part of the key pages that would be included in a draft?
A. Page 20.
Q. And page 20 is the one with funding value of assets at the top, correct?
A. Yes.
Q. Okay. Other than page 3 and page 20, do you recognize any additional pages that would be part of the key

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pages that would include the -- that would be included in the draft report?
A. Pages 13 and 14.
Q. Pages 13 and 14 are the comments and conclusion pages?
A. Yes.
Q. And, typically, would the comments and conclusion pages undergo any changes between draft and final absent any comments from the trustees during a review?
A. No.
Q. So you've help me out by pointing out pages 3, pages 13 and 14 and 20 as key pages. Any others that you've noted?
A. I can't recall.
Q. Now, turning back to the April 4, 2014, letter that is pages, the pages marked 1 and 2 in this Kermans Exhibit 2, what is the purpose of this letter that is at the front of the annual actuarial valuation?
A. The purpose of the letter is to indicate what the purpose of the report is for.
Q. And that purpose of the report is the same that you've described to me a few minutes ago regarding why Gabriel Roeder Smith typically issues annual actuarial valuations?
A. Yes.

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Q. And this particular annual actuarial valuation, I take it, is the final, not a draft report, correct?
A. Yes.
Q. And it was issued in April of 2014, correct?
A. Yes.
Q. And the PFRS was already in -- or, excuse me, the -- as of April 4, 2014, the City of Detroit was already in bankruptcy, correct?
A. Yes.
Q. Now, the date of the valuation was June 30, 2013. Is the time period between June 30, 2013, and the issuance of this annual actuarial valuation on April 4, 2014, typical for around the amount of time that usually takes place between a valuation date and the issuance of a valuation report?
A. It varies.
Q. And if you had to kind of ballpark the general range, around how long would you say that variance is, from how long to how long?
A. Could you repeat the question?
Q. Sure. In your typical experience, what would you say is the range of time between the measurement date for a valuation report and the date of issuance of that valuation report?

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A. Six months to a year.
Q. So the time between the valuation date here and the issuance of this final report would fit, you know, well within that kind of typical range, fair to say?
A. Yes.
Q. There's an appendix to, to the annual actuarial valuation that lists the actuarial assumptions used in the valuation, correct?
A. I would not call it an appendix.
Q. Okay. Well, I'm specifically referring to the section -- well, first of all, let's look at page 1 of the April 4 letter. About two-thirds of the way down the page there's a paragraph beginning the actuarial assumptions. Do you see that?
A. Yes, it's called an appendix.
Q. Okay. Well, just to be clear for the record, so the actuarial assumptions used in the valuation are, are what I'll find in the section that's marked appendix in this report, correct?
A. Yes.
Q. And are these assumptions that are included in the appendix in whole or in part provided to the, the retirement system in advance of issuance of the final report?

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A. I don't recall whether they are part of the draft report.
Q. And you don't recall whether they typically are or whether they specifically were in this case, is that fair?
A. Either.
Q. Now, some of the assumptions would be included in the comments and conclusion section that you said was included in the draft report that's on pages 13 and 14, correct?
A. Yes.
Q. For instance, under experience during the past year on page 13, we can see that there is an assumed eight percent --
MR. BULLOCK: Just hold on a minute.
MR. HOWELL: Certainly, sorry.
MR. BULLOCK: Thank you. Okay, go ahead.
MR. HOWELL: I'm sorry about that.
MR. BULLOCK: And I apologize for interrupting you. I just think it's important --
MR. HOWELL: No problem.
MR. BULLOCK: -- that she sees that, so ...
BY MR. HOWELL:
Q. So are you with me on page 13, the comments and

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conclusion section?
A. Yes.
Q. And you see that kind of the first section on that page is experience during the past year?
A. Yes.
Q. And you see that it says: Investment experience for the year ended June 30, 2013, was favorable, with a market rate of return of 14.4 percent, which is 6.4 percent above the assumed 8 percent investment rate of return. Do you see that?
A. Yes.
Q. So that would be an example of one of the actuarial assumptions that was included, the eight percent investment rate of return assumption that was included in the draft report, correct?
A. Yes.
Q. Now, I'll turn your attention to page 2 of the April 4 letter that's at the, kind of the front of Kermans Exhibit 2, and let me know when you're with me there.
A. I'm there.
Q. Okay, and the second -- well, actually, let me start with -- at the bottom there are three different people who have signed this letter, correct?
A. Yes.

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Q. Can you describe what your role -- you were one of the three signatories, correct?
A. Yes.
Q. Can you describe what your role was in putting together the 72nd annual actuarial valuation, dated June -- for the period ending June 30, 2013, for the PFRS?
A. I'm one of the signing actuaries.
Q. And as a signing actuary, what are your kind of roles and responsibilities with respect to an actuarial valuation?
A. A signing actuary has responsibility for the report and the contents of it.
Q. Now, earlier you described several steps that go into the creation of one of these annual actuarial valuation reports, including requesting information from the system, review of that information, requesting the data, et cetera, et cetera.
As a signing actuary, kind of what steps are you involved in in the process, other than kind of ultimate signoff on the material that's contained within the report?
A. I would review the analysis that was done by one of the team members of the data that was received, I

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would review any calculations, and I would compare our four-person peer review and analysis procedures with what was done, and I would perhaps draft some of the comments or review comments that were drafted by others, and I would be responsible for the presentation to the board of trustees.
Q. One of the things that you said you would be involved with was to review the analysis done by team members for the project, is that correct?
A. Yes.
Q. Do you recall how many people were on the team for putting together the June 30, 2013, annual actuarial valuation for the PFRS?
A. Yes.
Q. How many people were on the team?
A. The three folks listed here; plus, there would be one or two analysts involved, as well.
Q. Is it the same team for the PFRS and the GRS actuarial valuation reports?
A. These three folks are involved in both. The analysts might not be the same.
Q. And can you recall how many analysts you used for the June 30, 2013, actuarial valuation for the GRS?
A. Two.

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Q. And I think you said it was one or two for the PFRS. Do you remember, specifically?
A. It's two for the PFRS, as well.
Q. And I take it that you work as signing actuary for multiple projects, not just for the PFRS and GRS, correct?
A. Correct.
Q. And you work with different analysts when you work on different projects, is that correct?
A. Yes.
Q. And have you had an opportunity to work with the analysts who you worked with on the PFRS valuation for June 30, 2013, on other projects, as well?
A. Yes.
Q. And are you -- do you have a favorable opinion of the work done by those analysts?
A. Yes.
Q. Do you also have experience outside of the GRS valuation in working with the analysts who assisted with the GRS valuation?
A. Yes.
Q. And do you have a favorable opinion of the work done by those analysts?
A. Yes.

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Q. Now, what was the role of Kenneth Alberts with respect to putting together this valuation?
A. Kenneth is the project coordinator.
Q. And, in general, what are the roles and responsibilities of a project coordinator at Gabriel Roeder Smith working on a valuation report?
A. Kenneth would supervise the analysts that are doing the initial work and make sure that information is received and analyzed from the client. Kenneth also would be one of the individuals that would go to the meeting with the board of trustees.
Q. Would you have the role as sort of the lead presenter of -- to the board of trustees of the report?
A. It would be a shared responsibility with either David or Kenneth --
Q. Okay.
A. -- and myself.
Q. So let's speak about David. How do you pronounce this is last name?
A. Kausch.
Q. Okay. So what were David Kausch's responsibilities with respect to this PFRS valuation report that's Exhibit 2?
A. Similar to my responsibilities, he's the other signing

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actuary.
Q. Does Gabriel Roeder Smith typically have two signing actuaries for valuation reports they provide?
A. Yes.
Q. Have you had an opportunity to work with Mr. Kausch on other assignments during your time at Gabriel Roeder Smith?
A. Yes.
Q. And what's your opinion of the work done by Mr. Kausch?
A. It's excellent.
Q. And the same question for the work generally done by Mr. Alberts?
A. Same opinion.
Q. So it's fair to say that you feel that the team that worked on this, these June 30, 2013, actuarial valuations for both PFRS and GRS is a competent valuation report team?
A. Yes.
Q. And you would consider your co-workers to be a team that you're excited and happy to work with, correct?
A. Yes.
Q. To the extent that any of us can be excited and happy to work with on any project.

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Now, in, in the list of kind of roles and responsibilities that you provided for the signing actuary on a valuation report, one thing that you said was prepare for peer review. Can you describe what the process is for having an actuarial valuation peer review at Gabriel Roeder Smith?
A. We have a four-person process at Gabriel Roder Smith & Company that involves a doer, a checker, a reviewer, and a peer reviewer.
Q. Okay. What does the doer do?
A. The doer is the individual that takes the data and pushes it through the Gabriel Roder Smith & Company proprietary software, does the initial calculations and spreadsheet work.
Q. So here that would have been one of the two analysts on the team for either PFRS or GRS?
A. Yes.
Q. What does the checker do?
A. The checker reviews all of the calculations and decisions of the doer.
Q. I'm going to guess, I could be wrong here, but would Mr. Alberts be in the role of the checker here or is it someone else that's one of the analysts?
A. The analysts.

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Q. Okay. Who, then, serves as the reviewer for this project?
A. It depends. We do occasionally switch those roles. I believe that Mr. Alberts was the reviewer on this particular report.
Q. And the role of a reviewer, then, I take it is just what you laid out earlier when you spoke about Mr. Alberts' kind of roles and responsibilities on this project, is that accurate?
A. Yes.
Q. And then the peer reviewer, what does the peer reviewer do?
A. The two peer reviewers in this case look everything over, check for reasonableness, compare the decisions made with actuarial standards of practice, and see if the results seem reasonable, make sure all of the work was done in a proper fashion.
Q. Are the peer reviewers typically other signing actuaries that work on other projects, or is there another group of people who typically do peer review?
A. We all do peer review if we are credentialed.
Q. And do you recall who did the peer review for the June 30, 2013, valuations for PFRS and GRS?
A. Both David Kausch and myself.

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Q. Would anyone else besides the three people listed here be involved in the peer review process in looking over this valuation report?
A. Not officially.
Q. How about unofficially?
A. Any number of people may have looked at this report.
Q. So from time to time when working on a report at Gabriel Roeder Smith you may ask some of your other certified colleagues to take a look at a report and give their thoughts or comments?
A. Correct.
Q. And do you remember whether that was specifically done with respect to this report or not?
A. I don't.
Q. Okay. In the second paragraph on page 2, it begins: This report has been prepared by actuaries. Do you see that --
A. Yes.
Q. -- paragraph? Okay. So that sentence says: This report has been prepared by actuaries who have substantial experience valuing public sector retirement systems.

You stand behind that statement, right?
A. Yes.

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Q. Do you personally have substantial experience valuing public sector retirement systems?
A. Yes.
Q. Around how many different public sector retirement systems have you had the opportunity to work in valuing?

MR. BULLOCK: Counsel, are you looking for simply an estimate?

MR. HOWELL: Yes, just an estimate.
A. Fifty.
BY MR. HOWELL:
Q. Do you have an understanding as to around the number of public sector retirement systems that Mr. Kausch would have valued in the past, just -- again, just an estimate?
A. Twenty-five.
Q. Same question for Mr. Alberts.
A. Fifty.
Q. The next sentence says: To the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries.

You stand behind that statement, correct?

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A. Yes.
Q. Since issuing this report, have you become aware of any inaccuracies within this report?
A. No.
Q. Since issuing the report dated -- well, issued in April of 2014 but that was for the period ending June 30, 2013, for the GRS, are you aware of any inaccuracies in that report?
A. No.
Q. Do you still today believe this report to be complete as it was at the time that you issued it?
A. Yes.
Q. The next sentence says: The actuarial assumptions used for the valuation produce reports which, individually and in the aggregate, are reasonable.
Do you see that?
A. Yes.
Q. And you stand by that statement, correct?
A. Yes.
Q. And so if I understand that statement correctly, it means that the, the individual actuarial assumptions, they are each, in the view of Gabriel Roeder Smith, reasonable actuarial assumptions, correct?
A. For this purpose of this report, yes.

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Q. And apologies if I've asked this already, but could you elaborate what you mean by for the purpose of this report?
A. This report is a specific measurement, the calculation of a contribution rate for a fiscal year. For that purpose, the assumptions are, individually and in the aggregate, reasonable.
Q. Now, in order to get to that contribution rate, another calculation that goes into this report is the calculation of the UAAL as of June 30, 2013, for the PFRS, correct?
A. Yes.
Q. And in order for the calculation for the contribution rate to be complete and accurate, the calculation for the UAAL as of June 30, 2013, also needs to be complete and accurate, correct?
A. Yes.
Q. In the fourth paragraph it says: David Kausch and Judith Kermans are members of the American Academy of Actuaries (MAAA).
Could you just briefly describe for me what the American Academy of Actuaries is?
A. It's one of the professional organizations that actuaries typically belong to. It provides guidance

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on how to do our work.
Q. Do you have any other -- are you a member of any other actuarial associations besides the American Academy of Actuaries?
A. I am a member of the Conference of Consulting Actuaries. I'm a fellow of the Conference of Consulting Actuaries.
Q. Are you aware of whether or not Mr. Kausch is a member of any other actuarial associations besides the American Academy of Actuaries?
A. He's a fellow of the Society of Actuaries. I also believe that he is a fellow of the Conference of Actuaries.
MR. GALLAGHER: Mr. Howell, Sean Gallagher here. It sounds to me like we've had someone else join the conference on the telephone, but we didn't get a name of that person.
Could that person please announce their presence on the phone?
MR. GROSMAN: Yes, it's Chris Grosman, from the Carson Fischer firm, on behalf of Oakland County.
MR. GALLAGHER: Thank you, Mr. Grosman.
Sorry, Rush.
MR. HOWELL: No, thanks for pointing that

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out.
BY MR. HOWELL:
Q. What are the qualification standards of the American Academy of Actuaries to render actuarial opinions?
A. We have actuarial standards of practice that we have to follow when we do our work, and the American Academy of Actuaries provides those standards for us. There are 48 of them.
Q. Do you have to take any sort of test or is it -- or is there a different process by which you meet the qualification standards?
A. You meet the qualifications through exam, examinations and also through experience.
Q. In the bottom full paragraph on this page it says: The plan sponsor (City of Detroit) is currently in Chapter 9 bankruptcy. Due to this situation, there is a great deal of uncertainty regarding the structure of the plan. If the plan structure changes as a result of the bankruptcy, the board should consider having this report reissued to account for those changes.
Do you see that?
A. Yes.
Q. And you believe that was a prudent recommendation at the time?

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A. Yes.
Q. Has the board for the PFRS reached out to Gabriel Roeder Smith regarding having this report reissued?
A. No.
Q. Has the board of the GRS reached out to Gabriel Roeder Smith about having the GRS June 30, 2013, valuation report reissued?
A. No.
Q. If you'll turn with me to page 4 of Kermans Exhibit 2, at the top it says Actuarial Accrued Liabilities as of June 30, 2013. Are you -- tell me when you're with me there.
A. I'm there.
MR. BULLOCK: Counsel, we've been at this for about an hour. When you find a reasonable place to break, can we take a minute or two break?
MR. HOWELL: I'm perfectly happy to break now if we'd like to take a five or ten-minute break.
MR. BULLOCK: This would be a good point.
MR. HOWELL: Okay, great.
MR. BULLOCK: Thank you.
VIDEO TECHNICIAN: The time is 10:09 a.m. We are now off the record.
(Off the record at 10:09 a.m.)

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(Back on the record at 10:22 a.m.)
VIDEO TECHNICIAN: The time is 10:22 a.m. We are now on the record.
BY MR. HOWELL:
Q. Ms. Kermans, before we went off the record, we were looking at page 4, or the page marked 4 in Kermans Exhibit 2, the June 20 -- June 30, 2013, valuation for PFRS. Are you with me on page 4 there?
A. Yes.
Q. And this page is entitled Actuarial Accrued Liabilities as of June 30, 2013, correct?
A. Correct.
Q. And the unfunded actuarial accrued liability, otherwise known as UAAL, at the bottom of the page is listed at a little over $415,600,000 right?
A. Correct.
Q. Now, there's a pound signal that, if we follow to the bottom of the page shows that that number assumes that past-due contributions of $71 million are not made. Do you see that?
A. Yes.
Q. Do you have an understanding as to what those $71 million of past-due contributions refer to?
A. Contributions for prior fiscal years. If you look at

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page 3, you can match it.
Q. And where on page 3 will I match that $71 million in prior-year contributions that were not made?
A. Under the row titled past-due payments for fiscal year 2013.
Q. And do you have an understanding as to whether those past-due payments of fiscal year 2013 were entirely past-due payments during that year or whether that included the roll forward of other past-due payments from prior years besides fiscal year 2013?
A. I don't understand the question.
Q. Well, I guess my question is, do you have an understanding as to whether there were past-due payments for fiscal year 2012 at the time of the June 30, 2012, valuation report?
A. I don't have an understanding.
Q. And so you don't know whether that $71 million of past-due payments from fiscal year 2013 all related to payments that originated in fiscal year 2013?
A. The 71 million is entirely related to past-due payments from fiscal year 2013. I don't know if there were additional payments that were outstanding at the time from '12.
Q. If you turn with me to page 5, with Valuation Results

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Comparative Statement at the top?
A. Yes.
Q. We see that the computed total in the second-to-bottom row, the 2013(c) for the actuarial accrued liability, or the AAL, is $3,890,000 and change, correct?
A. Yes.
Q. And then the unfunded amount in 2013(c) is that 415 million amount that we just saw, correct?
A. Yes.
Q. And if you subtract out the 71 million in past contributions or you assume that those contributions will be made, that's what would take you to row 2013(d), correct?
A. Yes.
Q. Now, if I want to get an unfunded percentage, I could just take the unfunded number there of 415 million and change and divide that by the AAL computed total of 3.89 million and change, correct -- 3.89 billion and change, correct?
A. I don't understand the purpose of that calculation.
Q. Well, that's okay, I'm just asking -- I mean, you do calculate -- in fact, in this report you list a funded percentage, correct?
A. Correct.

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Q. And it may take me a couple questions that don't make sense to get to that, but if I wanted to know the unfunded percentage, it would be one minus the funded percentage, correct?
A. Correct.
Q. Okay. So if you have a 90 percent funded percentage, you have a 10 percent unfunded percentage, fair enough?
A. Yes.
Q. So if I wanted to know what the unfunded percentage was here, I could take the 415 million and divide that by the AAL number of 3.89 billion, correct?
A. Yes.
Q. And so if I wanted the funded percentage, it would be one minus the result of 415 million and change divided by 3.89 billion and change, right?
A. Yes.
Q. And now that funded percentage, if you turn with me to page 13, the comments and conclusion section, under the section that's employer contribution rate, are you with me in that section?
A. Yes.
Q. About halfway down the paragraph there's a sentence that says: As of June 30, 2013, the system is 89.3

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percent funded, so the computed employer contribution is above the employer normal cost.
Do you see that?
A. Yes.
Q. And that 89.3 funded percentage is, subject to, you know, rounding, is the same amount that we would get if we did that calculation I just talked about a moment ago, where we take 415 million, divided by 3.89 billion, and then subtract that result from one, correct?
A. Yes.
Q. Now, that 89.3 percent funded percentage is a calculation that you reviewed, right, as the signing actuary?
A. Yes.
Q. And it's a calculation that you believe was correct at the time the report was issued, correct?
A. Yes.
Q. And you have no reason between the time the report was issued on April 4, 2014, and today to think that number's incorrect, right?
A. I don't think the number is incorrect.
Q. Now, that number is not done with the unfunded -- or, excuse me, let me strike that.

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That 89.3 funded percentage is not done on a market value basis, correct?
A. Correct.
Q. Now, could you describe for me the difference between that funded percentage calculation and a funded percentage calculation done on a market value basis?
A. In this plan, if that calculation were done on a market value basis, the number would be 78 percent rather than 89.3 percent.
Q. Okay, and I may not have asked the question very clearly. I understand that that's the result. I'm asking, in kind of a more general sense, what's the difference between a market value funding percentage calculation and the calculation that led to the 89.3 percent, not the actual numerical difference but kind of the methodological difference?
A. The numerator is a different number.
Q. And why is that?
A. One uses the funding value as the numerator and the other uses the market value as the numerator.
Q. And that's the funding value of unfunded assets?
A. It's the funding value of assets.
Q. Okay. So would the assets, in performing that calculation, be in the numerator or the denominator?

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A. In the numerator.
Q. And how does the -- how does Gabriel Roeder Smith arrive at a funding value of assets as opposed to a market value of assets, in particular for the PFRS?
MR. BULLOCK: Counsel, while she's flipping pages, there was a request a few minutes ago that we move some microphones around and she speak up. Does anyone know if we're having some success here in terms of reception?
Can everyone hear us on line?
MR. CROWDER: Yes.
MR. BULLOCK: Can you hear the witness?
MR. CROWDER: Yes, we can.
MR. BULLOCK: Good. Thank you, counsel.
BY MR. HOWELL:
Q. So my question was, how does Gabriel Roeder Smith, specifically for the PFRS, arrive at a funding value of assets versus a market value of assets?
A. That calculation is illustrated on page 20 of this report.
Q. And can you just walk me through on page 20 how Gabriel Roeder Smith does a calculation that leads to a funding value of assets?
A. The funding value of assets and the parameters used

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here are adopted by the board of trustees. They involve a seven-year smoothing period for gains and losses above and below market rates of return, and the smoothing process is illustrated in this section here that goes to the right.
Q. So section G of the -- on page 20?
A. Yes.
Q. And the impact of a smoothing process is that the particular -- or one impact of a smoothing process is that the particular gains or losses for a particular year will be spread out over a number of years rather than being entirely allocated to the year when they actually occurred, correct?
A. Correct.
Q. So, for instance, the year 2008, which we all know to be a very poor year for investment returns worldwide, really, if you have a smoothing process, then those -- that poor year will be reflected, kind of divided out over a period of seven years rather than the entire impact being felt in one year, correct?
A. Correct.
Q. Now, you said that the board of trustees for the PFRS was the one that had adopted the seven-year smoothing method, correct?

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A. Yes.
Q. Was Gabriel Roeder Smith involved in conversations relating to the decision to apply a seven-year smoothing period?
A. Yes.
Q. And do you know whether that was a recommendation from Gabriel Roeder Smith or a recommendation from somewhere else, or a collaborative effort to reach that assumption?
A. It was not a recommendation from Gabriel Roeder Smith.
Q. Do you know where the recommendation came from?
A. One of the trustees.
Q. Now, adopting a seven-year smoothing period would be considered an actuarial assumption that went into this calculation, correct?
A. I would call this an actuarial method.
Q. And when Gabriel Roeder Smith performs analysis using actuarial methods, Gabriel Roeder Smith has to be comfortable that those methods are reasonable, correct?
A. Yes.
Q. So even though it wasn't a recommendation from Gabriel Roeder Smith, you nonetheless were able to gain comfort that a seven-year smoothing period was a

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reasonable actuarial method to use in putting together the June 30, 2013, actuarial valuation, correct?
A. Yes. This method has something called a corridor, and we feel that it is reasonable.
Q. When you refer to a corridor, the corridor specifically is designed to make sure that the difference between the funding value of assets and the market value of assets does not go outside of a predetermined range, correct?
A. Correct.
Q. And the corridor here was that the funding value of assets should not be less than 80 percent of the market value of assets, nor more than 120 percent of the market value of assets, is that correct?
A. No.
Q. Okay, I'm sorry, what is the range here?
A. 30 percent.
Q. Okay, my mistake. So the corridor here is that the funding value of assets shall not be less than 70 percent of the market value of assets, nor more than 130 percent of the market value of assets, correct?
A. Correct.
Q. And that must be the case for each year in the analysis?

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A. Yes.
Q. Do you know whether Gabriel Roeder Smith will be performing an annual actuarial valuation for the PFRS for the period ending June 30, 2014?
A. I do not.
Q. Have there been any discussions between the PFRS and Gabriel Roeder Smith regarding an annual actuarial valuation for the period ending June 30, 2014?
A. No.
Q. Typically, when would the process begin for working on an annual actuarial valuation for the prior fiscal year?
A. Once the census data was received.
Q. Do you know when the census data was received for the period ending June 30, 2013, for the PFRS?
A. No.
Q. Do you have an estimate as to when work began on this 72nd annual actuarial valuation for the PFRS?
A. My estimate would be at the beginning of the year.
Q. And beginning of the year meaning beginning of --
A. Calendar year.
Q. -- calendar year 2014?
A. Correct.
Q. Do you have any reason to believe that Gabriel Roeder

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Smith will not be the system actuary performing the 73rd annual actuarial valuation for the PFRS?
A. No.
Q. And you would expect, then, to begin that process sometime maybe early calendar year 2015, correct?
A. Yes.
Q. And so you haven't -- fair to say Gabriel Roeder Smith hasn't arrived at any actuarial assumptions that it will use for the 73rd annual actuarial valuation for the PFRS for the period ending June 30, 2014?
A. That's correct.
Q. Now, earlier you testified, you pointed me to the fact that on a market value basis -- and this was on page 13 in the employer contribution rate section. Let me know when you're there.
A. Okay.
Q. And so you testified that on a market value basis, the fund is approximately 78 percent funded, correct?
A. Yes.
Q. So that would mean it was around 22 percent unfunded, correct?
A. Correct.
Q. So on a market value basis, the UAAL calculation would be a little more than -- well, right around double

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what it was on page 4 of this report, correct?
A. I would have to -- I would have to do that calculation.
Q. Okay. Well, let me just ask you, if you were going to do that calculation -- so we know it to be 78 percent funded on a market value basis, correct?
A. Yes.
Q. So if you were going to do the funding calculation, you would take the computed total of actuarial accrued liabilities that we looked at earlier is about $3.89 billion and take 70 -- take 78 percent of that, correct?
A. That's not the way I would do the calculation.
Q. Okay. Why don't you tell me how you would do the calculation.
A. I would take the accrued liability and I would subtract the market value of assets.
Q. And then the resulting number would be the unfunded liability on a market value basis, correct?
A. Yes.
Q. And then if you wanted the funding percentage, it would be one minus that divided by the actuarial liability, correct?
A. The funded percent is actually shown on this page, the

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78 percent.
Q. Right. So my question, though, and I apologize, I got myself turned around, how would you do the calculation to determine what the unfunded actuarial accrued liability would be on a market value basis?
A. As mentioned, I would take the accrued liability, and I would subtract the market value of assets.
Q. And how would you calculate the market value of assets for purposes of that calculation?
A. The market value of assets is a reported number. It's not a calculated number. It's also contained on page 20 and other places in the report.
Q. Okay. So where would we find the market value of assets on page 20 of the report?
A. Row B.
Q. And, specifically, we would take the 2013 number in row B, the $3.034 billion?
A. That is the market value of assets at the end of the year.
Q. And so to calculate the unfunded actuarial accrued liability on a market value basis, you would take the computed total of actuarial accrued liabilities of 3.89 billion and subtract the market value of assets of, roughly, 3.034 billion, correct?

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A. Yes.
Q. So that number would be somewhere, roughly, in the $850 million range, correct?
A. Correct.
Q. If you could turn with me to page 7, the assets and accrued liabilities graph, and let me know when you're there?
A. Okay.
Q. I had a little difficulty -- the asset section is quite clear and is marked with the darker shade of gray and has the black line showing the top -- showing the assets amount, correct?
A. Correct.
Q. I had a little difficulty distinguishing between the UAAL shading and the assets over accrued liability shading. First of all, can you describe for me what the assets over accrued liabilities represents?
A. This graph is supposed to be in color. That would be very helpful to you.
Q. Okay. Well, since I don't have it in color, can you tell me what the assets over accrued liabilities refers to?
A. This graph is intended to indicate how much of the accrued liability is covered by the assets in a

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graphical presentation. So the largest part of the graph is the actuarial accrued liability, as indicated by the arrow here, and then the assets are also indicated by the arrow which portion covers the actuarial accrued liability.

Q. And so if I'm following this correctly, from 1972 up through, you know, roughly 1996, there was an AAL that was in excess of the amount of assets in the PFRS system?

A. Yes.

Q. And then what I can't tell on the shading is going forward from 1996 until around 2002, there is a, what appears to me to be a different color shading, and I'm trying to figure out whether the AAL was above or not above assets during that time.

A. As I said, this chart should be in color.

Q. So are you unable to tell, then, as well, by looking at the chart?

A. I cannot tell for sure, but I suspect that is the area when the plan was fully funded.

Q. And so then we also see that the plan was fully funded as recently as, say, around 2010-2011, and then I think there's a little bit of additional shading that represents AAL going back above assets at the end of

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this graph. I'm just making sure that I'm reading that correctly. Is that right?

A. I think that's correct. The graph is -- I'm not able to tell without the color.

Q. Turning to page 13, the comments and conclusion section that we've talked about a little bit, investment -- this is an experience during the past year. It says: Investment experience for the year ended June 30, 2013, was favorable, with a market rate of return of 14.4 percent.

Do you see that?

A. Yes.

Q. Now, due to the asset smoothing, the entirety of that 14.4 percent would not be allocated to the fiscal year 2013, correct?

A. Correct.

Q. And so, in fact, the recognized rate of return over the seven-year funding period was only 4.1 percent, correct?

A. The recognized rate of return as of June 30, 2013, was 4.1 percent.

Q. And that's for the seven-year period ending June 30, 2013, correct?

A. No.

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Q. What is -- what period is that for?

A. It's for the period ending June, the one-year period ending June 30, 2013.

Q. I'm sorry, I asked the wrong question. That 4.1 percent reflects the seven, seven prior years of smoothed assets in order to arrive at the one-year investment return ending on June 30, 2013, correct?

A. Correct.

Q. So it would include one-seventh of each of the seven prior years' investment return in order to -- and then that's aggregated to determine an average to determine the one-year investment return, correct?

A. Close enough, correct.

Q. So it will include, for instance, the, you know, negative 20 percent return, or in excess of negative 20 percent return of 2008, one-seventh of that, right?

A. No.

Q. And so can you explain to me why that is not the case?

A. That period is so far in the past that that gain or loss, likely loss, has been fully recognized by 2013.

Q. The 2008 loss has?

A. I believe so. It doesn't show on this page, anyway, on page 20.

On page 20, what happened was, there was a

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restatement of assets at some point in the past, and that was rolled all together. So you cannot determine whether or not a 2008 loss is in here. There are three bases in 2013.

Q. Okay. And can you point me to where I'd find that on page 20?

A. It is in section G.

Q. And you said there's three bases for the year 2013?

A. Three bases are being recognized in 2013, and there are portions of loss and a gain from prior years, but if you go down to G4, you see a larger number. The assets were restated at some point in the past.

Q. Okay, thanks. I think I'm with you now.

So when we look at that number, the negative 139 million number that's in the 2013 column, in row G4, that's the number that's a restatement of some prior years, and it's impossible just by looking at this to ascertain which years are included or not included in that number?

A. Correct.

Q. So you don't know one way or another whether 2008 is still showing up in this number, correct?

A. That's correct.

Q. Now, there's a section entitled data furnished for

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valuation, and you testified earlier that one of the early parts of the process is receiving data from a system that you will then use in performing the calculations that go into a valuation report, correct?
A. Correct.
Q. Are you aware of any problems or inconsistencies in any of the data provided by PFRS that was used in the June 30, 2013, valuation?
A. The data that was used in the June 30, 2013, data valuation report was reasonable by the time the report was completed.
Q. Subsequent to this report being completed, are you aware of anything that would make the data that was included in this report unreasonable?
A. No.
Q. And that's also true for the GRS, correct; you're not aware of anything that would, subsequent to the issuance of the June 30, 2013, GRS report that makes you believe that the data used therein was unreasonable, correct?
A. Correct.
Q. Turn your attention to the appendix at page 30, and then we'll move to the first page of the appendix, at 31. Are you with me there? We're still on Kermans

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Exhibit 2.
A. Yes.
Q. Under assumption review at the top of the page, it says: As required by City ordinance, assumptions are formally reviewed every five years and changes are recommended as experience emerges.
Do you see that?
A. Yes.
Q. Gabriel Roeder Smith will do a formal review every five years of the assumption, is that correct?
A. That is what the City ordinances states.
Q. And do you know whether Gabriel Roeder Smith in fact does a formal review every five years or more frequently of the assumptions used for the valuation reports?
A. I know that we've done such studies in the past.
Q. Now, is a formal review of that sort sometimes referred to as an experience study?
A. Yes.
Q. Does Gabriel Roeder Smith also do informal reviews of the assumptions used in its valuation reports?
A. Yes.
Q. How often would you say the informal reviews are done of the assumptions used in a Gabriel Roeder Smith

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valuation report?
A. Annually.
Q. And, in fact, every time you issue a report, you have to make sure that you're comfortable with the assumptions that -- the actuarial assumptions used therein, correct?
A. Correct.
Q. And you do in fact do that; you make sure that you believe that the actuarial assumptions contained in a valuation report that you issue and that you're the signing actuary for are reasonable, correct?
A. Correct.
Q. And you did that for all valuation reports you've provided for the PFRS, correct?
A. Correct.
Q. And you've also made sure that all of the assumptions used in valuation reports for the GRS are, in your opinion, reasonable, correct?
A. Correct.
Q. One of the -- I guess there's two economic assumption paragraphs, and I'll turn your attention to the first economic assumption paragraph. Are you with me there?
A. Yes.
Q. There it says: The investment return rate used in the

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valuation was eight percent per year compounded annually (net after investment expenses).
Do you know what the process was for selecting an eight percent investment return rate assumption for use in the 72nd annual actuarial valuation report for the PFRS?
A. Yes.
Q. What was that process?
A. Well, that board -- that particular assumption is adopted by the board of trustees, and that assumption was changed in between the last experience study and what we would call the next experience study, which is underway now.
Q. So there's an experience study underway now for the PFRS?
A. Yes.
Q. There's an experience study underway now for the GRS?
A. Yes.
Q. Do you know whether those experience studies began before or after the City of Detroit declared bankruptcy?
A. No.
Q. Do you have a general understanding for roughly when those experience studies began?

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A. Around the same time as the bankruptcy.
Q. So sometime in kind of mid-2013?
A. The summer of 2013, yeah.
Q. Now, the PFRS had an investment assumption -- well, let me ask you, first of all, just you personally, how long have you worked on the valuation reports for the PFRS and GRS?
A. Approximately fifteen years.
Q. So you're aware that in 2011 the PFRS changed its investment return assumption from 7.5 percent to 8 percent, correct?
A. Correct.
Q. And you're also aware that -- let me get the exact date.
You're also aware that the -- that Gabriel Roeder Smith issued an experience study for the PFRS and GRS in kind of early 2009, correct?
A. Correct.
Q. And at that time, in 2009, GRS had an investment return assumption of 7.9 percent, correct?
A. I think that's correct.
Q. And in early 2009, when Gabriel Roeder Smith issued its experience study, the PFRS had an investment return assumption of 7.8 percent, correct?

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A. I think that's correct, as well.
Q. And subsequent to the issuance of the experience study in 2009, the PFRS changed its investment return assumption for 2009 and 2010 to 7.5 percent, correct?
A. Correct.
Q. And then there was a change made that we just discussed in 2011 for the PFRS from 7.5 percent to 8 percent, correct?
A. Correct.
Q. Now, when -- for each of these assumed actuarial rates of return or target investment rate -- you understand those are synonymous, basically, right?
MS. GREEN: Object to the form of the question.
MR. HOWELL: Fair enough.
BY MR. HOWELL:
Q. So let me try to fix that question. I am going to refer to, as I already have, to the concept of an investment return rate. You understand what that means, right?
A. Yes.
Q. All right. And then sometimes that's also called an investment return assumption, right?
A. Correct.

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Q. And is that sometimes also called an actuarially-assumed rate of return?
A. Yes.
Q. Okay. So my apologies that I may sometimes use those terms, you know -- I may not use the same term every time, but you'll understand if I use any of those three terms, I'm talking about the same thing, okay?
A. Okay.
Q. So for each report, for each actuarial valuation report that Gabriel Roeder Smith issues to the PFRS, there is an investment return rate assumption, correct?
A. Correct.
Q. And for each such report, Gabriel Roeder Smith, regardless of who initially chooses or arrives at the investment rate assumption, Gabriel Roeder Smith has to become comfortable that that is a reasonable assumption, correct?
A. Correct.
Q. And for every year that Gabriel Roeder Smith has issued a valuation report for the actuarial valuation, actuarial liability valuation for PFRS, Gabriel Roeder Smith has deemed the investment return assumption to be reasonable, correct?

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A. Correct.
Q. And if Gabriel Roeder Smith believed the investment rate assumption to be unreasonable, that's something that you would raise with the plans, correct?
A. Yes, and we would disclose that in the valuation report.
Q. And there's no disclosure that -- in any valuation report from Gabriel Roeder Smith for the PFRS that the investment return assumption was deemed unreasonable by Gabriel Roeder Smith, correct?
A. Correct.
Q. Now, do you recall having any conversations in association with the 2013 fiscal year actuarial valuation report for PFRS in which you discussed whether or not eight percent was a reasonable investment return rate?
A. I don't recall one way or the other.
Q. Can you recall any time where the PFRS, in association with the preparation of this Exhibit 2, the 2013 fiscal year valuation report, where the PFRS came to Gabriel Roeder Smith and said, "I think the investment return assumption is too high"?
A. I don't recall that.
Q. Now, you said that the eight percent investment return

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assumption was something initially provided by the board of trustees for the PFRS to Gabriel Roeder Smith, is that a fair characterization?
A. No.
Q. So how, then, was the 8.0 percent investment return assumption arrived at for use as the investment return rate in this report?
A. The board of trustees adopted an eight percent assumed rate of return.
Q. So then what does Gabriel Roeder Smith do to make sure it's comfortable with that assumption?
A. We, we, we look at the assumption, we consider something called a best estimate range, and we determine whether or not this falls within that, and whether we feel this is likely to occur at least 50 percent of the time.
Q. And if you feel that it's likely to occur at least 50 percent of the time, you deem it to be within the best estimate range and a reasonable assumption, correct?
A. Correct.
Q. And if you feel that it's not likely to occur 50 percent of the time, then you may have to raise that issue with the plan, correct?
A. Correct.

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Q. And you didn't raise that issue with the plan in this case, correct?
A. Correct.
Q. When looking at the investment return assumption, do you ever also consider the investment return assumption of other large public pension plans?
A. That can be one of the decision points, but not, not a major one.
Q. So that could be a data point. It wouldn't be, it wouldn't be a sole data point that you would rely on?
A. No.
Q. Do you ever look at the investment policy of a retirement system when kind of testing the investment return assumption of that system?
A. Yes.
Q. So that's another thing that could be a helpful data point?
A. Correct.
Q. But not necessarily the only thing you would rely on, correct?
A. Correct.
Q. Do you ever look at the historical returns for a particular system when testing an assumption regarding the investment return rate for that system?

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A. Yes.
Q. That's another thing that could be a helpful data point in getting comfortable with an investment rate assumption, correct?
A. Correct.
Q. So you look at kind of a variety of data points, and then based on all of that, you determine whether or not you think it fits within your best estimate range, right?
A. Yes. A couple of other things that would be considered is the purpose of the measurement that you're taking, the materiality of the assumption that you're making, relevant data, as you mentioned.
Q. When you say the materiality of the assumption, you would agree that the investment return rate is always a material assumption, correct?
A. Yes.
Q. Now, with respect to the pay increase assumptions that are the second paragraph of the economic assumptions on page 31 of Kermans Exhibit 2, those pay increase assumptions assume that the PFRS plan would be an ongoing plan, correct?
A. Yes.
Q. And they include both increases in salary and

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increases in salary that are tied to service-related benefits, correct?
A. They do, although for the very next year we have a zero percent assumption for wage increase.
Q. Thank you for that clarification. So with respect to salary increase -- first of all, you incorporate tables where you make assumptions regarding salary increases for different ages and different years of service with the PFRS, correct?
A. Yes.
Q. Now, moving back up to the previous paragraph, about halfway through the paragraph you say: Considering other financial assumptions, the eight percent total investment return rate translates to an assumed real rate of return of four percent over wage inflation.
Do you see that?
A. Yes.
Q. And you still agree with that statement today, correct?
A. I agree with -- that that statement is appropriate for this report and the calculations done in the report.
Q. And wage inflation is typically about a half percent to a percent higher than price inflation, is that correct?

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A. According to the Social Security Administration, yes.
Q. So you say considering other financial assumptions. Do you have an understanding as to what those other financial assumptions are?
A. I think that is referring to the Consumer Price Index and the wage inflation.
Q. How does Gabriel Roeder Smith go about deriving its inflation assumption, inflation rate assumption for use in an actuarial valuation?
A. The wage inflation assumption is part of the experience study process. We have numerous things that we look at, involving starting with the Consumer Price Index and then looking at, as you mentioned, the differential between that and potential wage inflation.
Q. Now, when Gabriel Roeder Smith performs the informal review, the annual informal review when preparing a valuation report for a system, if you believe that there is an unreasonable assumption in the most recent experience study, you would adjust that assumption to make it reasonable going forward, correct?
A. Yes.
Q. You also have several noneconomic assumptions listed on page 31, continuing through page 33. One relates

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to a mortality table.
Where does Gabriel Roeder Smith obtain the mortality information that it uses in coming up with a mortality assumption for a valuation report?
A. That analysis is part of the five-year experience study.
Q. So do you know whether there were any changes to the mortality assumptions used in this 2013 valuation report versus the mortality assumptions listed in the most recent experience study?
A. I believe this is the same table. I would have to confirm that, though.
Q. And while I understand you said you're not a hundred percent sure on that, if you felt that the mortality table included in the prior experience study was no longer reasonable, you wouldn't continue to use it, waiting until the next experience study came out, right?
A. Correct.
Q. And that's true for any assumption that would be no longer valid in the experience study. You would, you would change that during your review of the valuation report rather than wait for the next experience study to come out, right?

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MS. GREEN: I'll object to form and foundation.
Rush, I think you're assuming that there are certain assumptions that she has the ability to change, and I think she already testified there are certain assumptions the board has to authorize previously. So if we could just clarify which assumptions you're -- I don't know if that makes sense to you or not, but ...
MR. HOWELL: Well, for one thing, and I don't mean to -- I mean, I appreciate the clarification, but I would prefer that we not have speaking objections, if possible, and object to the form, and then I'll ask her if she understands the question and do my best to clarify it.
But, you know, I'll take this form objection and just -- I'll strike that question.
BY MR. HOWELL:
Q. On page 32 there's something called miscellaneous loads, and I want to focus on the second sentence there that says: Active accrued liability (excluding DROP members) was increased by one percent to approximate the effect of missing or incomplete data.
Do you see that?

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A. Yes.
Q. And can you explain for me -- well, if I'm understanding this correctly, this is just kind of a one percent that's added to the AAL to deal with the fact that there might be some problems with the data?
A. Correct.
Q. And how does Gabriel Roeder Smith determine that one percent is the, is the best number to use for this miscellaneous load?
A. Each year we analyze the data and we try to determine whether or not we think it's a reasonable data set to use in the valuation, and one of the things that we can do, if we think it is reasonable to use in the valuation but we think that it may be missing certain data elements, is we can make what we view in our judgment to be an appropriate load to the liabilities to reflect that.
Q. So Gabriel Roeder Smith will from time to time apply a miscellaneous load to -- in this same circumstance for other retirement systems, as well?
A. Yes.
Q. Do you know whether it's typical to include a miscellaneous load or typical not to include a miscellaneous load?

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A. I think it is typical to include a miscellaneous load for data.
Q. And is one percent the typical number used by Gabriel Roeder Smith, or does that vary?
A. It varies.
Q. And what would you say, in your experience, is the range that you would use for a miscellaneous load for purposes of approximating the effect of missing or incomplete data?
A. One to three percent.
Q. There's also in -- the first sentence says: Normal retirement accrued liability (excluding DROP members) was increased by three percent for service purchases.
Can you just explain to me what that is referring to?
A. Individuals, active individuals when they're working will sometimes purchase service that they've earned in other municipalities or military service, and this is a load to reflect that there may be a cost to that that is not already reflected in the accrued liability numbers.
Q. Can you describe for me what the DROP program is for PFRS?
A. The DROP program is detailed in this report on

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page 17.
Q. And do you know whether Gabriel Roeder Smith has ever undertaken an effort to analyze the effect on the UAAL for the PFRS as a result of the implementation of the DROP plan?
A. Michigan State law, I believe, requires that an analysis be done for every single change in benefit provisions, and I would assume that it was done for this one, as well.
Q. And do you, as you sit here, do you have any understanding of the impact on the UAAL for the PFRS as a result of the implementation of the DROP plan?
A. No.
Q. On page 34 of Exhibit 2 to the Kermans deposition is a page entitled Funding Methods. Do you see that?
A. Yes.
Q. And the first sentence there says: The entry age actuarial cost method was used in determining age and service liabilities and normal cost, vesting liabilities and normal cost, and casual liabilities and normal cost.
Do you see that?
A. Yes.
Q. And that's the entry age normal actuarial cost method,

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correct?
A. Yes.
Q. Do you know how long the -- how long Gabriel Roeder Smith has been using the entry age normal cost method in performing valuations of the actuarial liability for PFRS?
A. No.
Q. Has that been the case for as long as you can remember?
A. Yes.
Q. Would you agree that entry age normal is an appropriate cost funding methodology for an ongoing plan?
MS. GREEN: Object to form, foundation.
BY MR. HOWELL:
Q. You can answer if you understood the question.
A. No, I don't.
Q. You do not. And why is that?
A. I think your question was too broad for me to answer it.
Q. Oh, I'm sorry. So you did not understand the question?
A. Correct.
Q. Okay. I think we just need to make sure the record's

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clear there so it doesn't sound like --
MS. GREEN: I was confused, too, so let's maybe re-ask that or restate it.
MR. HOWELL: I mean, I think the record's clear, but I just -- I want to make sure we don't have something that's on there that looks goofy.
BY MR. HOWELL:
Q. So I asked you, would you agree that entry age normal is an appropriate cost funding methodology for an ongoing plan, and your answer to that question was you don't understand the question, right?
A. Correct.
Q. For purposes of the work Gabriel Roeder Smith did here, it assumed that the PFRS plan was an ongoing plan, correct?
A. Yes.
Q. And it assumed that there would be future salary and service benefits, correct?
A. Yes.
Q. Now, you're aware that there can be circumstances in which a plan is frozen, correct?
A. Correct.
Q. And in some frozen plans there will be no future increases in salary or service increases, correct?

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A. Correct.
Q. In that situation, a frozen plan in which there's no future salary increases nor will there be future service-based increases, do you think using the entry age normal funding method can overstate the UAAL of that plan?
A. I would have to do an analysis for that.
MS. GREEN: I wanted to place an objection on the record before you answer.
Rush, to the extent these are outside of the scope of the 30(b)(6) topics and seem to be hypotheticals may be more appropriate for an expert witness. I'll place the objection, but obviously her answer is already on the record.
BY MR. HOWELL:
Q. And I think your answer was that you'd have to do an analysis of that, is that correct?
A. My answer is that it would depend.
Q. What would it depend on?
A. The purpose of the measurement, the plan involved, and other factors.
Q. Could you give me an example of a set of factors in which using the entry age normal cost funding methodology for a frozen -- plan that's frozen for

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salary and service increases could lead to an overstated UAAL?
MR. BULLOCK: I'm going to object to the form of the question. You're asking for her to render some form of an expert opinion. She's here as a lay witness.
BY MR. HOWELL:
Q. You can, you can answer the question if you understood it.
A. I don't understand it.
Q. Well, you told me that in order to determine whether or not the entry age normal cost method, cost funding method would -- in a frozen plan, with frozen salary and frozen service, would lead to an overstated UAAL would depend on an analysis of a variety of factors, correct?
A. Yes.
Q. And I am trying to figure out what factors you were referring to that could result in the -- use of entry age normal cost funding methodology in a frozen plan lead to an overstated UAAL.
MS. GREEN: I'm going to lodge the same objection. Maybe we can just do a standing objection. I don't want to slow you down, but I do think it's

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somewhat outside the scope of the 30(b)(6) topics, and I do think you're sort of getting close to the line of an expert witness hypothetical sort of question.
But if we can just make that agreement, I won't re-lodge the objection every time.
MR. HOWELL: Sure, we can stipulate to a standing objection on this line of question.
MR. BULLOCK: With that being said, are you planning on asking the same question again?
MR. HOWELL: Yes. I think the question's still pending, but I can ask it again.
BY MR. HOWELL:
Q. So my question is, can you provide for me any of the factors that you referenced that might indicate that the use of an entry age normal cost funding methodology for a frozen plan would lead to an overstated UAAL?
A. Not without a lot more consideration.
Q. Have you ever worked on a plan that was frozen before?
A. Yes.
Q. Have you ever changed your cost funding methodology for a frozen plan?
A. That's a complex question. Can you please restate it?
Q. Well, so you use a particular cost funding methodology

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when you're performing actuarial -- performing any actuarial valuation, right?
A. Yes.
Q. And you testified that you have worked on plans before that were ongoing at one point and then became frozen, is that correct?
A. Yes.
Q. And I'm just asking, on those, with respect to those specific plans, at the time the plan was frozen, did you change the cost funding methodology that you used in performing actuarial valuations for that plan?
A. Typically, if a plan becomes frozen, although "frozen" is not a technical term, you would consider cash flow needs and other such things that would lead you to possibly changing a method or two in the process; not necessarily the cost method, though.
Q. So it might lead to an adjustment of the, of the cost funding methodology, though not necessarily a complete change to which cost funding methodology is used?
A. Correct.
Q. The entry age normal cost funding method for an ongoing plan assumes future salary and service increases, correct?
A. Yes.

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Q. If a plan was frozen and wasn't going to have future salary and service increases, would you agree that you should not include accruals for future salary and service increases in the cost funding methodology you use to value that plan?
A. It depends on the measurement that you're taking.
Q. What if you're -- the measurement that you're taking is a valuation of the UAAL?
A. I don't understand the question.
Q. So it's your testimony that there would be certain purposes, certain measurements that you would be taking, where even though a plan had been frozen as to future salary and service increases, that you would still want to accrue for future salary and service increases as part of the cost funding methodology?
A. I don't understand that question.
Q. Well, let me try to make it more simple. If you have a situation in which there aren't going to be future service and future salary increases, should you include future service and future salary increases when calculating a UAAL for that plan?

MS. GREEN: I'm going to object. I still want to be clear for the record that we have a standing objection to all of these hypothetical

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questions to a 30(b)(6) witness who's not here in an expert capacity, and I don't want there to be a misunderstanding that you had a certain line of questions and now you're in a different line of questions.

Throughout the record there have been several hypothetical questions lodged to this witness. I just want to restate and clarify for the record that it's well beyond the scope of the eight topics listed on the 30(b)(6) notice. But you may proceed.

MR. HOWELL: Okay, and I will state for the record that I disagree. Part of the topics here were the actuarial valuations performed by Gabriel Roeder that includes the actuarial cost method used, and I believe that I've established foundation with this witness that she's worked on multiple plans and used different cost funding methodologies, but I understand the objection, and if you want -- I think we're close to the end of this line of questions, but if you want to just object each time to make sure that it's clear, I don't have a problem with that.

BY MR. HOWELL:
Q. So, all right, we were talking about cost funding methodologies, right?

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A. Yes.
Q. My question to you is, in a situation in which a plan is frozen and there is no future salary increase contemplated and no future service increase contemplated, in your experience as an actuary, do you believe that those -- the cost funding methodology can still include accruals for future salary and future service increases?
A. If you are working on an actuarial valuation for the purpose of measuring the employer contribution rate, then you would want your funding method to line up with what's actually going to happen.
Q. On page 35 of sample salary adjustment rates, is this an example of a table, the top table on page 35 that was derived from the prior experience study?
A. Yes.
Q. And the base (economic) there is -- that, that refers to wage inflation, correct?
A. Correct.
Q. Do you have an understanding as to what Gabriel Roeder Smith viewed to be price inflation in putting together this valuation report? I know the range is between a half and one percent lower. Do you know whether one-half or one percent lower was applied?

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A. I do not.

MR. HOWELL: I don't know how long we're going. I'm getting ready to go to a new exhibit, if we want to take a break.

MS. GREEN: I think lunch is going to be here at 11:45 or noon. Do you want me to see if it's here and we can break, or do you want to just muddle along for another fifteen minutes and then we'll do lunch?

MR. HOWELL: If it's okay -- whatever you guys want to do.

THE WITNESS: I'm okay with fifteen more minutes, yeah.

MR. BULLOCK: Are we within that time frame?

MR. HOWELL: Sure.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 3
11:37 a.m.

BY MR. HOWELL:
Q. Ms. Kermans, I'm going to hand you what I am marking as Kermans Exhibit 3.

MR. HOWELL: And for identification purposes, Kermans Exhibit 3 also doesn't have a Bates

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number but is the Gabriel Roeder Smith & Company 75th Annual Actuarial Valuation for the General Retirement System of the City of Detroit.

BY MR. HOWELL:

Q. And, Ms. Kermans, do you recognize this document?
A. Yes.
Q. And this is a document we've referred to several times, but this is the final actuarial valuation as of June 30, 2013, for the GRS, correct?
A. Yes.
Q. And if you turn to the third page within here, which -- it's another letter on April 4, 2014, do you see that?
A. Yes.
Q. So this is a similar letter from Mr. Kausch, yourself, and Mr. Alberts that kind of lays out the purpose of the actuarial valuation, correct?
A. Yes.
Q. And in the second sentence on the first paragraph of the letter it says: This report was prepared at the request of the board and is intended for use by the retirement system and those designated or approved by the board.
Is it the board of trustees of the GRS that

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typically comes to Gabriel Roeder Smith and says, "We want to go ahead and do the actuarial valuation for the next year"?
A. The typical process starts with us requesting the data, assuming that we have an ongoing relationship with them.
Q. Do you know who your engagement is with? Is it with the plan system itself or the board of trustees?
A. It's with the system, represented by the board of trustees.
Q. In the bottom paragraph, the one that's bolded, the first line is: We presented preliminary valuation reports at the March 9, 2014, board meeting.
Do you see that?
A. March 19th.
Q. Oh, I'm sorry.
A. Yes.
Q. Thanks for that clarification. So it says: We presented preliminary valuation results at the March 19, 2014, board meeting. Correct?
A. Correct.
Q. And you attended that board meeting, correct?
A. I don't recall whether I attended or David Kausch, along with Kenneth Alberts.

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Q. In the past have you, have you ever attended a board meeting of the GRS?
A. Yes.
Q. And I know you can't say specifically on this one, but from time to time you will be involved in the presentation of the report to the board of trustees of the GRS and PFRS, correct?
A. Correct.
Q. And these board meetings are open to members of the GRS and PFRS, as well, correct?
A. I don't understand the question.
Q. Okay. Who -- in your experience, who has been at these board meetings when you present this report?
A. The board of trustees, not necessarily all of the members, but some of them. Retirement system staff. Occasionally reporters. Attorneys.
Q. And how does the process go? Do you kind of walk through the report and then open it up for questions, or is there a different process?
A. We go through the report. We have questions throughout the report and sometimes at the end.
Q. And can you recall making any significant changes between the presentation of the draft valuation report in March and the submission of the final version in

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April for this GRS 75th annual actuarial valuation?
A. No.
Q. And this bolded paragraph explains that after that meeting, you received some additional information or additional data, but based on your analysis, the addition of that data wasn't material enough to make any changes, basically, right?
A. The addition of that data, with the result of incorporating that data, ended up being less than our one percent load that we have in the valuation process already, and so we did not suggest a redo of the valuation.
Q. Okay. You anticipated my next question, which was whether that adjustment was the load, so thank you.
Turning to the second page, second paragraph, second sentence, it says: To the best of our knowledge, this report is complete and accurate and was made in accordance with actuarial standards of practice promulgated by the Actuarial Standards Board.
You stand by that statement, correct?
A. Yes.
Q. Then you say: The actuarial assumptions used for the valuation are set by the board. Different assumptions would produce different results. The actuarial

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assumptions are reasonable.
You stand by that statement, correct?
A. Yes.
Q. Turning to page A4, which is the actuarial accrued liabilities as of June 30, 2013, retirement system totals, are you with me on that page?
A. Yes.
Q. There is an unfunded accrued pension liability of $1,084,210,716, correct?
A. Yes.
Q. And that includes $36 million of past-due contributions, an assumption that those would not be made, correct?
A. Correct.
Q. And like the past-due contributions we looked at for PFRS, were those entirely fiscal year 2013 past-due contributions?
A. Correct.
Q. Turning to page A8, the conclusion section of the comments, it says: The retirement system is 70 percent funded as of June 30, 2013, based on the funding value of assets.
Do you see that?
A. Yes.

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Q. And again, it's a 58 percent on market value of assets, is that right?
A. Correct.
Q. So if I wanted to determine the UAAL on a market value basis, I would take the actuarial accrued liabilities of 3.6 billion and change -- as listed, for instance, on page A4, and subtract from that the market value end of year on page A13 for 2013 of just about $2.1 billion, correct?
A. Correct.
Q. So that would lead to a UAAL on a market value basis of just a little bit over $1.5 billion, correct?
A. Correct.
MS. GREEN: Rush, I got an email from my assistant that lunch is here and ready, so whenever you are ready to take a break.
MR. HOWELL: This is a decent spot, if you want to take a break now.
MS. GREEN: How much time do we think we need? It's just across the hall, but ...
MR. HOWELL: Well, I'm sure everyone --
MS. GREEN: 12:30?
MR. HOWELL: However long you guys would like to take.

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VIDEO TECHNICIAN: The time is 11:44 a.m. We are now off the record.
(Off the record at 11:44 a.m.)
(Back on the record at 12:37 a.m.)
VIDEO TECHNICIAN: The time is 12:37 p.m. We are now on the record.
BY MR. HOWELL:
Q. Ms. Kermans, this morning we spent a great deal of time going through the actuarial valuations for both the PFRS and GRS, and I was hoping you could have both Exhibit 2 and Exhibit 3, which are those two valuations, for your reference. I just want to ask a few final questions on these documents.
Now, the unfunded actuarial accrued liability, or the UAAL, that you had listed for the PFRS was about $415 million, correct, and that's as of June 30, 2013?
A. Correct.
Q. And the UAAL as of June 30, 2013, that you had for the GRS was about $1.084 billion, correct?
A. Correct.
Q. And so if we add those two together, the 415 million, roughly, and the 1.084 billion, roughly, we get a combined UAAL for the two retirement systems of almost

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exactly $1.5 billion, correct?
A. Well, those are not two numbers that I would add together, because they're created on different bases, but, yes, mathematically, that's the answer.
Q. And what do you mean when you say they're created on different bases?
A. They have two different assumed rates of return, for example.
Q. So, for example, the GRS has a 7.9 percent assumed rate of return, whereas the PFRS has an 8 percent rate of return?
A. Correct.
Q. But if I simply wanted to say what is the combined UAAL of the PFRS and GRS pursuant to the Gabriel Roeder June 30, 2013, valuations, it would be about $1.5 billion between the two just added together, right?
A. Yes.
Q. And we went through the calculations, and do you recall that if you were to do the UAAL on a market value basis for the GRS, it was a little, just a little above $1.5 billion?
A. Yes.
Q. And do you recall that when we looked at the UAAL for

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the PFRS on a market value basis that -- going through the calculation you explained, we got about $850 million, or right around there, for the UAAL for the PFRS on a market value basis?
A. Correct.
Q. And again, understanding that there are differences in how those two calculations occurred, but if you were to add the UAAL of the PFRS and the UAAL of the GRS on a market value basis, you would add the roughly 1.5 billion to the roughly 850 million, for something around 2.35 billion or so, is that about right?
A. Correct.
Q. And those numbers, the UAAL, first on a funding value basis, the 415 million for PFRS and the 1.084 for the GRS, you believe those to be accurate at the time you issued this report, correct?
A. Yes.
Q. And subsequent to issuing the report, you have not determined that those were inaccurate at the time they were issued, right?
A. Correct.
Q. And with respect to the calculations that we did for the UAAL on a market value basis for PFRS, you believe those are also correct at the time the report was

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issued, correct?
A. I didn't do those calculations at the time the report was done, but I see no reason to -- why they wouldn't be still correct.
Q. And the same is true for the GRS market value calculations; you didn't do them at the time, but you see no reason why they wouldn't be correct, right?
A. Remain correct.
Q. Did you review the report of the Court's feasibility expert, Martha Kopacz, as part of your preparation?
A. I did not review the report. I was not asked to review the report.
Q. Now, we've talked a bit about the experience studies that were done and completed in early 2009 for GRS and PFRS. Do you recall discussing those?
A. Yes.
Q. I'm going to hand you what I will mark as Kermans Exhibit 4.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 4
12:46 p.m.

MR. HOWELL: And for identification purposes, Kermans Exhibit 4 does not have a Bates stamp but is the Gabriel Roeder Smith Police and Fire

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Retirement System for the City of Detroit Five-Year Experience Study, July 1, 2002, through June 30, 2007.

And I will note and apologize that we have this large kind of water mark on the top of each page. The reason for that is that this exhibit was listed in the expert report of William Fornia. We then requested a copy of it from Mr. Fornia after reviewing his expert report, and he provided it, unfortunately, with this stamp across the top.

BY MR. HOWELL:
Q. So that's why it's there, and I'll ask you to try your best to ignore it as we flip through the pages.
A. I will try my best.
Q. Yeah. Ms. Kermans, do you recognize this document?
A. Yes.
Q. And this is, in fact, the 2009 five-year experience study for the PFRS that we've discussed a few times, right?
A. Yes.
Q. And so I'm going to refer to this to try to save a little time going forward as the PFRS experience study, okay?
A. Okay.
Q. What is the purpose of an experience study as done by

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Gabriel Roeder Smith for a system?
A. That information is outlined on page A2 of the report.
Q. And where, specifically, is the purpose of the report laid out?
A. Underneath the flick@trusteepensionadvisers.com, primarily, some information indicating that the purpose of the study is to review experience related to withdrawal of active members, rates of disability, et cetera.
Q. So you're referring to those six or so bullet points kind of near the top of page A2?
A. Yes.
Q. And is it fair to say that one of the purposes of an experience study is to look at past experience to evaluate assumptions that have been used in actuarial calculations for a particular system?
A. Could you repeat that?
Q. Yes. Is one of the purposes of an experience study to go back and look at past history to assess the quality of actuarial assumptions that are used in performing actuarial calculations for the system in question?
A. I can't really answer yes or no to that question.
Q. Part of the reason that you do an experience study is to gain additional comfort with actuarial assumptions,

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right?
A. Okay, yes.
Q. And one reason you do an experience study is to determine whether or not you need to update actuarial assumptions that are used in valuing the actuarial liabilities, right?
A. Yes.
Q. Now, you also have an informal review that takes place, as well, and this experience study is a formal review that supplements that process, correct?
A. Yes.
Q. This experience study for the PFRS related to the five-year period from 2000 -- July 1, 2002, to June 30, 2007, correct?
A. Can I ask what you're looking at?
Q. Sure, I'm happy to refer you to page 1, and it's a January 29, 2009, letter from you and from Norman Jones to the board of trustees for the PFRS --
A. Okay.
Q. -- and about halfway down it says the investigation covered the five-year period from July 1, 2002, to June 30, 2007.
And is that consistent with your understanding of when the -- this experience study

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covers?
A. Yes.
Q. What is your role in performing this -- or what was your role in performing this experience study?
A. The role would typically be that I would review analyses done by analysts regarding experience that happened during the five-year period and to work with the other signing actuary in developing probabilities of events going forward for the next five-year period.
Q. Norman Jones was the other signing actuary here?
A. Yes.
Q. Have you worked with Mr. Jones on other experience studies besides this one?
A. Yes.
Q. And in your experience with Mr. Jones, have you found him to be competent in his role as a signing actuary?
A. Yes.
Q. How would you characterize the work that Mr. Jones does?
A. It's excellent.
Q. Did Mr. Jones work with you on the GRS experience study, as well?
A. I worked on the GRS experience study, but I was not one of the signing actuaries on that study.

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Q. That study, the signing actuaries were Mr. Jones and Mr. Alberts, correct?
A. Mr. Alberts and Mr. Jones were the individuals that signed that study, yes.
Q. But you had some involvement in working on the GRS experience study, as well?
A. Yes.
Q. Do you recall what that involvement was?
A. It would be in a peer review role and really not much different than my role here, to be honest, so ...
Q. So in a general sense, reviewing analyses done by the team of analysts, and looking at probabilities, and just generally the same things you laid out regarding the PFRS?
A. Correct.
Q. Okay. In the first paragraph -- I'm sorry, strike that.
In the fourth paragraph, the bolded paragraph, it says: We believe that the actuarial assumptions recommended in this experience study report represent, individually and in the aggregate, reasonable estimates of future experience of the Police and Fire Retirement System of the City of Detroit.

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You stand by that statement, correct?
A. I stand by that statement when -- in 2009, yes.
Q. Subsequent to 2009, have you come to believe that certain actuarial assumptions in this experience study needed to be changed?
A. We have not completed our analysis of the subsequent experience study.
Q. I understand that the next experience study is ongoing. However, I also understand that you do an informal review with each valuation in which you look at the actuarial assumptions used for that valuation, correct?
A. Correct.
Q. And you have not found, since issuing this report January 29 of 2009, that any of the actuarial assumptions in this experience study that are used in the valuation reports that you do for PFRS or GRS need to be changed, correct?
MS. GREEN: Asked and answered.
A. We are still in the midst of the next experience study. It's a different process than what's done annually.
BY MR. HOWELL:
Q. I understand that, and apologies if this is asked and

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answered. I just want to make clear, you have not in the year-over-year actuarial valuations that you've done since January 29, 2009, including, for instance, the June 30, 2013, valuation, you've not seen actuarial assumptions that are included in this experience study that needed to be changed for use in one of the valuation reports, correct?
A. Correct.
Q. Now, on page A1 of this report, in the first bullet it says: A spread for funding purposes between three and four percent, with the wage inflation assumption between 4.8 percent and 3.5 percent, resulting in overall investment return assumption of between 7.5 percent and 7.8 percent.
Do you see that?
A. Yes.
Q. And that is the recommended actuarial assumption regarding the investment return assumption that resulted from this experience study, correct?
A. There are two numbers there that are investment return assumptions. So I can't answer the question that you're asking.
Q. Fair enough. There's a 7.5 percent investment return assumption and a 7.8 investment return assumption

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there, correct?
A. Correct.
Q. And there's a statement that the investment return assumption is between 7.5 percent and 7.8 percent. Do you see that?
A. Yes.
Q. So would it be fair to say that the 7.5 percent to 7.8 percent reflected the recommended actuarial assumption -- that the recommended actuarial assumption should be between those two numbers following this experience study?
MS. GREEN: Object to form.
MR. BULLOCK: Object to form.
BY MR. HOWELL:
Q. You can answer if you understood the question.
A. No.
Q. Well, maybe I can ask it in an easier way. If we look at page A2, go towards the bottom, the short paragraph about three from the bottom, it starts, "We are recommending." Are you there with me?
A. Yes.
Q. It says: We are recommending certain changes and assumptions. The various assumption changes and their impact on the required contribution are described on

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the following pages.
And, in fact, this experience study reflects certain recommendations by Gabriel Roeder for changes of actuarial assumptions for the PFRS, correct?
A. Correct.
Q. And can you describe the process for me of how -- not specifically, but generally a recommendation from GRS would go to a system and then how a determination would be made whether to adopt or not adopt that recommendation?
A. It would depend on the recommendation.
Q. So let's talk about an investment return assumption recommendation.
A. As part of this process, we would provide an analysis that included a range of results that we felt were reasonable, and then the board of trustees would select from those, from those alternates.
Q. So you would only put forward investment return assumptions that you believed to be reasonable, and then after discussion with the board, they could choose from that menu of reasonable assumptions, and you would know that that was okay with you because you'd already said these are a reasonable set of

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assumptions?
A. Correct.
Q. So looking at page A9, this is -- at the top of this page it says Economic Assumptions. Do you see that?
A. Yes.
Q. And then below it says: In summary, our recommended range of economic assumptions for the system -- system are as follows.
And the current investment return and wage inflation assumptions are listed, and then several alternates are also included, correct?
A. Correct.
Q. And that's just an example of what you just described, which is you may provide a few different reasonable options to the system and then they can choose?
A. Correct.
Q. So in January of 2009, you provided three alternatives, and of those three alternatives, there were two investment return assumptions recommended by Gabriel Roeder Smith to the PFRS, correct?
A. I see three alternates.
Q. I agree that there are three alternates, but of the three alternates, there are only two different investment return assumptions, correct?

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A. Correct.
Q. So Gabriel Roeder Smith recommended in January of 2009 that the PFRS could use an investment return assumption of 7.5 percent or of 7.8 percent, correct?
A. If you read the last paragraph from the bottom, it says: We would recommend considering a three basis point reduction in the assumed rate of return to 7.5 percent.
Q. So one of the recommendations was to consider going from 7.8 percent, which had been the investment return rate, to 7.5 percent, correct?
A. Correct.
Q. Now, you also say that continuation of a 7.8 percent investment return assumption would be reasonable in your view at that time, correct?
A. Correct.
Q. However, you also provide a recommendation that it would be worth considering going down to 7.5 percent?
A. Correct.
Q. Now, ultimately, after providing this menu of options to the PFRS board, PFRS did in fact adjust their return assumption from 7.8 percent to 7.5 percent in 2009, correct?
A. Correct.

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Q. Now, later in 2011 the PFRS again adjusted its investment return assumption from 8 -- from 7.5 percent to 8 percent, correct?
A. Correct.
Q. Do you recall whether Gabriel Roeder Smith was involved in discussions around that adjustment from 7.5 percent to 8 percent?
A. I don't recall.
Q. And -- strike that.
On page A9 there's also a couple of different wage inflation recommendations, depending on which alternate to use, either 3.5 percent or 4 percent for wage inflation, correct?
A. Or 4.8.
Q. The current is 4.8, and then the suggested alternates are 4 percent or 3.5 percent, correct?
A. Correct.
Q. Do you know what Gabriel Roeder Smith did to arrive at the wage inflation numbers that were presented as alternates to the PFRS?
A. I believe that's detailed in the report, as well. If you'll give me a moment, I'll try to find it.
Q. Sure.
A. It's on page C1 -- actually, that's a merit and

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seniority portion.
Part of the analysis is on page A11, and then the remaining part is on page C1.
Q. And can you describe for me -- let's start with page A11. Can you describe for me the methodology that Gabriel Roeder Smith used, including page A11, to arrive at a recommended inflation assumption?
A. What typically happens is we start with an inflation rate, and we use a building-block method to determine all of the other assumptions, including the wage inflation and the assumed rate of return.
This page just outlines some of the historical data that was used as part of the decision-making process and shows what types of yields and national average earnings have indicated over the last 50-some years.
Q. So, in your view, one of the helpful data points in arriving at an inflation rate assumption would be historical rates of inflation, right?
A. Correct.
Q. And here you look at 58 years of history of price inflation and other data points to help arrive at an inflation assumption recommendation, correct?
A. Correct.

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Q. If we turn back to page A7, there's some description of the process used to arrive at the inflation assumption, is that correct?
A. Yes.
Q. And subsequent to the issuance of this experience study, setting aside the fact that I know you have not completed the next experience study, have you ever made any adjustments to the inflation rate assumption when performing an annual actuarial valuation for PFRS and GRS, different than what's in this experience study?
MS. GREEN: Object to form.
A. Could you repeat the question?
BY MR. HOWELL:
Q. Sure. So again, I'll just preface this by saying I know that the next experience study is not completed.
A. Okay.
Q. Subsequent to the issuance of this experience study, in preparing any of the annual actuarial valuations that you've done for PFRS and GRS, have you used any inflation assumptions that are different than what is laid out in the experience study?
A. In the 2013 valuation and at least one or two before, we had a zero percent wage inflation assumption for

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one or two years, which was not discussed in this valuation -- in this experience study.
Q. Other than the use of a zero percent wage inflation for a period of one or two years in some of the annual actuarial valuations, are there any other changes that you have made in issuing an annual actuarial valuation for the PFRS or GRS to the inflation assumptions listed in this experience study?
A. Not that I'm aware.
Q. Okay. Do you recall why zero percent wage inflation was used for a period of one or two years in certain of the annual actuarial valuations?
A. Our understanding was that there was a pay freeze for those individuals.
Q. So that assumption changed due to a particular set of circumstances in which there was a, a specific reason not to include the inflation assumption in the experience study?
A. Could you rephrase the question, please?
Q. I think I've asked and answered it. We'll move on.
A. Okay.
Q. I'll ask you to keep that Kermans Exhibit 4 in front of you, but I'm going to hand you what we'll mark as Kermans Exhibit 5.

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MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 5
1:10 p.m.

MR. HOWELL: For identification purposes, Kermans Exhibit 5 doesn't have a Bates range but is the City of Detroit General Retirement System Five-Year Experience Study for the period July 1, 2002, through June 30, 2007, issued February 17, 2009.
BY MR. HOWELL:
Q. Ms. Kermans, do you recognize this document?
A. Yes.
Q. And this is just the five-year experience study for the GRS that's analogous to the one we were just looking at for the PFRS, right?
A. Correct.
Q. Now here if you'll turn with me to page A10, again, the title of the page is Economic Assumptions, and again, there are certain recommended ranges of economic assumptions for the GRS, where you provide the current and two alternates at the top of the page.
Do you see that?
A. Yes.
Q. And at the time that this report was issued in February of 2009, the GRS had an investment return of,

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assumption of 7.9 percent, correct?
A. Correct.
Q. And it's your understanding that the GRS has used a 7.9 percent investment return assumption for more than a decade, correct?
A. Correct.
Q. Now, the alternates that you provide here both have a 7.5 percent investment return assumption, correct?
A. Yes.
Q. And in the text below the menu of options, the first sentence says: Funding value rates of return for the ten-year period ending June 30, 2007, averaged 7.8 percent for the plan in total, close to the currently assumed 7.9 percent.
Do you see that?
A. Yes.
Q. And you understood that that was accurate at least at the time that you reviewed this document, correct?
A. Yes.
Q. You go on to say -- or Gabriel Roeder goes on to say: However, due to the board's gainsharing program, the funding value rates of return credited to the pension funds have averaged only 5.9 percent.
Do you see that?

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A. Yes.
Q. Do you have an understanding of what is meant by the board's gainsharing program?
A. Yes.
Q. What is the board's gainsharing program?
A. One of the benefit provisions that the plan has is an annuity savings fund, and interest is credited to the annuity savings fund, and that is a type of gainsharing program.
Q. You go on to say: A continuation of a 7.9 percent investment return assumption would be reasonable if, going forward, investment returns are credited proportionately to all reserve funds.
Do you see that?
A. Yes.
Q. Can you explain to me the difference between what is described in that sentence and what was done under the gainsharing or ASF program?
A. I believe that's illustrated in the funding value rates of return shown below.
Q. And can you explain to me how I would see from the funding value rates of return chart the difference between a proportional credit of investment returns to all reserve funds versus the gainsharing program?

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A. The pension funds have averaged a 5.9 percent rate of return, but the funds in total have averaged 7.8 percent.
Q. And what is represented in addition to pension funds in the fund total?
A. The annuity savings fund.
Q. And so without the gainsharing but instead a proportional credit, the fund total would be the column to look at rather than the pension fund column?
A. Correct.
Q. Gabriel Roeder goes on to say: If the current gainsharing practice is to be continued, we would then recommend a reduction in the investment return assumption to -- excuse me, at least to 7.5 percent and eventually to an even lower rate.
Do you see that?
A. Yes.
Q. Do you have an understanding as to whether the gainsharing practice continued subsequent to this report, and if so for how long?
A. My understanding is that it continued until 2011.
Q. It is also your understanding that the GRS did not adopt a change from 7.9 percent for a target investment return to 7.5 percent, correct?

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A. Correct.
Q. Did you nonetheless still view the 7.9 percent target investment return as a reasonable target -- as a reasonable investment return assumption while performing the actuarial valuations for GRS in 2009 and 2010?
A. Yes.
Q. And you did that because you still believed that it was more likely than not that the GRS would return investment returns of 7.9 percent or higher, correct?
A. Correct.
Q. Since February of 2009, has Gabriel Roeder issued any recommendations to the GRS for the GRS to change its investment return assumption?
A. There would be no official recommendations until such time as the experience study's completed.
Q. Well, if you while performing an actuarial valuation believed the investment return assumption to be unreasonable, you would have to disclose that, right?
A. Yes.
Q. And you haven't done that between 2009 and today, correct?
A. We have not declared the investment return assumption used in the valuation as being unreasonable.

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Q. And nor have you, whether, you know -- from an experience study or otherwise, you haven't provided any additional recommendation for a change to the investment return assumption for the GRS, correct?
A. We would not provide an official recommendation until such time as we completed the experience study.
Q. So you haven't done it, right?
A. We would not do it until we completed the experience study.
Q. I understand your point. I just want to make sure that you're not going to tell me that you have done it. So the answer is that you haven't provided an official recommendation to the GRS to change their investment return assumptions since 2009's experience study, correct?
A. I don't recall having done that.
Q. Do you recall making any informal recommendations, not official, but unofficial recommendations to change the investment return assumption for GRS subsequent to February of 2009?
A. I don't recall. It is possible.
Q. In preparation for your deposition, did you ask anyone else at Gabriel Roeder Smith whether there had been any informal or unofficial recommendations to the GRS

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to change the investment return assumption since 2009?
A. I did not ask that question.
Q. And, to your knowledge, as you're sitting here now, you can't refer me to any informal or unofficial recommendation by Gabriel Roeder to GRS to change its investment return assumption since 2009, correct?
A. Correct.
Q. Sitting here today, you cannot point me to any official or unofficial recommendation from Gabriel Roeder Smith to the PFRS to change its investment policy assumption, return assumption since 2009, correct?
A. Correct.
Q. Turning back to, I believe it was Kermans Exhibit 4, the PFRS experience study, if we look at A2 and those six bullets that you talked about, which were the different areas of assumptions that were kind of analyzed in this experience study?
A. Correct.
Q. I don't want to belabor the point by walking through each of them, although I'm happy to do so if we need to, but just the same question for these different assumptions, the retirement assumptions, the salary increase assumptions, mortality assumptions.

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In looking at these, are there any changes to any of these assumptions, any of these categories of assumptions, that you can recall making for any of the annual actuarial valuations for PFRS or GRS between the time of this experience study and today, other than the change for the first two years of inflation that you already, that you already mentioned?

A. I cannot recall any other changes.

Q. I don't want to misstate your prior testimony, but I believe that you said subject to a privilege around mediation discussions, that prior to preparing for this deposition you had not reviewed any documents prepared by Milliman in which Milliman provided comments related to the actuarial work done by Gabriel Roeder Smith for the GRS and PFRS, correct?

A. I believe that we were not asked to do any formal reviews of any Milliman work.

Q. When did you first become aware that Milliman was working with the City of Detroit with regard to actuarial work associated with review of the actuarial work for the PFRS and GRS?

A. I believe that would be about a year ago.

Q. Have you ever had any conversations, you know,

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separate and apart from any mediation privilege here, any conversations with Milliman about the work that Gabriel Roeder Smith has done for the PFRS or GRS?

A. I have not.

Q. Anyone from Milliman ever reach out to anyone at Gabriel Roeder Smith to discuss any of the actuarial assumptions or actuarial valuations done by Gabriel Roeder Smith for PFRS or GRS?

A. I believe that there was some discussion pre-bankruptcy with someone at our office and the Milliman company.

Q. And do you have any understanding of the subject of those discussions?

A. I believe they were trying to either do a retiree health valuation or do some kind of an analysis for the City.

Q. Do you know what kind of analysis?

A. As I mentioned, it's either a health valuation or some other kind of pension analysis.

Q. You don't know the specific type of pension analysis?

A. No.

Q. Do you know Glenn Bowen at Milliman?

A. Outside of mediation, no.

Q. What about Kathryn Warren?

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A. Same answer.

Q. What about Allen Perry?

A. I've never met Allen Perry.

Q. What about Suzanne Taranto?

A. I've never met Suzanne Taranto.

Q. I'm going hand you what I will mark as Kermans Exhibit 6.

MARKED FOR IDENTIFICATION:
DEPOSITION EXHIBIT 6
1:26 p.m.

MR. HOWELL: For identification purposes, Kermans Exhibit 6 has the Bates range POA00260505 through 522.

BY MR. HOWELL:

Q. Ms. Kermans, do you recognize this document?

A. I don't believe that I do.

Q. At the -- this document is a July 6th, 2012, letter from Glenn Bowen and Suzanne Taranto of Milliman to the chief operating officer of the City of Detroit, and in the first paragraph it says: As you have requested, Milliman has begun an analysis of the City of Detroit's actuarial liabilities in support of the City and Financial Advisory Board ("FAB"). This letter summarizes Milliman's assessment of the current

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actuarial and financial status of the pension and post-retirement health programs.

Do you see that?

A. Yes.

Q. Now, in July of 2012, Gabriel Roeder Smith had conducted assessments annually for years of the current actuarial and financial status of the GRS and PFRS pension programs, correct?

A. Could you repeat the question?

Q. Certainly. In July of 2012, Gabriel Roeder Smith had at that point in time been assessing the current actuarial and financial status of the GRS and PFRS pension systems in yearly valuations for decades, right?

A. Correct.

Q. Do you know whether the City reached out to Gabriel Roeder Smith in 2012 to perform assessments of the current actuarial and financial status of the PFRS and GRS pension systems?

A. Please repeat the question?

Q. Do you know if the City reached out to Gabriel Roeder Smith in 2012 to assess the current actuarial and financial status of the PFRS and GRS pension systems?

A. I don't recall that happening.

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Q. Do you believe that Gabriel Roeder Smith would have been in a better position than Milliman in July of 2012 to provide an assessment of the current actuarial and financial status of the GRS and PFRS pension systems?

MS. GREEN: Object to form.

A. I believe we did assess the financial position of both pension plans in our actuarial valuation.

BY MR. HOWELL:

Q. I understand that. My question is a little different. It's do you believe that Gabriel Roeder Smith was in a better position in July of 2012 to assess the current actuarial and financial status of the GRS and PFRS pensions than was Milliman?

A. You're asking me if the analysis done by Milliman was better done by Milliman than by Gabriel Roeder Smith, and I cannot answer that question because I don't know what this analysis was about.

Q. Apologies. That is not the question I was trying to ask. What I'm trying to ask is whether you believe that in July of 2012, Milliman or Gabriel Roeder Smith would have been better situated to assess the current actuarial and financial status of the PFRS and GRS pension systems.

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A. It is common for other actuaries to audit the work of each other, and Gabriel Roeder Smith would not have been in a position to audit their own work. So the question that you asked cannot really be answered the way you're expecting.

Q. So it's your testimony that it can't be answered as to whether Milliman or Gabriel Roeder Smith was in a better position to assess the current actuarial and financial status of the GRS and PFRS pension systems in July of 2012?

A. I'm saying it depends on the project.

Q. The next paragraph says: Based on a preliminary review of the June 30, 2010, actuarial valuation reports for the General Retirement System for the City of Detroit and the Police and Fire Retirement System of the City of Detroit, we have the following high level recommendations.

Do you see that?

A. Yes.

Q. Are you aware of any June 30, 2010, actuarial valuations performed for the GRS and PFRS other than those done by Gabriel Roeder Smith?

A. No.

Q. They go on to say that one of the recommendations is

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to remeasure assets and liabilities using unbiased assumptions.

Do you have an opinion as to whether Gabriel Roeder Smith had used biased assumptions in its June 30, 2010, actuarial valuation reports --

A. Yes.

Q. -- for the GRS and PFRS?

A. Yes, I have an opinion.

Q. What is your opinion?

A. Our assumptions were unbiased.

Q. Now, if you look on the second page, ending in Bates number 506, it says: The following table provides our very rough preliminary guesstimates ("VRPG") of the potential actual state of the systems.

Do you see that?

A. Yes.

Q. And you wouldn't use, just generally, very rough preliminary guesstimates in putting together an annual actuarial valuation, correct?

A. It is not an actuarially-defined term.

Q. Safe to say that the material that is in your annual actuarial valuations are not very rough preliminary guesstimates, in your opinion, right?

A. You are correct.

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Q. Okay. Now, if you see, there's a chart right below that and there are a series of items listed. Do you see that?

A. Yes.

Q. And below is a, there's kind of a section over the next couple of pages that relate to several of these items in the chart, and I just want to walk through a few of those with you, but I want to make sure I give you an opportunity to review these sections before I do, but we're going to hop around a little bit in this document so that we don't have to go through the whole thing, okay?

MS. GREEN: Rush, if I could interject, she has not seen this document, and you want her to read it? Can we take a ten-minute break, anyway, because we've been going a little over an hour, just to take a restroom break?

MR. HOWELL: Yeah, absolutely, we can take a break.

VIDEO TECHNICIAN: The time is 1:32 p.m. We are now off the record.

(Off the record at 1:32 p.m.)

(Back on the record at 1:51 p.m.)

VIDEO TECHNICIAN: The time is 1:51 p.m.

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We are now on the record.
BY MR. HOWELL:
Q. Ms. Kermans, we were discussing Kermans Exhibit 6, which is the July 6, 2012, Milliman letter to the chief operating officer of Detroit, and we were looking at a chart that's labeled the VRPG of Potential Actual State of Systems as of June 30, 2010. Do you see that?
A. Yes.
Q. And I don't want to take too much time going through this, I understand you haven't reviewed the document, but I just want to ask you to look at a couple sections that relate to two of these items that are listed in the chart, because you can see in the chart that with each item, either assets go down or liability goes up, leading to a reduction in Milliman's VRPG of the funded status of the GRS and PFRS. Do you see that?
A. Yes.
Q. So directly below the chart there's something that says optimism of demographic assumptions, and it was your testimony earlier that demographic assumptions that you use in performing your actuarial valuations are in the view of Gabriel Roeder Smith neither

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optimistic nor pessimistic, but are best estimate assumptions, correct?
A. They are the best estimate assumptions until the experience study is completed.
Q. And it says: For both DGRS and PFRS, the valuation reports indicate the use of a mortality assumption that does not explicitly provide for the projection of mortality improvements.
Do you see that?
A. Yes.
Q. Do you know whether the valuation reports and the mortality assumptions in the Gabriel Roeder Smith valuation reports provide for projection of mortality improvements?
A. The 2013 reports for both police and fire and the DGRS do not provide for expected mortality improvements.
Q. That's also true for the 2010 report, to your knowledge?
A. I don't recall.
Q. Why not include explicit provisions for projection of mortality improvements in the 2013 reports?
A. It's the same mortality table that we were using from the 2009 study. It's just that we've now determined that we can no longer say that it provides a margin

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for future mortality improvements.
When we do the experience study, chances are we will update the assumptions to include a margin for future improvements.
Q. So you can't say for sure, one way or another, what you're going to have in the updated experience study, correct?
A. Correct.
Q. And in 2013 you wouldn't have used a set of assumptions, mortality assumptions that you didn't think were reasonable, correct?
A. Correct.
Q. So you believe that the 2013 assumptions that you used did not explicitly provide for -- projection of mortality improvements were reasonable at the time you used them, correct?
A. They were reasonable for the purpose of that measurement.
Q. And the purpose of that measurement was to determine contribution rate necessary for those -- PFRS and GRS, correct?
A. Correct.
Q. Do you see in item E it says adjust out pension obligation certificates in the VRPG chart in the

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center of page 2 of this July 6th letter?
A. Yes.
Q. And I can turn your attention to page 4, which lists the bottom section as impact on the City of past pension obligation certificates -- and you're familiar with what the pension obligation certificates are, correct?
A. Yes.
Q. And you'll see in the middle of that section it says: In item E of the table above, we have adjusted out the pension obligation certificate value to present the big picture view.
Do you see that?
A. Yes.
Q. Now, in the actuarial valuations performed by Gabriel Roeder Smith, you do not remove the pension obligation certificates from the assets of the DGRS and -- or the GRS and PFRS, correct?
A. The assets as reported include the pension obligation certificate money.
Q. And why do you include them rather than adjust them out when you are performing the valuations for the GRS and PFRS?
A. It is our understanding that they are included in the

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trust fund money.

Q. And so in the opinion of Gabriel Roeder Smith, it's correct to assume that those are included in the assets?

A. They're included in the assets when they're reported to us.

Q. And you have no reason to doubt that that's correct, right?

MR. BULLOCK: Object to form.

MS. GREEN: Same objection.

BY MR. HOWELL:

Q. You can answer if you understood the question.

A. Sounds like a legal issue rather than an actuarial one.

Q. Well, I'm not asking you a legal issue, I'm asking you -- you have to make a determination as an actuary whether or not to accept data that's provided to you, correct?

A. We are not -- under no obligation to audit data or to assume that it's deceitful in any way.

Q. If you thought that there was over a billion dollars incorrectly included in assets, based on your review, is that the sort of thing you would maybe bring up to a system?

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A. Yes.

Q. And you didn't, you didn't think that was the case here, right?

MR. BULLOCK: Object to form.

BY MR. HOWELL:

Q. You can answer.

A. We had no reason to bring it up.

Q. Ms. Kermans, you would agree that it's important to choose a reasonable investment return assumption when preparing an actuarial valuation of a crude actuarial liability, correct?

A. We don't choose the valuation assumption. I would agree that it's important to use a reasonable assumed rate of return when completing the actuarial valuation.

Q. Thanks for that clarification. And, in fact, if you believed that the investment return assumption that you were using was not reasonable, you would have to either not go forward with the analysis or disclose that you believed that investment return assumption was unreasonable, correct?

A. Correct.

Q. Would you agree with the statement that an investment return assumption that is set too low will overstate

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liabilities and costs, causing current taxpayers to be overcharged and future taxpayers to be undercharged?

MS. GREEN: Object to form and foundation.

A. Could you repeat the question, please?

BY MR. HOWELL:

Q. Do you agree with the statement that an investment return assumption that is set too low will overstate liabilities and costs, causing current taxpayers to be overcharged and future taxpayers to be undercharged?

MS. GREEN: Same objection, but go ahead and answer.

A. Can you tell me what you're looking at, please?

BY MR. HOWELL:

Q. I'm just asking you --

A. Questions?

Q. -- if you agree with that statement.

A. I think it's more complicated than that.

Q. And how so?

A. I think there are other parties that would be affected by that decision than just the taxpayers, but ...

Q. Setting aside other parties for a moment, just focusing on the taxpayers, the current and future taxpayers, would you agree that if you set an investment return assumption too low, you could

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overstate liabilities and costs, hurting the current taxpayers and benefitting the future taxpayers, whereas if you set it, an investment return assumption too high, you could hurt the future taxpayers at the -- to the benefit of current taxpayers?

MS. GREEN: I'm going to object again or reiterate my prior objection. That just seems to be sort of an expert witness type of question, a hypothetical, and outside of the scope of the 30(b)(6) notice under which Ms. Kermans is being presented as a witness.

BY MR. HOWELL:

Q. You can answer.

A. I will say that if you set your assumed rate of return too low, you can increase liabilities and create a contribution rate that is too high for the intended measurement.

Q. And your belief is that could, that could affect multiple parties, one of which could be taxpayers?

MR. BULLOCK: Object to form, Counsel. I think, in fairness, because you've moved outside of her role as a lay witness, she needs some context for your question.

BY MR. HOWELL:

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Q. Well, did you understand the question?
A. I heard the question.
Q. Okay. I mean, I'm not asking you for an expert opinion here. You perform actuarial valuations, right? We've discussed that at length.
A. Yeah.
Q. And one of the things you have to do is get comfortable with investment return assumptions, because if they're not reasonable, you can't use them, right?
A. Correct.
Q. So do you in that position, including the work that you've done for PFRS and GRS, do you have an understanding as to why an investment return assumption needs to be reasonable?
A. Yes.
Q. And explain for me why it is that you view it important that an investment return assumption be reasonable.
A. A number of reasons, but it depends on the measurement and for the actuarial valuation so that the contribution rate is calculated properly.
Q. What would some other reasons be, in addition to the one that you just listed?

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A. So the generations of citizens are treated fairly.
Q. What do you mean by that?
A. Taxpayers.
Q. And what do you mean when you say so the generations of taxpayers would be treated fairly?
MS. GREEN: Object to form and foundation again.
A. I think some of that information is listed in our report.
BY MR. HOWELL:
Q. Fair enough. You're welcome to point me to where in your report you think that that's listed, but it would be helpful for me if you could explain why it is that you think it's important to set a reasonable investment return assumption so that generations of citizens would be treated fairly.
A. So that, in line with the goals and objectives of the retirement system, that generations of citizens would have equitable contribution rates, and, as you mentioned, that we wouldn't charge too much to this generation and less to the other.
Q. As part of the work that you do in putting together annual actuarial valuations for GRS and PFRS, do you undertake a review of the asset allocations for those

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systems?
A. No, not a review.
Q. Do you look at the asset allocations for those systems? And I'm not asking if you, you know, provide recommendations or do an analysis of them, but do you at least observe what they are?
A. We use the asset allocations provided to us as part of the valuation process for the DGRS. There is no allocation in the PFRS.
Q. So you're not aware of the asset allocation of the PFRS?
A. PFRS has one contribution rate and one group contribution rate calculated.
Q. I may be asking -- I should be more clear. I'm talking about the allocation of investments across different asset classes for the GRS and PFRS.
A. Okay.
Q. That information is provided to Gabriel Roeder Smith, as well, correct?
A. We receive assets by class, yes.
Q. And is that something that you look at, as well, as part of your actuarial analysis?
A. We would look at that as part of the experience study process.

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Q. And that could be helpful in determining the appropriate investment return assumption, correct?
A. Correct.
Q. In fact, an investment return assumption is largely tied to a particular asset allocation, correct?
MS. GREEN: Object to foundation.
A. Could you repeat the question?
BY MR. HOWELL:
Q. An investment return assumption is largely a function of the asset allocation for the system in question, correct?
A. I would say that the asset allocation of a system's money is one of the decision-making points in selecting the assumed rate of return.
Q. In general, if you have a more aggressive asset allocation, you would generally expect higher returns but also more risk, correct?
MS. GREEN: Object to foundation again.
A. I'm not an investment adviser. What you're saying makes common sense.
BY MR. HOWELL:
Q. Well, if a, if a system wants to adjust -- make a significant adjustment to its investment return assumption, that new return assumption has to be tied

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to some sort of asset allocation, correct?
MS. GREEN: Object to form.
A. I would say that the asset allocation would help you decide what the assumed rate of return should be.
BY MR. HOWELL:
Q. And other things being equal, if I have the same asset allocation, I can't just say I'm going to have a significantly different investment return assumption, correct?
MS. GREEN: Objection.
A. I can't answer that question in the form that you've asked it.
BY MR. HOWELL:
Q. Well, you review investment return assumptions as part of your job, correct?
A. As part of the experience study process, we will evaluate and make recommendations for a reasonable range of investment return assumptions for the five-year period going forward.
Q. And a plan -- a system, rather, can't just come to you and say, "We're going to set our investment return assumption five hundred basis points higher and we're not going to make any changes to our asset allocation," right? That wouldn't make any sense,

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would it?
A. We have plans that we work with that have prescribed assumptions that are set by the State. So there is a situation where they would tell us what the assumed rate of return would be.
Q. And in that circumstance, you would still have to justify the reasonableness of that assumption by making sure that it's something you believe would occur more often than not, correct?
A. Not exactly.
Q. In a situation where you have a prescribed return assumption, in order for that return assumption to be reasonable, you would still need it to -- you would still need to believe that it would be reached more often than not, correct?
MS. GREEN: Object to the form of the question.
A. We would determine what a reasonable range of results would be, and what we would generally do is we would choose a number within that range, primarily recommending something that's in the 50th percentile of likely occurrences.
BY MR. HOWELL:
Q. When you're performing actuarial valuations, the

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discount rate that you use in calculating a UAAL is typically the same as the investment return assumption for that plan, correct?
A. The discount rate used to calculate the present value of future benefits is generally the same in public sector plans as the assumed rate of return on assets.
Q. And when you say "generally the same," have you ever seen an example where it wasn't?
A. I have not.
Q. Is there anything in either of the 2013 annual actuarial valuations, either the one for the PFRS or the GRS, that you would like to change as you sit here today?
A. Could you be more specific?
Q. Just anything that comes to mind that you think you would want to change.
A. No.
Q. I don't think I have anything further. Thanks for your patience today. I believe we may have --
MR. HOWELL: Does anyone on the phone, before we move on, have any questions they're going to ask today?
MR. PLOTKO: I don't. This is Greg Plotko.
MR. HOWELL: Okay. I think we just have

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one other set, then.
Would you like to take a break or ...
MR. BHARGAVA: We can go off the record for a couple minutes while we transition.
VIDEO TECHNICIAN: The time is 2:12 p.m. We are now off the record.
(Off the record at 2:12 p.m.)
(Back on the record at 2:21 p.m.)
VIDEO TECHNICIAN: The time is 2:21 p.m. We are now on the record.

EXAMINATION

BY MR. BHARGAVA:
Q. Good afternoon, Ms. Kermans.
A. Hi.
Q. As I said before, my name is Mike Bhargava, and I'm representing Assured Guaranty Municipal Corporation.
A. Okay.
Q. I just have a few hopefully very quick questions for you. Have you, have you had the opportunity to review any of the various iterations of the City's plan of adjustment?
A. I have not done a formal review of the plan of adjustment.
Q. Okay. Have you seen parts of the plan?

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A. I have briefly read parts that would pertain to the pension system.

Q. Okay. So are you generally familiar with what the plan proposes in terms of the pension systems?

A. I am somewhat familiar with the cuts that are being proposed.

Q. Are you, are you aware that the plan allocates a portion of the UAAL that it attributes specifically to DWSD?

A. I have not been asked to perform an analysis -- Gabriel Roeder has not been asked to perform an analysis of the numbers that appear in the plan of adjustment to even determine whether or not they're, in fact, an unfunded accrued liability.

Q. Okay. So are you aware -- but you're aware that there is a portion of the UAAL that is attributed to DWSD, is that right?

A. I am aware that a certain portion of the claim is attributed to the DWSD.

Q. Okay. And are you aware that this amount is amortized over nine years?

A. Yes.

Q. Okay. Was the decision to amortize the UAAL over nine years, was that the result of any actuarial

JUDITH KERMANS

recommendation by Gabriel Roeder?

MR. BULLOCK: Objection to the extent that it calls for a violation of the mediation confidentiality provision.

BY MR. BHARGAVA:

Q. Okay, and let me -- again, as the previous counsel did, I want to make it clear that I'm not asking for anything that happened during mediation.

A. We made no recommendations regarding the plan of adjustment outside of mediation.

Q. Okay. And again, outside of mediation, did Gabriel Roeder perform any actuarial analysis in support of the nine-year amortization period?

A. We did not.

Q. Okay. Were you asked to review the nine-year amortization period before it was included in the plan of adjustment?

A. Outside of mediation, we weren't asked to do any analysis regarding the plan of adjustment.

Q. Okay, and is -- do these answers also hold in terms of the proposed 6.75 percent investment return assumption? In other words, were you -- was Gabriel Roeder asked to perform any analysis with regard to the 6.75 percent investment return assumption?

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A. Outside of the mediation process, we were not asked to perform any analysis of any of the assumptions or numbers in the plan of adjustment.

Q. Okay. Was Gabriel Roeder asked to analyze in any way the -- well, let me back up.

Are you aware that there -- the plan proposes that DWSD contribute money to the UAAL in a way that other divisions of the City are not asked to contribute?

A. I'm aware that the DWSD is making some type of a contribution based on the nine-year amortization period -- actually, that's not right.

I'm aware that DWSD is being asked to make contributions during the nine-year period between now and the 2023 year.

Q. Okay. And are you aware that other City divisions are not being asked to make a similar contribution?

A. That's my understanding.

Q. Okay. Did Gabriel Roeder perform any actuarial analysis in support of the plan's deferential treatment of DWSD versus other City divisions?

A. We did not perform any analysis of anything regarding the plan of adjustment outside of the mediation process.

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Q. Okay. And, similarly, you didn't provide any recommendations regarding the differential treatment of different City divisions, is that right?

A. Outside of mediation, that is correct.

Q. Okay, that's all I have.

MR. BHARGAVA: Anyone else on the phone have any questions?

All right, I think we are concluded.

VIDEO TECHNICIAN: The time is 2:27 p.m. We are now off the record.

(The deposition was concluded at 2:27 p.m. Signature of the witness was not requested by counsel for the respective parties hereto.)

JUDITH KERMANS

CERTIFICATE OF NOTARY

STATE OF MICHIGAN)
) SS
COUNTY OF KENT)

I, REBECCA L. RUSSO, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to, either party nor interested in the event of this cause.

REBECCA L. RUSSO, CSR-2759
Notary Public,
Kent County, Michigan.
My Commission expires: 6-3-2017

EXHIBIT D

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

IN RE:

CITY OF DETROIT, MICHIGAN, Chapter 9
Debtor. Case No. 13-53846
Hon. Steven W. Rhodes

_______________________________/

DEPONENT: GRS 30(b)(6) WITNESS (CYNTHIA THOMAS)
DATE: Tuesday, July 15, 2014
TIME: 10:05 a.m.
LOCATION: CLARK HILL, PLC
500 Woodward Avenue, Suite 3500
Detroit, Michigan
REPORTER: Karen Fortna, CRR/RMR/RPR/CSR-5067
JOB NO: 212649-A

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ALSO PRESENT: Ms. Trinee Moore, Detroit Public Library

I N D E X

W I T N E S S

CYNTHIA THOMAS PAGE

Examination by Mr. DeChiara 7

REDACTIONS PURSUANT TO AGREEMENT OF COUNSEL

Page 23, line 13, through page 25, line 15

Page 26, lines 12-18

E X H I B I T S

EXHIBIT	DESCRIPTION	PAGE
Ex. No. 1	Amended Notice of Deposition . . .	10
Ex. No. 2	The General Retirement System of the City of Detroit, 75th Annual Actuarial Valuation, June 30, 2013	17
Ex. No. 3	7-9-14 Lennox email	23
Ex. No. 4	GRS' Responses and Objections to Interrogatories of International Union, UAW, Regarding Plan Confirmation	26

(GRS Ex. No. 3 clawed back.)

Tuesday, July 15, 2014
Detroit, Michigan
10:05 a.m.

*   *   *   *

CYNTHIA THOMAS,

having first been duly sworn, was examined and testified as follows:

MR. DeCHIARA: Good morning, Ms. Thomas.

THE WITNESS: Good morning.

MR. DeCHIARA: My name is Peter DeChiara from the law firm of Cohen, Weiss & Simon, LLP. We represent the UAW International Union in the Chapter 9 bankruptcy of the City of Detroit.

Have you ever had your deposition taken?

THE WITNESS: Yes.

MR. DeCHIARA: Okay. So let me go over a few ground rules, although you're probably familiar with them.

We have a court reporter here who is going to take down my questions and your answers to my questions. So that the court reporter can get a clear transcript, I would ask that you answer my questions with words as opposed to gestures or shrugs.

Also, please wait until I finish my

question and I'll also wait to finish -- wait until you finish your answers. If I cut you off inadvertently, let me know and I'll let you finish.

If you don't understand my questions or you don't hear my questions, let me know and I'll repeat them or try to clarify them. If you answer a question, I'll assume you heard it and understood it. Is that fair?

THE WITNESS: That's fair.

MR. DeCHIARA: If you need a break at any time for any reason, just let me know and we can take a break.

THE WITNESS: Okay.

EXAMINATION

BY MR. DeCHIARA:

Q. By whom are you employed?

A. The Retirement Systems of the City of Detroit.

Q. And what's your position there?

A. Executive director.

Q. And how long have you been the executive director?

A. Since August of 2012.

Q. Were you employed at the GRS prior to August of 2012?

A. Yes.

Q. And what position did you hold prior to that?
A. I was assistant director of the Police & Fire Retirement System of the City of Detroit.
Q. And how long did you hold that position?
A. Since 2004.
MR. GALLAGHER: Peter, just for the sake of clarity, because we've learned of this because of the GRS/Gabriel Roeder acronym, maybe we'll just make sure that when you refer to GRS, you are referring to the General Retirement Systems of the City of Detroit as opposed to Gabriel Roder Smith, right?
MR. DeCHIARA: I was unaware of that. Okay.
MR. GALLAGHER: Based on the documents, the actuarial reports --
MR. DeCHIARA: Yeah, I know.
MR. GALLAGHER: -- we may get there, and I just want to make sure that's --
MR. DeCHIARA: Thank you for that clarification.
So Ms. Thomas, when I refer to the acronym "GRS," I'm referring to the General Retirement Systems of the City of Detroit.
THE WITNESS: Okay.

BY MR. DeCHIARA:
Q. Did you prepare in any way for this deposition?
A. Yes.
Q. Other than speaking to counsel for the GRS, did you -- well, let me ask you, did you prepare in any way other than speaking to counsel for the GRS?
A. I did not.
Q. Did you review any documents?
A. I did.
Q. What documents did you review?
A. A few older actuarial statements and audited financials.
Q. Anything else that you recall?
A. Yeah, maybe a spreadsheet or two, work-type spreadsheet that was prepared in my office by the accounting section.
Q. Who do you report to in your position?
A. Oh, boy. You ready for this? And then you guys will all feel sorry for me. So I report to the board of trustees on the General Retirement System, I report to the board of trustees on the Police & Fire Retirement System, and then I'm also underneath the finance director and the mayor. That's a lot of bosses.
MR. GALLAGHER: Peter, I'm sorry to

interrupt again. Forgive me. Maybe this is a good point to clarify that Ms. Thomas is here in a representative capacity based on the 30(b)(6) deposition notice that you issued.

MR. DeCHIARA: Yes. Let me put in the amended notice. Let me mark the amended notice. So why don't we mark it as GRS 1.

(Marked for identification:
GRS Exhibit No. 1.)

BY MR. DeCHIARA:

Q. Ms. Thomas, I've marked as GRS 1 the amended notice of deposition of the International Union, UAW, to General Retirement System of the City of Detroit.

Is it your understanding that you're here testifying today pursuant to this amended notice of deposition?

A. It is.

Q. Did you review this document?

A. I did.

Q. Okay. Let me refer you to -- you see that there's a list of -- starting in the middle of the first page, there's a list of topics?

A. Yes.

Q. Okay. Let me begin with the first one. "The status of the Detroit Library Commission as an

entity separate from the City of Detroit."

In preparing for today's deposition, did you look into the question of whether -- look into the question of whether the Detroit Library Commission is an entity separate from the City of Detroit? And before you answer, let me just say, I'm not looking for any legal conclusions and I'm also not looking for anything that you might have discussed with counsel.

A. No.

Q. Okay. Do you have a view or an understanding of whether or not the Detroit library Commission is a separate entity from the City of Detroit?

A. I do.

Q. And what's your view?

A. And my view is, I guess, based on my 26 years working at the Retirement System, just various conversations working as an accountant prior to being in management, but also on a managerial level and working with the boards of trustees, it's -- it was always our belief that the library was -- it was separate, but still with the City.

And what I mean by that is they could -- they had their own little HR and payroll unit, they could hire their own employees, but the employees were still civil servants and members of the system.

And there was a lot of discussion about this because, at times, the Retirement Systems' trustees looked to the library as wanting to have that type of status, being separate, having more authority as far as running the Retirement Systems and having authority over the employees and operations, but still -- still retain that civil servant -- civil servancy for the staff and membership into the system.

Q. I probably should have asked this earlier. What is your professional training? Are you an accountant?

A. Yes. Well, that's -- my degree was in accounting.

Q. Okay.

A. I haven't been an accountant in a long time.

Q. Do you have any professional training in any other fields other than accounting?

A. Other than training at -- an executive training at Wharton's School of Business, I do not.

Q. So you said that it's your understanding that the library has its own human resources department; is that correct?

A. Not necessarily human resources department, but a unit that was responsible for human resource activities.

Q. So would that be, for example, hiring and firing and promoting functions?

A. Yes, yes.

Q. So the library does that independently, according to your understanding?

A. Yes.

Q. And is it your understanding that the library maintains its own payroll function?

A. Yes.

Q. You testified when you answered my question that there's been lots of discussion about the status of the library over the years?

A. Yes.

Q. Can you remember any discussions in particular, whether recent or in the past?

A. A little bit. I can remember a little bit of a discussion with James Edwards, who works -- used to work in the law department. I believe he's retired now. And Mr. Edwards asked me to check our files for any -- any correspondence or documents we had pertaining to the library. And then also over the -- I think probably in 2013, there was also some up-to-date discussion of the library and the Retirement Systems possibly becoming its own department.

Q. Okay. Let me ask you about the discussion you had with Mr. Edwards. He used to work with the law department of the City of Detroit?

A. Correct.

Q. Okay. And he asked you to check for -- check your files for correspondence pertaining to the library. When was that conversation?

A. I believe it was this year, maybe February.

Q. Okay. And do you know why -- did he tell you why he made that request of you?

A. He did not.

Q. Did you have an understanding of why he made that request?

A. Ultimately, yes.

Q. And what was your understanding?

A. That the library -- that the City -- that the City of Detroit and Jones Day team needed to understand the structure of the library and how it became a separate entity.

Q. Did you ever speak to Mr. Edwards subsequently about that issue?

A. I did not.

Q. Did you ever speak to anyone from Jones Day about that issue?

A. I didn't.

Q. Did you ever speak to anyone else who represented the City or represents the City about that issue, meaning the status of the library?

A. No, I didn't.

Q. Then you testified that in 2013, there have been discussions about the status of the library. Who -- did you participate in those discussions?

A. I did.

Q. Who did you have those discussions with?

A. Clark Hill attorneys.

Q. And Clark Hill is counsel for the GRS?

A. For the Police & Fire -- well, as it pertains to bankruptcy, for both systems, but general counsel to the Police & Fire System.

Q. Okay. So I'm not going to ask you about those conversations you had with counsel for the GRS.

Now you testified to something earlier, something about the -- I'm not quite sure I followed what you were saying, but something about someone was looking for more authority, maybe the library was looking for more authority over the years. Could you explain what that testimony was?

A. Actually, what I was referring to was the Retirement Systems were looking for more authority over their staff and operations.

Q. What do you mean by looking for more authority?

A. As I testified to a little earlier, all of the bosses that I have, there's a conflict of interest because the boards of trustees are equally my boss, as the finance director and the mayor, yet they can definitely have different goals and motivations and directives, and that's -- it's a common problem. And so the boards of trustees were looking for a way to resolve that or lessen it, and in doing so, the discussion was they felt that the Library Commission had that authority over their staff and operations.

Q. So am I understanding this correctly, that the board of trustees of the GRS was looking to the library as a model of an organization that has authority over its own workforce in a way that the GRS did not?

A. Absolutely.

Q. Do you have any understanding or knowledge of what entities select the governing board of the Detroit Library Commission?

MR. GALLAGHER: Objection to foundation.

THE WITNESS: I do not.

MR. DeCHIARA: Okay. I would like to

mark as GRS 2 a document that is entitled, "The General Retirement System of the City of Detroit, 75th Annual Actuarial Valuation, June 30, 2013."

(Marked for identification:
GRS Exhibit No. 2.)

BY MR. DeCHIARA:

Q. Are you familiar with this document?

A. I am.

Q. Okay. And it says GRS in the upper right-hand corner of the cover page. That's the other GRS in this case, right? That's --

A. Correct. Gabriel Roeder Smith & Company.

Q. Who is that company?

A. That is the actuarial firm for the Retirement Systems.

Q. Okay. And they prepared this document that's marked as Exhibit 2?

A. They did.

Q. Let me ask you to turn to page B-3. Actually, B-4. And this page is entitled, "Active and Retired Members Included in Valuation, Historic Comparisons."

And there are two charts on the page. And the top chart has the heading, "Active Members by Valuation Division."

What is a valuation division, do you know?

A. Yes. Basically it is different departments or divisions that are split that are shown separately for the purposes of this valuation.

Q. So does the GRS, in general, keep separate records or accounts for these different valuation divisions?

A. When you say accounts, can you explain that?

Q. Well, let me ask you because you're more knowledgeable about this than I am, so rather than my trying to guess how it's done, let me ask you.

Is there any way in which the GRS maintains separate -- maintains separate records for these different divisions?

A. We don't necessarily maintain separate records, but at -- upon request and for various reasons, we may -- we may do some type of accounting to separate by division or we may -- we may instruct our IT section to prepare reports that are separated by these divisions.

Q. So would the separation of the divisions just be for purposes of a report or are records maintained separately on an ongoing basis for these different divisions?

A. As it pertains to contributions, then you will find historically the information is maintained separately.

Q. Okay. So is it correct that in the GRS files -- and by "files," I mean computer or paper files -- that when contributions come in, they are recorded according to which division they came in for; is that correct?

A. That -- that would be a correct statement, yes.

Q. Okay. And what about liabilities, does -- in the same way that the GRS maintains records separately for the divisions by -- of contributions, does it also maintain records separately of the valuation divisions for purposes of liability?

A. For reporting purposes -- and by that, I mean to prepare reports that would be used by the actuary, and I can't think at this moment if that's something that our auditor looks at as well -- but for contributions, it's we maintain the records separately on an ongoing basis because we're billing the different revenue groups here, the different divisions, we're billing them and then recording the contributions received, whereas with the liabilities, there's really nothing that the Retirement Systems does with that other than report the information as requested.

Q. Okay. But the GRS has the capability, if it wants to, to break out by division what liabilities are allocable to the participants in which division?

A. We do.

Q. You testified a second ago that the GRS bills a separate division, so does that mean, for example, that the GRS sends out bills to the library for contributions?

A. We do. We send -- yeah, I guess we call them invoices.

Q. How often?

A. Generally monthly.

Q. So the GRS, on a monthly basis, sends invoices to the library?

A. Correct.

Q. And do you know, is the invoice sent by hard copy, is it a piece of paper that goes out?

A. Usually it's by email.

Q. Okay. And to whom is it emailed?

A. I don't know the person's name. I'm going to assume it's their accountant, whoever the main accountant is there, and it's the head accountant of the Retirement Systems that notifies the accountant at the library.

Q. So there's an email that goes from the accounting department of the GRS directly to the accounting department of the library?

A. Yes.

Q. I assume you're familiar with the fact that the City of Detroit is in Chapter 9 bankruptcy?

A. Yes.

Q. Okay. And are you aware that the City has a proposed plan of adjustment?

A. Yes.

Q. Do you have an understanding of whether the proposed -- let me back up.

Do you have an understanding that the City's plan of adjustment proposes certain cuts to pension benefits of GRS participants?

A. Yes.

Q. Do you have an understanding of whether the proposed cuts to pensions in the City's plan of adjustment would apply to cuts in the pensions of GRS participants who are employees or retirees of the library?

MR. GALLAGHER: Objection. Foundation.

Peter, you know this is the case, but we are straying a little bit from the four corners of the notice and Nos. 1, 4 and 6, and I just want to make sure we stay there.

MR. DeCHIARA: You know, I think it's not expressly covered, but I think it goes to the separateness of the two entities, so I would ask the question.

(Whereupon the question was read back by the court reporter.)

THE WITNESS: That's my understanding.

BY MR. DeCHIARA:

Q. That it would?

A. That they are included.

Q. And what's the basis of your understanding?

MR. GALLAGHER: I think, Ms. Thomas, you don't need to answer to the extent that the basis of your understanding is communications with counsel.

MR. DeCHIARA: Correct.

THE WITNESS: I don't recall ever -- any request for information to omit library.

BY MR. DeCHIARA:

Q. Have you ever spoken to anyone from the City -- and by that I mean any City official or any lawyer for the City, including anyone at Jones Day -- about this issue that I just asked you about, namely, whether or not GRS participants who are retirees or

employees of the library would be -- would have their pensions cut under the proposed plan of adjustment?

A. No.

Q. Have you ever spoken to anyone from the library about that question?

A. No.

Q. Do you have any knowledge about who may have made the decision that library employees and retirees' pensions would be included in the proposed cuts?

MR. GALLAGHER: Objection. Foundation.

THE WITNESS: No, I do not.

REDACTED

REDACTED

REDACTED

REDACTED

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BY MR. DeCHIARA:

Q. Ms. Thomas, are you aware of what ASF recoupment is?

A. I am.

Q. Can you explain briefly, if you're able, what ASF recoupment is?

A. I can. ASF is the annuity savings bond and the recoupment is where the City/Jones Day team have come to the conclusion that excess interest was given on the Annuity Savings Fund without proper authority, and as such, they are seeking to recoup the excess interest from a particular timeframe that's included in the POA.

Q. And by "POA," you are referring to the plan of adjustment?

A. That's correct, the plan of adjustment.

Q. And do you have any understanding about whether the ASF recoupment would seek also to include recoupment from GRS participants who are employees or retirees of the library?

A. That's my understanding.

REDACTED

REDACTED

REDACTED

MR. DeCHIARA: Let me now move on to topic No. 2 in the amended notice, which concerns the number of GRS participants who are library employees or retired -- retirees. And let me begin by showing you what I'll mark as GRS 4.

(Marked for identification: GRS Exhibit No. 4.)

BY MR. DeCHIARA:
Q. And I will represent to you that GRS 4 are interrogatory responses that the GRS provided to the UAW in this case. Have you ever seen GRS 4 before?
A. I can't be sure.
Q. All right. Well, let me turn your attention to response No. 2 -- I'm sorry, response No. 1, the response to interrogatory No. 1, which is at the bottom of page 5 and continues up to the top of page 6. Do you see that?
A. I do.
Q. Okay. And you see it provides numbers for GRS participants who are active DLC employees, deferred vested former DLC employees and retired former DLC employees. Do you have any knowledge about whether those numbers are accurate or not?
A. I'm willing to say that they are pretty accurate.
Q. Okay. Do you have any reason to question the accuracy of these numbers?
A. No.
Q. What's your understanding of deferred vested employee? Do you have an understanding of what that means?
A. Deferred vested employee is an employee who has a

vested interest in the system and they have -- deferred refers to the fact that they are eligible to receive benefits at a point in the future.

Q. Okay. So how are they different from active DLC employees?

A. Active DLC employees have not reached a point of eligibility.

Q. Let me turn your attention back to GRS 2, which is the June 30, 2013 valuation report, and in particular, page B-2 -- I'm sorry, strike that. B-1. Are you at that page?

A. I am.

Q. Okay. And it says, "Summary of Member Data, June 30, 2013." What's your understanding of -- you see there's a chart that has the heading, "Active Members," at the top, and then at the bottom, a chart that says, "Inactive Vested Members." What's your understanding of the difference between those two categories?

A. So the inactive vested members are members who are no longer active City employees, but they have a vested interest. They are eligible to receive benefits in a future point.

Q. Okay. And among the active members, does that include both employees who have already accrued

benefits and those who have not yet accrued benefits?

A. In the active members?

Q. Yes.

A. Those who have accrued and those who have not.

Q. And -- go ahead. Finish.

A. Those who have accrued benefits to make them eligible and then those who have accrued benefits, but not yet eligible. Is that the question?

Q. Right. Let me try to clarify.

A. Okay.

Q. Does the category, "Active Members," include active employees who have a vested right to pension benefits as well as active employees who do not have a vested right to pension benefits?

A. Yes.

Q. So going back to the interrogatory response, GRS No. 4, the figure that's -- there's a figure there for active DLC employees. Would that category as well include both active employees who have vested right to pension benefits as well as those who do not?

A. Yes.

Q. I'm -- if you compare the number for active employees under the interrogatory response to

the number for active members for the library on page B-1 of the valuation report, the number is slightly different. The interrogatory response gives the number 328 and the valuation report gives a number as 332. Do you know why -- do you know why there's a difference?

A. The 332 is as of June 30, 2013, and between that time and May 1st of 2014, there are less active employees.

Q. Let's move on now to topic No. 3, which concerns contributions made to the GRS on -- for library employees and retirees. Am I correct that the GRS has a defined benefit plan as well as a defined contribution plan?

A. That's correct.

Q. And are all the contributions to the defined benefit plan made by employers as opposed to by employees?

MR. GALLAGHER: Objection. Foundation. Form.

THE WITNESS: I'm sorry, can you repeat that, please?

BY MR. DeCHIARA:

Q. Are the contributions that are made to the DB plan exclusively made by employers as opposed to by

employees?

MR. GALLAGHER: Objection to foundation.

THE WITNESS: It's my understanding it's employer contributions.

BY MR. DeCHIARA:

Q. Let me now turn your attention to response -- the interrogatory response to interrogatory No. 2 on GRS 4, which is at the bottom of page 6 onto the top of page 7. And let me focus your attention on the chart that's at the bottom of page 6, going onto the top of page 7. And do you see there's a column to the chart that says, "Employer Contributions to Defined Benefit"?

A. I do.

Q. Okay. And these are -- am I correct that these dollar figures given in this chart under that column refer to the employer contributions made on behalf of the GRS participants who are library employees or retirees for the years that are indicated?

A. That's my understanding.

Q. And the employer that was making those contributions was the library; is that correct?

A. Yes, that's my understanding.

Q. And these contributions that are referenced on this

chart under the column, "Employer Contributions to Defined Benefit," those would be the monthly contributions that the library makes in response to the invoices that you testified about earlier?

A. That's correct.

Q. How does the GRS determine how much to charge the library in those monthly invoices?

A. Every year the actuaries determine a factor that is used and we take the factor for each division and apply it to the last payroll of the fiscal year.

Q. What do you mean by a factor?

A. A percentage.

Q. So is it correct that each year the actuaries for the GRS determine what percentage of payroll needs to be paid as contributions to the defined benefit plan?

A. That's a fair statement.

Q. Okay. Let me refer you to GRS Exhibit 2, the valuation -- the June 2013 valuation report, page A-1. Do you see that page?

A. I do.

Q. And the page heading says, "Summary of Computed Employer Contribution Rates, 2014-2015 Fiscal Year." And then it says, "Contributions Expressed as a Percent of Payroll," and then it has separate

columns for the various valuation divisions, including one for the library. I just want to try to understand this chart. Are you -- do you have an understanding of this chart?

A. I do.

Q. Okay. So does the factor that you -- or percentage you were referring to a minute ago appear somewhere in this chart?

A. The estimated employer contribution rates.

Q. Where --

A. Towards the bottom. The third column from the bottom.

Q. Oh, estimated -- I see. So for the library, for this period, the 2014-2015 fiscal year, the factor or percentage that the actuaries came up with for the library is 32.98 percent?

A. That's correct.

Q. Okay. And I notice that that percentage for the library differs from the percentages for the other valuation divisions; is that correct?

A. That is correct.

Q. Okay. And then under the 32.98 percent, there's a dollar figure for FY 2015 for estimated employer contributions for the library, it says 4.6 dollars. I assume that's -- is that million?

A. Millions.
Q. Okay. Does the GRS have the payroll amount for the library to be able to come up with the $4.6 million number?
A. Can you clarify, when you -- are you asking if the General Retirement System has the payroll amount?
Q. Well, let me back up. So I assume you have a percentage -- strike that.
You have a percentage and then you multiply it by something and you get $4.6 million. So what is the something that you're multiplying it by?
A. The final -- the total of the final payroll for the fiscal year.
Q. Okay. And that's -- in the case of the library, that's the library's payroll, correct?
A. No, it's the total payroll for the City of Detroit for the end of the fiscal year.
Q. I see. So -- and where does the GRS get that number from?
A. From the City.
Q. Okay. And then the GRS then multiplies that number by the various factors for each division to get each division's contribution, is that how it works?
A. That's correct.

Q. Going towards the top of the chart under -- you see it says, "Normal Cost," in the upper left-hand corner?

A. Yes.

Q. And then there are -- under that, there's a series of categories such as the first one is, "Age & Service Pensions," and if you look over to under the library column, it says 8.35 percent. What does that number mean, the 8. -- let me back up.

What is the Age & Service Pensions?

A. That's pensions -- pensions that were -- the eligibility for those pensions were either service or age.

Q. Okay. And then what does the 8.35 percent number represent?

A. I'm hesitant to answer that question because it's an actuarial question and I don't want to give -- if I'm mistaken with my assumptions, then I don't want to give you the wrong answer.

Q. I'm not asking you -- you're not an actuary, are you?

A. Not at all.

Q. Okay. I'm not either, so we're both working at a disadvantage here.

I'm not asking you for your professional

view -- or professional actuarial view, I'm just asking you in your capacity as the executive director of the GRS whether you have a working knowledge of what this percentage means.

A. My understanding is the 8.35 would represent those pensions that were eligible for service and age as a percentage of that total payroll that we discussed earlier.

Q. Let me go back to what you testified about earlier. When I asked you -- going back to that 32.98 percent, when I asked you earlier what number that number was multiplied against to get to $4.6 million, you testified that it was the overall payroll for the entire City, and I'm just questioning the accuracy of that by looking at this chart, which indicates for the library that when you multiply that number by 32.98 percent, you get 4.6 million, but if, for example, you move to the column to the left, water and sewage, the factor is 46.47 percent, which is somewhat higher, a somewhat higher percentage, but if you look at the contribution for FY 2015 for water and sewage, you get 31.3 million, which is a multiple times the library's contribution. So I'm wondering, in light of that, whether it's correct that those

percentages are multiplied against the same number.

MR. GALLAGHER: Objection to form.

THE WITNESS: And also -- so when you first started the question or comment, you stated that I said that multiplying the 32.98 times the total payroll would come to the 4.6, but I don't believe that I said that it would come to the 4.6. I believe I said that this is what was used to determine the contributions owed, and what you -- which is a little bit different. Because what they did in this particular book, you see you've got the 4.6, and that's for fiscal year 2015, and 3.6 for 2014, and when you look on -- see, this is -- if you look on this chart, this is as if every division contributed the way they should have, but if you look on A-2, this is showing the actual, what actually occurred, the contributions actually received. So you see it shows the past due for 2013 for a couple of those, but the chart is a little different.

BY MR. DeCHIARA:

Q. Okay. So let me just focus on the chart on A-1, which is the amounts -- the amounts that were owing; is that correct?

A. Yes, but the more accurate chart is A-1 because A-2 is -- I mean, A-1 is making an assumption, but A-2 is what occurred, the actual, what actually occurred in that year.

Q. Okay. That's fine.

A. Okay.

Q. I'm just trying to understand how the chart on A-1 works.

A. Okay.

Q. And in particular, I'm trying to focus on how you get to the $4.6 million for the library for FY 2015. And I believe you testified, and if I'm getting this wrong, let me know, but I believe you testified that the way you get to that number is you take the 32.98 percent and you multiply it by some number.

A. Yes.

Q. Okay. So my question is, is that number that you multiply the 32.98 percent the same number -- and let me back up.

And I believe you testified that the number that you multiply the 32.98 percent against is the total payroll of the City. Was that your prior testimony?

A. Yes.

Q. Okay. And so would -- so let's now move to water and sewage. To get to the 31.3 million for water and sewage, estimated employer contribution for FY 2015, do you multiply the 46.47 percent by some number?

MR. GALLAGHER: Objection to form. Foundation.

THE WITNESS: Okay. No, you -- so it's incorrect. That's incorrect what I told you. If you look at the UAAL above --

MR. DeCHIARA: Where is that?

THE WITNESS: It's not bolded. Unfunded Actuary Accrued Liabilities.

MR. DeCHIARA: Okay.

THE WITNESS: Okay. That's what you multiply times -- we use the UAAL for the last payroll of the fiscal year and that gives you the rate that's used for each division.

BY MR. DeCHIARA:

Q. Okay. But my question is, so you're telling me that the factor, the percentage, is not the 32.98 percent?

A. No.

Q. It's the 8.09 [sic]?

A. It's the 18.09.

Q. Okay. That's fine, but that doesn't answer my question. What I'm trying to get at is, what number is that multiplied against to get, in the case of the library, to the 4.6 million, or in the case of water and sewage, to get to the 31.3 million, and is it your testimony that the number that the factor is multiplied against in the case of the library is the same number that it's multiplied against -- that the water and sewage factor is multiplied against to get the water and sewage figure?

MR. GALLAGHER: Objection to foundation.

THE WITNESS: Okay. So at this point I'm sitting here very confused. And I apologize. And I don't -- because I don't actually bill the agencies, I haven't done this calculation.

MR. DeCHIARA: Okay.

THE WITNESS: I am familiar with it and we go through it on an annual basis, so I'm sitting here very confused, but it's -- your question sounds -- it sounds to me as if you're asking me if the percentage that we use for library, if we use the applicable percentage for water and sewage, if we're multiplying it times the same data to reach the rate, and that answer, if I'm understanding you correctly, then the answer is yes.

MR. DeCHIARA: Okay. And I'm not trying to confuse you.

THE WITNESS: I know you're not.

MR. DeCHIARA: I'm just trying to understand the chart.

BY MR. DeCHIARA:

Q. And the water and sewage percentages under the UAAL is about, you know, just eyeballing it, it's slightly less than twice the library percentage, but the estimated employer contribution for the water and sewage is, again, eyeballing it, looks like it's about six times. So it just seems as a matter of math you can't use the same number to -- you can't multiply those percentages against the same number and get those results. Do you see what I'm saying?

A. I see absolutely what you're saying. Now I'm not certain, once we do that, if there's some other type of calculation that occurs; I'm not certain about that.

Q. Well, could it be that the number is not the -- that's used -- that the percentage is multiplied against is not the overall City number in the case of each of these divisions, but rather that

division's own payroll?

A. I doubt it. I've seen the calculation and I also know that by matter of procedure, we actually have to wait until mid July to get the final figure from payroll, and we are waiting for the total payroll, the conclusive of the whole fiscal year, we're waiting for that total payroll figure.

Q. When you get -- when the GRS gets the total payroll figure, is it broken out by division?

A. It is not.

Q. Do you know how the library pays the GRS its contribution? Does it send a check, does it wire the money, do you know how it comes in?

A. It comes in by wire.

Q. Has the library ever not paid the full amount it was invoiced by the GRS?

A. The full amount in the fiscal year?

Q. Well, you invoice monthly. Does it pay monthly?

A. Generally, yes.

Q. Sometimes it doesn't?

A. Correct.

Q. When it doesn't, how often does it pay?

A. Generally, we receive some type of payment every month from library. There may be an occasion where they have paid less and then maybe caught up on the next month, or if there's some type of discrepancy or some issue that causes a delay in the communication for the invoicing.

Q. Has it ever been by the end of a fiscal year, the library has not paid everything it was invoiced for that fiscal year?

A. By July of the next -- in the next month, the library generally has paid completely.

Q. The fiscal year ends -- the fiscal year of the GRS ends in what month?

A. June.

Q. At the end of June?

A. Yes.

Q. Are you aware of the library ever having not paid everything it was invoiced for the fiscal year by the end of the fiscal year?

MR. GALLAGHER: Objection. Foundation. Form.

THE WITNESS: Yes, by the end of the fiscal year; however, by July, they will catch up.

BY MR. DeCHIARA:

Q. So there may have been occasions where, by June 30th, the library had not paid everything it had been invoiced for that fiscal year, but you're not aware of any occasion on which the library, by

the following July, had not fully paid for that fiscal year that had just ended; is that correct?

A. That is correct.

Q. Are you aware of the City ever having used its own monies to pay employer contributions for the library retirees or employees who were participants in the GRS?

A. I wouldn't have knowledge of that.

Q. You're not aware of any occasion on which that's occurred?

A. I wouldn't have knowledge of that. The wire we receive is from the library and we don't know if those are library funds or if they've received the funds from the general fund, we just -- we receive our wire from the library and that's generally all we're concerned with.

Q. Have you ever received a wire from the City as payment towards employer contributions for the library employees or retirees?

A. No.

Q. Let me now refer you back to GRS 4, the interrogatory responses, and in particular the response to No. 2. In addition to the column that says, "Employer Contributions to Defined Benefit," there's a column to the right of that that says,

"Employee Contributions to ASF," and that gives a series of dollar figures for various fiscal years.

Is it your understanding that those dollar figures represent the amounts that were contributed to the annuity -- is it Annuity Security Fund, is that what ASF stands for?

A. Savings fund.

Q. Savings fund. I'm sorry.

Is it your understanding that those dollar figures represent contributions to the Annuity Savings Fund for the GRS participants who are library employees and retirees?

A. That's my understanding.

Q. And the contributions to the ASF are exclusively employee contributions?

A. That's correct.

Q. And the ASF is a defined contribution plan?

A. It is.

Q. Okay. Let me now move on to topic No. 4, which concerns the amount of accrued liabilities attributable to the GRS participants who are library employees and retirees.

And let me turn your attention to the valuation report that's marked as GRS No. 2, and actually, let me refer you to page B-2 in GRS

No. 2.

And this page is entitled, "Allocation of Assets Used for Valuation Reserve Accounts." And there are five separate funds listed on this page. Do you have an understanding of what these various funds are?

A. For the most part, yes, I do.

Q. Okay. And you've explained to me what the Annuity Savings Fund is so you don't need to do that again.

What's the Annuity Reserve Fund?

A. The reserve fund is -- those are -- that's where employees who have not -- who are not actively participating in the Annuity Savings Fund; however, the dollars are still with the system.

You want me to further?

Q. Yeah, if you could. I'm not sure I understood that.

A. Okay. So we talked about deferred vested employees --

Q. Right.

A. -- or members.

So if someone is vested, they can leave and choose to leave their savings in the fund, and if they're vested, it will continue to earn interest, but because they aren't active, it's placed in the reserve fund.

Q. So are the -- are there a separate pool of participants, some of whom are in the ASF and some of whom are in the ARF?

A. You can -- it would be acceptable to say it that way, but generally, the Annuity Savings Fund is for active participants, those are what you -- I guess you can refer to as active accounts, active employees contributing and it's earning interest. We -- you know, for accounting purposes, we would show the reserve fund as those annuity dollars for non-active members for whatever reason they left the money in the system.

Q. But they are participants in the plan who are no longer contributing?

A. Correct.

Q. Is that the distinction, whether they're contributing or not?

A. Active and contributing.

Q. So if you're active and contributing, your money goes into the ASF, and if you're no longer contributing --

A. Or active.

Q. When you say active, do you mean active employee or active participant in the plan?

A. I mean an active employee. Because you can be in the Annuity Savings Fund, you can be active and not contributing; it's optional.

Q. I see. So is the distinction that the annuity savings -- the people who have accounts in the Annuity Savings Fund are active employees and those who have accounts in the Annuity Reserve Fund are not active employees?

A. That's a better description.

Q. So if I'm an active employee, let's say I'm an active library employee and I have contributed to the ASF, can I go somewhere and see the amount of money in my ASF account?

A. Yes.

Q. How would I do that?

A. The Retirement Systems. You can request a summary and we can produce a summary for you, we can produce your -- you know, a history of your contributions.

Q. So the GRS maintains individualized accounts for every participant in the ASF?

A. The money is combined, it's commingled, but we have the ability to give you an accounting individually.

Q. Okay. And is that individual accounting, is that something that exists on an ongoing basis for each

participant in the ASF in the GRS files or computer system?

A. Yes.

Q. When you say the money is combined, do you mean the assets of the GRS?

A. Correct.

Q. And is -- are the assets of the DB and the DC plan combined?

A. Correct.

Q. Okay. Well, what is the Pension Accumulation Fund?

A. That's the -- that's an accounting term, too. That's the fund that's used to -- the accumulation of pension earned, I guess you could say. Earned pension benefits.

Q. Now those numbers appear for each division on page B-2 in parentheses, which I understand to be negative numbers. Are those negative numbers?

A. Yes.

Q. Can you explain why those are all negative?

A. It's -- it's a liability to the system. It's -- this is an accumulation of benefits that must be paid.

Q. And what's the Pension Reserve Fund?

A. So the reserve is -- that's the reserve of funds that will go towards the accumulation of what's earned.

Q. So am I reading it correct, this chart correctly, if I conclude that as of June 30, 2013, for the library, for the DB plan, there was approximately $66 million in assets attributable to the library and roughly $23 million in liabilities?

A. That's a good understanding, yes.

Q. All right. And finally, what's the Accrued Liability Fund?

A. So the liability fund is for this -- there are a couple different types -- well, that was no longer there -- but there are other liabilities of the fund that the fund must pay out for the different divisions here and that's in addition to -- that's in addition to -- that's taking into consideration in addition to the reserve fund.

So actually, for the 23 -- if you look at library for -- there's an accumulation, you can say, of benefits already earned of 23 -- 23, what is it, million there? And so the 66 of the pension reserve and 24 of accrued liability would go towards that 23.

So -- and if you kind of go back through and you look at that -- well, I'm getting mixed up in my explanation, but if you look at it as an overall fund, then it kind of lends to where you get your funding status from, if that makes sense. I can't explain it well, I'm sorry.

Q. Okay. Is the Accrued Liability Fund, are they additional assets that the GRS has to pay out pension liabilities?

A. Yes.

Q. Are they -- so they're in addition to the assets that are in the Pension Reserve Fund?

A. Yes.

Q. All right. Let me turn your attention to the next page, page B-3. And this page is entitled, "Actuarial Accrued Liabilities as of June 30, 2013, by Division."

Am I reading this chart correctly that as of June 30, 2013, for the retirees and beneficiaries of the library division, there was approximately $66 million of liability under the defined benefit plan?

A. Repeat that question.

Q. Am I reading this chart correctly that for retirees and beneficiaries, for the library division, there was approximately $66 million in liabilities?

A. Yes.

Q. And then if you add in the inactive members' future

deferred pensions and also active members, you get to a total of approximately $109 million in defined benefit plan liabilities for the library division?

A. That's correct.

Q. Okay. And then I'm just a little confused. You testified earlier when we're talking about chart B-2 that when we talked about the Pension Reserve Fund, I believe you testified that the 66,020,254 number was a liability -- I'm sorry, you testified that it was assets.

A. The reserve fund to pay for the pension accumulation.

Q. Right. So the Pension Reserve Fund is a statement of assets available as opposed to liabilities?

A. Yes.

Q. And the reason -- I'm not trying to trip you up, I'm trying to understand.

A. Right.

Q. Because I'm looking now at -- if the Pension Reserve Fund, the 66,020,254, is a statement of assets, then why does that number appear on page B-3 at the very top under the library column as part of the liabilities owed to retirees and beneficiaries?

MR. GALLAGHER: Objection to form.

THE WITNESS: Okay. So with the -- with the actuarial statement, you're also looking at a snapshot in time, so you have -- if you're looking at B-3 and you look at retirees and beneficiaries -- so as of this date, we have these liabilities that are owed. We have a reserve that was set up for those liabilities that were owed. So the reserve -- we have these funds in a reserve to pay for this liability. That's the way we -- that's the accounting methodology for it.

BY MR. DeCHIARA:

Q. Okay. So as -- looking on B-3, under the column, "Library," where it says, "Pension Fund Balances," do you see that line?

A. I do.

Q. Okay. And then if you look at it across the page, under the library column, the pension fund balance is 66,173. Do you see that?

A. I do.

Q. Okay. And that's a statement of assets that are available to pay the amount that's set forth on the line above, the 109,192; is that correct?

A. Yes.

Q. Okay. And then the balance is the unfunded accrued pension liabilities of 43,019, correct?

A. Yes.

Q. Okay. So does the pension fund balances, the 66,173, does that appear anywhere on page B-2?

A. Say that again. I'm sorry.

Q. Yeah. You see the pension fund balances, it says 66,173 on page B-3?

A. Uh-hum.

Q. Okay. Does that -- is that number, does it appear or is it somehow represented or taken into account on page B-2?

A. I'm not sure if it does.

Q. Okay. Let me now move to topic 6 on the deposition notice.

Do you have any view or understanding about whether or not there could be circumstances where the City of Detroit would be liable for contributions that the library owes to the GRS?

MR. GALLAGHER: Objection to foundation to the extent it calls for a legal conclusion, to the extent that it is not based in conversations with counsel.

MR. DeCHIARA: Yeah, I'm not asking you to testify about any knowledge you gained through or about any conversations you had with counsel for the GRS, but without limitation, I would ask you that question.

Do you want me to repeat it?

THE WITNESS: Please.

MR. DeCHIARA: Actually, can you read it back?

(Whereupon the question was read back by the court reporter.)

THE WITNESS: I can't say I'm aware of any.

BY MR. DeCHIARA:

Q. Well, my question is just, do you have any knowledge or understanding about that issue at all?

A. That the City of Detroit would be liable for contributions for library employees?

Q. Right. Do you have any knowledge or understanding about that question?

A. No, I don't have any knowledge about that.

Q. Okay. Did you ever discuss -- apart from with counsel for the GRS, did you ever discuss that issue with anyone?

A. No.

Q. Did you ever read anything anywhere about that issue?

A. I don't think so.

Q. Did you ever hear anyone say that the City could be

liable for contributions that the library owes because the City is the plan sponsor?

MR. GALLAGHER: Objection. Form and foundation.

THE WITNESS: I don't think I've heard it referred to that way. If you want my assumption, I don't know if you want that --

BY MR. DeCHIARA:

Q. Well, I'm not asking you for your assumption, I'm just asking you, have you ever heard anyone say that or anything like that?

A. Not specifically in regards to the library, no.

Q. Have you heard -- have you heard something like that said not in regards specifically to the library, but in regard to some other entity?

A. Yes.

MR. GALLAGHER: Objection to the extent that it goes beyond this deposition notice.

BY MR. DeCHIARA:

Q. Did you ever read in any document anywhere that the City could be liable for contributions of the library because of it, meaning the City, being the plan sponsor? Did you ever read that anywhere?

A. I don't think so, not specifying library.

Q. Are you aware of any discussions about whether the

library would get what's been referred to as a contribution holiday; in other words, a period of time where its obligation to contribute would be suspended?

A. No, I'm not aware of that.

MR. DeCHIARA: Off the record.

(Whereupon a break was taken from 11:39 a.m. to 11:52 a.m.)

MR. DeCHIARA: I have no further questions. Thank you, Ms. Thomas.

THE WITNESS: Thank you.

(Discussion off the record.)

MR. DeCHIARA: In light of the objection by counsel for the GRS to GRS Exhibit 3, which was an email from counsel for the City concerning the AFS recoupment, I have agreed that that document should not become part of the record of this deposition. I will ask that any physical copies of that exhibit be returned to me.

And also, counsel for the GRS and I will review the rough version of the transcript and redact any testimony bearing on that exhibit. Is that acceptable?

MR. GALLAGHER: I think that's consistent with our agreement.

MR. DeCHIARA: Any other objections from the attorneys?

MR. GALLAGHER: Comments, objections?

MR. DeCHIARA: Okay. I think that's --

MS. KOVSKY-APAP: Just that I would like to also have an opportunity to review the rough with you.

MR. DeCHIARA: Yeah, we can do all of that together and counsel for the City can participate in that process.

MS. KOVSKY-APAP: Okay.

(Whereupon a break was taken
from 11:53 a.m. to 12:13 p.m.)

MR. DeCHIARA: I have marked two areas in the rough transcript where the redactions should be to eliminate any testimony references to GRS Exhibit 3, and both counsel for the City and counsel for the GRS have had an opportunity to review the redactions and have agreed that the redacted areas are the appropriate redactions.

Is that in agreement?

MR. GALLAGHER: Yeah. So it was Exhibit No. 3, GRS Exhibit 3 is stricken, redacted, clawed back?

MR. DeCHIARA: Right. The hard copies of

GRS Exhibit 3 have now been physically clawed back. And you've had an opportunity to review the redacted portions of the transcript. And do you agree those are the appropriate redactions.

MR. GALLAGHER: I do. They begin, at least, with you asking to mark the new document as GRS 3, and a couple of pages later, it stops with me saying "Fair," F-A-I-R, and then they begin again about a page later with you asking, "If you turn GRS 3 over," et cetera, and then end with the next answer, "I do not." Is that correct?

MR. DeCHIARA: Those are the correct redactions.

MR. GALLAGHER: Great.

MR. DeCHIARA: And counsel for the City, are you in concurrence that those are the appropriate redactions?

MS. KOVSKY-APAP: I am.

(Deposition concluded at 12:14 p.m.)

STATE OF MICHIGAN)
COUNTY OF OAKLAND)

Certificate of Notary Public

I do hereby certify the witness, whose attached testimony was taken in the above matter, was first duly sworn to tell the truth; the testimony contained herein was reduced to writing in the presence of the witness, by means of stenography; afterwards transcribed; and is a true and complete transcript of the testimony given. I further certify that I am not connected by blood or marriage with any of the parties, their attorneys or agents, and that I am not interested directly, indirectly or financially in the matter of controversy.

In witness whereof, I have hereunto set my hand this day at Royal Oak, Michigan, State of Michigan.

I hereby set my hand this day, July 15, 2014.

Karen Fortna, CRR/RMR/RPR/CSR-5067
Notary Public, Oakland County, Michigan
My Commission expires 4/30/2019

EXHIBIT E

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

IN RE: CITY OF DETROIT, MICHIGAN, Debtor. . . . .

Docket No. 13-53846
Detroit, Michigan
September 15, 2014
8:30 a.m.

CONTINUED TRIAL RE. OBJECTIONS TO CONFIRMATION OF CHAPTER 9 PLAN; (#7061) MOTION/THE DETROIT RETIREMENT SYSTEMS' MOTION TO EXCLUDE PORTIONS OF MARTHA KOPACZ'S TESTIMONY FILED BY CREDITORS GENERAL RETIREMENT SYSTEM OF THE CITY OF DETROIT, POLICE AND FIRE RETIREMENT SYSTEM OF THE CITY OF DETROIT; (#7003) CONCURRENCE/FINANCIAL GUARANTY INSURANCE COMPANY'S JOINDER IN SYNCORA'S MOTION TO EXCLUDE CERTAIN OF THE EXPERT OPINIONS OF MARTHA KOPACZ UNDER FEDERAL RULE OF EVIDENCE 702 FILED BY CREDITOR FINANCIAL GUARANTY INSURANCE COMPANY; (#6999) MOTION TO EXCLUDE CERTAIN OF THE EXPERT OPINIONS OF MARTHA KOPACZ UNDER FEDERAL RULE OF EVIDENCE 702 FILED BY INTERESTED PARTIES SYNCORA CAPITAL ASSURANCE, INC., SYNCORA GUARANTEE, INC.
BEFORE THE HONORABLE STEVEN W. RHODES
UNITED STATES BANKRUPTCY COURT JUDGE

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Proceedings recorded by electronic sound recording, transcript produced by transcription service.

THE CLERK: Calling the matter of 13-53846, City of Detroit, Michigan.

THE COURT: Good morning. Looks like everyone is here. Go ahead, sir.

MR. HEIMAN: Good morning, your Honor. David Heiman, Jones Day, on behalf of the city, and I'm very pleased this morning. Once again, I've said this, but to do something -- to announce a development that we probably had concluded would not happen has happened today. I'm pleased and privileged to report that more than a year of litigation between the city and Syncora has now come to an end, and we have settled our dispute. I want to make it clear that the settlement does not resolve the Class 9 treatment. FGIC will continue to object, as far as we understand it. They can speak for themselves today, but efforts to reach a settlement with them at least thus far have not been successful. However, the settlement, in our minds, a very favorable one to the city, is a very significant step in the city's efforts to move swiftly through this confirmation process and to exit Chapter 9 as soon as possible and to return the city to its citizens.

With that in mind and maybe a little bit out of order, I'd like to thank some people here if I may because this is the reflection, manifestation of a huge amount of work by a lot of people, so I'd like to first thank the

Court, who has been encouraging of settlement and also provided the time for the parties to actually work together to settle. And as your Honor knows, the mediators have been incredibly instrumental in helping the parties find common ground, the mediators in this particular instance being Judges Rosen and Perris and Eugene Driker. So I want to thank them for just another example of persistence and tireless efforts on their part, and I think, as your Honor knows, I think it's hard to know where we'd be in this case without the support of the mediators throughout this process.

I'd like to thank the parties themselves, both the city and Syncora, who have laid down their swords after much fighting. It takes a lot of emotional and, you know, mature effort to do that. In particular, I'd like to thank the advisors, professionals on both sides. Again, after being passionate adversaries for more than a year in litigation, today those professionals are now acting in concert in support of the city.

Just a word or two about the plan -- I'm sorry -- the settlement, which will become part of the plan -- Ms. Ball will be more specific in a moment, but I'd like to do just a little bit of an overview. First, and of great value to the city, is that Syncora will be withdrawing all objections across the board in connection with the plan or other aspects and appeals that may be outside of the plan, and they will become a supporter of the plan as well as a supporter of continuing litigation relating to the COPs causes of action that are existing today in front of the Court. The plan itself provides for a 13.7-percent recovery on the Syncora-related claims both to be paid by virtue of a portion of the B notes -- 60 percent of the reserve on the B notes will go to Syncora -- and other consideration that Ms. Ball will detail.

The other part of the settlement is to establish a commercial relationship between Syncora and the city for the long term regarding development of certain assets that the city owns or will transfer to a Syncora subsidiary, and the city and Syncora will work together in the development of those properties. So that part of the settlement will be reflected in the implementation section of the plan, and Ms. Lennox can address more specifics on that if you want, so we have two parts to the settlement. One part is claim treatment, and the other is related to the new commercial relationship.

What I'd like to do today is have various of our lawyers plus Ryan Bennett speak to specifics of the settlement or procedures, so -- and in this case, it does take a village to get this done, so I would have Ms. Ball address the specifics of the settlement, Mr. Bennett comment to the extent he feels necessary, Ms. Lennox report to the

Court on where we stand on the documentation that reflects the settlement and the filing of that, Mr. Miller on certain commitments to the Retirees' Committee, and Mr. Cullen on what the city sees as an appropriate procedure for continuing the confirmation trial. I apologize for all of that, but it's -- as I say, it was a complicated settlement and requires a lot of thought and presentation to the Court.

As to the status of the agreement, I want to make it clear we have an agreement. The last time we saw you, it was an agreement in principle, and everybody went to work until the wee hours this morning to come up with what is an agreement. There are aspects of the agreement that we still need to work on, but we're agreed on how to do that. So not surprisingly, when there are transfers of properties and diligence required and planning for development of those properties, there is -- there are a little bit of moving targets on which properties and so forth, so the one tag area of the settlement that we need to continue to work on but is not going to come back before the Court is with respect to two properties, so late last night the city discovered certain parcels previously included in the development agreement that could not be conveyed to Syncora. As a result, the city agrees that by the close of business on Tuesday, September 16, 2014, the city will provide Syncora with properties that represent reasonably equivalent value consistent with that development scheme or their development scheme that are reasonably accepted to Syncora. They may actually conceivably be the same properties or replacement properties. The parties have agreed that we can fix this one tag issue hopefully with relative ease within the next 48 hours and probably sooner.

As to the documentation that is necessary for this, Ms. Lennox will report to you on it, but as far as we're concerned and I think as far as Kirkland & Ellis is concerned, we're pretty much done with that, still, you know, some wordsmithing, I suppose.

One last point. We have been working -- well, since last Thursday with the Retirees' Committee and the holders of the LTGOs to discuss how they view the impact of this settlement on them, and we have made a lot of progress in those discussions and expect to continue those discussions this morning and are confident that we can conclude those discussions, so we will need to do that before we file the documents. Thank you, your Honor.

MS. BALL: Good morning, your Honor. Corinne Ball of Jones Day for the city. Perhaps we should start with just a review of the context that brings us here. As your Honor is aware, there are many relationships between Syncora and the city other than Syncora's role as COP -- an insurer of the certificates of participation. Syncora is a swap insurer. Syncora has insured the unlimited tax general obligation bonds. Syncora is an insurer of the certificates of participation. Syncora is a holder of the certificates of participation. And in addition to that, Syncora, through its subsidiary, American Roads and Pike Pointe, is a lessee of the city on the Windsor Tunnel and, as a consequence of that, is also present in surrounding buildings as a lessee at the terminus of the tunnel on the Detroit side. In fact, it has some hundred employees in Detroit in its headquarters in that location.

Your Honor, with that, perhaps I'd like to walk you through, with your permission, the elements of the settlement, and we have -- if your Honor would like one, I have a PowerPoint, if I may approach.

THE COURT: Yes.

MS. BALL: Perhaps we can walk through it. Your Honor, this is a global settlement and a global resolution of the multiple roles and relationships that Syncora has with the city and has had over the past year in this courtroom. If we could go through it, it is a -- we are entering into a development agreement, which Mr. Heiman described, which relates to properties, in essence, near the terminus of the Windsor Tunnel. We are amending the lease for the Windsor Tunnel and assuming it under the plan. Your Honor may or may not be aware, but the lessee of that tunnel went through its own bankruptcy in parallel with the city's bankruptcy, and Syncora has, in fact, taken over that role as of September 2013, so they're new to the city, and we needed a new and better relationship. We're also settling Syncora's COPs situation, and we're resolving all litigation related to the Chapter 9 whether in this court, your Honor, or on the appellate levels. And that, of course, your Honor, will also resolve their secured claims -- their asserted secured claims, which your Honor may recall were one of the very first disagreements that the city and Syncora had.

On the development agreement, the city and a subsidiary of Syncora called Pike Pointe will enter into a development agreement. Under the agreement, the developer is granted an option to acquire certain specified properties that will last five years from the effective date subject to extension in certain instances. Prior to the exercise of the option, the developer may undertake due diligence of the properties. Once the option is exercised, the developer must develop the applicable property into parking facilities, residential housing, commercial retail space, and any other use suitable for location consistent with the city's urban planning policies and the city's comprehensive development plan. The developer will have 15 months to begin developing the property or else it will revert to the city. The developer must also complete construction within three years and three months of exercising its option. The city and the Syncora subsidiary will also enter into an option to enter into a 30-year concession with respect to the Grand Circus garage including an obligation to invest 13.5 million in capital expenditures during the first five years of that long-term leasing arrangement for that parking garage.

With respect to the tunnel lease, the city will extend and assume the lease as amended of the Detroit-Windsor Tunnel and the related properties which I mentioned earlier, your Honor, surrounding the terminus of the tunnel. The amended lease will extend the term from November 2020 to December 2040. The amended lease will contain additional reporting requirements on the part of the tunnel company, and the city will only be limited in its ability to disclose that information in very certain specific circumstances, which compares to today, which it is a fairly opaque relationship from the city's point of view. The tunnel company will maintain the city portion of the tunnel to the same standard as the Windsor side. The amended lease will also allow the tunnel company to offset certain capital expenditures made to improve the tunnel against the tunnel's rent obligations. During the initial term of the lease, your Honor, which is the current lease, which runs through 2020, the tunnel may credit capital expenditures against its rent up to the full amount of the rent due during this period. During the extension term, your Honor, they may credit capital expenditures against 75 percent of the annual rent subject to certain limitations. In all, the tunnel company may not credit more than eight million of capital expenditures against rent during the extension term, but in all, your Honor, it represents a substantial commitment to improve the condition and safety of the tunnel. The amendment anticipates and does not preclude a new joint operating agreement with respect to the Windsor portion of the tunnel and a new -- potentially new intergovernmental authority between Detroit and Windsor to allow the tunnel to be operated in an integrated manner. Your Honor, that's providing for the future.

With respect to the settlement of the COPs held and insured by Syncora, your Honor, the plan provides for the creation of a litigation trust, and the remaining interest in that trust I may remind your Honor belongs to other creditors of the city, does not revert to the city. The litigation trust established under the plan will purchase Syncora's COPs and COPs claims in exchange for new B notes. Your Honor, that's the nomenclature that has been in the plan to describe the notes issued to the various unsecured classes under the plan, the OPEB class, Class 12, general unsecured class, Class 14, and the COPs class, Class 19. It also provides for an enhancement for Class 9 consisting of new C notes and something that we call settlement credits. That, your Honor, is what, in essence, leads us to describe the Class 9 treatment as being enhanced to provide 13.9 percent as opposed to the original estimates of 10 percent on account of Class 9. As a settling party, Syncora will be included as an exculpated party under the plan of adjustment subject to certain agreed carveouts. Importantly, your Honor, this settlement offer with the enhanced portion of the C notes and the settlement credits will be made available to any COP claimant that opts into the settlement prior to the effective date on the plan of adjustment. The COP claimants that do not participate in the settlement will receive the treatment previously set forth in the sixth amended plan. Notably, your Honor, no enhancement with the C notes and the settlement credits unless the COP claimants opt in.

Your Honor, if we move ahead, on the effective date, Syncora will receive 23.5 million in new B notes. Your Honor, that number refers to the face amount, and that number represents 60.358 percent of the total COP claims asserted by Syncora. If we move ahead, the enhancement on the settlement of the COPs is on the effective date Syncora will receive approximately 21.3 million in new unsecured five-percent C notes due in 2026. These new 12-year C notes bear interest at the rate of five percent. Through the operation of the parking system in the city, the city will segregate certain parking revenues each year until monies sufficient to meet the annual debt service on these new C notes is set aside. The notes are unsecured, and, though due in 2026, they must be prepaid in the event of certain parking asset disposition should the city decide to sell or outsource its parking, and they may be prepaid at the city's option at any time without premium or penalty.

I think, your Honor, if we move ahead to the settlement credits, alternately called vouchers, and to some others almost green stamps, I think was the phrase that we used -- on the effective date, Syncora will receive 6.25 million in Class 9 settlement credits. What are they? Settlement credits may be applied towards the purchase of eligible city assets. Eligible city assets include the Joe Louis Arena post-demolition in 2017 when it's available. Should the city pursue a proposal for its parking assets, that's an eligible asset. And real property located -- your Honor, it's real property within three miles of the tunnel terminus, again, back to their current presence. To apply the credits, the owner must participate in the normal procurement or auction process run by the city. It has to be the final party selected in that procurement or auction process and otherwise satisfy all the requirements. Settlement credits can only be used for 50 percent of the purchase price of an eligible asset. Importantly, your

Honor, these settlement credits can be freely assigned or transferred. We thought that was an important feature particularly for those COPs holders who may not have a relationship with the City of Detroit on an ongoing basis.

Your Honor, if we move to the litigation front, whether it's the swaps, the COPs, the UTGOs, or the appeals, the many appeals, Syncora will now support the plan, and I think it has already filed some withdrawal of its objections, but it will promptly withdraw all objections to confirmation of the city's plan of adjustment, which will be, your Honor, at this time without prejudice but obviously will mature as we move forward through confirmation. Subject to definitive documentation on the confirmation date of the plan, Syncora will withdraw all plan objections with prejudice. Syncora's appeals will be held in abeyance, your Honor, as we plan to file a joint motion to stay them until the process is complete and the plan becomes effective at which point such appeals will be withdrawn with prejudice. And, your Honor, among others, it includes the public lighting authority appeal, the post-petition financing appeal, the automatic stay appeal, the swaps settlement appeal, the mediation appeal, and I think there may be a few I've missed. In satisfaction of its asserted secured claims relating to the collateral account, your Honor may recall, that was associated with the casino revenues and other litigation claims, Syncora will receive $5 million. I think Mr. Cullen will assist the Court, but we anticipate there will be further trial process motions and exhibits which will accord and reinforce Syncora's agreement to support the plan. With that, your Honor, I'm happy to answer any questions you may have.

THE COURT: Can we go back to Slide 5, please?

MS. BALL: Yes, sir.

THE COURT: For other COP claimants who opt in, what do they give up by opting in, and what does the city get?

MS. BALL: Your Honor, they will be selling their COPs claims to the litigation trust, and the city would be distributing not only the B notes, which were described in the existing sixth amended plan, they will also be getting their share of the enhancement, the new C notes and the settlement credits.

THE COURT: Thank you.

MS. BALL: Anything else, your Honor?

THE COURT: No.

MS. BALL: Thank you. With that I would defer to Ms. Lennox as to how we're working this through the plan.

MR. BENNETT: Good morning, your Honor. Ryan Bennett of Kirkland & Ellis on behalf of Syncora. I'm very glad to be standing here before you today, your Honor. This is a big day for Syncora and a big day for the City of

Detroit. We'd like to thank the Court, the Court's staff for the time and patience over the past many months and thank the mediators for their assistance, particularly over the past three weeks as we've worked through what has been a very complicated and creative resolution to Syncora's unique relationship with the City of Detroit. Ms. Ball and Mr. Heiman captured the settlement accurately. Syncora will shortly be withdrawing its objections to the plan, its various motions that are pending before the Court without prejudice to our ability to renew our litigation should the definitive documentation not be reasonably acceptable to the city and Syncora and the plan not be confirmed, but we expect, as Mr. Heiman highlighted, that we are substantially done. We know we are substantially done and that that will be coming shortly. Our appeals, likewise, will be held in abeyance, as Ms. Ball pointed out, and dismissed with prejudice upon the effective date. Your Honor, that's all I have, fortunately. Thank you very much.

THE COURT: Thank you.

MS. LENNOX: Good morning, your Honor. With respect to the plan process, as these developments with respect to the settlement that Ms. Ball outlined have progressed, the draft of the seventh amended plan has kept pace, so that is in fairly good shape. We have, I think, a couple of things that we're hoping to iron out with some other parties today.

Our goal is to file that plan today, you know, subject to ironing out the differences, but we are in good shape on that, your Honor.

MR. HEIMAN: Your Honor, before we call on Mr. Cullen, I did mention that we would be hearing from Evan Miller today, and -- oh, he was hiding, and I don't blame him because he's a target for a lot of people.

MR. MILLER: Thank you for those kind words. Good morning, your Honor. Evan Miller, Jones Day, for the City of Detroit. I wanted to briefly talk about an issue in connection with the Class 12, the so-called OPEB settlement. Certain issues have arisen in connection with the -- excuse me -- implementation and start-up of the so-called VEBA trusts. Those would be the trusts that pursuant to the settlement would be providing and paying for retiree health insurance. And I want to advise the Court that the City of Detroit commits to negotiate in good faith a resolution of all of those issues relating to the start-up of the VEBAs. We will do so as soon as practicable with the mediators, and I can personally advise the Court that I'm confident that it will be done in relatively short order. Thank you.

THE COURT: Thank you.

MR. CULLEN: Good morning, your Honor. Thomas Cullen of Jones Day on behalf of the city. In light of these developments, the city does propose to move forward with its order of witnesses this week. We have -- that order, serendipitously enough, really addresses issues at the front end which are unconnected with the Syncora settlement, principally the actuarial issues, art, and we have attempted to move certain DWSD witnesses in front of any dealings with the implications of the Syncora settlement. The first witness to deal with those issues will be Mr. Malhotra, who we believe comes up at the end -- on Friday, if at all, this week. He's covering a great deal of ground, of course, and there will be -- if not this week, there will be time over the weekend to prepare any additional cross with respect to the settlement for Mr. Malhotra. We believe that the -- that that will allow the parties the ability to address the well-trodden issues of art, DWSD, and actuaries this week and then address the settlement-related issues either at the very end of the week or early next.

THE COURT: Before you go, let's review your witness order.

MR. CULLEN: Yes.

THE COURT: And can you describe in a sentence or two what each will cover?

MR. CULLEN: Yes. This is what we have, your Honor. Mr. Bowen is an actuary for Milliman. He worked on the derivation and the implementation of the 6.75 revenue assessment. He is a percipient witness, not an expert in this case. He's going to testify about what actually happened. Mr. Perry is an expert witness who will testify as to the reasonableness of the 6.5. Ms. Fusco is the representative of --

THE COURT: When you say 6.5 --

MR. CULLEN: 6.75.

THE COURT: 75, yeah.

MR. CULLEN: 6.75. I apologize, your Honor.

THE COURT: Let's not confuse the world on this.

MR. CULLEN: Yeah. I'm sorry. Thank you, your Honor. Ms. Fusco is the representative of Christie's who will testify as to their work. Ms. Nichol is an expert witness who's going to be --

THE COURT: Well, stop there because we also have a hearing today regarding Ms. Kopacz.

MR. CULLEN: Yes, your Honor. I was only addressing the order of witnesses.

THE COURT: Okay.

MR. CULLEN: And this is all subject to the movement of the Court, subject to the length of the cross-examination. Ms. Nichol is going to be dealing with the issues of what is the appropriate baseline to measure discrimination in the plan. It's a witness of the Retirement Committee and presented by them. Ms. Taranto is another actuarial witness. We're hoping to get Mr. Bloom, who is the investment banker on behalf of the Retirement Committees, who will testify as to the arm's length nature of the negotiations and the result of those negotiations with respect to pension issues. Erickson and Plummer are both art -- are art valuation and sale of the art issues. Mr. Satter has to do with the value of the DWSD assets. Mr. Penske is a local notable developer and a citizen of the city who will testify as to grand bargain issues and investment in the city. Mr. Buckfire's issues have been made available to the Court in his report. He is not expected to testify with respect to the Syncora settlement. Ms. McCormick will deal with -- McCormick will deal with the DWSD issues and the operation of DWSD and concerns which have been raised in this proceeding about the capital expenditure budget and its sufficiency. Mr. Malhotra is the E&Y witness with whom the Court is familiar, who will testify as to the projections which will underlie the plan and the baseline projections for the city. Mr. Orr then comes up to testify with respect to the broad range of issues relating to the plan and the settlements and feasibility and other issues. Mr. Kaunelis is another DWSD witness with respect to certain assumptions with respect to investment principally. And Mr. Gilbert is, again, a citizen of Detroit who will testify with respect to the grand bargain impact on Detroit, et cetera. That is how we see it as of now, your Honor.

THE COURT: And this is your projection for this week and next?

MR. CULLEN: Yes, yes.

THE COURT: All right. Thank you. Let's leave that up for a bit, if you don't mind. Okay. Thank you. I want to add one other point here in relation to Syncora, which is related only because it deals with Syncora. It has nothing to do with the settlement, per se. The Court had entered an order to show cause directed to Syncora and its attorneys why they should not be sanctioned for the scandalous and defamatory aspects of their second supplemental objection to the plan. In the meantime, Kirkland & Ellis, on behalf of itself and Syncora, has apologized to Judge Rosen and to Mr. and Mrs. Driker for its conduct. The Court concludes that those apologies, in the interest of justice, resolve any issue of sanctions, and, accordingly, the Court here today will be entering an order that vacates the order to show cause and disposes of that issue. All right. Who wants to be heard now?

MR. PEREZ: Good morning, your Honor. Alfredo Perez on behalf of FGIC. Your Honor, we've listened to everything that was said this morning, and I think I'm kind of standing here in the same place I was a week ago or so last Tuesday. We're going to need some time to prepare, and the issue is when can we schedule that time. And so if the Court wants to proceed with the actuaries and the art and then give us an opportunity to prepare, I think that's perfectly appropriate, but we're going to need a continuance for the two reasons that we set forth in our papers. One, the additional time to prepare, and, two, the additional time to prepare to the new plan, which I'm glad we are going to get it today, and that will give us -- but likely, your Honor, we're going to have to have additional expert report. Likely, your Honor, we're going to need to take one or two depositions, and we're going to have to be able to be in a position to put on our case in response to this new plan. So if the Court wants to proceed with the actuaries and the, you know, several art witnesses this week and then continue us until the 29th, I think we're perfectly happy to do that, and I think that would allow us -- although I really -- we really wanted to ask for two weeks in our motion last night, but we decided that probably wasn't doable and it wasn't as credible, but we are going to need some time as set forth.

And we have this issue with the expert. There's no reason why the city couldn't have agreed to let us use that expert. They knew about it. They had the report. In the interim, we're going to go and have to find our own expert. So, your Honor, we're happy to proceed this week with those sets of witnesses and then whenever Mr. Satter ends, take that time off to prepare and come back on the -- and come back on the 29th, and that's what we would propose.

MR. CULLEN: Thomas Cullen again, your Honor, for the city. I would only say this, that distinctions must be made here between the various interests we are working with in dealing with the continuance of this proceeding. There is the interest of the city itself in resolution of the proceeding. There is the integrity of the proceeding. There is the convenience of the witnesses to this proceeding, and, finally, there is convenience of counsel. There's no doubt about the interests of the city. The interests of the city are to move forward as quickly as possible. The Court is aware of the tremendous run rate of expense of this proceeding. A week off from presenting evidence is not a week off from the run rate of those expenses for the city. The transition of the city to the post-emergency manager world is proceeding apace as we speak. The sooner we get out of this proceeding, the better it is for the city, the better it is for that transition. The resolution of all of these issues is critical to how the city moves forward.

With respect to the witnesses, it's no doubt that they've rearranged their life to do this. You look at where we are with Mr. Penske and Mr. Gilbert. As you might imagine, they are very difficult people to schedule for various good and sufficient reasons. I believe that the sooner we get Mr. Malhotra on and all of his testimony in the better that the opponents of the city will know how -- what they need in terms of experts or not. The sooner we get Mr. Orr in front of the Court, the better that they will know going into those -- the gap between the 25th and the 26th in the proceeding. So they've made significant adjustments in their lives. Now, in these circumstances, the convenience of the lawyers is only important to the extent that it threatens or undermines the integrity of the proceeding, and I think that that is a difficult case to make here. There are no surprises certainly in the testimony of any of the witnesses for this week. There are no surprises in the broader issues that affect and surround the Syncora settlement in this. The cone that Ms. Ball talked about has been there all along of considerations and otherwise.

With respect to all of these witnesses, there has been -- there have been depositions. There's been a very thorough opening. The witnesses are no surprise, and it's certainly no surprise that an ally in one of these proceedings might follow its self-interest out of the case. There's been something of an Agatha Christie mystery vibe about this as parties disappear one by one all throughout this case. And mediation is confidential, but the bodies of Mr. Sprayregen and Mr. LeBlanc are not, and they've been through this building continuously over the past few weeks. So we have pulled this together. We pulled it together under some time pressure, but in order for the city to move forward, we think that people have and have -- have enough preparation, have seen enough, can plead only attenuated surprise with respect to the recent turns of events, and have the materials in order to represent their client fairly as we move forward. That's all I have, your Honor.

MR. PEREZ: May I respond, your Honor?

THE COURT: Yes, but let me just ask if anyone else wants to be heard first.

MR. BRILLIANT: Your Honor, Allan Brilliant on behalf of Macomb Interceptor Drain Drainage District, a Class 14 claimant, and I would have gotten up before Mr. Cullen, but he beat me to the podium after Mr. Perez had spoken. We join in Mr. Perez's argument with respect to requesting, you know, a continuance. There's really two issues here, your Honor. Mr. Cullen focuses really just solely on the Syncora withdrawal aspect of the issue, which obviously makes things a little bit more difficult for the various parties since there had been an agreement and allocation of who was going to deal with what witnesses, which all needs to be changed now, but the more fundamental issue we have here, your Honor, is there's a new very complicated deal that Syncora has entered into, which needs to be analyzed by all the parties to determine what additional objections they may have. And as Mr. Perez said, it's likely, you know, to lead to additional discovery, and obviously we're going to need to put on additional testimony with respect to the issues. It's not as if Syncora was just being given a certain amount of --

THE COURT: Assuming you object to it.

MR. BRILLIANT: Assuming we object to it, but we need to have some opportunity to determine --

THE COURT: I just found it interesting your presumption that you would object.

MR. BRILLIANT: Well, your Honor, at a minimum, they're saying that Syncora is getting 13.9 --

THE COURT: On behalf of your $25 million claim.

MR. BRILLIANT: Twenty-six, your Honor, but the --

THE COURT: Forgive me.

MR. BRILLIANT: But at a minimum, your Honor, it would appear they're getting, you know, a 40-percent, you know, larger distribution, you know, at face value if one believes that all of these other issues that are here are not, you know, on account of their COPs claims. But, your Honor, the problem that we have, you know, in going forward and doing the investigation as to the, you know -- you know, the fairness and whether or not it unfairly -- the new settlement unfairly discriminates against, you know, Class 14 is that we have to -- if you agree with the city, is we have to file the objection, do that analysis, discovery, retain witnesses, while we're reorganizing our workload, you know, among all the objectors in light of Syncora's withdrawal from the plan, and that just -- your Honor, is just, you know, too much, you know, to expect from all the objectors at this point in time. And really, your Honor, it's just in the interest of justice at some point, you know -- doesn't necessarily have to be today, although we would prefer that it be sooner rather than later, but at some point the parties have to be given an opportunity to do that analysis. And given all the -- if all the resources are being used here in preparing for the cross-examination of the witnesses, it's just not going to be able to -- you know, to be accomplished in a fair way.

THE COURT: Thank you. Would anyone else like to be heard?

MR. HOWELL: Yes, your Honor. Steven G. Howell, Dickinson Wright, special assistant attorney general, appearing on behalf of the state. Your Honor, the State of Michigan also opposes an adjournment in this matter and supports the city's objection to it and believes that for all the parties that are involved with the exception of a couple, this has been a long process, and we would like to see this continue. We believe that this is not that big a surprise that this came along, and we would like to see the Court continue to move forward with this on the schedule we have set. Thank you, your Honor.

THE COURT: Thank you. Would anyone else like to be heard? Mr. Perez.

MR. PEREZ: Your Honor, three points. What you didn't hear from Mr. Cullen was due process, and that's, frankly, the only issue that we have before the Court. Are we receiving due process? Furthermore, your Honor, to some extent this is a situation where if we're not granted a continuance, no good deed goes unpunished because the objectors collectively determined we had to allocate our time. We had to allocate our resources. We didn't want to be duplicative. And now as a result -- and we're not asking for a long continuance, your Honor, and the fact that the schedule is how it is really shortens the time that we would be asking for a continuance. But, your Honor, to say that we do not need additional time to prepare based on the record, the fact that we were all sharing time, the fact that the Court encouraged us to have a lead questioner for the witnesses, just is -- just doesn't comport with due process.

Furthermore, your Honor, I would -- I only hearken back to the time when the Court asked somebody whether, you know, being here and supporting Detroit wasn't the most important thing they were doing. I'm sure that the witnesses are important people who need to be -- you know, need to be doing important things, but this is actually more important. Your Honor, I commit to you that we will work as diligently as possible, but, for instance, this whole situation with the one expert witness, it's a total self-inflicted wound by the city. There's no reason for them to have done that other than to be vindictive.

THE COURT: What witness are you talking about, sir?

MR. PEREZ: Murphy, your Honor. Thank you.

THE COURT: Anything further on this issue? All right. The Court will take it under advisement.

MR. CULLEN: One moment.

THE COURT: Sir.

MR. CULLEN: Thank you.

THE COURT: Yes.

MR. CULLEN: I do think that we were addressing the due process issue when I talked about the integrity of the process versus the convenience of counsel. These are all well-represented parties. They've had notice of these issues for some time. And I'm sure that this is hard, and if this were a mere game, we would grant this courtesy as a courtesy, but it is not. It is a proceeding about the fate of Detroit. Time is very important to us. The expense of it is very important to us. The transition is very important to us. And we think that there is sufficient opportunity for very talented counsel to make a record on the issues about which they care about. That's all, your Honor.

THE COURT: All right.

MR. PEREZ: May I respond, your Honor?

THE COURT: If you have anything new to add, absolutely.

MR. PEREZ: Your Honor, the only question I have is I wonder what they would be saying if the shoe was on the other foot. Thank you.

THE COURT: Okay. I'm going to take this under advisement and take a recess now, and we'll reconvene at 9:30, please.

THE CLERK: All rise. Court is in recess.

(Recess at 9:20 a.m., until 9:39 a.m.)

THE CLERK: All rise. Court is in session. You may be seated.

THE COURT: It appears everyone is present.

MR. STEWART: Your Honor, Geoffrey Stewart, Jones Day, for the city. The city calls its next witness, Glenn Bowen.

THE COURT: Well, hang on. I've got to give a ruling on --

MR. STEWART: Oh, I'm sorry.

THE COURT: -- the matter I took under advisement.

MR. STEWART: I better sit down.

THE COURT: Good idea. As the Court discerns the motion for adjournment here, there are three relatively distinct grounds for it, and the issue before the Court is whether these grounds constitute extraordinary cause for the delay or continuance that is sought here. The three are that Syncora's withdrawal from the defense of the city's case causes FGIC and the other objecting parties, which at this point are mainly the Macomb Drainage District, to take over those parts of the defense that FGIC had taken responsibility for in their division of labor. The second is the strong potential for FGIC to need to retain experts that Syncora had retained or maybe it's only one -- excuse me -- so that it can properly pursue its defense of the city's case in the absence of Syncora and its experts. And the third is the potential need to file supplemental objections to the -- what will be, I guess, the seventh amended plan to be filed here promptly along with any potential need for additional discovery relating to those supplemental objections to the amendments in the plan.

The Court must conclude that the first two of those asserted grounds do not constitute extraordinary cause for any adjournment, and to the extent the motion is based on those two grounds, it is denied. There is merit in the city's position that Syncora's negotiations with the city over the past several weeks have been well-known, and in those circumstances it seems to the Court that it was incumbent upon all objecting parties, consistent with their obligations to their clients, to prepare for the contingency that, in fact, Syncora might settle at some point, and that preparation would have included necessarily preparation to take over for the examination of the witnesses that Syncora was going to cover and, in the absence of an agreement regarding experts, locating experts. In this regard, the Court will also note parenthetically but importantly that nothing in FGIC's motion or its presentation today identified any steps that FGIC took in regard to cross-examination preparation or locating and preparing an expert since the agreement in principle was announced last Tuesday night or addressed how those five days was insufficient to meet its preparation needs.

On the other hand, the Court must conclude that the city's filing of an amended plan incorporating its settlement with Syncora does require the Court to accommodate the interests of FGIC and the Macomb Drainage District and other objecting parties to have an opportunity to examine that plan or the amendments to it and to file supplemental objections to that plan as they deem appropriate, to take discovery as necessary in relation to that, and to prepare to address the Syncora settlement as part of this confirmation hearing.

Having said that, however, it's less clear to the Court how the details of that should play out, and so, accordingly, I'm going to ask counsel for FGIC and Macomb and any other objecting creditors to meet and confer with counsel for the city to see if you can come to some agreed upon schedule or plan that will -- excuse me -- accommodate the interests of the city in the promptest possible resolution here and in the objecting parties' interests in an adequate opportunity to address the new plan, and perhaps you can do that over the lunch hour and then let the Court know where you stand at that time. I think that's as much as we can do on this now, and I will ask the city to proceed with its case.

MR. SOTO: Your Honor, one -- if I can just sit --

THE COURT: Yeah.

MR. SOTO: FGIC will be asking the Court for an accommodation with respect to the adding or replacing of the one expert witness. We've located another witness, had initial conversations with him. I've had some initial conversations with Mr. Cullen, and he will be replacing Dr. Murphy. It's a fellow named Dr. Jonathan Guryan is who we are working with, so --

THE COURT: What's the name, sir?

MR. SOTO: Dr. Jonathan Guryan, who's at Northwestern.

THE COURT: Okay.

MR. SOTO: I guess the other guy was in Chicago. So we'll be coming to the Court for that accommodation with respect to this.

THE COURT: Well, I urge you to discuss that accommodation, whatever it is you will be seeking, with the city and see what you can work out.

MR. SOTO: Thank you, your Honor.

THE COURT: If I have to decide something, I will, but I think it is appropriate to ask you all to try to figure out how to deal with this in the meantime. Mr. Stewart.

MR. STEWART: And I apologize for jumping the gun earlier.

THE COURT: Okay.

MR. STEWART: Geoffrey Stewart, Jones Day, for the city. The city calls its next witness, Glenn Bowen. Your Honor, if I may have leave to approach, I have five sets of the exhibits we would use with Mr. Bowen.

THE COURT: Yes, sir. Step forward, please, sir, and raise your right hand.

GLENN BOWEN, CITY'S WITNESS, SWORN

THE COURT: All right. You may sit down in the witness box. Thank you.

MR. STEWART: May I proceed, your Honor?

THE COURT: One second. Seems like we're still getting organized here. Okay. You may proceed.

MR. STEWART: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. STEWART:

Q Good morning, Mr. Bowen.
A Good morning.
Q Could you please give us your full name and address?
A Glenn David Bowen, Wayne, Pennsylvania.
Q Okay. Are you employed?
A Yes.
Q And by whom are you employed?
A Milliman, Incorporated.
Q And what is Milliman, Incorporated?
A An actuarial consulting firm.
Q Okay. And where are the offices of Milliman in which you work?
A I work in the Wayne, Pennsylvania, office.
Q And Wayne is a suburb of Philadelphia?
A Correct.
Q Okay. Tell us, if you could, of your college education?
A I have a bachelor's degree and a master's degree in civil engineering from the University of Delaware.
Q And what year did you receive those -- what years did you receive those degrees?
A The bachelor's degree in 1989, master's degree in 1994.
Q Did there come a time when you became an actuary?
A Yes.
Q When was that?
A I was hired in 1996 by Towers Perrin Company, now called

Towers Watson.
Q Okay. And you were hired by them as an actuary?
A An actuarial analyst, yes.
Q And how long did you remain at Towers Perrin?
A Roughly five years.
Q And what was your job after that?
A I was hired by Milliman in 2001.
Q Okay. And tell us, if you could, what -- in brief what your career at Milliman has been.
A I am a pension actuary, so I consult to pension plan sponsors and legislative bodies that have interests in the pensions that are sponsored in their jurisdictions.
Q Okay. You just used a term "pension plan sponsors." What is a pension plan sponsor?
A There can really be I'll say two broad kinds. In the corporate sector, you would typically think of it as the employer who sponsors the pension plan, and in the governmental sector, it would be the local government or other governmental authority.
Q Okay. And in your practice as an actuary, what percentage of your time have you spent working with government sponsored pension plans?
A I would say it's certainly morphed over my career from a focus on corporate to a focus on public, and public is now 90 percent or more of what I do.

Q And how many different public pension plans have you worked with over the course of your career?
A I'll say dozens, and I've also worked with retiree healthcare plans in the public sector as well, about a hundred of them.
Q Are you qualified as an actuary?
A I'm a fellow of the Society of Actuaries, also an enrolled actuary under ERISA and a member of the American Academy of Actuaries.
Q Are those the credentialing bodies for actuaries in the U.S.?
A Yes.
Q Have you published any papers or other articles in the field of being an actuary?
A About a half dozen.
Q Okay. Now, let's -- I'd like to just make sure we have our definitions nailed down before we go further. The city, of course, has two Retirement Systems, does it not?
A Yes.
Q Are they sometimes also called pension plans?
A Yes.
Q What are the city's two Retirement Systems?
A There's the General Retirement System and the Police and Fire Retirement System.
Q And are they sometimes known by their initials, the GRS

and the PFRS respectively?
A Yes.
Q And just a minor point, is it the case that Milliman refers to them as the DGRS and the DPFRS?
A That is correct.
Q But the terms are interchangeable. We don't need the D?
A We do not.
Q We all know we're talking about Detroit here?
A Yes.
Q Okay.
A I speak for myself only saying that.
Q And you're aware of something called a -- called the DWSD?
A Yes, I am.
Q What is the DWSD?
A The Detroit Water and Sewer Department.
Q Do the employees of the DWSD -- are they members of any -- either of the city's Retirement Systems?
A Yes, they are.
Q Which system?
A The General Retirement System.
Q And, by the way, am I correct that one refers to the employees as members?
A In a public pension plan, yes.
Q Now, you're aware of something called a defined benefit

plan?
A Yes.
Q What is a defined benefit plan?
A A defined benefit plan is a retirement plan where, as it's titled, the benefit is defined. There will be a formula that will determine the amount of the pension that you receive.
Q And who makes contributions to a defined benefit plan?
A The plan sponsor will make contributions. In some instances, the employees will be required to make a contribution as well.
Q Okay. So did there come a time when you began working on matters relating to the City of Detroit's two pension plans?
A Yes.
Q When was that?
A It was in the middle of 2012.
Q And what were you asked to do in the middle of 2012?
A Our very first assignment was a request that we review the annual actuarial valuation reports that had been prepared by the Systems' retained actuary and provide us, as much as possible, a description of the status of the plans in laymen's terms.
Q Okay. And let me direct your attention to the exhibits before you. They may be at the bottom of your pile, but they're two.

MR. STEWART: And let's put them up in order, if we could, Syncora Exhibit 4054 and Syncora Exhibit 4776. And, your Honor, I believe these have been stipulated into evidence.

MR. WAGNER: We have no objection, your Honor.

BY MR. STEWART:

Q Mr. Bowen, do you have these two exhibits before you?

A I do.

Q Tell me, if you --

THE COURT: Let me just say for the record that in case they are not already in evidence, Exhibits 4054 and 4776 are admitted.

(Syncora Exhibits 4054 and 4776 received at 9:56 a.m.)

BY MR. STEWART:

Q Mr. Bowen, could you tell us what these two exhibits are?

A These exhibits are the annual actuarial valuation reports prepared by the Systems' retained actuary. One report is for the General Retirement System and one is for the Police and Fire Retirement System.

Q Now, you just used the phrase "Systems actuary." What is the Systems actuary?

A Excuse me. I use that phrase to define the actuary who has the responsibility for conducting the annual valuation.

Q And that's the actuary hired by the Retirement System itself?

A Yes.
Q Who is the actuary for these two Retirement Systems?
A Gabriel, Roeder, Smith & Company.
Q And their name appears in the upper right-hand corner of each of these two exhibits?
A Yes.
Q Okay. And so I believe you were telling us that your first assignment had to do with looking at these two, and, by the way, these are, once again, called annual valuation reports?
A Yes.
Q Do you sometimes call them AVR's?
A I do not, but I can if you would like.
Q I won't either then. I'll call them annual valuation reports. So what was it you were asked to do in particular with respect to these annual valuation reports?
A As I mentioned, we were asked to review them, and we were asked to explain them to city personnel who did not have extensive pension background.
Q Now, I think you testified this engagement came to you in the middle of 2012?
A Yes.
Q These are the reports, however, for the year ended 2011, are they not?
A That's correct.

Q Why was it you were dealing with 2011 reports when you were doing your work in 2012?
A These were the most recently published reports that existed at that time.
Q Okay. And so as a result of looking at these reports, what did you do next?
A We documented our results in a letter and met with the city personnel.
Q Now, you just used the term "letter." Does the term "letter" in the way -- in your work for the city have any particular meaning?
A Our relationship with the city over time has been ad hoc consulting, you know, ad hoc requests, and in those cases we will typically write a letter because a template does not exist to respond to such a request.
Q Fair to say that the deliverable that Milliman has in its work for the city has been letters?
A Yes.
Q How many letters over the course of Milliman's engagement by the city has Milliman delivered to the city?
A Speaking for the pension side, it has been over a hundred.
Q Okay. Now, was one of the things you were asked to do here in 2012 to look at the city's contribution?
A Later in 2012, yes.

Q Okay. Let's move on then, but before I do that, let me just ask you about something else.

MR. STEWART: Can we please put up on the screen Exhibit 633, which is a demonstrative exhibit?

BY MR. STEWART:

Q Mr. Bowen, is Exhibit 633 in front of you?

A Yes.

Q Have you seen this before?

A I have.

Q What is Exhibit 633?

A It is -- it contains an equation and a pictorial diagram, which is a very high-level description of how a pension plan needs to stay in balance over time.

MR. STEWART: Your Honor, I would move into evidence only for purposes of being a demonstrative Exhibit 633.

THE COURT: Any objections?

MR. WAGNER: No objection, your Honor. And just for the record, Jonathan Wagner from Kramer Levin Naftalis & Frankel on behalf of the COPs.

THE COURT: Thank you, sir.

MR. STEWART: And I think --

THE COURT: 633 is admitted.

(City Exhibit 633 received at 10:00 a.m.)

MR. STEWART: Sorry, your Honor.

MR. WAGNER: For demonstrative purposes.

BY MR. STEWART:
Q And Exhibit 633 sets forth an equation?
A Yes.
Q What is the purpose -- what is the explanatory purpose of this equation?
A Over the long term, the inflows and the outflows of the pension plan must be in balance in order for the plan to pay the promised benefits.
Q Okay. Let's go through each of the letters here. What does the letter "C" stand for?
A "C" stands for contributions.
Q And would that be the city contribution we talked about earlier?
A Yes.
Q What does "I" stand for?
A "I" is investments.
Q And when you say "investments," what's being invested?
A There is a current pool of assets and an expectation of future income over time.
Q Okay. Is the round blue figure -- is that -- does that represent the current assets?
A That represents a tank, if you will, and if you think of the assets as water, the tank is the trust. It holds the assets.
Q Okay. And then what is "B"?

A "B" is benefits.
Q And when you say "benefits," what are you referring to?
A In this case, this is a -- we don't actually use this equation, per se. It's not that simple. But that's a measure of the liability for the benefits that have been promised.
Q These are the benefits to be paid to retirees?
A Yes.
Q Okay. And how do you know what those benefits are?
A That's the -- one of the main purposes of conducting the annual valuation.
Q Okay. And then "E" is our final letter. What is "E"?
A That is expenses.
Q Okay. And so tell us now that we've walked through this how this model works.
A Okay. It's I'll say easy to conceptualize on a single person. If there was one person in a pension plan, you would effectively spend their career putting money in on the left and earning a return on it, and then the pool would be effectively full at the time of retirement, and during the time of retirement the benefits would flow out.
Q And at various times in your work for the city, were you asked to determine individual values for either "C" or "B" or "I" or even "E"?
A We've worked with all of them over time.

Q Okay. And now let me ask you about the next assignment. Later in 2012, were you asked to do something new by the city?
A I believe the next assignment in late 2012 was to do a simple forecast of employer contributions.
Q Of "C"?
A Correct.
Q And, once again, did you work with an actuarial valuation report?
A Yes.
Q Do you know whether it was the ones we've already seen, or was it a new report?
A I believe at the time our initial assignment, the 2011 was still the most recently published report.
Q So what did you do vis-a-vis the 2011 report?
A We looked at the report, and there are various I'll say facts and figures in there of an actuarial nature. Using those facts and figures and some extrapolation techniques, we projected forward five years and used the methodology that was in use to produce contributions in order to demonstrate what the expected pattern of contributions was going to be.
Q Now, let me direct your attention now to 2013. Have you heard of something called a pension task force?
A Yes.
Q What is or was the pension task force?

A The pension task force was a group of advisors that had been retained by the city that was responsible for pension matters.

Q Okay. And what sort of things, in a very general matter, did the pension task force look at?

A The pension task force looked at a lot of things. On this diagram, most of the focus was on -- most of the focus of the tasks that came to Milliman was on benefits.

Q Okay. And I apologize if I've asked you already. Who are the -- who are the members of the task force?

A The two members that interfaced with the most were Evan Miller from Jones Day and Chuck Moore from Conway MacKenzie.

Q Was this before or was it after the city filed its bankruptcy petition?

A The pension task force was formed in early 2013, so it would have been before.

Q Okay. Now, let me ask you some definitions before we move forward. Have you heard of something called an accrued actuarial liability?

A Yes.

Q And that is sometimes called AAL, is it not?

A Yes, it is.

Q Okay. What is it?

A It is the measure that the actuary will determine in the annual valuation report that represents the liability that is

categorized under "B" in this long-term equation.
Q Okay. So is it a present value or is it calculated in some different way?
A It is a present value.
Q So the AAL is the present value of "B"?
A Correct.
Q Okay. Have you heard of something called an unfunded accrued actuarial liability?
A Yes.
Q What is that?
A That is the difference between the present value of the liability we were just discussing and the assets that are currently on hand.
Q So if we look at our diagram here, that would have some bearing on the level of the water in this blue tank we have?
A If there was a UAAL, unfunded actuarial liability, that would be like saying the tank is not quite as full as we'd like it to be today.
Q Okay. So just to summarize, the AAL is the "B" in our diagram; correct?
A Correct.
Q And the UAAL would be if the tank wasn't as high up as it ought to be?
A Correct.
Q Okay. Let me ask you about a couple of other terms.

Have you heard of something called an investment return assumption?

A Yes.

Q What is that?

A That is the rate of return that, on average, you are expected to earn on your invested assets in the future.

Q And how does it figure into the calculation we see in Exhibit 633?

A In the first step and where the actuary spends most of their time is in the determination of the "B," benefits, the accrued liability. We calculate those on a nominal basis in all future years, and to develop a present value, we will discount them based on the expected investment return.

Q Okay. What is the relationship between the investment return assumption and the level of the city's contributions?

A The higher the investment return assumption, you're assuming that more of the ultimate benefits will be paid by investment return, and in the short term, that depresses the contribution level.

Q Okay. And the lower the investment return assumption, what effect does that have?

A That's the opposite. That assumes that since you're going to earn less on your investments, more contributions would be needed over time, and it raises the short-term contributions.

Q Okay. Have you heard of the term used "funding status"?
A Yes.
Q What is funding status as that term is used with respect to public pension plans?
A Funding status is the assets divided by the liabilities.
Q Okay. And what does it -- what does it tell us?
A Higher funded status is better.
Q You have more funds?
A Yes.
Q Okay. Did there come a time in 2014 you were asked to do something called a replication or a replication audit?
A Yes.
Q What is a replication?
A A replication is when an outside actuary, not the system actuary, is asked to effectively take all of the inputs used by the system actuary, program their own valuation system or their own software, and attempt to reproduce similar results.
Q And when were you asked to do a replication audit?
A We were actually asked at some point in 2013.
Q Okay. And which systems were you asked to -- were you asked to do one for both of the systems?
A Yes.
Q Okay. Now, I think you said that a purpose of this was to check the work or duplicate the work of the system actuary?

A That was part of it, yes.
Q Okay. And what role in that assignment did Gabriel, Roeder's annual valuation reports play?
A That was really the fundamental document we looked to to learn about the plan.
Q Okay. So look, if you could, at the following documents which are before you.

MR. STEWART: And these, I believe, have been, once again, stipulated into evidence, but let's put them up. It's 1001, 1004, 1023, and 1024. And, your Honor, as I said, I think these came in under the operation of the pretrial order, but for avoidance of data, I will move them into evidence if there's no objection.

MR. WAGNER: That's fine. They were actually on our exhibit list, so we -- no problem.

THE COURT: All right. All right. If they were not previously admitted, they are now.

(COPs Exhibits 1001, 1004, 1023, and 1024 received at 10:09 a.m.)

BY MR. STEWART:
Q Okay. Now, in your replication audit, to spend a minute on these, tell us, if you could, what these four exhibits are.
A Well, I only see one on my screen, but I assume you have two valuation reports or four valuation reports.

Q Yeah. You actually have them in your packet there. There's a mound of paper. But let me ask you this. In your replication that you did in 2014, which of these valuation reports did you work with?
A Well, our task was to replicate the 2013 valuations.
Q And so would that be Exhibit 1023 and 1024?
A Yes. They are the 2013 valuations.
Q And which one is for the GRS?
A 1023 is GRS.
Q Okay. And the PFRS is 1024?
A Correct.
Q Okay.
A Yes.
Q Let's go through these reports so we have an understanding of how they work, and let's do it with 1024, if we could. Do you have that before you?
A You said 1024?
Q I did.
A Okay.
Q Yeah. And the cover, of course, is the cover, and the second page is the table of contents; correct?
A Yes.
Q And the third and fourth page are the cover letter from Gabriel, Roeder to the trustees of the system?
A Correct.

Q Okay. Let's now go, if we could, to page 4. And I think -- is that 4? Yeah, there we go. Page 4. What is page 4 of Exhibit 1024?
A Page 4 is a summary. You could best describe it as "B" in our earlier equation, benefits, the present value of the benefits payable by the system.
Q Okay. At the top it says "actuarial accrued liabilities as of June 30th, 2013"?
A Correct.
Q And that's the term we talked about earlier?
A Yes.
Q And then we have a series of calculations here on the table?
A Yes, yes.
Q Okay. Now, at the bottom -- at the very bottom of it, is there a place where this report sets forth the actuarial accrued liabilities for the System?
A Yes.
Q And where is that?
A That is the first line in the third box under "System Totals."
Q Okay. And that number is $3.89 billion?
A Correct.
Q Below that there's something called accrued assets.
A Yes.

Q What does "accrued assets" mean?
A In this case, I believe it is the smoothed value of assets that is used in the contribution calculation.
Q Okay. And then at the bottom we have -- is that the UAAL?
A Yes.
Q Okay. Let's keep going through the report. If we could, let's turn to page 15. I think it's -- there we go. Do you have page 15 before you?
A Yes.
Q What is page 15 and the pages following it?
A It's labeled "Summary of Benefit Provisions," and this is where the actuary sets forth eligibility conditions and resulting benefits that define what the members will receive.
Q Okay. And do you know where this information comes from?
A My understanding is that some of it may be set in statute, and some of it is in collective bargaining agreements.
Q Now, in your replication audit, your replication procedure, what use did you make of this part of the exhibit that summarized benefit provisions?
A One of the requirements of performing a valuation is that we in our system code the benefits that members are eligible for, so we started with this document.
Q Okay. Let's go, if we could, to page 21. What is page

21 and the pages after it? What do they set forth?
A These are summaries of what I call census data. It is data regarding the members of the system.
Q Okay. And what does it say? What does it tell us about the members of the system?
A These are summary tables that summarize the data which is on each individual member's record of quantities that are important for the pension valuation.
Q And what relevance does this have to your work in a replication procedure?
A We need to know the membership of the system to be able to value to perform the replication.
Q Let's go, if we could, now to page 31. 31 and the pages after it, what do they set forth?
A These are assumptions, which is I'll say the third component of running a valuation or doing a replication.
Q And what's the relevance of assumptions in this exercise?
A What we are trying to model in the determination of "B" is the expected future cash flows that the system will disgorge over time, and they are all contingent upon what the members do, how long they work, how long they live, et cetera.
Q Now, I've been asking you about Exhibit 1024, which is the actuarial valuation report for the PFRS. Is the structure of the report for the GRS similar?

A Yes.
Q Okay. So before I go further, let me ask you this. Does Milliman have a calculation engine known as VAL 2000?
A Yes.
Q Who or what is VAL 2000?
A VAL 2000 is a software system developed and maintained by Milliman for use in preparing valuations of pensions and retiree healthcare systems.
Q Have you used VAL 2000 in your career at Milliman?
A Yes.
Q How often have you used it?
A Continuously.
Q How long since you joined Milliman have you worked with VAL 2000?
A It was there when I joined, so continuously since 2001.
Q How well do you know the operation and features of this software?
A Very well.
Q Okay. Now, what role did VAL -- did this software play in the replication procedure you've described to us?
A I think you used the phrase "calculation engine."
Q I did.
A So VAL 2000 you can think of as a template that is designed to accept inputs and then do the resulting calculations.

Q Okay. And what inputs -- in this replication procedure were inputs loaded into the software?
A That would be the three we just mentioned. The census data is loaded into the software, the actuarial assumption tables are loaded into the software, and we code the benefit provisions.
Q Okay. From the report that we looked at?
A Correct.
Q Okay. And who did the loading of this information?
A Various members on staff.
Q And what was your role in terms of that part of the work?
A I guess the best way to characterize it is the analysts on staff work under the direction of the consultants, so in terms of some of the mechanical loading procedures, we set forth what I call a job description.
Q Okay. And what role did you have in assuring that the job description was adhered to?
A We have a series of peer review or checking that gets done after those procedures are completed.
Q Okay. And once the data was loaded, it was then recited in the software; correct?
A I'm not sure I understand the meaning of "recited."
Q The data was loaded into VAL 2000 --
A Yes.
Q -- is that right?

A Yes.
Q Was it at that point then saved and archived in the system?
A Yes.
Q Is it still there?
A Yes.
Q Okay. Now, let's, if we could -- and did there come a time when you, in fact, performed the replication procedure?
A Yes.
Q Okay. And what -- and did you report to the city what you found?
A Yes.
Q What form was your report?
A That was a letter for each of the systems.
Q Okay. Let's, if we could, look at Exhibits 1008 and 491. Mr. Bowen, do you have Exhibits 1008 and 491 before you?
A I'm working on it.
Q Okay.

MR. STEWART: Can you put up 491? Ah, there we go.

MR. WAGNER: I'm sorry. Can I get a copy of 491? I don't see it in the book.

MR. STEWART: Is it not in the book?

THE WITNESS: Yes, I have them.

BY MR. STEWART:

Q Okay. All right. Before we go further, tell us what

these two exhibits are.
A 491 is our report on the replication of DGRS, and 1008 is our report on the replication of DPFRS.
Q Who wrote these two letters?
A Myself and a colleague of mine.
Q And is your -- does your signature appear at the back of each letter?
A Yes.
Q Okay. And before these letters went out, what did you do to assure the accuracy of the contents of the letters?
A I was involved in the process all the way through, drafting the letter, reviewing the results that are in the letter.
MR. STEWART: Your Honor, I move admission of both exhibits.
MR. WAGNER: No objection.
THE COURT: They are admitted.
(City Exhibit 491 and COPs Exhibit 1008 received at 10:19 a.m.)
BY MR. STEWART:
Q Okay. Let us, once again, deal with just the PFRS side of this. That's Exhibit 1008. Do you have that before you?
A I do.
Q Okay. Let's go through it, if we could. We have a -- we have the first page, and then on the second is something

called project description.
A Yes.
Q And just as a general matter, what is the project description?
A The project description is to determine the June 30, 2013, actuarial liability for the PFRS.
Q Okay. And it refers, does it not, to the actuarial valuation report we've been talking about?
A The 2012 report of DPFRS, yes.
Q And has the link to where it could be found on the Internet?
A Correct.
Q Okay. Now, further down there's a paragraph entitled "Investment Return."
A Yes.
Q Do you see that?
A I do.
Q Now, does this indicate that you ran this replication using two different investment return assumptions?
A Yes.
Q One was eight percent, and one was 6.75 percent?
A Correct.
Q Where did the eight-percent assumption come from?
A That is the rate that is used in the valuation report.
Q And where did the 6.75-percent assumption come from?

A That was a request from the city.
Q Okay. As a result of this replication procedure, were you able to determine the AAL for the system under these two different investment return assumptions?
A Yes.
Q And let's look, if we could, at page 6 of the exhibit. Do you see the table on page 6?
A Yes.
Q And what does the table on page 6 set forth for us?
A That is the results of our replication based on an eight-percent investment return rate and a 6.75-percent investment return rate.
Q Okay. Just for the record, what was the determination you made when you applied the eight-percent investment return assumption?
A 3.794 billion.
Q And when you applied the 6.75-percent investment return assumption?
A 4.285 billion.
Q Okay. And I think earlier we talked about the actuarial valuation report you were working with, and do I remember correctly you were still working with the 2012 report or was it the 2013?
A At this point in time, the 2012 was the most recent that we had access to.

Q So let's look at Exhibit 1004 and, in particular, page 3 of our exhibit -- of that exhibit, I should say. What was the AAL calculated by Gabriel, Roeder for this system for that period of time?
A As of 2012, the AAL was 3.823 billion.
Q And how did it compare to what your replication procedure determined?
A Well, actually that is a different date, so we did not compare those two numbers.
Q I'm sorry. I had misunderstood. Let's look then at the 2013 actuarial valuation report. Do you have Exhibit 1024 in front of you?
A I do.
Q Okay. Let's look, if we could, at the comparable table in Exhibit 1024. That's on page 4 of the exhibit. Now, how does the -- what did Gabriel, Roeder determine as of June 30th, 2013, was the AAL for the PFRS?
A 3.890 billion.
Q And how does that compare with the value you came up with in your replication?
A It's in between two and three percent different.
Q Okay. Now let's go, if we could, to Exhibit 491. Do you have Exhibit 491 before you?
A I do.
Q And Exhibit 491 is what?

A The report of our replication audit of DGRS.
Q Okay. And I think you described already the procedure. Was anything done differently with GRS than you had done with PFRS?
A No. The procedures were similar.
Q Let's look, if we could, at page 6 of Exhibit 491 and at the table there.
MR. STEWART: If we could blow the table up, please.
BY MR. STEWART:
Q Now, the table has results under two different investment return assumptions; correct?
A Yes.
Q One is 7.9 percent?
A Correct.
Q Where did that come from?
A That is the rate that is used in the annual actuarial valuation.
Q Okay. And the other column has the investment return assumption of 6.75 percent?
A Yes.
Q Where did that come from?
A That was requested by the city.
Q And so what did your procedure determine with respect to the AAL for the GRS as of June 30th, 2013?
A Under the basis used in the valuation report, 3.601

billion and under the 6.75-percent return 3.978 billion.
Q Okay. Let's go, if we could, to Exhibit 1023, which is in evidence, and let's go to page 4, please, A-4. It's the one that in the lower right-hand corner has a control number 2982. There we go. This is the Gabriel, Roeder actuarial valuation report for the GRS as of June 30th, 2013?
A Correct.
Q What had Gabriel, Roeder determined was the AAL for that system on that date?
A 3.609 billion.
Q And how did that compare with the value you determined using their investment return assumption?
A That was -- that differed by roughly $8 million.
Q Out of a total of how much?
A 3.6 billion.
Q Okay. Now, after you had finished the replication audit, did you -- did Milliman remain involved in the city's matters?
A Yes.
Q And in the months following it, what -- without getting into what you did, what generally was your role?
A We were asked to prepare various analyses using our replication as a baseline in making adjustments.
Q Okay. And there was a mediation process going forward, was there not?

A There was.
Q Okay. And without saying what you did, just tell us what was your role in the mediation?
A We were --
MR. PEREZ: Your Honor, excuse me. I'm going to object. If he's not going to say what his role is, then --
THE COURT: You can stay seated. You don't have to --
MR. PEREZ: Yeah.
THE COURT: -- injure your back making objections to evidence.
MR. PEREZ: Your Honor, to the extent that he's going to go into the mediation, we're obviously not going to be -- not going to be able to ask him any questions, so I'm not sure what the intent of the question is.
MR. STEWART: I'm not sure what the intent of the question was either actually, Judge. I'm going to ask the witness this.
BY MR. STEWART:
Q After that, did you --
THE COURT: That is a withdrawal of the question, yes.
MR. STEWART: Withdrawal.
BY MR. STEWART:
Q After that, did you remain involved in supporting the

mediation process?
A Yes.
Q Thank you. Now, by now, by the time we get to 2014, you've been working with the city's two pension plans for how long?
A We started in the middle of 2012.
Q About two years?
A With some gaps, but, yes, two years.
Q How well would you say you knew the plans by then?
A We had to know them very well to be able to perform the replication.
Q Now, have you heard the term before a frozen plan?
A Yes.
Q What is a frozen plan?
A There's more than one variety of frozen plans, but the most common definition would be where there is a freeze date. Employees who were hired after the freeze date do not become members of the plan, so they will not accrue benefits under the plan. And employees who are working as of the freeze date will cease accruing any benefits in the future.
Q Okay. Who makes the decision to freeze a plan?
A In my experience, in a corporate sector plan the plan sponsor sometimes has the unilateral right to do so. Sometimes it is subject to collective bargaining.
Q Let me direct your attention, if I could, to the date of

July 18, 2013. Do you understand that was the date --

THE COURT: Excuse me one second.

MR. STEWART: Yes.

THE COURT: The answer you just gave, you said that was in the corporate setting?

THE WITNESS: Yes.

THE COURT: Is there another answer for the public setting -- sector setting?

THE WITNESS: Well, the plan freezes are very common in the corporate sector, very uncommon in the public sector, and I think that's really a legal matter as to who gets to freeze the plan that I can't answer to.

THE COURT: Thank you, sir.

BY MR. STEWART:

Q So let me direct your attention, if I could, to July 18, 2013. Do you understand that was the date upon which the city filed its petition in bankruptcy?

A Yes.

Q As of that date, do you know whether or not the GRS plan was frozen?

A It was not.

Q How do you know that?

A There was no piece of information that we provided, were provided or found that said the plan was frozen.

Q And in your dealings with the city and with the plan, who

said anything to you about it being frozen?
A Nobody said anything to us about it being frozen.
Q And as of that date, can you tell us whether or not the PFRS plan was frozen?
A It was not.
Q Subsequent to that time, have there been proposals that the plan should be frozen?
A Yes.
Q Do you know whether that has happened yet?
A I do not.
Q Now, let me ask you a couple of --
MR. STEWART: Let's put up, if we could, Exhibit 632.
BY MR. STEWART:
Q Mr. Bowen, do you see Exhibit 632 on the screen in front of you?
A Yes.
Q What is Exhibit 632?
A There is a formula at the top which is a -- I'll say the generic template of how a final average pay pension plan calculates a benefit, and there is a diagram below that which is illustrative of a member moving through their working career and their retirement years.
Q Okay. So the formula -- and who prepared this?
A Jones Day.

Q And have you looked at it?
A Yes, I have.
Q Is it accurate?
A It's a very high-level representation, so, yes, it's accurate.

MR. STEWART: Your Honor, I would move 632 into evidence as a demonstrative exhibit only.

MR. WAGNER: That's fine, your Honor.

THE COURT: All right. For that purpose, it is admitted.

(City Exhibit 632 received at 10:31 a.m.)

BY MR. STEWART:
Q So, if we could, Mr. Bowen, let's look at the top. There's a formula. Could you tell us, first of all, what the formula says and, second, what it is?
A Okay. It says pension equals "X" percent times service times final average pay, and this formula is used to determine the pension that a member will receive based upon the service they have rendered and their final average pay and the "X" percent multiplier, which is part of the pension plan design.
Q So where does the "X" percent come from?
A The "X" percent is -- I believe that's a statutory figure, but it is set at the -- it is set as part of the benefit design to determine the overall level of the benefit.

Q What does "service" mean?
A Service is basically the amount of time that the member works for the city.
Q Okay. And what is final average pay?
A Final average pay is in most cases for the city's plans three highest years of pay at the end of the period of service.
Q Okay. So let's look at our chart. On the far left corner we have DOH. What does that stand for?
A The date of hire.
Q Okay. Now, have you heard the term "accrual" as that term is used in pension plans?
A Yes.
Q What does "accrual" mean?
A As a synonym, you could use the word "earned." You accrue your benefits over your career. You're earning your benefits as you're working.
Q So if I worked for the city, and after one year when do I start accruing my benefits?
A You start accruing them upon hire.
Q The day I started?
A Yes.
Q Okay. Now, have you -- when do my benefits stop accruing?
A When you separate from service.

Q Okay. Now, is there a term called "vesting"? And there is vesting on our exhibit as well.
A Yes, there is.
Q What does "vesting" mean?
A If you discontinue your service with the plan sponsor prior to reaching the vesting date, in this example, ten years, you forfeit your right to receive a pension.
Q And what is the vesting period for the GRS and the PFRS?
A With some exceptions, it's ten years.
Q Okay. So back to me again. Let's assume I work for the city and quit in year nine. What are my vested benefits?
A None.
Q Why?
A Because you have not rendered the requisite period of service.
Q How many years have I accrued?
A Nine.
Q But I still get no benefits?
A Correct.
Q If I work to 11 years, then quit, how many years have I accrued?
A Eleven.
Q And how many have I vested?
A Eleven.
Q So what benefits do I get under the formula here, and

what's the service -- the value of the service variable in our equation?
A At that -- in that example, it would be 11.
Q Okay. Now, up here we have something called final average pay. Let me ask this. What do the words "final pay" mean in the phrase "final average pay"?
A They're meant to denote the pay near the end of your period of service, end of your career.
Q And average is the three years you told us about?
A Yes, for these systems.
Q Now, in calculating the AAL for a system, is one of the benefits a system takes into account the future cost it's going to have for people who have not retired yet?
A Yes.
Q How does the system know what their final average pay is?
A One of the actuarial assumptions used in the valuation is a projection of salaries over time.
Q So the system projects the final average pay of people who have not yet reached that segment of their career where they measure the final average pay; is that correct?
A Everything is projected, so, yes.
Q Okay. Now, what assumptions does -- do these two plans use to project that final average pay?
A Well, there -- I mean there is a salary assumption that's the baseline for projecting what the salary would be, and

there are additional assumptions that determine the probability of separating from service in each future year, termination if you're not retirement eligible and then ultimately retirement.

Q And then are there assumptions about wage increases and inflation?

A I kind of consider them all baked into the salary assumption scale, yes.

Q But they're part of the salary assumption?

A Yes.

Q Where do we find that?

A They can be listed in the valuation report.

Q So the actuarial valuation reports that are already in evidence set those forth?

A Yes.

Q And by the way, are both GRS and PFRS final average pay plans?

A Yes.

Q Now, let's move on. Did there come a time more recently in April when you were asked to perform other calculations from the information stored in the VAL 2000 system?

A Yes.

MR. STEWART: And let's put up, if we could -- pardon me -- Exhibits 473 -- pardon me -- and 474. And, your Honor, both of these are also exhibits that the COPs parties

have put on their list as 1011 and 1012 respectively.
BY MR. STEWART:
Q Before we go further, Mr. Bowen, could you just tell us what these two letters are?
A Okay. Exhibit 1011 is regarding DPFRS, and we were asked to calculate the funded status in 2023 under a variety of a specified scenarios.
Q And what is the other letter?
A That concerns DGRS, and we were asked -- we were given a desired target to be hit in terms of funded status in 2023 and were asked to calculate the employer contributions that would be required to do so.
Q And who prepared these two letters?
A They were both prepared by Milliman.
Q Okay. And did you -- pardon me. What was your role in the letters?
A I was involved in the process from beginning to end.
Q And did you sign both?
A Yes.
Q And what did you do before signing to assure yourself of the accuracy of the matters set forth in the two letters?
A As I mentioned before, we have a series of peer review checks, and they apply to the various portions of the overall procedure.
MR. STEWART: Your Honor, I'd move into evidence

both exhibits.

MR. WAGNER: No objection.

THE COURT: Thank you. They are admitted.

(City Exhibits 473 and 474 received at 10:37 a.m.)

BY MR. STEWART:

Q Let's start, if we could, with Exhibit 473, and I notice I'm using the city's exhibit number, and you used the COPs exhibit number. Why don't we use the city's exhibit number for sake of simplicity, and that is 473?

A Okay.

Q And if we could, let's spend a minute on the structure of the letter here. Once again, the first page sets forth some background of the scope and intent of the exercise; is that correct?

A Yes.

Q And then on page 2 we have the paragraph entitled "Project Description"?

A Correct.

Q What is the project description of this project?

A There are several bullet points of inputs that were provided to us, and we were asked to use all of those and project the funded status -- excuse me -- and also the unfunded liability of DPFRS in 2023.

Q Okay. So at the very first lines -- pardon me -- speaks of estimating the funded status and unfunded liability for

that Retirement System; correct?
A Yes.
Q And then what are the bullet points again?
A These are the series of inputs that were provided to us by the city to be used in this exercise.
Q And what role did you have in choosing those inputs?
A We did not choose them. They were provided to us.
Q In other words, they were givens in this work?
A Correct.
Q All right. What did you do then with these assumptions?
A I'll take the second bullet point to start with, a 55-percent reduction to future COLAs moving from two and a quarter percent to one percent. That is a change to "B," so we took our baseline valuation and made that adjustment as we're going to be determining a different value of "B."
Q Okay. Once again, were you using the VAL 2000 software that you've described to us?
A Yes.
Q And that had the other values in it from your previous work. Am I right?
A Yes.
Q Okay. Now, after putting these assumptions into the calculation engine, did you get results? Did the results come out?
A Yes.

Q And let's look at the next page, the table in the next page. What does that table set forth?
A We were asked to value two separate employer contribution streams and two separate market value rates of return for 2013-14, which led us to four scenarios, and the results are in the two right-hand columns. The third column is the projected funded status under each scenario, and the final column is the estimated dollar amount of the unfunded liability in 2023.
Q So if we take the first row, that has an assumption of employer contributions of $260.7 million and a market rate of return of 11.9 -- 59 percent; correct?
A Yes.
Q And those are the assumptions you were given?
A Yes.
Q And then the next two columns show us what?
A The projected results in 2023 under those assumptions.
Q Okay. And you were being asked to forecast what the situation would be in 2023; correct?
A Yes.
Q Okay. Now, if we go to the very end, just a few pages back there are a series of tables. Just generally can you tell us what these are?
A Yes. We were asked -- in addition to providing the results on page 3, we were asked to provide year-by-year

information on various items, assets, liabilities, cash flows, from the period 2014-15 up through 2023.

Q I see an abbreviation BOY here. What does BOY stand for?

A Beginning of year.

Q Okay. And if we look at this particular page -- I guess it's Exhibit 1 -- and the table, we have the actuarial accrued liability at BOY. Do you see that?

A I do.

Q Okay. And then below that unfunded liability at BOY; correct?

A Yes.

Q Okay. And if you go all the way over to the right, does that -- do those numbers sum up the year-by-year values in those rows?

A Yes. Those are the year-by-year values.

Q Okay. Let's now, if we could, look at Exhibit 474. And this is the letter you wrote with respect to the GRS. Am I right?

A Correct.

Q So let's start again with page 2 in the project description.

MR. STEWART: And let's blow up that first paragraph.

BY MR. STEWART:

Q And what was the project that you were asked to do that

is recounted here in Exhibit 474?
A In this situation, the target was set as having a 70-percent funded ratio, and that's the funded status we referred to earlier, in 2023. We were given a variety of input parameters and asked to solve for the amount of employer contributions that would be needed based on those parameters to hit the goal.
Q Okay. What assumption were you given by the city in terms of the investment return assumption?
A This was 6.75 percent.
Q Okay. And then am I correct that in addition to that, there were city-specified annual contributions to the DWSD?
A The city specified the methodology, yes.
Q Okay. And then there was going to be a recoupment from the annuity savings fund?
A Yes.
Q Did both of those require you to have the system do some calculations before you could come up with a final answer?
A Yes.
Q Okay. So let's, if we could, go to the next page. And by the way, let's just frame this a little bit. One of the things you had to do was to determine the DWSD contribution projection?
A Yes.
Q And the other was the ASF recoupment?

A Yes.
Q So let's go through those in that order. The top of the next page, page 3, is that the section where you deal with the contribution projection?
A That's the beginning of the section, yes.
Q Okay. And, once again, we have bullet points. What are those bullet points?
A Those are the parameters that were used in the DWSD contribution projection.
Q Okay. Now, if we look at the main body of that paragraph, it -- oops -- refers to a city-specified contribution schedule. Do you see that?
A Yes.
Q And what was that contribution schedule that the city specified?
A I'll say to be maybe more precise, the city specified that we should do a valuation of DWSD effectively only, a mini valuation, their portion of the overall system, and once that unfunded liability is known to develop a nine-year contribution.
Q Okay. And did you do that?
A Yes.
Q Let's look, if we could, at page 6 of our exhibit. And do you see the header that says "results"? Okay.
A Yes.

Q Does that first paragraph set forth what you determined when it came to the DWSD contribution?
A Yes.
Q And what did you -- what did you determine?
A It's in the last sentence, annual contribution of 45.4 million per year.
Q Okay. And as part of this, did the system also determine the unfunded liability for DWSD as of July 1, 2014?
A Yes.
Q And what was that number?
A That is the 292.1 million in the second line.
Q Okay. Now, I think we were talking about the recoupment from the annuity savings funds, and let's go, if we could, now to page 3, to the very bottom of page 3.

MR. STEWART: Let's blow that up, if we could.

BY MR. STEWART:
Q Under ASF recoupment, it talks about the city providing census data file. Do you see that?
A Yes.
Q Who provided the census data file to you?
A It was actually provided to us by Conway MacKenzie.
Q And who from Conway MacKenzie?
A Chuck Moore.
Q Okay. And what was this data file?
A This was a data file, as it mentions here, 13,650

members, so that's not everybody, but that is the subset of members that the city deemed to have received excess interest credits in their accounts.
Q Okay. Let's go to the next page, please. Let's look at the top carryover paragraph. That's all we need to see. Just reading, it says the interest credits were 387.4 million as of June 30th, 2013; is that correct?
A Yes.
Q Now, then you did procedures against that data file; correct?
A Yes.
Q Fair to say you were not able to match all the census data?
A Yes.
Q Let's look at the table, the line that says "total." What does that represent?
A Well, we received this census data file separate from the census data that we already had in VAL 2000 in our replication, so the first task was to match these excess interest credit amounts by individual member into our valuation system, and they did not all match.
Q So in your table you have numbers of people. You also have dollar numbers.
A Yes.
Q What do those two numbers add up to?

A The count of people adds up to the 13,000-some-odd that was on the last page, and the excess interest amounts add up to the 387.4 million at the top of this page.

Q Okay.

MR. STEWART: Now, let's, if we could, scroll down to the next table. Blow that up.

BY MR. STEWART:

Q And at the top the language says, "For this analysis, the maximum recoupment amount for an individual member was capped at 20 percent of the highest ASF balance during the excess interest determination period." Who capped it at 20 percent?

A That was a decision made by the city.

Q Not you?

A No.

Q Okay. So what does this table show us?

A This table shows that once the -- I'll say the original excess interest amount that was calculated was subjected to the cap, the total possible recoupment amount, which is in the third column, was reduced.

Q To what number?

A 226.5 million.

Q Okay. And was that the number you took into account when you went back to the beginning to determine the contribution level the city would have in the coming years?

A Yes. This was worked into this valuation pass.

Q Now, before I --

MR. STEWART: Let's go to the next page, if we could, and before we leave this subject, could you blow up the top three bullet points?

BY MR. STEWART:

Q Was there a methodology that the city was going to use to recoup these excess payments from the ASF?

A Yes.

Q And fair to say there were three categories of people that had to be recouped from?

A Yes.

Q And tell us, if you could, generally what the recoupment method was.

A Okay. What's highlighted on the screen now is for active members and deferred vesteds, deferred vesteds being members who have ceased working for the city but are not yet in pace; that is, receiving a benefit. So, quite simply, the approach in our valuation procedure was that if a member's excess interest amount was lower than the current value of their account, it would be subtracted, and that was it.

Q Just offset?

A Just offset directly, yes.

Q Second category?

A There are members who have a larger excess interest amount than their current account because there is the ability to withdraw some funds while in service, so for those members it was a two-part test subtracting the ASF account to the extent possible and then for the remainder of the amount to be recouped projecting an offsetting against the ultimate expected pension.

Q Okay. And how did you determine how to -- what the amount of the offset should be?

A The amount of the offset was -- as summarized in the chart on the preceding page, it was the excess interest amount provided by the city ultimately subjected to the 20-percent cap.

Q Okay. And was this done in a sense with a reverse annuity; in other words, a certain amount would be deducted from the benefit check?

A Yes.

Q And how was that calculated?

A To convert a lump sum to an annuity, we have an interest and a mortality assumption.

Q Okay. Is that something you came up with?

A It was provided to us by the city.

Q Okay. And the last category? Who were they?

A The third bullet point here is really a subset of the second, and these are -- this is the specific class of members who have no account, so there is no subtraction possible, and the entire recoupment amount is then projected

and offset against the pension.
Q Okay. Now, lets go, if we could, to page 6 and to the last paragraph on the page. Now, by the time -- this is the results paragraph for your letter; is that correct?
A Yes.
Q Okay. Now, by the time you've gotten here, you've done the DWSD calculation; correct?
A Correct.
Q The ASF calculation; correct?
A Correct.
Q And you're now able to finish the calculation you were asked to do?
A Yes.
Q What did you determine?
A Well, we were provided with certain specified inputs, so we used those, and that's the 150.8 million from non-DWSD sources. We calculated the DWSD based upon the methodology, and that became an input. In total what we did is we calculated the total amount of employer contributions needed during this time period, and since there were certain -- you know, those two streams of specified employer -- two streams of specified contributions, we then determined the residual employer contribution that would be needed to hit the 70-percent funded target.
Q Okay. So the bullet points, once again, are either

assumptions given to you or the results of your previous calculations you just told us about; correct?

A Yes.

Q So let's look at the main paragraph. What is it you estimated would be the additional contribution per year from the employer from 2015-16 to 2022-23 to have a 70-percent funded status as of the end of fiscal year 2023?

A $19.9 million per year.

Q Okay. Based on all the assumptions that you see here?

A Yes.

Q And based on the other calculations in your work; correct?

A Yes.

MR. STEWART: Okay. Thank you, Mr. Bowen. That's all I have.

THE COURT: All right. Let's take a brief recess now, reconvene at 11:10, please, for cross-examination.

THE CLERK: All rise. Court is in recess.

(Recess at 10:54 a.m., until 11:12 a.m.)

THE CLERK: All rise. Court is back in session. You may be seated.

MR. WAGNER: Your Honor, again, Jonathan Wagner on behalf of the COPs. I have binders -- may I pass them out -- that have the exhibits?

THE COURT: Yes, please.

MR. WAGNER: May I proceed?
THE COURT: Yes, sir.

CROSS-EXAMINATION

BY MR. WAGNER:
Q Mr. Bowen, nice to see you again. You're dressed a little bit better than last time I saw you last night in the elevator.
A Thank you.
Q Mr. Stewart took you through some of the work that you did or Milliman did in connection with this matter; correct?
A Yes, he did.
Q But he didn't take you through all the work, did he?
A He did not.
Q And you gave some testimony about the 6.75 rate of return. Do you recall that?
A Yes.
Q And Mr. Stewart showed you several letters that Milliman prepared in connection with this matter?
A Yes.
Q But he didn't show you your November 4, 2013, letters, did he?
A He did not.
Q And in those letters Milliman concluded that a return assumption of 7.2 percent would better reflect the expected investment returns for both plans net of expenses without any

bias; correct?
A You used the phrase "better reflect." I would say that was the calculation of median expected return.
THE COURT: Is the letter you're referring to in evidence?
MR. WAGNER: Yes, it is, but we'll put them up on the screen. Can you put up COPs Exhibit 1028, which is City Exhibit 495? There's been no objection.
BY MR. WAGNER:
Q Can you turn to page 4 of the letter in your book or you can look at it on the screen?
A It's rather tight up here for the book.
Q Okay. If you look at it on the screen, the paragraph beginning "Based on the above results," do you see that?
A I do.
Q Can you read that, sir?
A "Based on the above results, we believe that an assumption of 7.2 percent would better reflect expected investment returns net of plan investment expenses and provide an unbiased expectation of future results."
Q And that's with respect to GRS; correct?
A I can't tell from looking at this page.
Q Well, if you look at the first page of the document, you'll see that it pertains to GRS. Can you turn to page 1? Do you see that?

A Yes. This says DGRS.

MR. WAGNER: And can you put up Exhibit 1029, City Exhibit 496?

BY MR. WAGNER:

Q That's your letter with respect to PFRS; correct?

A Yes, it is.

Q And can you turn to page 4? Same paragraph, "Based on," can you read that, sir?

A "Based on the above results, we believe that an assumption of 7.2 percent would better reflect expected investment returns net of plan investment expenses and provide an unbiased expectation of future results."

Q And that's important information, isn't it?

A I believe that it is.

Q And at the time you wrote these letters, you believe the recommended investment rate assumptions you presented were the best recommendations based on the data available to you; correct?

A At the time, yes.

Q And you don't have any concerns or issues with respect to the investment returns that you recommended in those letters; correct?

A No, I do not.

Q And Milliman did the best job it could coming up with the 7.2 percent; correct?

A   Yes, we did.
Q   And you did the best job you could; right?
A   Yes, I did.
Q   And there are no mistakes in those letters, are there?
A   They've been through our peer review process. I will assume there are no mistakes.
Q   Very heavily vetted; correct?
A   Correct.
Q   The letters were cc'd to people from the city; right?
A   They were.
Q   The letters went to Evan Miller of Jones Day. You know who he is?
A   They were addressed to him, yes.
Q   And you have confidence in those numbers, don't you?
A   Yes.
Q   And you stand by those letters?
A   Yes.
Q   And, by the way, the period in those letters, if I'm right, is you did a 30-year analysis and a 75-year analysis; correct?
A   I would need to see the chart put in front of me, but we look at several different time durations in our capital market assumptions model.
Q   Well, can you look at page 4, sir, and confirm to me on either of those documents that you did a 30-year analysis and

75-year analysis?
A Yes. The table shows one year, thirty years and seventy-five years.
Q And of those, you believe the 75-year was the best analysis to use; correct?
A Yes, for an ongoing pension plan, absolutely.
Q Now, Mr. Stewart also showed you numbers concerning actuarial accrued liability; right? Do you recall that?
A Yes, he did.
Q He didn't show you the unfunded actuarial accrued liability numbers, did he?
A For DWSD, I believe we discussed that, not for the systems in total.
Q But he didn't put that up on the screen. He just went through the liabilities; right?
A Yes.
Q And you have to subtract the assets from the liabilities to determine the unfunded portion; correct?
A That is true.
Q Okay. Now, let's go back to the beginning. Would you believe -- would you agree with me, sir, that it's important for an actuary to get -- to use the right input?
A It's very difficult to answer that question the way it's asked because I'm not aware of a definition of the right inputs.

Q Let me rephrase it. It's important for an actuary to use accurate inputs?
A I would give you the same response.
Q You have your deposition transcript at the front of the binder. Can you look at it, sir?
MR. STEWART: Page and line?
MR. WAGNER: 157, line 10.
BY MR. WAGNER:
Q Do you have it there, sir?
A I do.
Q Were you asked the following question, and did you give the following response at your deposition?
"Question: Well, with respect to the inputs you just mentioned, am I right that it's important to use accurate inputs?
Answer: Generally speaking, it's important to use accurate inputs."
Did you give that answer?
A That is reflected in the transcript.
Q And would you agree with me that it's important for an actuary to use reasonable assumptions?
A I would agree with that.
Q And that's something you strive to do; correct?
A Yes.
Q And would you agree with me that Detroit is a very

important assignment?
A Yes, I would.
Q That's why we're all sitting here; right?
A Yes, it is.
Q Okay. Let me switch gears for a second and ask you about Mr. Fornia, who's been retained as an expert for the COPs. You know Mr. Fornia; right?
A I do.
Q And you've worked with him?
A Yes, I have.
Q And you've invited him to speak at at least one Milliman event?
A Yes.
Q Presentation was well-received by Milliman?
MR. STEWART: Objection, your Honor. What's the relevance of this? And I don't think vouching or reverse vouching for experts is appropriate.
MR. WAGNER: It's a point that Mr. Hackney raised. I could call him as part of our direct case, but --
THE COURT: I'm not sure you could actually.
MR. WAGNER: Okay.
THE COURT: The objection is sustained.
BY MR. WAGNER:
Q Now, I'm right that Milliman performed an actuarial exercise to calculate the size of the pension claims; right?

A No.
Q I'm sorry?
A No. I would not say that's correct.
Q Okay. Well, can you look at your April 17 letter? That's Exhibit 1033.
A I have a May 5th letter, 1033.
Q Okay. And if you look at page 2, this is a letter concerning GRS; correct?
A Yes. I apologize. I thought you were talking about did Milliman determine the claim. Milliman did allocate the claim for --
MR. STEWART: Object. This could be fixed, but the letter is not properly redacted to eliminate mediation privileged material.
MR. WAGNER: I'm not -- I don't know what they're referencing, but I'm obviously not going to go into any material that may be in here that should be redacted.
MR. STEWART: Well, I'm not suggesting you are.
THE COURT: Well, hold on one second. What exhibit number are we on here?
MR. WAGNER: This is Exhibit 1033 for which there was no objection posed by the city in the pretrial order.
THE COURT: Is it in evidence?
MR. STEWART: I don't believe it is, Judge.
MR. WAGNER: Well, it's technically in evidence

based on your Honor's ruling that unobjected to documents are in evidence, but we can -- we will fix whatever needs to be fixed if there is something that needs to be fixed.

MR. STEWART: I have no objection to fixing it. I just wanted to make sure before it goes into a public record that it is -- that the redaction issue is fixed.

THE COURT: Okay. Let me ask the two of you to just work that out and --

MR. WAGNER: That's fine.

THE COURT: -- let me know.

MR. WAGNER: That's fine. And let me just go back and make clear that I move Exhibits 495, which is our Exhibit 1028, and 496, which is 1029, into evidence.

MR. STEWART: No objection.

MR. WAGNER: Okay.

THE COURT: All right. They are admitted.

(City Exhibits 495 and 496, COPs Exhibits 1028 and 1029 received at 11:23 a.m.)

BY MR. WAGNER:

Q Okay. Now, sir, do you see under aggregate claim the paragraph lists assets for GRS as about 2.099 billion; correct?

A I see that.

Q Okay. And if you turn a few pages -- it's actually a page that Mr. Stewart showed you. If you turn to the April

17 letter, which is attached to this letter, and that's how it was produced to us, if you turn to page 6 of the April 17 letter, do you see that there are assets -- I'm sorry -- that there are liabilities of 3978 with a 6.75 return rate? Do you see that?

A Yes.

Q So 3978 in liabilities minus 2.099 in assets is about 1.879 billion; correct?

A I didn't follow the math that fast, but that's in the right neighborhood.

Q Okay. And can we agree that that's the number in the disclosure statement that sets out the size of the GRS claim, or should I -- do I have to show you the disclosure statement?

A No. I can agree that that's the number.

Q Okay.

MR. WAGNER: That's, your Honor, page 38 of the disclosure statement.

BY MR. WAGNER:

Q Now, let's go through the exercise with respect to PFRS. Can you turn to Exhibit 1034 in the book, page 2 of that document?

MR. STEWART: Objection. Your Honor, we have the same redaction issue with this exhibit, although I assume we can work it out.

MR. WAGNER: That's fine.

THE COURT: Thank you.

BY MR. WAGNER:

Q Do you see under aggregate claim you list overall liabilities of 4.825 billion? Do you see that?

A Yes.

Q And you see assets of 3.035 billion? Do you see that?

A Yes.

Q And that's a net of about 1285 -- 1.25 billion?

A Yes, it is.

Q And would you take my word for it that that's the amount in the disclosure statement for the PFRS claim?

A I will.

Q So if I'm right, it's fair to say that the figures for the amount of the claim came from these letters; correct?

A That's fair.

Q Okay. And, again, you use a 6.75 rate here; right?

A Yes.

Q Didn't use the risk-free rate?

A We did not use a risk-free rate.

Q Okay. Now, let's get into what's part of the claim. For both GRS and PFRS in these letters, you use something called the entry age normal method; right?

A Yes.

Q Okay. And the assumption underlying those letters was

that the plans would be ongoing; correct?
A This was a replication of the valuation of an ongoing plan.
Q Okay. And when one uses the entry age normal method for an ongoing plan, one is going to include liabilities that haven't vested yet; correct?
A That is true.
Q And as Mr. Stewart elicited from you, when you do that calculation, you're also going to include benefits with future salary increases included; right?
A That is correct.
Q And you're going to include calculation that includes future wage benefits; right?
A That's a function of the future salary, yes.
Q And it's going to include an element of inflation; right?
A That underlies salary increases, yes.
Q Now, sir, a frozen plan is a different ball game with respect to treatment of future salary increases and future services, is it not?
A It can be.
Q And when you do the calculation for a plan freeze, you eliminate future service and future salary; right?
A To the extent it has been seized for the participants in the plan, the members in the plan.
Q So one would see no future salary increases once a plan

is frozen; right?
A Under a hard freeze scenario, that's correct.
Q And the liability would drop; correct?
A That is correct.
Q And if a plan were frozen, you wouldn't include future wage inflation; right?
A Since that is a subset of the salary increase, that's correct.
Q Okay. And just to finish up this --
THE COURT: I'm a little confused about your questions here.
MR. WAGNER: Okay.
THE COURT: Are you asking about some hypothetical freeze or the Detroit freeze?
MR. WAGNER: I'm asking about -- well, my questions are general questions. I believe -- we believe that --
THE COURT: Okay. Then they're irrelevant to me.
MR. WAGNER: Well, they -- we believe they apply to the Detroit freeze, and I'm laying the groundwork for future testimony on this issue.
THE COURT: Ask the witness about the Detroit freeze.
BY MR. WAGNER:
Q Does the Detroit freeze include -- the Detroit plan is frozen; correct?

A To my knowledge. I'm not sure of the legal status today.
Q Okay. And do you know whether if you -- when you freeze those plans, whether future inflation should be included? Do you know one way or the other?
A The proposal is a hard freeze.
Q Okay. And would you give the same answer with respect to vested benefits?
A I'm not sure.
THE COURT: What's the question as to vested benefits?
BY MR. WAGNER:
Q The question is with the hard freeze, you wouldn't include benefits -- when you did your calculation of the liability, you wouldn't include benefits that haven't vested; right?
A In my experience, I've seen that done in the corporate sector. I'm not sure of the legal status of vested benefits in the governmental sector.
Q Okay. And with a frozen plan like Detroit's, you would not include in calculating the size of the claim, the amount of unfunded liability, you wouldn't include the calculation that takes into account wage inflation, would you?
A For a frozen plan, there would be no future wage inflation in the calculation.
Q And let me just finish up this --

THE COURT: I'm sorry. Does that answer apply to the Detroit plan or just some generalized frozen plan?

THE WITNESS: The proposal for the Detroit plan is that the plan would be frozen and future wages past the freeze date would not ultimately impact the member's calculations.

THE COURT: Thank you.

BY MR. WAGNER:

Q Okay. By the way, just to finish up this topic, do you know what the unit cost method is? Ever hear of that term?

A If you mean the unit credit cost method, yes.

Q Yes. And that's a method that looks at past service and past salary; right?

A That is correct.

Q Okay. Now, let's talk about investment rates. Am I right that the discount rate assumption is arguably the most critical assumption in determining pension obligation?

A Arguably, yes.

Q And the investment return assumption forms the basis for the assumed asset returns of investments within a pension system; correct?

A As far as it goes, yes.

Q And the investment rate -- the investment return assumption for public -- for a public plan is also used to measure the liabilities by discounting future payment

benefits at the assumed rate of return?
A That is the common practice.
Q And that's the way you've always seen it done; right?
A For purposes of funding, yes.
Q I'm also right that the funded status of a plan would decrease if you used a lower investment rate?
A That is correct.
Q And the higher the investment rate assumption, the better the funding status of the plan; correct?
A In both cases, the current measure of the funded status, yes.
Q Okay. And now just a couple more questions about risk-free rate. You're not aware of any public pension funds that have measured liabilities discounting future benefit at any rate other than the assumed investment return; correct?
A No. I am.
Q Well, you weren't aware at your deposition; correct?
A I don't -- I can say I am. I was deposed for three days. If we have a question which is slightly different that I answered, that's possible.
Q Okay. But Milliman doesn't use the risk-free rate in calculating a valuation rate or return rate; correct?
A That's a very broad question, so I would have to say it's not correct in all cases.
Q Can you turn to your deposition, page 237, line 25?

MR. STEWART: I don't have --

MR. WAGNER: I'm sorry. We'll come back to that, your Honor.

THE COURT: Okay.

BY MR. WAGNER:

Q Now, let's get back to your November letters. There came a time when you were asked to present an analysis for recommended return on investment for PFRS and GRS; correct?

A True, yes.

Q And those are the -- your work is set out in the November 4 letters; correct?

A Yes.

Q And the assumptions in your analysis were based on the asset allocations for GRS and PFRS at the time; correct?

A The most recent asset allocations that were made available to us; correct.

Q And you've not seen any different asset allocations for those two funds since then; correct?

A I have not been involved in the --

Q You've not seen any change in the asset allocation between November 4 and today; correct?

A I have not looked at new allocations or have not, yeah.

Q Now, there is -- the plan doesn't use your 7.2-percent rate, does it?

A Neither rate does now. Neither plan uses that rate.

Q It uses 6.75; right?
A Oh, the plan of adjustment. The system actuary does not use it nor does the plan of adjustment.
Q Okay. I'm sorry. I should identify which plan, but, yes, the plan of adjustment uses 6.75 percent; right?
A That is correct.
Q Okay. And that 6.75 did not result -- was not anything that resulted from Milliman's work, was it?
A It was not.
Q And it didn't reflect any asset allocation of which you were aware; correct?
A That is correct.
Q And you've not been provided with any asset allocation that produces a 6.75-percent investment return; right?
A The 6.75 percent was -- we call it a prescribed assumption.
Q And you've not been asked to revisit your analysis; correct?
A I have not been asked to revisit that November 2013 analysis.
Q And you have not revisited that analysis, have you?
A I have not.
Q Now, I'm right that you don't know the asset allocation that pertains to the 6.75 percent; right?
A The 6.75 was not based on a particular asset allocation.

Q Okay.
A It was --
Q I'm right that one of the things an actuary does is look at an asset allocation and come up with an investment rate; right?
A That's the usual practice.
Q And here what's going on is you've been given 6.75, and now someone is trying to come up with an investment rate. Isn't that what's going on here?
A That was the nature of this assignment, yes.
Q Okay. Now, I think you testified that you've been the -- you've served as an actuary for dozens of plans; right?
A Yes.
Q Okay. And am I right that industry surveys could be a useful data point when determining a projected rate of return for a pension system investment?
A I don't hold that view.
Q Can you turn to your deposition, page 83, line 7? 83, line 7. "Fair enough."

"Question: Fair enough. In your view then, could industry surveys be a useful data point when determining projected rate of return for a pension system's investment?

Answer: If you're using the phrase 'industry surveys' in terms of surveys of prospective returns, yes."

Do you see -- did you give -- were you asked that question, and did you give that answer?

A That response is different than the question that I understood that you just asked.

Q My only question is did the court reporter transcribe the question correctly?

MR. STEWART: Objection, your Honor. I think he said this is not proper impeachment because the questions do not match. Makes no difference what the court reporter did.

THE COURT: Okay.

MR. STEWART: The question is Mr. Wagner's question that he claims is inconsistent. That, I believe, is the issue here.

THE COURT: Okay. Well, it's not for the witness to claim improper impeachment. That's for you to claim. The only issue -- or question before him was whether he gave that question -- whether he heard that question and gave that answer. Is that right?

THE WITNESS: I have no reason to believe that this is improperly typed if that is your question.

THE COURT: All right. To the extent the city is objecting on the grounds of improper impeachment, the Court will overrule the objection.

BY MR. WAGNER:

Q Now, sir, can you turn to Exhibit 1036 in the book? This is the public fund survey; right?
A It's labeled "Public Fund Survey."
Q And this is put out by NASRA?
A I'm not sure if this is the NASRA survey or --
THE COURT: Have you seen this before, sir?
THE WITNESS: I believe I saw this in deposition.
MR. WAGNER: Your Honor, there's been no objection to this exhibit. I move it into evidence. There's been no objection by the city.
MR. STEWART: That's fine.
THE COURT: Is it in evidence?
MR. STEWART: No objection, your Honor.
MR. WAGNER: Okay.
BY MR. WAGNER:
Q Sir, you've heard of the term NASRA; correct?
A Yes, I have.
Q And what is NASRA?
A National Association of State Retirement Administrators.
Q And are you aware that Ms. Kopacz cited NASRA report in her report?
A I reviewed her report briefly. I can't say whether she did or not.
Q Are you aware that Ms. Nichol cited it?
A Same answer.

Q Okay. If you look at the first page, have you -- you've seen the public fund survey before; right?
A As I mentioned, I believe I saw this document in deposition.
Q Okay. And do you see at the top it says "Median" -- first of all, look at the top left, the date of 6-25, 2014.
A I see that.
Q Okay. And do you see it says "Median for the 126 plans shown here, investment return 7.9 percent." Do you see that?
A I see that.
Q And you see it has an inflation assumption of three percent. Do you see that?
A Yes, I do.
Q Okay.

MR. WAGNER: And, your Honor, we have another version of this exhibit, again, not objected to by the city, 1040. I move both of them into evidence.

MR. STEWART: No objection, your Honor.

BY MR. WAGNER:

Q Now --

THE COURT: All right. It's admitted.

(COPs Exhibits 1036 and 1040 received at 11:38 a.m.)

BY MR. WAGNER:

Q Can you turn to Exhibit 10164 in the book? Now, NASRA is a well-known organization in the field, is it not?

A In the state pension plan field, yes.

MR. WAGNER: Your Honor, I move this document --

BY MR. WAGNER:

Q And generally the information from NASRA is considered reliable?

A I have no reason to doubt its reliableness.

MR. WAGNER: Your Honor, I move this exhibit into evidence.

MR. STEWART: Let me check our objections.

MR. WAGNER: I believe it's admissible whether they object or not. It's admissible under 803 --

THE COURT: Well, I have to give them a chance --

MR. WAGNER: Sorry.

THE COURT: -- regardless.

MR. WAGNER: Sorry. Just trying to speed it up.

MR. STEWART: Whose exhibit is it? Whose exhibit? Whose exhibit is this? I mean --

THE COURT: What's the number again, sir?

MR. WAGNER: It's 101 -- 10164 happens to have been -- again, it was cited in --

THE COURT: I just asked the number.

MR. WAGNER: Okay.

THE COURT: Hang on.

MR. WAGNER: Sorry.

MR. STEWART: We can't -- your Honor, are you sure that's the right exhibit number?

MR. WAGNER: That's what I'm told, yeah.

THE COURT: It is -- it's not in evidence by our final pretrial order.

MR. WAGNER: Right. I think that's right.

THE COURT: It's a Retiree Committee exhibit.

MR. WAGNER: I would ask that it be admitted, and I think I've established the foundation under 803(17). It's also been -- it's been cited by Ms. Kopacz in her report, and it's been cited by Ms. Nichol in her report.

THE COURT: Have you seen this before?

THE WITNESS: Yes, I have seen this.

THE COURT: Is it anything that you relied on when you were preparing your work for the city?

THE WITNESS: No, it is not.

MR. STEWART: And, your Honor, I object for any number of reasons, but I would also point out we did not offer Mr. Bowen as an expert. The questions are getting into expert testimony. We will consider the door now open, and if what Mr. Wagner is doing is to -- going into this having conceded this is an expert witness, we will withdraw our objection, but the redirect will be using him as an expert.

MR. WAGNER: Your Honor, I don't think I've opened the door. I asked him a question, whether industry surveys --

THE COURT: Well, let's deal with whether the door is open when and if you actually decide to do that.

MR. WAGNER: Okay.

THE COURT: Right now we're just going to deal with the admissibility of this document. My question for you is if the witness didn't rely upon it for any purpose here, how is it admissible?

MR. WAGNER: Because the issue isn't whether he relied on it. The issue is whether I can use it to cross-examine him with respect to the 6.75 rate and the 7.2 rate. That's what this is about. These are rates used by public pension funds that are much higher than what's being used here, and Mr. Bowen has already testified -- though he tried to walk away from it, he's already testified that surveys of this type are useful data. And I'd also note that Ms. Kopacz relies on it, and Ms. Nichol relies on it.

MR. STEWART: Then perhaps when those witnesses take the stand, it could be used. This is the sort of cross-examination one uses with an expert witness. The witness did not see -- did not rely upon this. I don't see it is admissible in his examination. And I object as well to the use of evidentiary --

THE COURT: Mr. Stewart, I'm sorry. I need to cut you off and ask you to speak right into the microphone, please.

MR. STEWART: I'm sorry, your Honor.

THE COURT: And you can have a seat while you do that.

MR. STEWART: Okay. I apologize. Sorry. I don't see the relevance that Ms. Kopacz and Ms. Nichol relied on it. That means nothing. This witness, unless he is deemed an expert, should not be examined on matters he did not rely on. This would be for an expert something he could be asked, but I thought Mr. Wagner said he's not treating the witness as an expert.

MR. WAGNER: I'm just posing him questions on something that he believed is -- he said himself is relevant.

THE COURT: The objection is sustained.

BY MR. WAGNER:

Q Now, sir, in your November 2013 letters, you used a rate of inflation of two and a half percent; correct?

A That is correct.

Q And using a two and a half-percent rate of inflation, you came up with a 7.2 percent return; correct?

A Yes.

Q And if the rate of inflation were three percent, the rate of return would have been closer to 7.7 percent; correct?

A Yes.

Q And I'm right that there are lots of Milliman plans that use rates of inflation higher than two and a half percent;

isn't that true?
A There are.
Q I'm right L.A. County uses an inflation rate of 3.45 percent?
A I imagine you have it in a survey somewhere. I don't know that off the top of my head.
MR. WAGNER: Your Honor, may I show him Exhibit 103 -- 1040, which has been admitted into evidence and the city hasn't objected to?
BY MR. WAGNER:
Q Can you turn to Exhibit 1040? Actually, why don't we use 1036? I think it's a little bit easier. Sir, L.A. County, that's -- you look -- it's supposed to be alphabetical, but I guess it's alphabetical by state, so L.A. comes under -- comes after Arizona on the first page. Do you see that? L.A. County, you see that?
A Yes, I do.
Q That's a Milliman -- Milliman is the actuary for that plan; right?
A Yes, we are.
Q And there the rate of return is 7.7 percent; right?
A Correct.
Q Inflation rate is 3.45 percent; right?
A Both as of June 30, 2011; correct.
Q Okay. California Teachers, is that another Milliman --

is that another plan for which Milliman is the actuary?

A Yes.

Q Okay. And there the rate of inflation used is 3.5 -- is -- I'm sorry -- three percent?

A Correct.

Q And the rate of return is seven and a half percent?

A Yes.

Q By the way, do you happen to know the funded status of that plan?

A Of California Teachers?

Q California.

A I do not.

Q Would it surprise you if it was about 67 percent?

MR. STEWART: Objection, your Honor.

THE COURT: What is the objection?

MR. STEWART: "Would it surprise you if."

THE COURT: Yeah. His surprise is of no relevance. The objection is sustained.

MR. STEWART: Okay.

BY MR. WAGNER:

Q Can you turn to Florida RS? Is that another Milliman plan?

A Yes, it is.

Q And there the rate of inflation used is three percent?

A As of 7-1, 2012, yes.

Q Idaho, is that another Milliman plan?
A Yes.
Q Rate of inflation there uses 3.25 percent?
A As of 7-1-12, yes.
Q Okay. New Jersey Teachers, that's a Milliman plan, is it not?
A Yes, it is.
Q And the other -- the inflation rate used is 2.75 percent, is it not?
A As of 2011, yes.
Q Okay. By the way, that's a pension plan that's serviced from your office, is it not?
A Yes, it is.
Q And by my math, five plans out of the 126 listed here use an inflation rate of about two and a half percent. Is that -- is your math the same as mine?
A I have not looked through the survey exhaustively, so I don't know the answer to that.
Q Well, can you turn to Exhibit 1040, which arranges the plans based on the rate of inflation? Can you count how many use an inflation rate of two and a half or less?

MR. MONTGOMERY: If I may --

THE COURT: No, you may not. If you want to, you can step forward and approach a microphone.

MR. MONTGOMERY: Your Honor, this is not an unobjected to exhibit, and I just wanted to make the record clear that the Retiree Committee had objected to the admission of 1040.

THE COURT: Oh, well --

MR. WAGNER: Well, it's a little bit late for that. I mentioned that the city didn't object to it, and I never heard anything from the back.

THE COURT: Was it admitted?

MR. WAGNER: I think you admitted it.

MR. STEWART: Yes, your Honor. You admitted it.

THE COURT: 1040 was admitted. All right.

MR. WAGNER: Okay.

BY MR. WAGNER:

Q Do you see that there are five plans out of the 126 listed here that use a rate of inflation of two and a half or less?

A On Exhibit 1040, I see seven back in the time frame 2010 to 2012.

Q Okay. So seven out of 126; right?

A If there's 126 here, then yes.

Q Okay. That's about -- well, you're the actuary, but that's about six percent or so; right?

A You're in the ballpark, I'm sure.

THE COURT: I think we've got enough percentages to deal --

MR. WAGNER: Okay.

THE COURT: -- with without having to worry about that one.

MR. WAGNER: That's fine.

BY MR. WAGNER:

Q Let me move to another subject, sir, ASF. Now, you were asked some questions on direct about ASF. Do you recall that?

A Yes.

Q And I'm right that in calculating from an actuarial point of view the amount of actuarial liability for a pension fund, you would include the amounts that are due under the relevant plan?

A Yes.

Q And you would not include benefits that are not included under the plan?

A Correct.

Q Now, Milliman has done some work on ASF; right?

A We have.

Q And we saw before that the unfunded liability calculated by Milliman for GRS was about 1.879 billion; correct?

A I believe that's the figure.

Q Okay. And that figure includes an amount of ASF; right?

A The system has liability for both the pensions and the ASF.

Q And you understand that there's an issue with respect to ASF; correct?
A I do.
Q You understand that there were benefits presented to you that were labeled as excess credits, right --
A We were provided --
Q -- excess interest credits; right?
A We were provided with that information.
Q And you understand the city is looking to recoup a portion of those benefits; correct?
A Yes.
MR. WAGNER: Nothing further, your Honor.
THE COURT: Thank you. Any other cross-examination of the witness? Redirect.
MR. STEWART: Just very briefly.

REDIRECT EXAMINATION

BY MR. STEWART:
Q First of all, here's your glass of water. You were just shown Exhibit -- gosh, looks like 1036 -- and various inflation numbers. Do you remember those questions a few moments ago?
A Yes.
Q And you, in your answer, mentioned the dates of some of those entries went back to 2011 or times a couple of years ago. What change has there been in recent years in terms of

assumptions actuaries use about inflation?
A Well, I can speak specifically for Milliman. Our return was 2.75 percent in our capital market assumptions model prior to being reduced to 2.5. I don't recall the exact date that our committee made that determination, but to address your specific question more broadly, there has been a decrease. The trend -- the general trend in recent years has been a decrease.
Q Why?
A Again, I can't speak for the entirety of the industry, but market interest rates have been low. Inflation has been low. And to the extent that those recent experiences get factored into forward-looking expectations, they're -- the market is putting a lower price on inflation now than they were several years ago is the best way to sum it up.
Q Let me ask you just briefly about this investment return assumption that you were questioned about. The investment return assumption represents what exactly?
A In these surveys that we've been looking at, these are the --
Q No. Just in terms of the --
A Okay.
Q -- city's plans, not the surveys.
A In terms of the city's plans, the investment return assumption is used to discount the expected future cash flows

to be paid from the plan to determine a present value.
Q And in terms of the city's agreement with the plans, the investment return assumption also represents a certain commitment by the city, does it not?
A I'm not sure I fully understand that.
Q Well, let me ask it better in that case. These are defined benefit plans?
A Correct.
Q If the rate of -- if the investment return falls below what the investment return assumption is, what is the exposure of the city?
A Thinking back to the analysis we did earlier where we were asked to determine specific targets, if the interim period between now and the target date -- if experience is not -- if experience is less positive than expected, the city will have a larger exposure 2023 forward.
Q Fair to say that the investment return assumption from the city's point of view represents the city's agreement on the level of risk it is prepared to take on this obligation?
MR. PEREZ: Objection, your Honor. Leading.
MR. WAGNER: Objection. Yeah, leading --
MR. STEWART: I'll reask it.
MR. WAGNER: -- and argumentative.
THE COURT: The objection is sustained twice.
MR. STEWART: And it was only one question.

BY MR. STEWART:
Q From the city's point of view, what does the investment return assumption reflect in terms of the city's risk?
A The way it was communicated to me originally was the city --
MR. BRILLIANT: Objection, your Honor. Hearsay.
MR. WAGNER: Yes, yeah. It's hearsay.
MR. STEWART: Oh, I think by now that door, your Honor, is off the hinges much less wide open.
MR. WAGNER: No, your --
THE COURT: The objection is sustained.
BY MR. STEWART:
Q Okay. From the standpoint -- put to one side what the city communicated to you, simply as somebody who works with these numbers. From the standpoint of the sponsor of the system, what does the investment return assumption reflect in terms of the sponsor's risk?
MR. WAGNER: Objection. Foundation.
THE COURT: Overruled. Go ahead, sir.
THE WITNESS: Let me try to phrase it this way. The investment return is the hurdle rate that you have to hit in practice year over year. To the extent you do better, the plan sponsor is the recipient of that positive experience. To the extent you do worse, the plan sponsor has to continue to fund the plan and actually increase the contributions to

the plan to make up for that shortfall.
BY MR. STEWART:
Q And in this calculation, what is the lower rate of risk, a lower investment return assumption or a higher investment return assumption?
A Yes. A lower investment return assumption gives you a lower hurdle to hit in investing your assets.
Q And a lower risk in terms of future contributions from the city?
A Lower risk of volatility in contributions, yes.
MR. STEWART: Thank you. That's all I have, your Honor.
MR. WAGNER: Your Honor, just a short --
THE COURT: Yeah. Go ahead.
MR. WAGNER: -- recross.

RECROSS-EXAMINATION

BY MR. WAGNER:
Q Do you understand that under the plan if the rate of -- if the returns exceed 6.75 percent, that money goes to the retirees? Are you aware of that?
A I understand there's a provision for that.
Q And you understand that an investment return assumption that is too low will overstate liabilities?
A Oh, I thought you said lower state. You said overstate?
Q Yes, overstate.

A Okay.
Q You want me to read it again? You want me to pose it to you again?
A If you would, please.
Q Am I right that an investment return assumption that is too low will overstate liabilities and costs?
A If you have a definition of "too low" and are asking that in a general sense, I could agree to that's the way the math works.
Q And in preparing the November 4 letters, am I right that you didn't do an analysis of the historical rate of return for GRS and PFRS, did you?
A We did not.
Q And you didn't take into account that in most years GRS and PFRS actually exceeded their rate of -- their expected rate of returns, did you?
A That was not taken into account in our specific November analysis.
MR. WAGNER: Thank you.
THE COURT: Nothing further, sir?
MR. STEWART: Nothing further.
THE COURT: All right. I have some questions for you. Addressing the investment return assumption, is there one correct assumption that should be applied like everywhere, or is it fair to say that there is an acceptable

range of such interest rate assumptions?

THE WITNESS: Well, to specifically answer the first part of the question, I would say there is definitely not one assumption, and I would say to the second part of your question we believe there is a range of reasonable assumptions, but that is not an absolute range. It's a range which varies by plan.

THE COURT: What are the factors that impact where within a range -- one second -- where within a range a pension plan would choose its investment return assumption?

THE WITNESS: Certainly. In Actuarial Standard of Practice 27, which deals with selection of investment returns, the concept is that when the actuary gets done or the investment consultant gets done with doing their mechanics, which I can describe further if you would like, we should recommend a range in which the expected rate of return is more likely than not to fall, so the results of our capital market assumptions model where we can take a specific systems asset allocation and use it as an input to develop a range of outputs will develop percentiles, and so we'll look from the 25th percentile where three out of four times we think we'll hit that hurdle and we'll go up to the 75th percentile, which one out of four times we'll hit that. In between those two end points is a 50-percent range centered around the median expected return, and from the perspective of the standard, when we recommend it in just that fashion, we recommend to the sponsor that is our expected range based upon your particular asset allocation. Where the plan sponsor decides to fall within that range would be dependent upon their tolerance for risk.

THE COURT: And that issue, the issue of the sponsor's tolerance for risk, is that something that the actuary makes a recommendation or even gets involved in helping the client to assess?

THE WITNESS: That's not something that the actuary recommends, and from the perspective of assessing, I would not say it's typical for an actuary to assess a plan sponsor's budgetary ability to handle volatility, but what -- I mean the way that I would approach this is if you think back to the tank that we had on the earlier demonstrative, lowering an investment return assumption would cause a higher measure of liability currently, which would increase current contributions, the "C" that was going into the tank, with a lower hurdle of "I" in the future, so we could explain to plan sponsors, as we did for the city -- we ran several different investment return assumptions to illustrate how sensitive the results were, and the lower -- to oversimplify, but the lower "I" that you choose, the lower investment return you assume you're going to have over time, the more cash you may put in up front, but the much more likely you are to hit your targets over time, and vice versa all of that would be true as well.

THE COURT: So is it the role of an actuary for a plan sponsor ever to say to the sponsor under the guidelines that we, as actuaries, use, you should not use the investment return assumption that you have chosen to use?

THE WITNESS: I would say it's close to that, not exact. The plan sponsor -- the trustees for the system are free to choose their rate of return. To the extent that we feel it's outside our reasonable range, we have a responsibility to disclose that.

THE COURT: Did you ever say to the city here that the city and this pension plan should not choose 6.75 percent?

THE WITNESS: We did not.

THE COURT: In the beginning of your testimony, you mentioned what your credentials were.

THE WITNESS: Yes.

THE COURT: Can you state for the Court what you had to do or what you had to demonstrate to get those credentials?

THE WITNESS: Sure. The first one I would have mentioned is fellowship in the Society of Actuaries, and that is the -- one of their significant roles is examinations and continuing education, so a credentialing organization. The examination process is several years in length. It took me five or six years to get through the process. Having a master's degree, I would characterize the fellowship process as PhD level. It was significantly more intense.

The other examination credential I mentioned is the -- I'm an enrolled actuary under ERISA, and that's what's known as the joint board of the Department of Labor and Treasury administers examinations for actuaries who want to practice in private pensions and assist the plan sponsors in filing their various governmental forms.

THE COURT: Um-hmm. You mentioned that you had, I think you said, half a dozen publications.

THE WITNESS: Yes.

THE COURT: What was the name of what you consider to be your most important publication, and where was it published?

THE WITNESS: I'm not sure I could really say which one was the most important from a personal perspective. Well --

THE COURT: Well, then pick one.

THE WITNESS: From a personal perspective, I wrote an article on GASB 45, which is an accounting standard that came into place about ten years ago for governmental retiree healthcare plans, and I practice significantly in that area as well as pensions, so that one was very important to me personally.

THE COURT: And where was that published, sir?

THE WITNESS: That was a Milliman publication for our clients and general consumption.

THE COURT: Okay. All right. Anything further questions for the witness?

MR. WAGNER: Nothing further.

THE COURT: No? All right. Sir, you may step down, and you are excused.

THE WITNESS: Thank you.

(Witness excused at 12:04 p.m.)

THE COURT: We'll break for lunch now until 1:30. Mr. Cullen.

MR. CULLEN: Over the smaller break we got a start on our homework with respect to the Court's concern over the objections and the schedule with respect to those objections, and I think that I can say that we are in agreement that if, first, they would agree to file their objections on Friday and we would file our objections on the following Friday --

THE COURT: File your responses?

MR. CULLEN: File our responses -- sorry -- on the following Friday. During that period in between those Fridays we would do any factual depositions or discovery that we agreed on during that period. They would file their expert -- an expert report responsive to any changes affected by the Syncora agreement at that next Friday.

MR. PEREZ: No.

MR. CULLEN: No?

MR. PEREZ: The following Monday. Next Friday is Rosh Hashanah.

MR. CULLEN: Oh, the following Monday. And then that expert -- the expert depositions with respect to that would go on while the trial was going on. In order to get that objection work done, what the objectors would like to have happen is that they would like to do as much as we could do through Thursday night this week, not have trial hearing days next week, and start full bore on the next Monday, and specifically with respect to doing as much as we could do, that would absolve us of any break in the testimony, for instance, of Mr. Malhotra or Mr. Orr while the objection process was going on, so that seemed all sensible to us.

The thing that we remain somewhat at odds upon is the issue of the additional expert to replace Mr. Murphy, the expert on the subject of employee motivation. I had interpreted the Court's rulings with respect to the first and second aspect of the procedural concern to subsume the idea of Mr. Murphy on the following reasoning, that on other instances, for instance, on the art, when FGIC wanted their own expert, they hired their own expert or provided for an expert on that subject. That has not been done with respect to Mr. Murphy, so we would retain -- we disagree with respect to the need to schedule or to do things with respect to an additional expert to replace Mr. Murphy, but, as we told them, if the Court feels otherwise and there is an additional expert, we will agree to a schedule for that.

THE COURT: I do. I think FGIC should have the opportunity at this point to retain its own expert.

MR. PEREZ: And, your Honor, we've already talked to -- Mr. Soto has already talked to him this -- I'll sit down -- over the weekend, and the reason we picked the Monday, 29th, date for an expert report is because I think that's what they indicated they would need for an expert report.

MR. CULLEN: If that is the Court's clarification, then I think the city would agree to let them use Mr. Murphy, and we will depose Mr. Murphy in the course of either next week or the week thereafter.

MR. PEREZ: That's even better.

MR. CULLEN: Is that --

MR. SOTO: In other words, just if I'm understanding that, we'll stay with Murphy. We just have him deposed. That's fine, your Honor.

THE COURT: Okay. So let me ask the parties here to memorialize --

MR. CULLEN: Yes.

THE COURT: -- this agreement into a stipulation. I didn't quite understand from your presentation when we would actually be resuming testimony in this scenario.

MR. CULLEN: End of the day Thursday we stop. The -- a week -- the succeeding Monday we start, which I believe is the 29th.

THE COURT: It is.

MR. PEREZ: And, your Honor, this is all on the assumption that we actually get the plan tonight. I mean, that -- if --

THE COURT: Yeah. I was going to -- I was going to clarify that, too. Is there any issue about that as to --

MR. CULLEN: Not to the best of my knowledge, your Honor, but I'm pledging others' labor on that, so -- there's one other --

THE COURT: He wants to say something to you.

MR. CULLEN: Yes. There are a couple of things that may happen as a result of this with respect to the order of witnesses. In particular, we've talked about taking some of the witnesses out of order with sufficient notice if we --

THE COURT: Right.

MR. CULLEN: -- allowing us to accommodate this schedule. There's one other caveat for the Court. I received a note from Mr. Chiara, who is listening over the phone, who said that he wanted to be included in our meet and confer on this. On the idea that it wasn't actually a meet and confer and he wasn't on the motion and time runs, I thought we would present this to the Court, but I don't mean to prejudice Mr. Chiara.

MR. PEREZ: Your Honor --

MR. CULLEN: DeChiara. Sorry.

MR. PEREZ: -- he does raise a good point because I forgot what date we were supposed to set aside for Mr. DeChiara, and we don't want to disturb that. And it may have been the 29th or the 30th. I'm not sure.

MR. CULLEN: I think it's the 30th.

THE COURT: Well, let me ask you to --

MR. CULLEN: Sorry.

MR. PEREZ: We can work --

THE COURT: -- dive into that over lunch, and we can clarify it.

MR. CULLEN: Okay.

MR. WAGNER: More short term, at 1:30 are we addressing anything left first with respect to Ms. Kopacz?

THE COURT: Yes.

MR. WAGNER: Is that still on for 1:30?

THE COURT: The Court intends to first examine Ms. Kopacz itself regarding issues affecting her qualifications and methodology, and we still have the Retiree Committee's motion that's outstanding, and so I want to give them an opportunity to question her as well. And we still have to clarify what's happening with the Macomb County objections as well, so, anyway, we've used up enough time that we're going to push our start till 1:40.

MR. PEREZ: Thank you, your Honor.

MR. CULLEN: Thank you, your Honor.

MR. STEWART: Thank you, your Honor.

THE CLERK: All rise. Court is in recess.

(Recess at 12:11 p.m., until 1:40 p.m.)

THE CLERK: All rise. Court is back in session. You may be seated. Recalling Case Number 13-53846, City of Detroit, Michigan.

THE COURT: Looks like everyone is here. Please stand by one moment, please. Okay. So on the matter of the Macomb County objections, do we need to argue the issue that the Court set for hearing today, or can we just say that we're done with that?

MR. BRILLIANT: Your Honor, Allan Brilliant on behalf of Macomb County by and through its public works commissioner, Anthony Marrocco. We believe, your Honor, that the issue is now, you know, moot and that there's no reason to have argument on it.

THE COURT: What's the city's position on this?

MS. LENNOX: Good afternoon, your Honor. Heather Lennox of Jones Day on behalf of the city. We believe, in light of the withdrawal of the objection, even though it was not withdrawn with prejudice, as long as it remains withdrawn, we can avoid arguing the matter before your Honor today. Should it be refiled, however, we would have to take it up.

THE COURT: Okay. All right. The Court will consider that matter resolved then and won't conduct any further argument on it.

MR. BRILLIANT: Thank you, your Honor.

THE COURT: Okay. Let's turn our attention to the matter relating to the Daubert motions for Ms. Kopacz. I may have misspoken before the lunch break and suggested that the Retiree Committee had filed a motion. It was not the Retiree Committee. It was the Retirement Systems. My apologies for that mixup. Ms. Kopacz, are you here? Step forward, please. Slide all the way through, if you can, and we'll get you on the witness stand. Please raise your right hand before you sit down.

MARTHA E.M. KOPACZ, COURT'S WITNESS, SWORN

THE COURT: All right. Please sit down. All right. Is there any objection if the Court proceeds with its examination and then opens it up to others for their examinations of the witness?

MR. STEWART: No objection.

MS. GREEN: No objection other than we are not going to argue the motion first. We're going to do that after the testimony or in the middle or --

THE COURT: Well, I -- well, we're going to have -- we would have argument after the testimony in any event, so I would just prefer to defer until then.

MS. GREEN: Okay.

THE COURT: Okay.

DIRECT EXAMINATION

BY THE COURT:

Q What is your name?

A Martha Ellen Middleton Kopacz.

Q And what city do you live in?

A I live in Norwell, Massachusetts.

Q And where are you currently employed?

A I am employed with Phoenix Management Services in Boston.

Q And what kinds of work is Phoenix typically retained to perform?

A Phoenix Management Services and its affiliated companies are advisors to operationally and financially troubled organizations. We also do investment banking and transaction advisory work.

Q And what is your title at Phoenix?

A Senior managing director.

Q And what are your responsibilities in that position?

A I am a member of the senior partnership group of the

firm, and I service clients and promote our services to nonclients. I write and speak and supervise staff.
Q What is your understanding of your assignment in this case?
A My understanding of my assignment is to serve as your independent expert and to fulfill the order you signed appointing me to render an opinion on the feasibility of the plan of adjustment for the City of Detroit and to render an opinion on the reasonableness of the assumptions that underlie the revenues, expenses, and the plan payments.
Q And did you fulfill that assignment?
A I did.
Q Before we get into the issues here --
A Um-hmm.
Q -- I want to make a complete record of our communications.
A Okay.
Q First, did I ever state or suggest or imply what I thought your opinions should be on the issues that I presented or assigned to you?
A No, never.
Q Did I ever state, suggest, or imply the principles or methods that you should use in this assignment?
A Not at all.
Q In fact, have we ever discussed your conclusions and

opinions in this case?
A No, never.
Q Have we ever discussed the substance of your work in any way?
A Not at all.
Q Did we have a conversation about what your testimony will be at this hearing?
A We had a conversation about this hearing, not what my testimony would be.
Q What did we discuss?
A We discussed the logistics for today and that you would be asking me questions, and that was really it. Oh, and whether or not my attorneys could be here.
Q Did I e-mail to you the questions that I'm going to ask you today?
A You e-mailed me a list, yes.
Q What is your understanding of why I did that?
A I'm not really sure other than to maybe help me focus my preparation.
Q And did I request that you provide me comments or feedback or suggestions regarding my questions?
A You said I could if I wanted to.
Q Did you do that?
A I did not.
Q Did we have any discussion about what your answers to

these questions would be or should be?
A No.
Q Did you keep a contemporaneous log of all of your communications with me and my office?
A I did.
Q What is your understanding of why we are here today and what this hearing is about?
A We're here today because the Retirement Systems have an objection, and I don't mean that in a legal sense, but there are a couple paragraphs in my report that they really don't like.
Q Okay. You understand that other parties, FGIC and Syncora, had also filed motions challenging your qualifications or methods --
A Yes.
Q -- and that those have since been withdrawn?
A They have been, yes.
Q Okay. Only because those questions were raised, I intend to address those issues here today even though no one is pursuing those issues.
A Okay. That's fine.
Q Do you understand that today is not the day for you to testify about your opinions and the grounds for them? It is just to determine whether your opinions are admissible under the criteria for the admission of expert testimony in Rule

702 of the Federal Rules of Evidence?
A I understand the first part of that. This is not my -- this is not my testimony as to my opinion. In terms of what I did or didn't do, I know that there were objections raised to not doing enough or doing too much or something like that.
Q Okay. So let me review Rule 702 with you. It says, "A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion if: (a) the expert's scientific, technical, or specialized knowledge will help the trier of fact to understand the evidence or to determine an issue; (b) the testimony is based on sufficient facts or data; the testimony is the product of reliable principles and methods; and the expert has reliably applied the principles and methods to the facts of the case." So I want to review each of these criteria with you carefully and then the specific issues raised in the motions that challenge your qualifications or methods --
A Um-hmm.
Q -- so that I can determine whether your opinions are admissible. So let's begin with your knowledge, skill, experience, training, or education. What is your education?
A I have a bachelor's of science in business from the Kelley School of Business at Indiana University with a concentration in marketing, and I have a master's of business

administration also from the Kelley School with a concentration in finance and investments.
Q Um-hmm. And what continuing professional education have you participated in since then?
A Since then most of my career I have been a consultant in a public accounting firm, and I've also been certified professionally since shortly after I got out of graduate school, so I have had a 120-hour requirement every three years, so on average 40 hours a year, so I've probably done somewhere between 1,200 and 1,500 hours of continuing ed in my career.
Q And what is your employment history?
A After graduate school, I joined a firm called Peterson & Company in Chicago. It was a spinoff from Arthur Andersen. I was there for nine years in Chicago, New York, and Boston. I left Peterson in 1990 and joined Price Waterhouse, and I was at Price Waterhouse through the merger with Coopers, through the sale to FTI Consulting, and I left FTI in 2003. I joined Alvarez & Marsal. I was recruited by them to start their public sector not for profit practice, and I was there until March of '06 when I was recruited by Grant Thornton to start their United States corporate restructuring practice, and I stayed at Grant through just about the end of 2011. I intended to take a sabbatical, but I ended up with some clients hiring me individually when I left, so I formed Brant

Point Advisors and continued to serve clients on a much smaller scale and on a part-time basis until I joined Phoenix about a year ago.

Q Do you have any licenses or certifications?

A I do. I'm a certified management accountant, and I'm a certified insolvency and restructuring advisor.

Q And how did you achieve those certifications?

A Certified management accountant is very similar to a CPA except most of the people that hold it are inside corporate accounting and finance as opposed to public accounting. I sat for the exam shortly after I finished graduate school, and then I think there were some experience requirements, and then I was licensed after that.

Q And who grants that certification?

A It is the association of certified management accountants. It's like -- again, it's a trade -- I would say it's a trade organization like the AICPA or something like that, and so that's -- I immediately got into continuing education requirements as a result of that. And then the CIRA, I don't recall exactly when that certification was promulgated, but it was a group of industry professionals sometime back in -- I'm guessing the late '80s, the early '90s, who wanted to add some rigor to our restructuring advisory practice, and I was part of that group with Grant Newton that was part of the first group certified in that.

Q Do you have any publications?
A I don't have any publications, but I've written some articles, so most recently for the ABI Journal a couple months ago.
Q What was that on?
A That was -- and they changed the title, but it was along the lines of the missing link in successful restructurings, and it was really a piece about how important the management skill set and the talent is. It's not just the liabilities and the assets and how the numbers all work together, but it's really about the people that are going to be in charge once all of the professionals leave.
Q Do you have any professional affiliations or memberships?
A I do. I'm a fellow of the American College of Bankruptcy in the twelfth class, so a long time ago. I am a charter member of the Turnaround Management Association. I'm a charter member of the -- of IWIRC, which is the International Women's Insolvency and Restructuring Confederation. I started that chapter in Boston many years ago. I'm a member of the ABI, 25-plus years with that. INSOL, and then the rest of it is all more civic and whatever, but those are the main professional associations.
Q Have you held any positions of leadership within those organizations other than what you've already described?
A Yeah, I have, and the only one right now is I'm on the

admissions committee for Circuit American College.
Q Other than the American College of Bankruptcy, any other professional honors or recognitions?
A I've received some service awards from the Legal Aid Society in New York and from Judge Kaye in the State of New York. I received some recognition from the National Women's Conference, but, yeah.
Q Okay. Focusing now on your work in private sector business cases --
A Okay.
Q -- please describe for us your experience in serving as an expert either in bankruptcy cases or in out-of-court business workout situations and identify some of the relevant and significant cases and your assignments in them.
A Okay. The very first expert testimony I gave was back in the mid-'80s in Louisville, Kentucky, in front of Judge Roberts in a case called Belknap. It was a hardware chain distributor and retailer, and that was testimony around insolvency preferences, fraudulent conveyances. And there were a lot of cases filed -- individual adversary proceedings, so I probably testified before Judge Roberts I would say 15 times, something like that, really early in my career. And then sometime again I'm thinking more into the '90s I was retained in a matter called Healthco. Originally, the bankruptcy was in front of Judge Queenan, but the case

was tried in District Court in Massachusetts. It was about a fraudulent conveyance, whether a leveraged buyout would be a fraudulent conveyance. And I testified about the projections and the assumptions that the company, its investment bankers, and its accountants had made at that time. Also about the same time I testified in Tennessee in a case called Tennessee Hotel Associates, and I don't -- it was in Chattanooga, but I know the judge has retired since then, and I don't recall his name. That was a valuation case and some discussion around reasonable value of use and occupancy and the like. And then the last expert testimony prior to this occurred in late '95 or early '96 in front of Judge Cristol in Tampa in a case called Lykes Brothers Steamship, and it was about the condition of the debtor and its prospects for reorganization. So those are the only cases that I've actually testified in as an expert as opposed to a fact witness in Bankruptcy Court, and while I have been retained to be an expert in some other matters, I've never testified in court.

Q Um-hmm. In approximately how many of these kinds of matters have you worked where you didn't actually testify, where you were just a consultant or another kind of witness?

A I have -- I've participated in over a hundred restructurings in my career, and I've really stopped counting even though I keep a list of them to this day, and the -- and, again, my very first consulting engagement was the bankruptcy of a public accounting firm in Chicago in April of 1982. And I just got involved in the business at that point and have continued to this day, so I've done -- I would say probably half have been in court and about half have been out, and about half of them are debtor company organization side, and about half are another -- you know, a creditor constituency, a bank, a bondholder.

Q Approximately how many of them involved evaluation on your part of the debtor's plan?

A I counted them last night, and there are 29 that are -- in which I evaluated the company's plan in a formal context either in court or out of court but in a formal restructuring context and about 22 that I prepared.

Q Do you have experience -- or what experience do you have in evaluating executive leadership in the context of evaluating the feasibility of a business or a municipal restructuring?

A In every case, whether I've been involved in preparing the projections in the plan or evaluating the projections in the plan, I evaluated management and their ability to carry out that plan.

Q Um-hmm. And why did you do that in each and every case?

A Because I believe that the plans, no matter what the numbers say, they're predicated on having people in place who can deliver.

Q Okay. You did work for the Nassau County Interim Finance Authority?
A I did.
Q What was that work?
A I was retained by the Interim Finance Authority. We called it NIFA. It is a state control board that was put in place now probably 12 or 13 years ago when Nassau County got into financial difficulty. I was retained in -- I'm thinking -- I'm thinking back -- maybe 2010, early '10 or '11 when it was clear that the deficit in Nassau County was at a point where it was challenging the viability of the county, and the control board had the power under the state statute to take control and to freeze wages and to, in essence, take the checkbook. That required a finding by the control board that the county was insolvent or likely to become insolvent. There was a significant difference of opinion between the county executives and the NIFA staff and the NIFA board as to whether or not the county was structurally in a deficit position, and I was retained at that time to advise NIFA on whether or not a control period could be instituted. So the first part of that work was really to look at not only the annual budget through -- which was June, and I think I got involved in July after the budget had been issued, and they do three-year budgets there, but to look at those three years as well as to look at some of the prior budgets in terms of

how the county had accounted for certain revenues. And then I provided a written statement to the control board with my findings as to what I believed the deficit was and whether or not the county had the ability to do anything to get out from under that deficit. That was the first part of it.

And then the second part of NIFA was during that control period, we undertook a really kind of top to bottom operational and business review of the county to identify opportunities to reduce costs, improve services, make things more efficient, and we did that through the lens of looking at it on a time frame, what could be done in 90 days, what would take a year or more, what would take three to five years, so that there was a time frame, and we also looked at with all of those initiatives, which ones impacted collective bargaining agreements, which ones could be executed without collective bargaining negotiations, and we did the same thing and looked at those relative to legislation charter issues and whether or not you would need enabling legislation to do some of these things, so --

Q Did that work involve any evaluation on your part of any pension-related issues?

A Yes, although pension is not as big of an issue in New York because the pensions are funded, in essence, by the state, so if you don't make your pension contribution, the state simply withholds aid so that they get paid, so they were not in as unfunded position as many other states and municipalities.

Q What was your work in that case as it related to pensions then?

A We looked at the -- what we expected to be the future funding requirements over the next few years relative to were they going up, were they going down, and -- because the state had given -- had made some accommodations over the last few years, which reduced the amount of contributions that Nassau County had to make and when did we have to make those catch-up payments.

Q Did that work involve evaluating on your part the accuracy of the county's revenue forecasts?

A Very much so, yes.

Q What was the county's annual budget, if you can recall?

A Just about $3 billion. If it were a state, it would be the tenth largest state in the country, tenth -- I mean tenth -- there would be ten states in this country that are smaller than Nassau County. Sorry. I said that backwards.

Q And have you done work for the Legal Aid Society in New York City?

A I did.

Q What was that work?

A In 2004 and 2005 I served as the interim president and the chief restructuring officer of the Legal Aid Society in

New York.

Q And what were your responsibilities in that role?

A In that role Legal Aid was about 150 years old at the time, $150 million budget of which about 130 million are funded by the State of New York and the City of New York. The society was operating at a deficit although didn't really know how much because there had been some embezzlement and some intentional falsifying of records by the former CFO, so while I was serving in those capacities -- and there was an attorney in chief who handled the legal work obviously because I couldn't do that, but in terms of restructuring, we did a complicated out-of-court restructuring in which we had to renegotiate both of our union contracts. The first one was with the SEIU, who had the collective bargaining agreement with our paralegals, our social workers, our clerical people, and then with the UAW, who was the collective bargaining agreement with our lawyers, so we had to do -- we had to renegotiate those. We did a top to bottom strategic plan, did a lot of cost cutting, did some fund-raising, renegotiated leases, consolidated real estate. We froze the existing pension plans and renegotiated with the unions new pension programs going forward moving from a defined benefit into more of a defined contribution mode. What else did I -- oh, my gosh. We ended up taking about $65 million of liability off the balance sheet and getting the society from losing arguably a million plus a month to better than break even.

Q Are there any other nonprofit or municipal assignments that you've had that you think may have assisted you in preparing for the work in this case?

A Yeah. There's one other, and it was a private out-of-court restructuring in which I represented seven transit authorities, including MTA in New York, MBTA in Boston, CTA in Chicago, Minneapolis, Dallas, San Francisco. I'm forgetting somebody. I'm forgetting a couple. Anyhow, had an opportunity to work with the finance and budgeting teams from each of those transit authorities in terms of working with their annual development of revenue, so --

Q How would you say that that work helped you in this case?

A It really helped me when I was looking at the DDOT deficit in this case, right, because DDOT -- DDOT is unique in that it's an enterprise fund operation, but because it operates at a deficit, it has to be funded by the general fund, and that's really helpful. It also -- I think anytime -- in all of those cases, we're looking at the projection of revenues. Similarly, with Legal Aid, we're very involved with the city and the state in terms of how they were budgeting for our work and how we were getting authorizations through the council and the legislature, so --

Q Focusing again on your work for the Legal Aid Society in

New York, you mentioned that you did some work on their pension issues and that when you went in, there was a defined benefit pension plan; is that right?
A Yes.
Q What was your work specifically in evaluating that, that situation?
A Yeah. The first thing that I realized was that because -- the Legal Aid Society is a not for profit, but because it's not a public entity, it is subject to ERISA laws, so there were going to be cash funding requirements that -- some of which hadn't been made as timely as they should have been in the past, but it was going to be a significant crunch for the society to make those, so I reached out to the society's actuaries. And one of the unique things about Legal Aid is I had 17 law firms on retainer on a pro bono basis, and we had 1 firm who was really, really good in pensions, so I asked them to get involved and to look at our options for how to do -- to figure out how we were going to be able to do this. We also got involved -- I also got involved immediately with the unions because there was a union plan. There was also a plan for our nonunionized workforce which had to be modified as well. And it took probably I would say three or four months of work between the society's pension advisory group, their investment group, the subcommittee of the board that looked

at that, the outside lawyers, and we looked at a lot of options as to how to handle that, and then ultimately we had to negotiate what was the freezing of the plan and putting together a new plan, so --

Q So what was it about your expertise or the scope of your expertise that you felt allows you to work on pensions?

A Well, I mean I have -- I do have an MBA in finance and investments. Okay. So I had educational training in higher order finance concepts. I've been in the restructuring world for, at that point, probably, you know, 20-plus years, having come across pension issues and OPEB issues in the private sector from time to time, having clients who've had to turn their pensions over to PBGC, et cetera. And, quite frankly, pension is the kind of topic that I will never say that I like it, but you can put your head in it, and you can understand it when you have to. It's not -- there's some nuances to it. There's some things that are very complicated about it. But at the end of the day, it's about obligations. It's about investments. It's about finance, and that can be understood by most people as long as somebody is willing to teach you about that.

Q I take it this is the first time you've served as a court-appointed expert?

A Yes.

Q Is there something you need to retrieve?

A   Yes. I just dropped my glasses. I don't know why I have them, but I dropped them.
Q   What would you say has been different about your service as a court-appointed expert in this case compared to your service as experts for parties in prior cases?
A   That's the main -- that's the main difference is I don't really have a client that has a point of view. Every other engagement I've had, whether it involved expert testimony or just advisory work, I've always had a client that had some point of view about something, and so the independent nature of this role has been really very liberating and at some points in time a little unsettling.
Q   Did other professionals in the Phoenix firm participate with you in meeting your responsibilities as the Court's expert?
A   Yes.
Q   Can you please identify them and the specific roles that each played?
A   Yes. Let me go through that. First and foremost is Brian Gleason, who is my partner at Phoenix. Brian has 20-plus years' experience in this business and has done extensive work in the public sector in southeast Pennsylvania, in Philadelphia, in Delaware, in New Jersey, both on an interim management in public sector as well as advisory assessing sorts of things. Brian -- I made Brian be

my client during this engagement, and I made him challenge what we were doing as a team and helping me really think through to make sure that we were following a good approach and being mindful. Brian also helped manage the rest of the Phoenix team because I spent a significant portion of my time, particularly early on, in reaching out to parties of interest in the constituencies here, people that I felt that could help me get up to speed quickly. And so while I was focused on external sources of information, Brian was working with our team making sure that we were getting what we needed from the city, so -- and Brian was probably, along with me, the chief architect of the feasibility definition.

Q Who else?

A Okay. Next would have been Bob Childree. Bob worked with us as a subcontractor, but Bob and I had done the NIFA engagement together and Jefferson County at Grant Thornton. He had been involved in that, although I hadn't been involved in it. He was the former comptroller of the State of Alabama for 20-some years, and, you know, he's a government accounting guy. He's an expert in all of those accounting, finance, financing, budgeting, pensions, operations, ERP systems. Anything that you would put under the responsibility of a CFO for a state, Bob did that, and he did it for 20-some years, plus he's very, very active in the professional government accounting and finance groups. He's just a very wise guy, and he was really helpful. He was the one who helped in the very early part on NIFA in terms of defining what revenue is and how GAAP applies in a government context, so Bob did -- I asked Bob to work on finance, accounting, and IT, clearly areas of his expertise. I asked him to work on pensions, and at various points in time I asked him to help on things like state revenue sharing, so things that were within his domain.

The third member of the team was Al Mink. Al is kind of one our resident geeky CPA, CFA, you know, those kinds of guys, prior experience in the private sector as a CFO. He was the CFO of the Philadelphia Gas Works on an interim basis. Strong accountant, strong budgeter. And he and Bob -- he really worked on all of the areas of finance and accounting and the IT area. Next was Mike Gaul. Okay. Right away I looked at that. And I was going to say Al has -- I forget where his undergraduate degree is. His MBA is from Seton Hall, and he's got a whole bunch of letters behind his name.

And then the next would have been Mike Gaul. Mike has a business degree from Georgetown, done a lot of interim management on the finance and operations side. Mike handled most of the revenue. He handled the revenue that -- most of those revenue items. He worked on pension, did some drafting, some first drafts on those sections, worked with me on blight, and then -- okay. That was Mike. And then -- I'm forgetting some of Mike's areas.

And then there was Kevin Barr. Kevin is analyst -- phenomenal analyst. He's a Wharton grad. He's a CFA. Oh, I know. Mike Gaul is a licensed investment banker, not that he does a lot of that, but he is. Anyhow, Kevin was the person that really understood the ins and outs of all of the plans and the models, so Kevin -- and he worked with Mike on a lot of the other revenue issues and those sorts of things.

And then at the end we added a junior person by the name of Jack Murdoch as we were getting into the report writing, and he basically did anything that Mike or Kevin told him to do. So that was my team.

Q Does your report include any analysis or conclusions that are beyond your expertise or the expertise of your team?

A I don't think so.

Q Are there any other facts that you think the Court should consider in determining whether you are qualified as an expert by your knowledge, skill, experience, training, or education to testify to the opinions that the Court has requested of you?

A I don't think so.

Q Let's turn our attention to the next issue under Rule 702, whether your testimony is based on sufficient facts or data.

A Okay.
Q Do you believe that your opinions are based on sufficient facts or data?
A I do.
Q Take your time and identify as specifically as you can the sources of facts and data that your opinions are based on.
A Okay. They fall into two broad categories, and that -- I guess three broad categories. One would be information that I and my team gathered from interviews and working sessions with people. The second category would be information that we gathered and analyzed from the city or constituencies in this proceeding, and the third would be information that came from parties outside this proceeding. So we -- between when I was appointed and when we issued the report, we participated and conducted over 200 meetings in that time frame. I have met -- we'll just go through this -- the mayor, the emergency manager, their respective staffs. I've met with almost all of the department heads in the city, with their financial people. Most of the department heads also have a finance person. We've met with all of them. Extensive work with E&Y, Conway. I've met with the creditors' lawyers and financial advisors. I've worked with AlixPartners, with FTI, with Alvarez, with Goldin, with Houlihan, had dialogue back and forth with most of the

lawyers that are involved in this case. I've met with the land bank. I've met with the Art Institute people. I've met with benefactors to the city. I've met with the foundation people. I've met with the city council and the chief of staff of the city council. I've met with former city council people. And then my team, some people have been involved in those meetings. A lot of those I've done -- I did on my own, but they have met and worked with almost everybody on the E&Y team, almost everybody on the Conway team. They've also worked with all of the department heads in accounting and finance, so risk management, purchasing, treasury, accounting. They've met with the auditor general. They've met with the assessor, all of the IT people, police, fire, so it's -- it is -- those people provided an enormous amount of information not only as to what the city is doing from rendering services but how those services are delivered and how the costs flow from that, you know. Similarly, on the revenue side, you talk to people in treasury about how monies are collected and the interplay with the county, but they also lead you to documents, and I would say -- I can't even count how many documents we've probably collectively looked at. There is a seven-page list of the tiny -- like five-point font of documents that came to us from the city that came because we asked, not because they were already in the data room. So the city has the data room, and then when we

started requesting more information, they kept a separate list of that and put all that stuff in the data room so that anybody -- so that whatever I had everybody else could have if they wanted. Now, you know, there are parties here that probably don't care about the resumes of all of the department heads, the subdepartment heads in finance, but I care about that, so those are things like -- it's tens of thousands of pages of information. And then the outside information came from the blight task force, Future City's reports, consulting reports, people just voluntarily sending me things. Some of the other experts that you had interviewed sent me information that they had used that they thought would be helpful, so an enormous amount of information. And then sometimes we would go -- it wouldn't be -- we would then go to the city itself to the people in either the departments or the finance and accounting and get really granular data, so --
Q Okay. So who did you or your team talk to relating to the pension issues?
A I had the first meeting on pension with -- it was at Clark Hill, the lawyers for the Systems, and it was Bob Gordon, then two gentlemen who were the general counsels of each system. There was another lawyer that was in and out that I don't recall his name. And those were my first meetings on the pension system. Once I had a good overall

view of kind of what the pension issues were going to be, I then delegated that to Brian Gleason and Mike Gaul and to Bob Childree, and they had subsequent meetings with that same group and then with other people at the city. I reinserted myself in the pension discussions when I met and got to know Dick Ravitch because Dick has some interesting views. We had all -- we had known about Dick through his work before at the Rockefeller Institute and some of those publications, and obviously I relied heavily on Bob Childree's view on pensions and appropriate funding, but, yeah, that was how we did that.
Q Were there any meetings with any of the pension funds' or pensions plans' professionals or their advisors?
A I didn't have -- other than lawyers, I did not have. My staff did with some telephone calls. I don't believe there were any in-person meetings.
Q Okay.
A And there were -- I'm sorry. There were also pension meetings with the city and Jones Day. There were a lot of those.
Q Did you keep a contemporaneous log of all of the people with whom you and the members of your staff communicated in this assignment?
A I would say I did a 95-percent job on my own behalf, and I know that once we decided -- it was a couple of days into it that we decided the team needed to do the same thing, I

think they made a similarly diligent effort to keep that -- to keep those records, and I think between our detailed time records and the contemporaneous log, I think between those two documents, we've got it.

Q And so those logs or that time record have been made available to the parties in the case?

A Yes.

Q Did you keep a list of the documents that you reviewed?

A My team did, and I kept a drawer in my office at the CAYMAC of anything that I looked at that wasn't in the data room or that came from the city, so like my copy of the blight report, my copy of the triennial budget that came from the city, those sorts of things I kept in a big file drawer, and then when we were preparing our exhibit of documents for the report, one of my team members came in and inventoried that.

Q What was the condition of the city's financial information during the time when you were doing your work?

A Again, I think of it in a couple of different ways. When we got involved, the city had financial -- had completed its audits through June of '12, okay, and were working on fiscal '13. However, Ernst & Young had control of cash, so as has oftentimes been my experience with troubled businesses, when the bookkeeping gets out of sync in a time frame or completeness, you go to cash. And the good news with the city is that E&Y has been controlling cash for probably three years now so that you can actually get answers to questions, you know. You can get how many people are on payroll, what does this cost, those sorts of things. The historical records are not timely. It's a concern of mine. I've talked about it. I complain about it all the time. And that's because the information systems are so bad, so it is -- you can get the answer -- you can get an answer that I believe is truthful and accurate from the city. It'll just take you awhile, and you have to go find someone who knows how to pull it out of the awful bookkeeping and information technology systems, so I mean it's -- they're bad, but they're no worse than what I'm -- what I see in other places.

Q Well, that's my next question. Is it common for an entity in need of financial restructuring or experience problems -- to experience problems in providing adequate data to an expert who is asked to evaluate its projections?

A Almost never -- and I have one client that I've had recently that this is not true -- almost never does a client or a party, you know, a debtor or a debtor in waiting have adequate information that they can give to you on a real time basis; right? It's just --

Q DIW.

A DIW, debtors in waiting. And they just -- it's never -- it's not timely. It's where they cut staff. It's where they don't pay attention. It's always a mess.

Q Did anyone from whom you requested information withhold that data from you?

A Ultimately, no.

Q Okay. Okay.

A I had to get you involved. No. I had to --

Q What do you mean by "ultimately"?

A Recall that I never got the working models of the projections until Memorial Day.

Q And then you did?

A And then I did.

Q Were there other sources of data that, in your professional judgment, you should have accessed in forming your opinions?

A I don't think so.

Q Is there anything else you want to tell the Court about the sufficiency of the facts or data that you used?

A Again, I think that at the end of the day I got sufficient information. I was confident in the information that I received or was able to get, right, because had I not, I wouldn't have been able to come to my opinion, so while I would still like to have more information about certain things because I'm curious and I'd like to know more, at the end of the day, I got what I needed or I couldn't have rendered an opinion.

Q Let's turn to the next criteria under Rule 702, which is whether your opinions are the product of reliable principles and methods. Do you believe that your opinions are the product of reliable principles and methods?
A I do.
Q Let's first review what principles and methods you used were, and then we will discuss why you believe they are reliable --
A Okay.
Q -- so please note that this criteria is not about whether you reliably applied the principles and methods -- we'll discuss that later -- this is just about the principles and methods themselves and whether they are reliable, so take your time and tell us about the principles and methods or steps that you used in carrying out your assignment.
A Okay. I think the -- I go back to my proposal, which laid out an approach that I envisioned using if I was appointed in this case, and now after the fact I can look back at that approach and say that's exactly what we did. And it is -- is it a little bit different because of this situation, sure, because everyone is, but it is the approach that I have used my entire career and that other people in the restructuring advisory community use, so in -- with the City of Detroit, we collected about six years' worth of historical data, sometimes a little bit more, sometimes a

little bit less, for all of the revenue and the expense assumptions both in the ten-year plan, the ten-year, forty-year plan and the RRIs, so we looked at historical information. We looked at current spending levels or receipt levels, depending on where it was because, again, didn't have financial statements that were completed at that time. Obviously looked at all of the reports that had been developed by the various state agencies, the treasurer, reports the emergency manager had done, gathered information from all the outside consultants. I mean Detroit was a -- is a -- was a city that was consulted to death, so used all of that and then factored that in with all of the information we gathered from all of the interviews and the analysis. And what was going on from in late April and May until we got the working models is Kevin Barr was, in essence, building a bridge between the projections and the RRIs, so by the time I actually got the working models and could say, ah, that's the assumption for this revenue projection or, oh, I really see that now for the expense, Kevin had reverse engineered most of this model so that we actually could look at the underlying assumptions, look at the baseline, what the starting numbers were, and see if those projections made sense going forward, so it is -- in restructuring history, it's important for certain kinds of revenues and expenses if they're going to continue, but the other thing that happens with restructuring, thank goodness, is activities in the past can be radically changed as a result of the restructuring, so sometimes you can -- you know, perfect example here is with lighting; right? You wouldn't project lighting revenues to go forward when you've transferred the lighting authority over to a different entity, so you just make an individual assessment on each assumption. And after you do that, then you do the sensitivity analysis on your critical assumptions to see if you're going to be wrong and you know you will be wrong with projections, right, which are the assumptions that a small change in the assumption will create a big impact in the projections.

Q So to what extent did the fact that this is a municipal case rather than a business case impact the principles or methods that you used?

A It didn't impact the principles or the methods or the approach. The difference in it is that there is not an option to stop doing things because the city has to deliver some sort of basic service. You can't -- just because it costs too much to run that bus route doesn't mean you get to stop it.

Q To what extent did the time deadline that the Court imposed upon you impact the principles and methods that you used?

A It did not impact -- I mean it did impact; right? It impacted the level of effort. It impacted the size of my team; right? For the kinds of work we do at Phoenix, you know, six people in one place full time is a huge team of resources.

Q Right, but my question is the impact on the methods and principles.

A It didn't -- it really didn't impact the method and the principles. I think there are points where when I got satisfied with an issue or something, I said stop doing that; right? So, you know, at the end of the day when I knew what my perspective was going to be on IT, right, it's like stop going deeper onto that; right? Just stop. So I think there were points in time where I probably pulled my team back from continuing to go deeper into issues that I felt we had adequately covered.

Q So did the time limit result in any compromise of your professional judgment or conclusions or methods in the case?

A No, because I asked you twice for extensions; right? I mean I knew that first time that there was no way that I could get done what I needed to get done given when I had got in the working models, and then at the end I needed those last few days because we had gotten a new set of projections, so --

Q Um-hmm. Apart from what you've already mentioned, are there any other factors in the case that impacted the principles and methods that you used?

A No, not really. I was asked in my deposition about methods, and I actually went back and looked at those because I hadn't heard those words since I was in grad school. So there's a big method and a little method. I think the little method, the approach that I used in this engagement, is the approach that restructuring advisors, whether they're working for a debtor, a company, a municipality, or advising a creditor, that's what you do. You look at history. You sensitize it. You judgmentize it. You talk to people about it. You get down to source documents. And then you make a projection with -- that you feel is reasonable, and I think that's what we do. Do we do things like time series analysis? We do. Do we do regression analysis? We do. But we don't sit down and say, "Oh, my God, I'm going to use the delphi method to estimate this," or, "I'm going to use the naive" -- those are just -- those are like Wikipedia words, and I recall them now that -- from a long, long time ago, but we did do some of that.

Q Was it part of the methods that you used in this case to reconstruct from scratch the -- or a set of financial projections for the city's general fund?

A No. That was not -- that was not my scope, and that's not what I would do in the role of evaluating any plan.

Q Do experts in your field when evaluating feasibility

normally reconstruct financial projections like that?
A No.
Q Are there any circumstances when this is done within the scope of this kind of an assignment?
A I thought about that. I did it once in 1991 in a case called Lang Laboratories, and I represented the creditors. And about 30 days into that case, the CEO resigned. We agreed with the company to do a complete exchange of debt for equity, and at that point in time the creditors' committee advisors took over all the rest of the work on the reorganization plan, and, yes, so we really -- we started all over, but that was -- it was like 1991 that I did that.
Q Just so our record is complete, why did you not do that in this case?
A Because it doesn't make sense to do that. My job was to evaluate the plan -- or my job still is to evaluate the plan and the projections that underlie that.
Q Okay. Let's turn our attention to the reliability of the principles and methods that you used. Do you believe that your education, training, and experience has given you an understanding of the principles and methods that others use in your field and that are generally accepted when assessing the feasibility of municipal restructuring plans or a debt adjustment plan in a Chapter 9 case?
A I do.

Q Are any of the principles and methods that you used in this case materially different from the principles and materials -- principles and methods that are generally accepted in your field when the assignment is like it was in this case?

A I don't think so.

Q Are there reliable principles and methods for evaluating a 40-year projection for either a business or a municipality?

A I don't think so.

Q Why not?

A Because 40 years is so far into the future that it is very, very, very, very hypothetical, and as I was thinking about what 40 years ago was from today back, it's -- we were all children, and I can't imagine what the city's budget would have looked like 40 years ago because we had just had the first oil embargo and, you know, how that would have affected automobiles and the development of the city, so it's -- 40 years is such a long time horizon that while I think it is instructive to think about it, right, there's no reliable method for projecting 40 years in the future.

Q Is that a view that you would say is generally held within your field?

A It is.

Q What was the definition of feasibility that you decided to apply in determining whether the city's plan of adjustment

is feasible?
A It was a definition that I developed.
Q What was it?
A We spent a lot of time getting the words right on this, and it would be better if I had it to read. I know it's on page 13, which was kind of an easy to remember page; right? The feasibility definition -- and I'll do it as best I can from memory -- is is it likely that the City of Detroit, after confirmation of the plan of adjustment, will be able to sustainably provide basic municipal services to the citizens of Detroit and make the -- and meet the obligations in the plan without the probability of a significant default. That's close.
Q Um-hmm.
A But it has three concepts. It has provide services, meet plan obligations, and not likely default.
Q Um-hmm. And how did you decide that that was the appropriate definition?
A It evolved out of my view that feasibility is both a quantitative and a qualitative measure, that, yes, there are -- there's the numbers side. Can you generate the revenue? Can you deliver the services at a price point such that you've got enough cash to make plan payments? But it's also about the skill and the will, and this goes to the management, the human capital side. Do you have people who

are left behind who can execute on the plan?

Q Is that definition or one similar to it generally accepted in your field as an appropriate definition of feasibility?

A Well, I think time will tell. I think this is the first time that anybody in my profession has tried to define feasibility in a Chapter 9, so I think it makes sense, but I think time will tell. Ultimately you'll decide.

Q Is that definition of feasibility or one like it generally accepted in the business context?

A I think it is, and I think the -- again, we don't get any help from the Code in terms of what feasibility is. On the commercial side we've got a lot more case history, so, like I said, it makes intuitive sense to me that it's both qualitative and quantitative. There's clearly a time horizon concept with feasibility, which I think is more challenging in the Chapter 9 environment, and I also think the feasibility is a range. It is a -- values can have -- can be reasonable and feasible within a range. They're not just a point estimate.

Q So do you see any reason to use a different definition in a municipal case compared to a business case?

A Only to the extent that I think it is important that the municipality be able to sustainably deliver basic municipal services. They don't have to be best in class. I've said that, but they've got to be able to deliver basic services.

Q Is there anything further that you'd like to tell the Court about the principles and methods that you used or their reliability?

A I don't think so.

Q So, finally, let's turn our attention to the last criteria under Rule 702, whether you reliably applied to the facts of this case the principles and methods that you chose to use. Do you believe that you reliably applied to the facts of the case the principles and methods that you chose to use?

A I do.

Q One of your two tasks, as you've pointed out, was to investigate and reach a conclusion on whether the assumptions that underlie the city's cash flow projections and forecasts regarding its revenues, expenses, and plan payments are reasonable. Did you carry out that task?

A I did.

Q Could you define for the Court what is an assumption?

A An assumption is -- I'm thinking of synonyms. It's a hypothesis. It's an axiom. It's a presumption. It is something that you believe is going to happen. You take it for granted that it's going to happen.

Q Is that the generally accepted definition of assumption in the field?

A I think so, yes.

Q Can you estimate how many such assumptions underlie the city's cash flow projections and forecasts regarding its revenues, expenses, and plan payments?

A It's many hundreds and arguably probably thousands. The projections are contained in over 300 spreadsheets that are assimilated into the various projections in the RRIs, and each of those have many columns and many lines. And you would logically expect an assumption to be associated with each line item over time, so, you know, it's clearly, clearly, clearly, clearly into over the hundreds into the thousands.

Q Did you investigate each and every one of those assumptions?

A Kevin Barr has looked at every cell in every sheet and can tell you where it comes from and how it's calculated.

Q Earlier you used the phrase "critical assumption."

A Yes.

Q What does that phrase denote or mean?

A Again, it's a word that I chose when we were putting our proposal together in recognition of the complexity of what these projections were going to look like. And I knew once we got underneath them that they were going to be complex, and I knew that the fact that there were multiple parts of it that piece together was going to make it -- was going to make it complicated, but -- and given the time frame, there are critical assumptions that either lay the foundation for many of the other assumptions or they're critical because they're so sensitive to small changes having big impacts that you really had to look at them, so --

Q Okay. So that's my next question.

A Yeah.

Q What is the purpose of identifying some of the assumptions as critical assumptions?

A Because there are -- there is some subset of those thousands of assumptions that are really, really important, so, for example, right, one of the most critical assumptions in the city's projections are the head count assumptions, so at a foundational level, we've got to get comfortable that the projected head count by department of people doing what they're doing, right, makes sense.

Q You're talking about employment head count?

A Employment head count because, you know, again, you've got 60-plus percent of your costs that are derived either from salaries, wages, or benefits that are paid, so you better have the head count projections. You better be comfortable with that before you move on to say that, you know, the budget for this department or that department is okay, so that's an example.

Q Is it generally accepted within your field to separate

assumptions by how critical they are in --
A It is.
Q -- determining whether and to what extent to investigate them?
A It is because it's the -- it's a cost-benefit analysis so that you can -- you know, you want to make sure that you get all of the important assumptions analyzed, critiqued, evaluated, and the lesser assumptions either will have very little impact or you may run out of time or you may run out of budget to do them, so --
Q Was there ever an instance in the case when someone asked you to investigate an assumption because they thought it was a critical assumption but you decided not to?
A Not that I recall.
Q Were there any assumptions that, in your judgment, should have been investigated as critical assumptions but for whatever reason you did not investigate?
A No.
Q Well, what challenges or obstacles did you face in reliably applying to the facts of the case the principles and methods that you chose to use?
A Other than initially getting access to data that we felt was important that maybe the city either hadn't already collected or didn't think was important, once we kind of got over that hump, then there really weren't any other

impediments.
Q Okay. So you're satisfied that you worked through those challenges or obstacles?
A Yeah. I couldn't have rendered an opinion.
Q So there were no challenges in this regard that you did not successfully meet or overcome?
A That's correct.
Q Is there anything further that you want to tell us about the reliability of your application of the principles and methods that you used?
A Not that I can think of.
Q Let's address some of the more specific objections or issues regarding your testimony that the parties asserted in their motions even though some of them have been withdrawn.
A Okay.
Q Are you generally familiar with those issues that the parties have raised?
A I am.
Q How have you become familiar with them?
A I read the pleadings, and then I discussed them with my attorneys.
Q Do you believe that any of those objections have merit?
A I don't.
Q All right. So what I'm going to do now is summarize each objection and simply ask you how you respond to it.

A Okay.

Q One objection, for example, is that you did not actually test the reasonableness of a majority of the city's assumptions in its forecasts and that instead you opined that the city's assumptions are reasonable when considered in the aggregate.

A Okay.

Q What is your response to that objection?

A My response is that we did look at individual assumptions. We did analyze them. We did critique them individually. We looked at the assumptions in total obviously in the result. My challenge is with the word "test." Okay. This is not a blood test. You can't put a dipstick in it and get something to turn blue or pink. Okay. You have to look at the information about the assumptions and the data, so when you look at my report, much of -- and let's go back to the head count example; right? The head count analysis that we did in looking at the individual assumptions around head count by department over time, right, that information is information that we pulled together so that we could analyze it. That isn't something that somebody gave us. That is something that Kevin developed. So did you test it? I got a problem with the "testing" word. Did we analyze it? Did we verify it? Did we make sure that the head count that we looked at in different places made sense? Absolutely we did. Did we do that for every single assumption? No, because some of them are minor. Again, some of them are minor, but I do believe that for all of the assumptions individually, collectively we did it. I only -- in my report I only called out certain of the assumptions that I either thought were important to make a statement that I agreed with or certain of the assumptions that I felt it was important that I make a statement that I don't agree with. So I think silence on some of the assumptions has maybe been misconstrued as I didn't look at them, but that's not the case.

Q Another objection that was made is that there is no way to test some of your opinions on some specific assumptions. How do you respond to that?

A Again, I don't know how to respond to that because it doesn't make sense to me. This is not -- this is not a laboratory experiment; right? We're not putting two chemicals together to see if we get smoke; right? It is you look at information, you analyze it, and you assess its veracity and validity.

Q It is also asserted that you did not make any determination about the quality of E&Y's work.

A I read that, and I remember at some point being asked about that, and I didn't -- I relied on what E&Y did. I trust their professionalism. I believe they were honest with me. We checked all the math; right? So I didn't have to -- I didn't have to just accept it; right? We went and checked all the math, and we verified the assumptions, so I just didn't feel a necessity to make a statement about the quality of their work or similarly about Conway's work, but I mean they've done an amazing job; right? Do I agree with everything they've done? Absolutely not; right? Would they agree with everything I did? Absolutely not. But it's not like anything is inferior or substandard or unprofessional.

Q Well, was your assessment, evaluation, review, reliance on E&Y's work, consistent with what is generally accepted in the industry in these kinds of circumstances?

A Absolutely. When you're the evaluator of the plan and the projections as opposed to the developer, I think most evaluators, based on reputation, prior experience, whatever, would tend to rely on the preparer to some level based on their own ability to review and analyze.

Q It is asserted that you did not understand the city's methodology and, therefore, could not have evaluated it. How do you respond to that?

A I got a little bit tripped up with this big M, little M thing. I got asked about methodologies from an academic and a textbook perspective, and I wasn't very facile with those words. I knew what we did. We did trend analysis. We did time series. We looked at regressions. We looked at sensitivities. I didn't -- I don't think about that. That's not the words that people in my business use even though when I look in retrospect we absolutely did use some of those methods.

Q It is asserted that you were forced to rely on the city's unreliable and insufficient data and only when the city was willing to provide it to you because you did not have sufficient time to independently verify it.

A I don't believe that -- I mean there was -- there's never been a context in my career where you go in and you reaudit something. That doesn't make any sense. Okay. It's historical. You rely on the information that's there that's been audited by other folks that's been put into the city's annual report, so there wasn't -- even if I'd had all the time in the world, it's not something I would have done because it wouldn't have provided much value.

Q It is asserted that you lack experience with municipal finance and budgeting.

A I disagree with that.

Q Based on your work in Nassau County and with the Legal Aid Society and --

A Yes.

Q -- with your staff's work with Jefferson County and Philadelphia and the other experiences?

A We have a -- we have a lot of experience with municipal budgeting and finance both from a preparer and an evaluator's perspective.

Q We'll hear more about this in a moment, but it is asserted that you lack the qualifications to give opinions and conclusions relating to pension issues.

A I disagree with that. I agree that I am not an actuary, that I could not do an actuarial calculation. Quite frankly, I don't know how anybody did those things before computers because they're just -- they're mind-numbing; right? But, again, pension issues are not magical. They're not a super science that we can't understand. Everybody in this room can understand basic concepts around pensions, how benefits are calculated, how liabilities are calculated, how investments are made, how monies are discounted, so I just disagree with that.

Q A theme that came through the objections was that you were on the city's side in this case. Were you biased in favor of the city?

A No. I don't think the city would say that at all.

Q Did you come into this assignment with any preconceived notion regarding the feasibility of the city's plan of adjustment or the reasonableness of its assumptions?

A I didn't. I would not have put myself forward if I had had some perspective.

Q Is there anything else in the objections that you read

that you want to address?
A I don't remember them all, but I don't think so.
Q Okay. Just some final questions and conclusions here -- in conclusion here. Have you reviewed the transcript of your deposition?
A I have.
Q Is there any testimony in your deposition that you want to correct or clarify?
A No. There's nothing in my testimony that needs to be corrected or clarified. There are typographical and phonetic spelling errors which we've not undertaken to do an errata sheet, but, you know, in reading it, are there things I'd like to explain better, but realizing that that's not the opportunity for me to have a say -- I'm just answering questions -- I don't think that there's anything that's technically wrong with my testimony.
Q In these circumstances, the Supreme Court made the following statement, and for the lawyers in the room it's Kumho Tire versus Carmichael, 526 U.S. 137, 1998 -- quote, "The objective of that requirement is to ensure the reliability and relevancy of expert testimony. It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant

field." Did your work in this case meet that standard of intellectual rigor that the Supreme Court described?

A Absolutely.

Q Finally, do you plan to update your report?

A I have heard that we're getting a new plan maybe later today or tomorrow with new projections, so probably.

Q I take it that until you see that, you're probably not in a position to see how much work that would involve or what the timing of that would be?

A I don't. I don't have any idea.

Q Okay.

THE COURT: All right. That's all the questions I have. Let's take a break now for 15 minutes until 3:30, and then we'll see if others have questions, so I will see you then.

THE CLERK: All rise. Court is in recess.

(Recess at 3:13 p.m., until 3:29 p.m.)

THE CLERK: All rise. Court is back in session. You may be seated.

THE COURT: Okay. Ms. Green, do you have questions?

MS. GREEN: Yes, I do.

MR. STEWART: I have no questions.

CROSS-EXAMINATION

BY MS. GREEN:

Q Good afternoon. It's Kopacz as in rhymes with topaz;

correct?

THE COURT: Could you --

MS. GREEN: Thank you.

THE COURT: -- pull the mike --

MS. GREEN: Yes.

THE COURT: -- right in front of you and talk right --

MS. GREEN: Just wanted to make sure --

THE WITNESS: Yes, yes.

MS. GREEN: -- I had the pronunciation right.

BY MS. GREEN:

Q I wanted to go over a little bit of your prior experience at Nassau County. You identified your engagement there as involving some pension-related work; correct?

A I'm sorry. My involvement where?

Q At Nassau County.

A Oh, in Nassau County, yes.

Q And you identified your involvement there as having some pension-related work; correct?

A Pension was a significant budgetary item for Nassau County, so, yes, we did look at it.

Q But there the state provided a backstop, and so you did not have to opine as to the cause of the underfunding; correct?

A The state actually funded and took a deduction from the county.

Q And I believe you stated that you only looked at the future funding requirements for Nassau County as part of that engagement; correct?

A That's correct.

Q And at the Legal Aid Society you testified that your involvement with respect to pensions was to change a defined benefit plan to a defined contribution plan?

A We froze one and changed one.

Q Okay. But your role in this case has nothing to do with changing the Retirement Systems in Detroit from a defined benefit plan to a defined contribution plan; correct?

A That's correct.

Q And the scope of your engagement here is on two items, correct, feasibility and the reasonableness of the city's projections?

A Yes.

Q And you were not retained to opine on past investment or actuarial practices of the Detroit Retirement Systems; correct?

A Correct.

Q And you were not retained to opine about the appropriateness of the former assumed rate of return for the pension systems; correct?

A I don't believe I have. That's correct.

Q And you were not retained to opine on the appropriateness of any smoothing method or amortization period used by the Detroit Retirement Systems; correct?
A Correct.
Q And you were not retained to recommend proper pension plan reporting requirements for the Detroit Retirement Systems; correct?
A I said during my interview with the judge that to the extent that my involvement -- out of my involvement I would hope that it would improve aspects of the plan or aspects of the communication around the plan that I intended to include that in my report.
Q But that's not laid out in the order appointing you as an expert witness; correct?
A It is not in my order.
Q Okay.
A Correct.
Q Thank you. And you were not retained to opine on the causes of the pension plan's underfunding; correct?
A Correct.
Q And I believe you just testified earlier that you admit that you are not an expert in the realm of public pensions.
A I am not. I said I am not an expert. I am not an actuary. I do not consider myself to be a pension expert.
Q And you're also not experienced as an investment manager

of a public pension fund; correct?
A No. That's correct.
Q And you've never opined or given any conclusions as to the proper rate of return for a public pension fund; correct?
A Correct.
Q And you're unfamiliar with smoothing mechanisms and amortization periods used by public pension funds; correct?
A I don't think that's correct. I mean I'm familiar with them.
Q If I asked you if you could opine on the appropriateness of, for instance, a seven-year smoothing period, you would agree with me that you would not be able to answer that question; correct?
A I would have to study that question.
Q And similarly with respect to an appropriate amortization period, you would have no basis to know whether a five- or a ten- or a twenty- or thirty-year amortization period would be an appropriate period for a public pension plan such as Detroit's; correct?
A I would have to study that, yes.
Q And you're not published in the area of public pensions or actuarial science; correct?
A Correct.
Q And when asked when any of the pension risks that you cite in your report give you any pause with respect to the

city's plan of adjustment, you would agree that the long-term risks associated with the pension plans do not negatively impact your assessment of feasibility; correct?
A I'm sorry. Could you either repeat it or break it down?
Q I can. I can.
A Thanks.
Q The pension risks that are cited in your report, you would agree with me that your conclusions do not impact feasibility or your assessment of feasibility of the city's plan of adjustment; correct?
A I think we need to talk about what pension risks we're talking about.
Q Well, you didn't identify any particular pension risk that caused you to conclude that the city's plan was not feasible; correct?
A That's correct.
Q I believe you just stated that pensions are not magical. They're not a super science. But you agree that you are here being offered solely as an expert witness; correct?
THE COURT: I would agree with that.
THE WITNESS: Okay. Then I'll agree with that.
BY MS. GREEN:
Q Okay. So you did not personally interact with the Detroit pension systems prior to your engagement in 2014; correct?

A Correct.
Q Okay.
A Correct.
Q So you have no first-hand knowledge before your engagement by the Court into the Detroit Retirement Systems?
A That's correct.
Q With respect to investment rates of return used previously by the Retirement Systems, you did not do a detailed comparison of the Detroit Retirement Systems assumed rate of return compared to other public pension plans in your work --
A Correct.
Q -- correct? And you did not make any efforts to quantify what portion of any funding shortfall was attributable to any allegedly aggressive rates of return; correct?
A I did not analyze the causes of the shortfall.
Q Let's discuss your conclusions relating to the Retirement Systems investment practices.
A Um-hmm.
Q You had no quarrel with the Systems' investment distributions or asset allocation; correct?
A I don't recall having any quarrel with that.
Q And you never looked at the written investment policies for either of the Detroit Retirement Systems?
A I did not, but someone on my team did.

Q And if asked about which specific investments you believe to be risky, you cannot identify any particular investment by name; correct?
A I have -- other than the supposed investments that the former mayor directed to his business associates and friends.
Q But you did not quantify whether that particular investment actually contributed to any funding shortfalls; correct?
A Correct.
Q And you did not actually analyze the asset mix in the Retirement Systems' investment portfolio; right?
A Like I said, I didn't do it. I know someone on my team looked at that asset mix and gave me their perspective, yes.
Q And after looking at it, then there was no quarrel with the particular asset mix used by the Systems?
A It was not something that we went further into; correct.
Q And at the time you prepared your report, you had no information reflecting negatively on the current pension advisors to the city; correct?
A No. That's correct.
Q And at the time you prepared your report, you had not met with any of the Retirement Systems professional investment consultants; correct?
A Correct. I did not. I don't know -- like I said, I think people on my team had conversations with them but

didn't -- I don't think that they met with them.
Q Well, let's identify who those professional consultants were. If your communications log did not list meetings with NEPC or Wilshire, would that change your testimony as to whether people on your team met with the --
A Those are the current consultants; correct?
Q Correct.
A Correct. Yes. Like I said, I don't -- I can't tell you anything more than I've told you. I don't know that they have not met. I believe they met with somebody at least telephonically at some point.
Q And, similarly, you did not meet with or consult with the Retirement Systems chief investment officer, Ryan Bigelow; correct?
A That's correct.
Q And you never met with the Systems' actuaries -- the current actuaries either; correct?
A I did not; correct.
Q Or any of the trustees for either System?
A I think that maybe one of the people that I met with at Clark Hill was on the board.
Q Would you be able to identify that person? Let's do it this way. If they were not listed on your communications log as being present at the meeting --
A A trustee? Okay.

Q -- would that reflect that they were not present?
A That would reflect my -- that would be correct.
Q Okay. And you did not investigate when the Systems were fully funded versus when they became underfunded; correct?
A Correct.
Q And you agree that in terms of feasibility, knowing the timeline of events relating to the underfunding is not something that you cared about in your analysis; correct?
A Correct.
Q And you admit that there are no allegations of misconduct against current trustees in relation to either Retirement System?
A I have no knowledge of that one way or another.
Q And you're aware that there are certain governance changes being imposed under the plan within each Retirement System; correct?
A Like I said, I don't know that one way or another.
Q You would agree with me that past misconduct, whether true or not, did not impact your feasibility analysis?
A That's correct.
Q And you never attempted to quantify the actual economic impact that you would have attributed to any alleged misconduct within the Retirement Systems; correct?
A That's correct.
Q And you admit that certain portions of your report

consisted of words that you took from a declaration of Charles Moore; right?
A Yes.
Q And you never independently verified the factual points that you took from the Charles Moore declaration; correct?
A I did not personally. That's correct.
Q And your instructions to your team were to cite information that already existed in the record; correct?
A That is correct.
Q Let's talk about the due diligence relating to the cause of the Systems' underfunding. You did not look at what typical losses were to other public pension systems during the great recession; correct?
A I did not.
Q And you did not consult any publications or studies to compare how the Detroit Retirement Systems fared compared to other public systems as a result of the great recession; correct?
A Generally, I'm aware of what happened both in the public and the private sector during that time frame, so I didn't really feel a need to look historically in terms of that.
Q And you did not review any data from the U.S. Census Bureau related to public pensions during that time period?
A Not that I recall, no.
Q And you did not review the NASRA public funding survey

for that time period; correct?
A I think we did review NASRA.
Q And do you agree that the NASRA report concluded that the market decline in 2008 resulted in a median investment return for public pension funds of a negative 25.3 percent for the year 2008?
A I would have to look at the publication again, but the losses were in the 20-plus percent category.
Q And you would agree that the losses to the Detroit Retirement Systems were actually in line with the figures that were published by NASRA; correct?
A As I said, I don't remember the two data points. I know that they were both in the minus 20's.

THE COURT: Let me caution you to restrict your questions to those that relate to Daubert issues. This sounds like it's wandering into more substantive --

MS. GREEN: It does relate --

THE COURT: -- opinion testimony.

MS. GREEN: -- your Honor, to the -- whether she looked at particular data points and whether her methodology would have been reliable based on what she looked at, but I only have a few more questions and I'm done.

THE COURT: Well, but you're asking her what her opinions were having done that.

MS. GREEN: Okay.

THE COURT: That's where the --
MS. GREEN: I will restrict them.
THE COURT: -- line gets crossed.
BY MS. GREEN:
Q Regardless of the cause of the underfunding, you agree that in terms of your feasibility analysis, what was important to you when you wrote your report is how the Retirement Systems are being dealt with in the future under the city's plan; correct?
A That's correct.
MS. GREEN: Thank you, your Honor.
THE COURT: Okay. Does anyone else have any questions for the witness? I have nothing further. You are excused. Thank you very much for coming today. We will let you know when we need you back. And let me know when you come to a conclusion about when you'll do your supplemental.
(Witness excused at 3:44 p.m.)
THE COURT: Ms. Green, did you want to make an argument?
MS. GREEN: I have to admit that objecting to the testimony offered by the Court-appointed expert is a little awkward. I feel like Mr. Hackney must have last week when he objected to your questions of Chuck Moore. But as you commented then, every once in awhile the Court sustains its own objection, and --

THE COURT: That's true.

MS. GREEN: -- so I will proceed. Our motion is limited, and it is not intended in any way to --

THE COURT: Hang on. Hang on. I always sustain my own objections. What I only sometimes do is sustain other parties' objections to my questions.

MS. GREEN: Either way, our motion is limited. It's not intended to stifle in any way Ms. Kopacz's feasibility or her opinions regarding the reasonableness of the city's projections, and we're not disputing her qualifications in that aspect. Her municipal finance and restructuring expertise were well-established during your direct examination of her. But as she admitted, she's not a pensions expert and not an actuary. She's not an investment manager. And to the extent that certain of her opinions relate to pension systems and the cause of the underfunding and all those sorts of things, we feel that it's inappropriate to have her testify.

She also stated that pensions are not magical, they're not a super science and that they don't even require expert testimony under 702. If that's the case and she's only being offered as an expert witness, then I don't think it's appropriate to have her testify at all because she's not a percipient witness. And under Rule 601, as a lay witness, she would be unable to have any firsthand knowledge about our underfunding, mismanagement, actuarial practices, things of that nature, so for that reason, had I known that before we submitted our motion to the Court, I would have added the argument that if she's not an expert, then -- I'm sorry -- if it doesn't require expert testimony, then there would be no need for her to opine on those either way.

Furthermore, the scope of her testimony was limited by your order to two discrete subjects, and all of the pension-related opinions that she lists in her report go well outside the bounds of that. She affirmed today that her feasibility analysis is not impacted by any of her conclusions relating to past investment practices or past actuarial practices of the systems, and, therefore, under your order, it's not relevant to these proceedings or to plan confirmation. And I believe that the reason that you had appointed a feasibility expert was because you were concerned that there would be no adversarial process relating to feasibility, but, as you've seen, that's not the problem with the pension issues. There are experts on both sides, and it's hotly contested outside of Ms. Kopacz's testimony. Therefore, I think, again, it's almost duplicative or cumulative of the other testimony that you'll hear in the proceedings.

Finally, if she is not an expert, as we stated in our other motion, which has not yet been decided, regardless of whether she's an expert, the report itself should not come in. It's inadmissible hearsay. The protocol we've been using throughout these proceedings is not to admit an expert witness' report because it is hearsay, and so the Retirement Systems also object to the admissibility of her report into the record as evidence. Thank you.

THE COURT: Thank you. Would anyone else like to say anything about the Daubert issues? I want to hold on the issue of admissibility for right after this.

MR. STEWART: Your Honor, Geoffrey Stewart of Jones Day for the city, and I'll be very brief. First of all, as to the scope of the assignment, feasibility is a very broad charge, and nothing is more key to feasibility than whether the city in the years that are yet to come is going to be able to service the pension obligations it will see, which could well be crushing. It is for that reason issues such as the investment return assumption, pension, all the other things we heard from Bowen, we'll hear from others, are, in fact, key to that just as they're key to other things, too, so I don't think it's beyond the scope of the assignment, per se.

As to expertise, Ms. Kopacz testified that although she may not be an expert in this, she is able to understand it, and she dealt with at least three, if not four, people who were experts, first of all, Mr. Gaul, then Mr. Childree, then Mr. Gleason, and finally Mr. Ravitch, who needs no introduction because of his enormous expertise, and she dealt with all of those, and, therefore, her opinion is informed by those. It is not fair to claim that either she or her effort lacked expertise.

As to, though, the relevance of these issues about past behavior and conduct of the Systems, I think actually she dealt with that in a telling answer that she gave, and I'm going to have to read from my notes for obvious reasons, but let me grab them. In response to one of your Honor's questions, she testified that -- about executive leadership. She said in every case she evaluated management and their ability to carry out the plan because every plan depends on the debtor's ability to carry it out and execute it faithfully. It may well be that there's new management in these Retirement Systems, and that's a good thing; however, it's not possible to wholly ignore the history, and it's not possible in confirming a plan or looking at feasibility to turn a blind eye at things that went before that to many of us are shocking. So I don't believe this disqualifies Ms. Kopacz in any way nor do I think it renders unreliable or irrelevant the observations she made or the materials she relied upon in reaching her conclusions. And a good portion of her report going beyond pensions deals with the question of post-confirmation governance and who's going to run the city and how they're going to do this difficult job. And I don't think pensions or Retirement Systems should be excluded from that because she has spoken about other parts of the city as well. That's all I have, your Honor.

THE COURT: Okay. I'm going to take this under advisement and issue a written opinion. Let's focus our attention on the admissibility of Ms. Kopacz's report, per se. Ms. Green, was there anything further you wanted to say about that?

MS. GREEN: Only to reiterate that the clear standard in the Sixth Circuit is that expert reports are, in fact, hearsay. And in addition to that, Ms. Kopacz stated again today on the record that several of the statements contained in the pension-related conclusions of her report were, in fact, taken from a declaration of Chuck Moore and were not her own words. We cited case law in our brief that stated it's inappropriate for an expert to simply rely on someone else's hearsay, plop that into their report, and then use that as sort of a subterfuge to get around hearsay rules. And she stated several times during her deposition rather than write our own language, we chose to use someone else's declaration, and she stated that she was just reciting someone else's kind of version of the facts. So, in addition to the entire report being hearsay, we have specific objections to portions of her report since they are merely words taken from another person's document and basically word for word placed into her own expert report.

MR. STEWART: Your Honor, I wonder if to some degree a lot of this is moot anyway since other expert reports have been marked and admitted as demonstrative exhibits, which might pretermit a lot of the issues that are discussed by all sides here. However, I would make a couple of very brief observations. Part of the Court's task here is to determine whether or not Ms. Kopacz's opinions are well-considered and are well-founded, and the statements contained in the report are probative of that because it shows what she considered, what her sources were, and in many cases what weight she gave them. This is not hearsay if it is used to demonstrate the basis of the expert's opinion because it's not offered for the truth of the underlying statement. It's offered instead to corroborate the rigor of the expert's work.

Finally, I would say that as to forecasting, which is not something we've talked about today, a lot of the content of the report that comes from others is relevant because it is necessary to demonstrate that the forecasts and other assumptions Ms. Kopacz is opining about are, indeed, the same ones that we're seeing in the plan that will be before the Court. That's all I have, your Honor.

MR. SOTO: Your Honor --

THE COURT: Sir.

MR. SOTO: -- Ed Soto on behalf of FGIC. Our position has consistently been that -- actually two positions. One is that as a demonstrative piece of evidence that it could be admitted without admitting the truth of it, and I think Mr. Stewart alluded to that. Our second position has also been experienced here, and that is to the degree that a subsequent witness -- expert witness, indeed, testifies throughout about the substance of the report, it is no longer hearsay and may be admitted in another way, so we would like to adhere to those positions. And until Ms. Kopacz is able to do -- well, we have no problem with it coming in as a demonstrative, and if she's able --

THE COURT: Okay.

MR. SOTO: -- to do the latter, we would address it then.

THE COURT: Thank you. Does anyone else want to be heard regarding the admissibility of Ms. Kopacz's report? All right. The Court will take that under advisement as well. Can we return to our trial sequence?

MR. MILLER: Your Honor, may I approach with some documents?

THE COURT: Sir?

MR. MILLER: May I approach with some documents?

THE COURT: Yes.

MR. MILLER: Good afternoon, your Honor. Evan

Miller, Jones Day, for the City of Detroit. And the city would like to call as a witness Mr. Alan Perry.

THE COURT: Please raise your right hand.

ALAN H. PERRY, CITY'S WITNESS, SWORN

THE COURT: Please sit down.

DIRECT EXAMINATION

BY MR. MILLER:

Q Good afternoon, Mr. Perry.

A Good afternoon.

Q Please state your full name for the record.

A Alan Hopkins Perry.

Q And where do you live, Mr. Perry?

A Wynnewood, Pennsylvania.

Q And could you please describe your educational background, specifically any college and graduate school?

A I have a bachelor's in business administration from the Wharton School at the University of Pennsylvania and a master's in science and actuarial science from the Temple University Graduate School of Business in Philadelphia.

THE COURT: Excuse me one second. Can you pull that microphone slightly closer to you? I think the base may slide. There you go. See if that works better. Go ahead.

BY MR. MILLER:

Q And what years did you receive those degrees?

A Undergraduate degree was 1988, and my master's degree was

1990.

Q And what is your profession, sir?

A I'm an actuary.

Q And how long have you been doing actuarial work?

A The last 24 years.

Q So that would be since 1990. What kind of work did you do before you began doing actuarial work?

A I worked as an equity and equity derivatives trader for an investment firm.

Q And what firm was that?

A It was called the Chicago Corporation.

Q And where was that based?

A Chicago and Philadelphia.

Q And do you have any designations in the actuarial field?

A I'm a fellow of the Society of Actuaries and a member of the American Academy of Actuaries.

Q And how does one become a fellow in the Society of Actuaries?

A It takes a long series of actuarial examinations.

Q And what do those examinations cover?

A Mathematics, economics, finance, principles of insurance, principles of employee benefits, so on.

Q Are there subspecialties in the actuarial profession?

A Right. During the fellowship, you have to have in-depth knowledge in a particular actuarial practice area such as

insurance or life insurance or investments.
Q And do you yourself have a subspecialty in the field?
A Yes. My practice field is investments.
Q And in addition to your being a fellow in the Society of Actuaries, what other professional designations do you hold?
A I have my CFA charter, Chartered Financial Analyst.
Q And what entity issues a CFA or Chartered Financial Analyst designation?
A The CFA Institute.
Q And how does one become a Chartered Financial Analyst?
A I know there's the professional examinations, and there are also experience requirements.
Q When you began in the actuarial field in 1990, where were you employed?
A Milliman in Philadelphia.
Q And is that where you work today?
A Yes.
Q And do you work in the same office as Mr. Bowen?
A I do.
Q And is that office in Philadelphia proper or a suburb of Philadelphia?
A In the suburbs, Wayne, Pennsylvania.
Q Okay. And where else does Milliman have offices?
A We have 31 offices throughout the United States and I believe another 27 outside of the United States.

Q What type of services does Milliman provide to its clients?
A Actuarial and other general business consulting to life insurance companies, property casualty insurance, healthcare providers, and employee benefits plans and investment consulting.
Q I'm sorry. You said and investment consulting?
A And investment consulting.
Q In brief, can you summarize the work that you did in your first several years at Milliman?
A Primarily investment analysis of pension portfolios, developing capital market assumptions for our pension clients.
Q Okay. And what is your current title at Milliman?
A I'm a principal consulting actuary and a senior investment consultant.
Q And what are your current roles at Milliman?
A I have many roles. My primary role is to manage Milliman's pension asset liability modeling services.
Q And what is that?
A We provide -- we team up with pension actuaries and provide asset liability studies periodically for our pension clients.
Q And who are the clients that would use these asset liability studies?

A Generally, they'd be intermediate to large size public and corporate and multi-employer pension funds.
Q And how would they use and apply these studies that you would provide to them?
A Asset liability studies are a very in-depth look at the long-term funding and risks to pension plans typically focusing on asset allocation, risk management, long-term costs.
Q And approximately how many asset liability studies does the pension asset liability modeling group perform in a given year?
A Typically ten to fifteen per year.
Q And I think you previously indicated that this work has been provided to public sector pension plans; is that right?
A Public and corporate and multi-employer.
Q And can you name some of the public plan clients who've received these pension asset liability modeling studies?
A Sure. City of Hartford, Connecticut; Iowa Public Employees Retirement System; Kansas Public Employees Retirement System. I've also done a lot of the same kind of modeling more recently for the State of New York, State of New Jersey, State of Minnesota, Oregon Public Employees Retirement System, City of Portland.
Q Thank you. Do you have any other roles at Milliman?
A I also sit on Milliman's investment oversight committee.

Q And can you describe for us what the investment oversight committee does?
A The investment oversight committee provides oversight to Milliman's investment consultants in situations where the investment consultants have some discretionary authority over the asset management for their pension clients.
Q So if a Milliman investment consultant has the discretionary authority with respect to a Retirement System to terminate an investment manager, say a large cap investment manager, how would he or she interact with your committee?
A He or she would have to take that decision to the investment oversight committee, explain the rationale for that, and then the committee would approve it or not.
Q And you would evaluate the decision and opine whether the investment consultant on behalf of Milliman could execute his recommendation?
MR. WAGNER: Objection.
THE WITNESS: Yes.
MR. WAGNER: Leading.
THE WITNESS: Yes.
THE COURT: The objection is sustained.
BY MR. MILLER:
Q Mr. Perry, do you speak on actuarial matters or financial advisory matters?

A From time to time I do.
Q And at what organizations would you typically speak?
A National Association of State Treasurers, International Foundation of Employee Benefit Plans, public pension fund conferences like the Pension Fund Summit, the Enrolled Actuaries meeting.
Q And what would typically be the topics that you might speak on at these meetings?
A Typically it would be asset allocation or pension risk management.
Q Have you authored any publications in the field of investment advisory services?
A Just a few.
Q And can you give us some examples of those?
A Published an article in Contingencies, which is a publication by the American Academy of Actuaries, an article in Benefits Quarterly, and I'm co-author of Milliman's corporate pension funding study.
Q And tell us -- tell the Court about that study.
A That study -- there's a full study that goes out once a year reporting on the funded status of the 100 largest corporate pension -- defined benefit pension plans in the U.S., and then the data -- the funding ratio index is updated every single month.
Q And is that study widely used in the actuarial field?

A It's widely quoted.
Q Do you have any leadership positions at Milliman?
A I am chair of Milliman's capital markets committee.
Q How long have you served on that committee?
A About 19 years.
Q And how long have you served as chair of that committee?
A The last two or three.
Q And what does Milliman's capital markets committee do?
A Develops capital market assumptions to be used by both Milliman's investment consultants and Milliman's pension actuaries in their work providing guidance to their pension clients.
Q And these capital market assumptions would be related to what sort of projections?
A Typically it's expected returns and risk measures for all the asset classes that our pension clients invest in.
Q And how is this -- how is the work product, the capital market assumptions that are developed by the capital markets committee, used by Milliman clients?
A Our investment consultants use them to help their clients make asset allocation decisions, and Milliman's pension actuaries use them to provide guidance to their clients on setting the expected return assumption for their valuations.
Q And approximately how many pension plans throughout the United States use the capital market assumptions that are

developed by the committee that you chair?
A   Hundreds.
Q   How many of them are governmental pension plans or public pensions plans?
A   I'd say about 50.
Q   And approximately how many retiree health plans in the U.S. use the capital market assumptions that are developed by the capital markets committee that you chair?
A   I'd say more than a thousand.
MR. MILLER: Your Honor, the city moves to have Mr. Perry qualified as an expert witness on the subject of actuarial science and pension investment analysis.
MR. WAGNER: No objection.
THE COURT: You may proceed.
MR. MILLER: Thank you.
BY MR. MILLER:
Q   I'd like to begin the more substantive part of the exam by talking about core principles of pension plan investing. In the field of pension plan investing, what is the most important decision that a governmental pension plan must make?
A   I would consider the asset allocation decision to be the most important.
Q   And what do you mean by asset allocation decision?
A   The way the pension plan divides up their investments

into the -- among the different asset classes such as stocks and bonds and real estate.

Q And can you offer the Court a hypothetical example of a pension plan asset allocation portfolio?

A Sure. A plan might have, you know, 30 percent in U.S. stocks, 30 percent in non-U.S. stocks, 30 percent in fixed income, and 10 percent in real estate. That would be their asset allocation.

Q Why is the asset allocation decision the most important investment decision that a governmental pension plan can make?

A Many studies have shown, studies by companies such as Morningstar Associates, that, you know, asset allocation is the dominant factor in the level of long-term returns that pension funds earn.

Q And who's Morningstar?

A Morningstar is a Chicago-based investment research mutual fund rating organization widely followed.

Q And do investments in certain asset classes tend to produce higher returns than investments in other asset classes?

A Yes.

Q And which asset classes have historically provided higher returns than the others?

A Equity, equity-like asset classes have typically provided

the highest returns.
Q What type of equity classes?
A Public equity common stocks and also private equity.
Q In that case, why don't all retirement systems -- governmental pension plans, that is -- invest entirely in equities?
A That would be too risky. If the equity markets suffered a major correction, the entire portfolio would suffer that correction, too. There would be no other assets to diversify away some of that risk from the equity markets.
MR. MILLER: Can you put up City Demonstrative Exhibit 633?
BY MR. MILLER:
Q Mr. Perry, have you seen this demonstrative before?
A Yes, I have.
Q And the equation that is at the top of the demonstrative, contributions plus investments equal benefits plus expenses, have you seen that formula before?
A Yes, I have.
Q And is this a widely recognized formula in the actuarial field?
A Yes, indeed.
Q Can you explain to the Court the mathematical role that investment risk plays in this C plus I equals B plus E equation?

A Investment risk, volatility of investment returns generally would need to be balanced out by similarly volatile contributions to keep the fund in balance, so if investment returns aren't as high as anticipated, then contributions would need to be increased to make up for the difference.
Q So volatility of "I" or investments affects volatility of contributions?
A Yes.
Q Who typically makes the asset allocation decision for retirement systems?
A Pension trustees, pension committee.
Q Do actuaries often make the asset allocation decision?
A Not that I'm aware of.
Q So how do governmental pension plans, retirement system trustees make their asset allocation decisions? How do they go about doing that?
A Ideally they conduct an asset liability study, and what they're trying to do there is explore and discover the intersection with their investment return objectives and their risk tolerance.
Q What determines a retirement system's investment risk tolerance?
A Generally the financial strength of the plan sponsor. That governs the plan's ability and willingness to take risk.
Q If the sponsor of a retirement system -- that is, a city

or county, a governmental entity that makes the pension promise -- does not have the ability to take on significant risk, how should the retirement system trustees then go about making their asset allocation decision?

MR. WAGNER: Objection, your Honor. This is not in his expert report. None of this is in his expert report. He opined on one thing in his expert report, the proper return rate, not on how trustees make decisions.

THE COURT: The objection is overruled. You may proceed, sir.

THE WITNESS: If the plan sponsor is not strong enough to step in and increase contributions if investments are too volatile, then they should have a less aggressive investment policy such that they can handle the kind of losses that would be occurred -- incurred under a lower risk portfolio.

BY MR. MILLER:

Q Now I want to move away briefly from asset allocations and discuss another concept in the field of pension plan investing, the investment return assumption. In pension plan investing, what is your understanding of the concept of investment return assumption?

A Generally, the investment return assumption is related to the expected long-term rate of return on the pension portfolio.

Q In your experience, who typically decides the investment return assumption?
A It's also the plan, the plan trustees.
Q Okay. Are you aware of certain instances involving governmental plans where the decision is not made by the trustees, by another party?
A There are a few public plans such as New York, the State of New Jersey, I believe Minnesota, where that assumption is set by the legislature.
Q What is the mathematical relationship between the asset allocation decision and the investment return assumption?
A They're generally positively correlated. The higher the expected return --

THE COURT: Excuse me one second.

THE WITNESS: Pardon me.

THE COURT: We're having a technical issue we need to address. Caroline, what's being done here? Can we proceed?

THE CLERK: Believe so.

THE COURT: Good.

MR. MILLER: Thank you, your Honor. I do want to make a request of the witness.

BY MR. MILLER:
Q If you could speak a little bit louder and a little bit closer to the microphone and a little bit more slowly -- I

apologize. I was having a little trouble hearing you.
A I'll try.
Q Thank you.
THE COURT: What did you say? No, seriously.
THE WITNESS: I will try.
BY MR. MILLER:
Q Yeah, please. Just closer to the microphone and a little louder. Thank you.
MR. MILLER: Your Honor, can I repeat the question that was pending?
THE COURT: Yes. Good idea.
MR. MILLER: Thank you so much.
BY MR. MILLER:
Q Again, what is the mathematical relationship between the asset allocation decision and the investment return assumption?
A They're generally highly positively correlated, meaning the higher the expected return on the portfolio, the higher the expected return assumption.
Q And the converse is also true?
A Yes.
Q Are you familiar with the terms of the pension settlement that the city reached with the Retiree Committee and the two Retirement Systems?
A At a general level, yes.

Q And are you familiar with the terms governing the use of a 6.75-percent investment return assumption?
A Yes.
MR. MILLER: Can you put up City Exhibit 1, page 44? And can you blow up capital B in the middle of the page there? Little lower. There we go. Thank you. Thank you.
BY MR. MILLER:
Q Mr. Perry, can you read and review that sentence? And please read it into the record.
A During the period that ends on June 30th, 2023, the trustees of the PFRS or the trustees of any successor trust or pension plan shall adopt and maintain an investment return assumption and discount rate for purposes of determining the assets and liabilities of the PFRS that shall be 6.75 percent.
Q And what is your understanding of that requirement that is a part of the pension settlement?
A I interpret this sentence as the plan addressing the idea of a risk budget that the trustees should be targeting a portfolio with an expected return of 6.75 percent and maintain a portfolio that will be expected to deliver 6.75 percent with no more risk.
Q And this phrase that you just used, "risk budget," is that a concept or phrase that investment consultants -- pension investment consultants use?

A Yes.
Q And what does "risk budget" mean?
A It means developing a strategy that has some sort of a cap on the amount of risk that the plan can take.
Q So it -- I'm sorry. Go ahead. So is it fair to say and is it your view that the requirement of a 6.75-percent investment return assumption through the period ending June 30, 2023, essentially acts as a cap on risk?
A Yes, it is.
Q In your judgment, how does the 6.75-percent investment return assumption that's required by the pension settlement through 2023 compare to the investment return assumptions that are selected by other governmental pension plans?
A It's low. It's at or near the bottom of the assumption that we would see for the largest public plans.
Q Do you know of any governmental pension plans with lower investment return assumptions?
A Just one or two that I'm aware of.
Q And what are those plans?
A I believe the District of Columbia is at 6-1/2, and I believe the State of Indiana is at 6.75.
Q Any other plans -- governmental pension plans that you're aware of that use either a 6.75-percent investment return assumption or something lower?
A Not that I'm aware of based on, you know, the surveys and

things that we've been looking at, which have a lag to them.
Q And, again, if you could speak a little bit more slowly. I'm sorry. I'm having trouble hearing. I now want to talk about Milliman's capital markets model and how that capital markets model is constructed and operated. You testified earlier that you're the current chair of Milliman's capital markets committee. What does the capital markets model develop and make assumptions for?
A The capital markets model develops expected average returns, expected standard deviation of returns, and expected correlations between the returns of different assets for a large set of asset classes that our pension clients invest in.
Q Does it attempt to predict returns for all of the asset classes that pension plans, corporate and governmental, tend to invest in?
A Most of them. They keep finding new ones.
Q Okay. And what kind of software program do you use for this capital markets model?
A When the model is put together, it's an Excel program.
Q And who determines the various assumptions that go into and are yielded by application of the model?
A Milliman's capital markets committee.
Q The committee you chair?
A Yes.

Q And how many members does that committee have?
A It varies. In a typical year it's -- it could be as low as five, as high as eight or nine.
Q And what's the expertise of the men and women who serve on that committee?
A Generally, they are senior investment consultants.
Q Are there also actuaries on that committee?
A Right now there are two actuaries, me -- you know, myself and one other, and we're both actuaries who are investment consultants.
Q Okay. And, again, just to repeat for the record, what are the three categories of assumptions that your committee develops as part of this capital markets model?
A Right. Expected average returns, expected standard deviations as a measure of the volatility of the annual returns, and the expected correlations between the returns of different asset classes.
Q And, again, just for the record, what do you mean by correlations between asset classes?
A Correlation is the statistical measure that shows how closely related the returns of two different asset classes are. If they tend to move in lockstop together, if they're both high at the same time or they're both low at the same time, those have a high positive correlation. Two asset classes that move in the opposite direction, when one has a

high return, the other one tends to have a low return, those have a negative correlation. And asset classes that appear to be not related to one another in terms of their returns, they're independent, they generally have a zero correlation.

Q And why is it important to measure correlations between asset classes in developing capital market assumptions?

A Correlations allow us to reflect the diversification that's in a particular portfolio. If the assets in the portfolio are not perfectly correlated, that'll reduce the expected volatility or the standard deviation at the total portfolio level, and that's -- you know, that's the holy grail of investing is to be -- is to be very diversified.

Q And that can affect return?

A Absolutely.

Q Okay. Let's focus on the first category of assumptions that you identified, expected future average returns on asset classes. How does the capital markets committee go about forecasting expected future average returns on asset classes?

A We use a lot of data and capital markets theory, the idea being that capital market theory, sometimes known as modern portfolio theory, suggests that expected returns are driven by risk, and it's not just the volatility of one asset class. It's not just that asset class of standard deviation. It's really the amount of risk that that asset class adds to a portfolio or a portfolio of all assets. That risk is called covariance. So the portfolio theory says that expected return on an asset class is directly related to its covariance. The data that we use, historical returns, that allows us to estimate those covariances over historical periods, you know, how have each asset class' returns varied with the portfolio of all assets, and if we can establish what that relationship is, you know, what is the expected return per unit of that covariance risk, we can develop a set of capital market assumptions for all these asset classes.

Q And is there a particular asset class or two that you focus on first in developing these expected returns among a spectrum of asset classes?

A Right. To estimate what the expected return per unit of risk is, we independently develop expected returns for probably the two key assets classes that particular U.S. pension funds hold. That would be U.S. large cap stocks such as the S&P 500 and U.S. investment grade bonds, perhaps Barclays Aggregate Bond Index.

Q And how do you go about projecting future average returns on large cap U.S. domestic equity?

A Right. We primarily rely on the widely used dividend discount model, which is kind of a building block model, but it basically says that the price of the stock market is equal to the present value of all the expected cash flows to be received from holding those stocks. We have the price --

Q Let me stop you right there. Those cash flows being what?
A Dividends, you know -- you know, perpetuity of dividends.
Q Okay.
A Right. Growing dividends hopefully. And if we know the price today and we have the projected cash flows in the security, we can estimate what the discount rate is that equates those projected cash flows with the price. That's the expected return on -- on this case, on stocks. And taking that apart, the answer is it's the sum of three components. The first component is today's dividend yield. The next component is a forecast of the expected growth rate in corporate earnings, thus the growth rate in dividends they can pay out, and that's a real number. It's based on real growth in earnings. And the third number is expected inflation over the measurement period that we're forecasting.
Q And what is the inflation assumption that the capital markets committee is currently using in its capital market assumptions for purposes of developing expected future average returns?
A It is currently two and a half percent per year.
Q And what are the sources that your committee used and referred to in determining an inflation assumption of 2.5 percent?
A Right. We rely on what's called break even inflation,

which is the difference between the yields on conventional U.S. treasury bonds and the yields on inflation indexed U.S. treasury bonds. And break even inflation is the rate of inflation that would need to -- that we would need to experience such that returns on, for example, a 30-year conventional treasury bond and a 30-year inflation index treasury bond would be the same, so that's regarded as the bond market's forecast for expected inflation over -- you can look at a ten-year, twenty-, thirty-year horizon. We also look at forecasts of inflation from economists, which are published in survey form. We also look at --

Q Well, let me stop you there and ask what surveys in particular do you refer to to obtain economists' view of future inflation?

A Right. We use the survey called the Blue Chip Financial Forecasts published monthly by Aspen Publishers. It's widely followed.

Q Okay. And in addition to looking at economists' forecasts and the break even inflation rate, anything else that you refer to in developing that inflation assumption?

A Right. Another source is the U.S. Congressional budget office. They put out the longest forecast of anybody that I'm aware of, which runs out to 100 years, so they have their forecast for inflation for each of the next 100 years.

Q Anything else or --

A We look at history, but, you know, more just to, you know, get an idea of, you know, volatility measures of inflation and correlations between inflation and real returns.
Q And how long has the capital markets committee been employing a 2.5-percent inflation assumption in connection with its development of expected future average returns on asset classes?
A It's been about the last two, possibly three years. It was 2.75 percent two or three years ago.
Q Was it higher or lower more than two years ago?
A A couple years ago for maybe a year or two it was 2.75. Before that it was 2.5. Again, it's been down there for awhile.
Q So you indicated that there were essentially three building block tools that you used to forecast expected future average returns as it relates to this large cap domestic equity class --
A Yes.
Q -- dividend yield, real growth in earnings, and inflation. Do I have that right?
A Yes.
Q Great. And the expected future average returns on that large cap equity class is the sum of those three data points over a period of time?

A Essentially, yes.

Q And after developing the expected future average return on large cap equities, what is the next asset class that you focus on in order to develop these returns across an asset class spectrum?

A Right. Our other anchor, so to speak, is U.S. investment grade fixed income, you know, the broad investment grade U.S. bond market.

Q I'm sorry. Can you repeat that? I couldn't hear.

A The broad U.S. investment grade fixed income market sometimes referred to as the aggregate fixed income market.

Q Thank you. And how do you go about developing the expected future average returns on that investment grade bond portfolio?

A Right. Well, the nice feature of bonds is they have a stated yield. They are referred to as fixed income, so we don't have to forecast what the cash flows will be. They're built into the bonds, so you can get a quote on the yield to maturity of the entire bond market. And generally with bonds what you see is what you get. The future return is going to be very close to the yield when you buy it. However, we are in an environment right now where, due to the actions of the U.S. Federal Reserve and other central banks, they are influencing the interest rate markets significantly. Short-term interest rates are near zero, and long-term interest rates are still just a little above historical lows. Those Blue Chip Financial Forecasts and other forecasts that we look at, the consensus is that interest rates will be moving up over the next five years and even a little bit beyond five years out ten years, so I feel it's important to reflect that expectation of rising interest rates when we develop the assumption for fixed income. Fixed income -- you know, bonds have a fixed maturity. It's not in perpetuity like equities, so bonds are going to mature. You're going to roll over and you're going to buy new bonds. We expect them to have a higher interest rate, a higher yield as we go forward. So we reflect where we think interest rates are going based on these economists' forecasts, and based on the interest rate sensitivity of this bond market, we can calculate total returns, which would be, you know, coupon yield and also a price impact, generally bad as interest rates go up, and we can get the average return over the time period you're interested in by following and playing that out.

Q Got it.

A Right.

Q So once you have what I think you referred to as the two anchors, your projected returns on large cap domestic U.S. equities and investment grade bonds, how do you go about filling in the expected returns for the rest of the asset classes that pension plans would ordinarily invest in?

A Right. With those two anchors -- as I say, two points determine a line -- we can determine what we think is the market's expected return per unit of risk where, again, risk is that covariance measure. So we have it for the two points. We can figure out what it is because we're assuming that it's constant. It's a constant function of what the covariance is, so historically we can measure the covariance of all of the asset classes and then we can determine sort of by interpolation where the expected return is for each of the other asset classes based on that measure of covariance and how it compares to those two anchors.
Q So it's essentially an interpolation exercise?
A Right. It starts out that way.
Q You had mentioned a second category of inputs, which are expected standard deviation. How does the capital markets committee go about forecasting expected standard deviation of annual returns for asset classes that pension plans may invest in?
A Generally for standard deviations we use the historical standard deviation measured over a long time period. There are a couple of asset classes that are assets that don't trade in regular markets, things like private equity and private real estate. They suffer from some appraisal-based pricing and so, based on some research, we make some adjustments to those standard deviations, but for most of the

other asset classes, it's based on actual historical standard deviations.
Q Okay. And how does the capital markets committee go about forecasting that third category and last category of inputs, correlation between asset classes?
A Same way as the standard deviation. We base that on historical returns over that same time period that we use for the standard deviation.
Q Okay. And is there a deliberative process that the capital markets committee undertakes before it approves the assumptions in each of these categories?
A Yes. After the data is collected and the model is put together and we've set the returns for the two anchors and we have the set for all the capital asset classes, we go through them one by one, you know. Essentially the committee discusses them, if needed, and we approve them. Particularly, we approve any changes over what the assumptions were, you know, at the previous calibration of the model.
Q Okay. And, indeed, how often do you recalibrate and update the model?
A Generally every six months, December 31st and June 30th.
Q And as part of each six-month update, do you undertake any checks on your capital market model result?
A Yeah. Because of the size of Milliman, we benefit from

seeing the capital market assumptions of a lot of other consulting firms and actuarial firms. We are joint consultants often for the same client. And, you know, we keep track of how our assumptions compare to other investment consulting firms and actuarial firms' assumptions. There are also some forecasts of particularly U.S. large cap equity and investment grade fixed income that we can look at to see, you know, how we compare with those.

Q And generally how do Milliman's capital market assumption results compare to those of peer groups?

A Very close. We're kind of in the middle of the pack more often than not.

Q And what are some of the other firms that, in your judgment, are part of this peer group that you compare your results to?

A Right. Certainly the other large actuarial consulting firms such as Mercer, Towers Watson, Aon Hewitt, and then some of the larger widely used investment consulting firms such as Wilshire and NEPC and Callan and Frank Russell and others.

Q You mentioned Wilshire. Does Wilshire Associates have any current relationship to any of the two Retirement Systems that the City of Detroit sponsors?

A My understanding, they are the investment consultant for PFRS.

Q And NEPC, that's New England Pension Consultants; is that right?
A Yes.
Q Yeah. Do they have a current relationship with any of the Retirement Systems that the City of Detroit sponsors?
A It's my understanding they are the investment consultant for GRS.
Q And you said that generally Milliman's capital markets assumptions fare -- compare closely to the assumptions that are generated by these sorts of investment consultants?
A Generally, yes.
Q Let me ask this question. In forecasting expected future average returns on asset classes, do you look at what governmental pension plans have historically been returning on these asset classes?
A Not as a matter of setting our assumptions, you know. Obviously as an investment consultant I see those returns all the time, but they do not go into our model. They're not one of the inputs.
Q And why is that?
A The returns are forward looking. As I said, they're based on prices today and forecasts of future cash flows received from investments, and, you know, what they've been in the past doesn't influence, you know, that math at all.
Q And it's the -- is it your judgment that in forecasting

expected future average returns on asset classes, it is not important to look at what institutional investors such as pension plans have returned on those asset classes --

MR. WAGNER: Objection.

BY MR. MILLER:

Q -- in the past?

MR. WAGNER: Objection. Leading.

MR. MILLER: I'll withdraw it.

BY MR. MILLER:

Q I now want to turn to the work that you did for the City of Detroit. Did there come a time when the city retained you to project investment returns for its two Retirement Systems, GRS and PFRS?

A Yes.

Q And when was that assignment given to you?

A June of 2014.

Q And over what time horizons did the city ask you to project investment returns?

A Investment returns for the next ten years and for the next thirty years.

Q And how would you compare the two requested time horizon periods, a ten-year time horizon and a thirty-year time horizon? How would you compare them to the investment horizon periods that are typically requested by your clients that seek investment projection work?

A Those are typically the two standard time horizons. Certainly for investment consultant -- investment consulting, ten years is the common time period. Occasionally you'll see seven years, something like that. And on the actuarial side, 30 years is also a very common projection. Sometimes you'll see 20, but 30 is very common. We've been using it for 20 years.

Q And did you, in fact, undertake the assignment?

A Yes.

Q Yeah. And did you complete the assignment?

A Yes.

Q And did you prepare and submit an expert report in connection with the assignment?

A Yes.

Q And does that expert report contain a summary of your results of the assignment?

A Yes.

MR. MILLER: Could you put up City Exhibit 465? And why don't you turn to page 11, which is called Exhibit 1 within that document? Blow that up.

BY MR. MILLER:

Q And this document -- or this page relates to the work that you did in connection with which of the two Retirement Systems?

A Exhibit 1 is PFRS.

Q Okay. Before we get into the particulars of this page, Mr. Perry, you mentioned before that your capital markets committee updates its capital markets model every six months. What was the date for the capital market assumptions that were used in undertaking this project for the city?
A December 31, 2013.
Q And had there been any changes made to the capital market assumptions between July 1, 2013, and December 31, 2013?
A Yes, there were changes.
Q And what were the most important of those changes?
A Generally, the expected return on equities and most of the alternative asset classes were decreased by 25 basis points, a quarter of a percent, and the -- due to higher yields by the end of the year, the expected returns on fixed income were increased very slightly, just a few basis points.
Q Okay. So what would have been the impact on the projected investment returns that would have been yielded by application of the December 31, 2013, capital market assumptions relative to the ones that you had for July 1, 2013?
A For a pension plan with a lot of equities and alternatives in it, they would have decreased.
Q Thank you. Okay. What was the first step that you employed in the process to complete this investment projection assignment you had received several weeks ago?

A The first step was to obtain information about the investment policy targets for the two systems.
Q And how did you obtain that information?
A We requested it from the city, and we received an exhibit from the city, and we also received reports from the two investment consultants, Wilshire and NEPC.
Q Okay. And why did you request policy target allocations rather than the actual asset class percentages based on the actual value of investments at the time of the measurement?
A We think it's more appropriate to use the investment policy. That's their home base. That's what's supposed to be guiding their long-term asset allocation. The actual allocation on any one day generally deviates from that just due to market movements, so we prefer to use the targets because that's what we think is going to be the long-term average asset allocation over the measurement period.

MR. MILLER: And can you highlight the vertical column that's denominated 12 -- December 31, 2013, policy target allocation?

BY MR. MILLER:
Q And are those the policy target percentages that you recall working with?
A Yes.
Q Okay. Okay. After receiving the policy target allocations for PFRS, what was the next step?

A Well, we study those targets so we can map the asset classes that are represented in those targets as accurately as possible into our model, make sure that we have the best match on each of the asset classes that the system is invested in.

Q Okay. And then once you've reached a judgment that you have properly mapped the policy targets to asset classes in your model, what is the next step?

A The next step is to enter them into the model and examine the results.

Q Got it. And I want to focus your attention right now to the three vertical columns under the heading "Milliman Ten-Year Assumptions as of December 31, 2013."

MR. MILLER: And can you highlight those three columns in the box right under there?

BY MR. MILLER:

Q And, Mr. Perry, what are those percentages?

A The first column labeled "Geometric Mean," that's another word for the annualized rate of return. The middle column is the arithmetic mean. That's the expected average return in any one year. And the third column is the expected standard deviation for that asset class.

Q And these three columns of numbers, are these the actual ten-year capital market assumptions for the model for these particular asset classes?

A Yeah. These are the general -- the results for the general model that would apply for any plan -- any plan invested in these asset classes.

Q So these capital market assumptions that you see on this table, they weren't developed exclusively for the city's assignment?

A No.

Q Okay. They would apply to any pension plan or other entity seeking a capital market projection of returns?

A Yes.

MR. WAGNER: Objection. Leading.

THE COURT: Sustained.

MR. MILLER: Okay. I now want to highlight the numbers right under that table under the heading "Milliman Ten-Year Assumptions." Okay.

BY MR. MILLER:

Q Mr. Perry, can you walk the Court through the process by which you developed those numbers that are shown in the highlighted yellow?

A Sure. The first step is relatively easy. We start with the middle column, the arithmetic mean, because the arithmetic mean return on a portfolio of assets is the simple weighted average mean of the individual asset classes weighted by that asset class' allocation, so we can just multiply those together, 12 percent times 8.25, 7 percent times 9.20 and so forth, and when we add those up, we'll get the number at the bottom under the arithmetic mean column, the 7.43 percent. And that's essentially an intermediate step. Unfortunately, for the risk of the portfolio, the standard deviation at the portfolio level, it's a more complicated weighted average because we have to reflect also those correlation coefficients that we discussed. They're not shown here, but they have to be reflected. The weighted average on the portfolio is not a simple weighted average of the standard deviations. We reflect correlations, and that leads to the standard deviation for the total portfolio, which is the 12.75-percent number you see under the standard deviation column.

Q Yes.

A Now, armed with those two numbers, the arithmetic mean for the portfolio and the standard deviation of the annual return for the portfolio, we can calculate the expected geometric mean, the annualized rate of return, over the ten-year period.

Q And what is that number?

A And that's the 6.75-percent number.

Q And that's the number that your capital markets model showed for this portfolio of target allocations?

A Right.

MR. WAGNER: Same objection. There's just way too much leading here.

MR. MILLER: Go ahead.

THE COURT: The objection is sustained.

THE WITNESS: Okay.

THE COURT: No. The objection is sustained.

MR. MILLER: Oh, I'm sorry. Withdraw the question.

BY MR. MILLER:

Q Continue going through the process.

A All right. So the 6.75 is the expected mean annualized rate of return over ten years, but due to the way investment returns compound over time, that number has a little positive skew to it, so as actuaries we don't like to use that. That's not the most likely outcome. The most likely outcome is the median or the 50th percentile of this possible return distribution, so we make one final adjustment down to that 6.68-percent number. That is the median or 50th percentile expected return and most likely return over the next ten years.

Q And then can you explain to the Court the impact of the horizontal line that says net of .10 percent investment management fees?

A Right. Actuarial Standards of Practice 27 generally discourages assuming that actively managed investments will outperform sort of index funds or benchmarks, and you pay a lot of extra fees for that, so we're developing expected returns for essentially index funds or passive investments, and they have very small fees, so we're estimating the fees on that kind of a portfolio at only .1 percent or ten basis points. So after we take those fees off, we're down at 6.58 percent as the expected net of fees median most likely return over the next ten years.

Q So what figure does represent your best estimate of the PFRS projected returns for the next ten years?

A 6.58 percent.

Q Now let's move to the table on the far right under the column "Milliman 30-Year Assumptions." And did you essentially undertake the same process in determining your best estimate of the return for the PFRS portfolio over the next 30 years?

A Yes. We followed the exact same process. We're just using different individual asset class expected returns.

Q And what is your best estimate of PFRS returns for the next 30 years under your capital markets model?

A 7.12 percent.

Q Why is the 30-year best estimate higher than the 10-year best estimate for the PFRS portfolio?

A It's because, as I mentioned earlier, built into our capital market assumptions is the expectation of rising interest rates in general over the next ten years, so the 30-year assumptions have the same first ten years as the 10-year assumptions, but then when we get out, for example, to year 11, we're anticipating higher interest rates plus higher returns on the fixed income asset classes that will then -- the portfolio would then benefit from those for the remaining 20 years of the 30-year horizon, so that's going to push those 30-year numbers up within the fixed income asset classes.

Q Okay. Mr. Perry, did you yourself prepare these tables?

A Yes, I did.

Q Okay. And do these tables and the results on those tables, in fact, show the projected returns that your analysis concluded?

A Yes.

MR. WAGNER: Objection. Leading.

THE COURT: Overruled. What's your answer?

THE WITNESS: Yes.

MR. MILLER: Steve, can you put on the screen the next page of City Exhibit 465? It's called Exhibit 2. And let's highlight, right, on the top left. And can you yellow the top left corner? Right.

BY MR. MILLER:

Q And what does this exhibit represent, Mr. Perry?

A This is the same analysis but for GRS.

Q Okay. And did you follow the same process to develop the projected investment returns for GRS that --

A Yes.

Q -- you had for PFRS?

A Yes.

Q And what is the best estimate of the projected GRS returns for the next ten years?

A 6.52 percent.

Q And for the next 30 years?

A 7.04 percent.

Q And, again, the 30-year projection is higher than the 10-year projection, and why is that so?

A Same reason. We have higher expected average returns in fixed income over 30 years than we do over the next 10.

Q Now, when Milliman runs a capital markets projection, does that projection provide, in addition to a single best estimate that you've testified to, a range of best estimates?

A Yes, it does.

Q And why is that, sir?

A Because Actuarial Standard of Practice 27, which is the standard covering the development of economic assumptions for measuring pension obligations, it calls for the actuary to develop a best estimate range, and the pension industry generally has interpreted that to mean the 25th to 75th percentile of this median long-term return distribution.

MR. MILLER: Steve, can I ask you to stick with City Exhibit 465 and now move to page 2 of that exhibit? And can you highlight the two charts near the top of that page? Thank you.

BY MR. MILLER:

Q And, Mr. Perry, the top chart, what does that represent?

A Those are the expected returns and the best estimate range for the two systems for the ten-year horizon.

Q And the bottom chart?

A The same for the 30-year horizon.

Q Okay. And can you explain how the capital markets committee determined the best estimate range percentages that are shown on the top chart for DGRS and DPFRS?

A So based on the same data, the same results we just developed on the previous exhibits, with the expected average return and the standard deviation for the portfolio, we can use that information to estimate the 25th and the 75th percentile just as we did for the 50th percentile.

MR. WAGNER: Your Honor, can -- I'm sorry. Can I ask whether the -- what's being offered -- is this being offered into evidence, and what part of the document is being offered into evidence, whether it's the charts?

THE COURT: Good question.

MR. MILLER: Yeah. Your Honor, the city moves to offer into evidence as demonstratives the Exhibit 1 chart respecting PFRS, the Exhibit 2 charts respecting GRS, and these charts on this page.

MR. WAGNER: No objection as demonstratives.

THE COURT: All right. For that limited purpose, these -- those identified parts of this exhibit are admitted. And it is closing time, so we will take our --

MR. MILLER: Your Honor, I'm sorry.

THE COURT: We will not take our break now.

MR. MILLER: We will not. I beg your indulgence. The city would like to extract these materials from the expert report and move to have them entered into and admitted as evidence and not merely demonstratives.

THE COURT: Okay. So just for the record, what would your next exhibit number be? Anybody know?

MR. STEWART: 706.

MR. MILLER: 706.

THE COURT: Is there any objection to that?

MR. MILLER: No.

THE COURT: All right. Then for all purposes, the Court will admit Exhibit 706.

(City Exhibit 706 received at 5:00 p.m.)

THE COURT: Now can I call a recess for the day?

(Proceedings concluded at 5:00 p.m.)

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I certify that the foregoing is a correct transcript from the sound recording of the proceedings in the above-entitled matter.

/s/ Lois Garrett

Lois Garrett

September 21, 2014

EXHIBIT F

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

In re: City of Detroit, Michigan, Debtor, ____________________________/	Chapter 9 Case No. 13-53846 Hon. Steven W. Rhodes

SUPPLEMENTAL REPORT OF MARTHA E.M. KOPACZ REGARDING THE FEASIBILITY OF THE CITY OF DETROIT PLAN OF ADJUSTMENT

On April 22, 2014, Judge Rhodes entered an Order[1] appointing me as the Court's expert witness. Pursuant to that Order, "(t)he Court's expert shall investigate and reach a conclusion on:

(a) Whether the City's plan is feasible as required by 11 U.S.C. § 943(b)(7); and

(b) Whether the assumptions that underlie the City's cash flow projections and forecasts regarding its revenues, expenses and plan payments are reasonable."

I am providing this Report under Fed. R. Evid. 706(a). On July 18, 2014, I served my initial Expert Report (the "Initial Report") on parties in interest.[2] Except as noted below, I incorporate the Initial Report by reference in its entirety.

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[1] Docket #4215 - Order Appointing Expert Witness

[2] Docket #6156 - Certificate of Service regarding Expert Report of Martha E. M. Kopacz.

I submit this supplemental Expert Report for three purposes:

- To reaffirm my expert opinions after a review of the 5^{th} and 6^{th} Amended Plans of Adjustment filed after the submission of my initial Expert Report;
- To provide certain additional analyses based on information received from the City after the issuance of my Initial Report; and
- To correct typographical errors in the Initial Report.

Section I – Reaffirmation of Expert Opinion

Subsequent to July 18, 2014, the City filed two amendments to its Plan of Adjustment ("POA" or "Plan").[3] My team and I have reviewed the amended Plans in order to determine what impact, if any, the changes might have on my Opinions. Of particular note, the financial projections supporting the amended POAs have not changed from the financial projections I analyzed in connection with my Initial Report. Thus, there are no new or additional forecasts, or *quantitative* information, to be evaluated or critiqued.

However, some of the changes reflected in the amended Plans, as well as the more recent approved tender offer for DWSD bonds, do impact my *qualitative* assessment of the current POA. The settlements reached with creditors after the date of the Initial Report and the DWSD bond tender approved by the Court on August 25, 2014 help to reduce uncertainties for the City post-confirmation and, in some cases, reduce the amount of long term cash outflows from the City. The DWSD bond refinancing increases the likelihood that DWSD will be able to make its contribution to the pension obligations, as contemplated in the most recently

[3]Docket #6257 - July 25, 2014 Fifth Amended Plan; Docket #6379 - July 29, 2014 Corrected Fifth Amended Plan; Docket #6908 - August 20, 2014 Sixth Amended Plan

amended POA, and also provides some encouraging data that may benefit the City in its future efforts to tap the capital markets.

Based on the foregoing, I reaffirm my opinions in the Initial Report that:

(a) The City's plan is feasible as required by 11 U.S. C. § 943(b)(7); and

(b) The assumptions that underlie the City's plan of adjustment projections regarding its revenues, expenses and plan payments are reasonable.

Section II – Supplemental Analysis Regarding Unfunded Pension Liabilities

Section J in my Expert Report addresses Pension Issues. I conclude that section of the Report with future reporting recommendations[4]. These recommendations stem from my concern that the City may have continuing unfunded pension obligations far into the future and that these obligations may increase beyond the assumptions presented in the July 2, 2014 financial projections.

Prior to issuing my Initial Report, the City provided me and my team with information regarding a sensitivity analysis of the future unfunded pension obligations. At that time, the information was limited to the obligations of the

[4] Initial Expert Report of Martha E. M. Kopacz, beginning on page 154.

Police & Fire Retirement System ("PFRS") under several scenarios. This sensitivity analysis was prepared at my request by the City's actuarial firm, Milliman, Inc., and is discussed on pages 152 through 154 of the Initial Report.

Subsequent to the conclusion of my deposition, the City provided me with a similar analysis, prepared by Milliman, Inc., regarding future unfunded obligations of the General Retirement System ("GRS"). For the sake of clarity and simplicity, I am incorporating below the identical PFRS sensitivity analysis from my Initial Report, to which I have added a new sensitivity analysis for GRS. Adding the potential unfunded obligation related to GRS to that of the PFRS, which was identified in the Initial Report, provides a more complete picture and bolsters the recommendations for systematic and robust reporting contained in the Initial Report.

<u>Sensitivity Analysis</u>

The Society of Actuaries issued a *Report of the Blue Ribbon Panel on Public Pension Funding* in February 2014. The Blue Ribbon Panel recommended stress tests measuring the effect of investment returns over a 20-year period that are three percentage points above and below those used in calculating standardized plan contributions[5]. The panel believes that +/- 3% points represents "plausible stresses" based on its review of prior market returns[6].

In response to my request for an appropriate sensitivity analysis for the pension plans, Milliman has analyzed the PFRS and GRS plans assuming various average rates of return for the FY2014-2023 period and the aforementioned scenarios of 1) a bear market 5-year period followed by a bull market 5-year period and 2) a bull market 5-year period followed by a bear market 5-year period.

PFRS Sensitivity Analysis

As illustrated below, if the PFRS plan averages a 6% rate of return (75 basis points lower than the assumed rate of return) over the nine years ending June 2023, the Plan is forecasted to be only 70% funded in June 2023, resulting in an additional $236 million of unfunded liability versus the POA projections. That unfunded variance expands to $527 million if the PFRS plan averages a 5% rate of return during this time period. Finally, if PFRS is negatively impacted by a bear market/bull market cycle (as opposed to the inverse) with five years averaging 0%

[5] The Society of Actuaries "Report of the Blue Ribbon Panel on Public Pension Plan Funding"; February 2014

[6] The Society of Actuaries "Report of the Blue Ribbon Panel on Public Pension Plan Funding"; February 2014

followed by five years averaging 10%, the pension plan would have $342 million more in unfunded liabilities during the 10-year period in question.

PFRS Average Rate of Return Scenario Analysis[7]

Average Rates of Return July 2014 - June 2023	Estimated Funding Status June 2023	Estimated Projected Unfunded Liability June 2023	Estimated Projected Unfunded Liability Variance
3.00%	43%	$ 1,717	$ 1,036
5.00%	60%	$ 1,208	$ 527
6.00%	70%	$ 917	$ 236
6.75%	**78%**	**$ 681**	**$ -**
8.00%	92%	$ 252	$ (429)
0% - 1st 5 years; 10% - 2nd five years	53%	$ 1,439	$ 758
10% - 1st 5 years; 0% - 2nd five years	64%	$ 1,097	$ 416

GRS Sensitivity Analysis

Similar to the PFRS analysis above, if the GRS plan averages a 6% rate of return (75 basis points lower than the assumed rate of return) over the nine years ending June 2023, the plan is forecasted to be only 69% funded in June 2023, resulting in an additional $163 million of unfunded liability versus the POA projections. At an average 5% rate of return during this time period, the unfunded variance expands to $359 million. Lastly, if GRS is negatively impacted by a bear market/bull market cycle (as opposed to the inverse) with five years averaging 0%

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[7] Milliman, Inc. letter; dated July 9, 2014

followed by five years averaging 10%, the pension plan would have $165 million more in unfunded liabilities during the 10-year period in question.

GRS Average Rate of Return Scenario Analysis[8]

Average Rates of Return July 2014 - June 2023	Estimated Funding Status June 2023	Estimated Projected Unfunded Liability June 2023	Estimated Projected Unfunded Liability Variance
3.00%	47%	$ 1,209	$ 665
5.00%	61%	$ 903	$ 359
6.00%	69%	$ 707	$ 163
6.75%	**76%**	**$ 544**	**$ -**
8.00%	89%	$ 247	$ (297)
0% - 1st 5 years; 10% - 2nd five years	57%	$ 964	$ 420
10% - 1st 5 years; 0% - 2nd five years	65%	$ 799	$ 255

Section III – Errata Items

Set forth below are certain non-substantive "errata" changes to the Initial Report.

Date Change

On page 59 of my Initial Report, there is an error in paragraph 2, line six. The second reference to "FY 2015" in the statement "….property assessments in FY2015 and a 3-4% drop in FY2015." should instead be "FY 2016."

[8] Milliman, Inc. letter; dated July 22, 2014

Footnote 47

During my deposition, it was brought to my attention that Footnote 47 of my Initial Report was in error. Following the deposition, I determined that Footnote 47 applied to a different sentence in the Initial Report. As explained below, I am incorporating in full the relevant section of the Initial Report and correcting the misapplied footnote to the proper text.

Pension

Within the Pension Issues section of my Report (Section J) is a subsection dealing with “Pension Funding Level”, beginning on page 126 and concluding in the middle of page 129. The Detroit Retirement Systems have sought to exclude this portion of my Initial Report based on the mistaken belief that my statements and conclusions are erroneous. Although I will leave to the Court the decision whether to exclude these passages, the record should be clear as to the relevant sources on which I relied. As I noted in my Initial Report, I relied on information and data supplied by the parties in this case. To clarify, set forth below are the same pages from my Initial Report to which I have added footnotes which reference the relevant source.

Pension Funding Level

The accounting for defined benefit plans can be very complex. The calculations used to determine the appropriate funding levels required each year are dependent upon macro-economic factors, actuarial assumptions, and other variables that can be difficult to understand and can be manipulated to bias the required funding levels.

Historically, a number of different practices have contributed to a significant funding shortfall in the two pension plans. The Retirement Systems utilized unrealistic rate of return assumptions and managed the pension plans in accordance with questionable investment strategies that resulted in considerable underfunding of the respective Plans. The Retirement Systems assumed aggressive annual rates of return on investment (PFRS: 8.0%; GRS: 7.9%), allocated asset gains and losses over a seven-year period which masked potential funding shortfalls, and utilized renewing 29- (PFRS) and 30- (GRS) year amortization periods for funding the unfunded pension obligations.[9]

The calculation of this funding shortfall, or the Unfunded Actuarial Accrued Liability ("UAAL"), is dependent upon the use of assumptions as noted above.

[9] Docket #4391 – Fourth Amended Disclosure Statement; page 120, ¶ (b)(ii)

Based on the assumption methodologies used by the retirement systems previously, the UAAL was projected, at the end of FY2012, to have been approximately $977 million.[10] At June 30, 2013, that UAAL estimate was $1.5 billion as PFRS reported it was 89% funded with a UAAL of $415 million. At that same time, GRS reported it was 70% funded with a UAAL of $1.1 billion.[11] Using what the City now believes are more accurate assumptions, the City's actuary - Milliman, Inc. - has estimated that the combined systems' UAAL, at June 30, 2013, was approximately $3.5 billion. [12]

In addition to issues involving the aggressiveness of the rate of return assumption used to determine funding levels, also contributing to the increase of the UAAL were a number of questionable activities engaged in by the retirement systems, which included:

- Utilizing GRS fund assets to pay the promised returns on the Annuity Savings Program which, upon members of GRS allocating 3%, 5% or 7% of their after-tax salaries into a discreet defined contribution plan, effectively guaranteed a minimum 7.9% annual investment return

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[10] Docket #13 - Declaration of Charles M. Moore; ¶11

[11] Docket #4391 - Fourth Amended Disclosure Statement; page 120, ¶ (b)(i)

[12] Docket #13 - Declaration of Charles M. Moore; ¶13

regardless of the actual investment performance of the pension plans' assets[13]

- Using actual market returns for crediting purposes rather than the guarantee, the City believes that over $387 million of excess investment earnings were credited to Annuity Savings Funds from 2003-2013[14]

- GRS trustees, when the plan's actual returns were higher than the assumed rate of return, paid a portion of the positive variance between the actual investment return and the assumed rate of return in an additional pension check to already retired pensioners in what is commonly referred to as the "13th check" program[15]
- The City periodically deferred its required year-end PFRS contributions, and then borrowed to pay those deferrals with debt priced at a rate of 8%[16]
- Retirement System officials have been accused and/or indicted of material fiduciary misconduct, allegedly draining the pension of necessary liquidity and contributing to the underfunding of the Retirement Systems.[17]

The foregoing represents my Supplemental Report. Except as expressly set forth herein, my Initial Report remains valid without modification. Should additional

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[13] Docket #4391 – Fourth Amended Disclosure Statement; page 121, ¶(iii)(A)

[14] Docket #4391 – Fourth Amended Disclosure Statement; page 39, second full paragraph

[15] Docket #4391 – Fourth Amended Disclosure Statement; page 121, ¶(iii)(A)

[16] Docket #13 – Declaration of Charles Moore; ¶20 and Docket #4391 - Fourth Amended Disclosure Statement; page 122/771, ¶(iii)(C)

[17] Docket #4391 – Fourth Amended Disclosure Statement; page 121 and 122, ¶ (iii)(B). *(Note this is the original location of Footnote 47 found to be in error.)*

information become available after the issuance of this Supplemental Report, I respectfully reserve the right to amend or supplement this Supplemental Report.

Respectfully submitted,

Dated: August 27, 2014

/s/__***Martha E. M. Kopacz***

Martha E.M. Kopacz

EXHIBIT G

UNITED STATES BANKRUPTCY COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

IN RE: CITY OF DETROIT, MICHIGAN,	.	Docket No. 13-53846
	.	Detroit, Michigan
	.	September 29, 2014
Debtor.	.	9:06 a.m.

. . . .

HEARING RE. (#7667) EMERGENCY MOTION FOR RELIEF FROM STAY AND WAIVING THE FRBP 4001(a)(3) FILED BY CREDITOR CITIZENS UNITED AGAINST CORRUPT GOVERNMENT; CONTINUED TRIAL RE. OBJECTIONS TO CHAPTER 9 PLAN
BEFORE THE HONORABLE STEVEN W. RHODES
UNITED STATES BANKRUPTCY COURT JUDGE

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Proceedings recorded by electronic sound recording, transcript produced by transcription service.

THE COURT: Let's turn our attention to the emergency motion for relief from stay, please.

MR. PATERSON: Andrew Paterson on behalf of the petitioners.

MS. NORRIS: Megan Norris of Miller Canfield --

THE COURT: All right. Stand by one second while those who would like to leave the courtroom get an opportunity to do that.

MR. THORNBLADH: Thank you, your Honor.

MS. JENNINGS: Thank you, your Honor.

THE COURT: You're welcome. Let's give folks one more minute. And I think we are ready to proceed, sir.

MR. PATERSON: Your Honor, this is petitioner's -- movant's motion for relief from the stay for purposes of filing in the Wayne County Circuit Court an open meetings case against the Detroit City Council. And I would first indicate that the ideal of a democratic government is too often thwarted by bureaucratic secrecy and unresponsive officials. Citizens frequently find it difficult to discover what decisions are being made and what facts lie behind those decisions. The Open Meetings Act protects citizens' right to know what's going on in government by opening to full public view the process by which elected and nonelected officials make decisions on citizens' behalf. Those are not my words. Those are the words of the Michigan legislature upon the introduction of the Open Meetings Act and the Freedom of Information Act in 1976 in the post-Watergate era. The Section 3 of the Open Meetings Act states in its very first sentence, "All meetings of a public body shall be open," and the law as it is developed construes exemptions from that narrowly and broadly protects the right of citizens to know what's going on in their government.

The response from the debtor on behalf of the city council indicated, and I think correctly, that the violation of the Open Meetings Act is not really the issue before this Court, and I think that's correct, although the bulk of the response did try to repeat over and over and over again that it was a permitted meeting under various exemptions, particularly the legal matters. The evidence that the movants intend to introduce would be the extensive public statements about the meetings from the participants in the meetings indicating that there were negotiations and discussions for three full days. I think it was a patent violation of the Open Meetings Act, and the plaintiffs intend to seek as well as a declaration of that an injunction against further violations by the Detroit City Council with respect to the Open Meetings Act.

THE COURT: Well, how do you deal with the city's argument that your claim is moot?

MR. PATERSON: It's not. I mean they've

indicated --

THE COURT: How do you deal with it? What's your response?

MR. PATERSON: They've indicated repeatedly that these were meetings and discussions addressing the facts behind the decisions, and those are clearly covered by the Open Meetings Act. The city's response or the debtor's response is the response that it may want to make to a circuit judge, but for purposes of this Court's relief, the merits of the case aren't really before it, although I'm confident this is a lay-down open meetings violation. The city has failed in its response to point to any specific harm that would happen to this proceeding or in this court. They've made --

THE COURT: Well, but I need an answer to my question because if the matter is moot, there's no sense in granting relief from the stay.

MR. PATERSON: I'm seeking an injunction.

THE COURT: What's not moot about it?

MR. PATERSON: I'm seeking --

THE COURT: What relief can a court provide to your clients?

MR. PATERSON: The Circuit Court can and probably will enjoin them from further violations of the Open Meetings Act. Citizen's right to know. It's a fundamental right of every citizen of this state to see that public bodies --

THE COURT: But there's no more --

MR. PATERSON: I did in our motion --

THE COURT: Let me just -- let me just finish my question.

MR. PATERSON: Yeah. Go ahead.

THE COURT: There's no more imminent or threatened violation of the Open Meeting Act at this point.

MR. PATERSON: The circuit judge may determine that and may not issue an injunction, but I am going to seek an injunction against further violations. I must say I have in the past sued the city's city council for past violations. This is not a new thing to disregard the public's right to know. I don't understand it as a philosophy of governance. I would think that you would want to educate your constituents as to all of the issues behind all of your decisions so that they better understand it and don't suspect that there's some secret deal, I think particularly in this case. There's not been any decision made by this city council other than the initial one back 18 months ago that's been more important. The citizens are wondering.

THE COURT: What happened 18 months ago?

MR. PATERSON: Mr. Orr was accepted and appointed to the emergency manager position under Act 43 --

THE COURT: Did the city council do that?

MR. PATERSON: City council did not oppose it. I think it was a five to four vote, as I recall, or four -- it was a one vote majority. That's that last decision that the council made that had the importance to this decision, and I don't think that there's any particular dispute with the merits of the decision. It's probably a good thing. I don't think that's the issue. I think the way they have gone about it in hiding it from their constituents is the issue. That doesn't serve the public interest well. It doesn't --

THE COURT: Does the law require a public body to open up its meetings when it's seeking legal advice from its attorneys?

MR. PATERSON: I think it's pretextual that they said that. How do you negotiate --

THE COURT: Please answer my question.

MR. PATERSON: Oh, the law permits certain matters that are legal matters that are involved in litigation but also in the public body's obligations under contract or the law to be discussed, and they do allow them to be discussed in private.

THE COURT: And so why -- where is the evidence that something other than that happened here?

MR. PATERSON: The evidence is in the public statements of the participants in the meeting.

THE COURT: Like what?

MR. PATERSON: Pardon?

THE COURT: Like what? Name one.

MR. PATERSON: Three days of negotiations. Even in their own brief, they talked about reaching a consensus. All of the facts that underlie the decision that was made and the agreements that were reached have been excluded from the public view.

THE COURT: Now, you said there were public statements that suggest that something at these meetings happened other than council deliberating with its attorneys on legal matters.

MR. PATERSON: I do say that. I do say that, and I think the defendants --

THE COURT: I'd ask you to identify one.

MR. PATERSON: The defendants indicate that in their response. They indicate that the closed sessions were conducted for the purposes of obtaining legal advice. They've said that repeatedly, repeatedly, repeatedly, but they also indicate --

THE COURT: The fact that they state it repeatedly doesn't make it wrong.

MR. PATERSON: No, but if I call a dog's tail a leg, he still only has four legs, as Lincoln observed.

THE COURT: Okay.

MR. PATERSON: The statement in the defendant's response indicates that they reached a consensus and that the consensus was reflected in the agreements that were signed and authorized by the city council. Those agreements --

THE COURT: Well, but they were -- it was a -- it was a consensus concerning this litigation.

MR. PATERSON: It's a consensus as to how to proceed with respect to the future --

THE COURT: This litigation.

MR. PATERSON: I don't see that as an exemption under the Open Meetings Act.

THE COURT: Well, but --

MR. PATERSON: All public meetings -- all meetings --

THE COURT: I thought you had already admitted that there was an exemption for legal advice relating to litigation.

MR. PATERSON: Yes, and I think the public statements by the participants in the meeting indicate that was pretextual, very simply pretextual.

THE COURT: Okay. But I'm asking you --

MR. PATERSON: In fact, you don't need to see the smirk of the mayor when he was asked that question to know that it was pretextual. Other members that attended the meeting saw that they had a lot of negotiations to do over the timing and all of those issues that were involved that are substantive.

THE COURT: But I'm asking you why isn't all of that covered by the exemption?

MR. PATERSON: It's not. It's not legal matters.

THE COURT: But to tell me it's not doesn't answer my question. Why isn't it? What's the --

MR. PATERSON: Participating --

THE COURT: What's the legal analysis that establishes that it's not?

MR. PATERSON: Participating in a negotiation with parties is not legal analysis. That's not discerning legal analysis. That's my right to participate in a negotiation, and the city council is told that in their legal opinion, and then they proceed to negotiate. Those are public discussions.

THE COURT: But it's negotiation over a legal matter in litigation.

MR. PATERSON: It does not exempt the facts that underlie the decision and the consensus and the discussions that were reached with respect to this. Not all legal --

THE COURT: What's the best case you've got in support of your position?

MR. PATERSON: I think I cited them in my brief, and they do address the scope of the legal exemption. It's certainly in the context of litigation it can arise. It is also, though, important to know what were the bases reached for some compromise within those litigations or the facts underlying -- the discussion of the facts underlying and the truth of those facts. The substance of that decision is the kind of decision that a Circuit Court would make.

THE COURT: Well, let me propose -- let me propose to you a hypothetical. Counsel for the city wants to give -- all right. The term "counsel" obviously has two distinct meaning here. The attorney for the city wants to give the council -- the city council legal advice on how to settle a personal injury suit and explain why he's recommending a settlement at X dollars. Okay. They go into closed session because it's in litigation, and one of the members says, "I don't want to -- I don't think we should settle this for X. I think we should settle it for Y," and they continue to have a discussion with the attorney about the legal merits of the case, the strengths and weaknesses on each side, and they come to a resolution to offer a settlement at Z. How much, if any, of that needs to be in public under the Open Meetings Act?

MR. PATERSON: The legal obligations or the recommendation of the attorney if it's in writing is certainly something that can be discussed. Why did you reach that number, why do you propose settling it, and here's what I propose settling it for because of and gives them the merits, objections to it, discussion of it, starts to borderline whether or not that is exempt. That's the circuit judge's obligation to determine in the proceeding, and the minutes --

THE COURT: So your position is that even the attorney's statement of reasons why the case should not be settled at Y, it should be settled at X, is something that might be subject to the Open Meetings Act?

MR. PATERSON: Might be; might be. Not likely, but might be. More than often -- more often than not there will be a consensus reached, but the discussions here travel beyond the settlement of a lawsuit. This is the active participation of the city in its future of the most fundamental aspects of it and the regaining of the power to do that. That was what was on the table according to Mr. Orr and his orders that were entered in respect to that. Those are matters that reach well beyond the legal obligations of the city and involve widespread negotiation over the regaining of the power of the elected members of the city council.

THE COURT: Well, but all in relation to the administration of this bankruptcy from the city's perspective.

MR. PATERSON: The city is also obligated and the emergency manager is also obligated to administer the city and administer under the law all of the obligations of the city and the business of the city. They can't blanket the business of the city with a, well, it's in Bankruptcy Court; therefore, the stay is a shield against violations of the Open Meetings Act and other violations of law.

THE COURT: Anything further, sir?

MR. PATERSON: No, other than I did in my motion indicate to the Court that I'm not seeking to undo, as I'd have the right to do under the Open Meetings Act, the actions taken. The relief that we're seeking in the Circuit Court would be prospective only, and it would be prospective with respect to further violations of the Open Meetings Act by the Detroit City Council.

THE COURT: And of course you'd want attorney fees.

MR. PATERSON: And of course I would want attorney's fees.

THE COURT: Thank you.

MR. PATERSON: Thank you.

MS. NORRIS: Good morning, your Honor. Megan Norris on behalf of the city. I'll be brief. It's clear that you've reviewed everything. First of all, the timing of the motion and the substance of plaintiff's motion makes it clear that the events at issue are over. Plaintiffs filed their motion mid-day on Thursday. By the end of the day Thursday, the city and state had filed with this Court a joint notice of transition plan, which outlines a proposed transition from the emergency manager to the city elected officials. Plaintiff in their motion does not -- petitioners don't argue that there have been any other violations of the Closed Meetings Act by city council. City council has been in and out of closed session for a number of reasons on a number of occasions since this bankruptcy trial began. The only issue are the meetings that have just taken place. One of the Garzoni factors is the creditor's claim -- whether the creditor's claim is likely to succeed on the merits, and as the Court has noted, there is no evidence of any violation. The meeting was properly closed. The statute was cited. The transition -- the subject being the transition, specifically PA 436 transition matters, was cited in city council's closure resolution. This was not a blanket business of the city closure. This was not even a blanket attorney-client privilege closure. This was specifically to discuss the memoranda of counsel and the advice of counsel and discussion of the memoranda relating to the transition. Clearly there can be harm to the city if this is allowed to go forward at this time, and that really is the question. It's not whether it can go forward. It's whether it can go forward at this time, whether the stay should be lifted. As this Court has noted repeatedly in the trial in front of it as we speak, the issue on the plan of adjustment is not simply whether debts can be resolved. The issue is also whether the city has a viable plan to go forward, and a big part of that plan is how the city moves from the emergency manager that has effectively guided the city through this bankruptcy back to the elected officials as the city goes forward to allow a lawsuit against exactly those players, city council, but obviously the mayor would be involved. Obviously the emergency manager would be involved. To allow a lawsuit involving those folks to go forward at this time would be detrimental to exactly what this Court is trying to accomplish in smoothing the transition of the city out of bankruptcy. If you have any questions, I'm happy to answer them.

THE COURT: What's the connection given that Mr. Paterson says all he wants is an injunction against future violations of the Open Meetings Act?

MS. NORRIS: Right. So the connection is it's a law -- first, he has to prove a violation, so there's a lawsuit, and in that lawsuit there will be arguments about what happened or didn't happen. That will require at minimum an in camera review of what happened in closed session. In many cases Mr. Paterson has sought to take depositions of people involved to determine whether the mayor's smirk -- I use Mr. Paterson's term -- means anything, to determine whether, as in the Wyoming case, there were winks or nods or slips of paper across the table, so there's discovery in that case. So before there's any finding of a violation, before any injunction is issued, before any attorney's fees are awarded, there has to be a finding, and that is exactly the kind of action that the city does not need to be going through right now. It is a very sensitive area. The orders have been issued. You've seen the transition, the joint notice of transition. As Mr. Paterson noted, there was a city council meeting at the beginning not to oppose the appointment of Kevyn Orr, and there has been a meeting at the end. The parties have agreed that there is a date certain -- i.e., the effective date of the plan of adjustment -- and Mr. Orr has begun the transition, so there's no evidence that there would be meetings on this topic going forward. If there were, they would be noticed in the same way, but to say that the notice was pretextual in some way when the results of the meeting are exactly the topic identified in the legal memoranda, it's not like the results of the meeting are something unrelated to exactly what was identified. The transition plan is absolutely without any support.

THE COURT: Thank you.

MS. NORRIS: Thank you.

MR. PATERSON: If the Court is concerned, I'm fairly satisfied that there's ample evidence that won't require the deposition of the mayor or the emergency manager in this case. Statements made by city council members and others are public and ample, and I, frankly, expect that they will have to admit those statements once the proceeding has begun.

THE COURT: The city questions why this can't wait, if it needs to be pursued at all, until after the bankruptcy is over.

MR. PATERSON: The injunction relief would prevent further violations of the Open Meetings Act and allow the citizens to see what decisions are being made in public and what the facts are that lie behind those decisions.

THE COURT: Well, fair enough, but you don't have any evidence of any imminent or threatened violation of the Open Meetings Act other than, well, they did it once, so they might do it again.

MR. PATERSON: I think that question flips the burden. I think the proceeding, if the stay were lifted, is not going to affect this Court's actions or anything in this Court whatsoever. It's going to carry on independent of that, and there's absolutely no burden on this Court by removing and lifting the stay with respect to this litigation, and, in fact, I think that --

THE COURT: Well, the argument isn't based on burden on this Court. The argument is based on burden to the city in having to address your lawsuit while it's trying to wrap up this --

MR. PATERSON: The city --
THE COURT: -- critical litigation here.
MR. PATERSON: The city law department has had little to do during this proceeding because many of the cases that were stayed did not proceed. I know for --
THE COURT: You're concerned about full employment for the city law department?
MR. PATERSON: I think they're more than able and capable of defending this action.
THE COURT: Well, but it's not just the law department. It's the city.
MR. PATERSON: I don't see how potentially, I guess, a deposition -- if there's a failure to admit public statements that were made and a request for that admission is denied, I suppose at that point I need to take the deposition of the person that made the statement, and in most cases it's members of the city council that were explaining their vote and why they carried out for three days the discussions on this matter. That doesn't seem to impose any burden on this Court.
THE COURT: All right. Thank you. Anything further?
MR. PATERSON: Thank you.
MS. NORRIS: No, your Honor.
THE COURT: All right. I'll take this under

advisement for 15 minutes, and we'll reconvene at 9:45, please.

THE CLERK: All rise. Court is in recess.

(Recess at 9:30 a.m., until 9:50 a.m.)

THE CLERK: All rise. Court is back in session. You may be seated.

THE COURT: It appears everyone is present. The standard by which the Court determines this and other motions for relief from the stay is whether the moving party has established cause. The matter is, of course, addressed to the Court's discretion. In evaluating whether there is cause for relief from the stay, the Court considers the harm to the moving party if the stay is maintained and the harm to the debtor if this motion is granted and relief from stay is granted. In this case, if relief from the stay is denied and the stay is maintained in effect, the plaintiffs will be forced to wait to pursue their claim against the city until the stay terminates, which would happen either upon confirmation or dismissal of the case. If the motion is granted, the city will be, of course, required to defend the lawsuit that would be filed.

The city maintains that the lawsuit is moot and that it otherwise lacks merit under the Open Meetings Act and that it should not be forced to defend a lawsuit that is either moot or lacks merit or both. There are certainly aspects of the claimed violation of the Open Meetings Act that are moot, but it appears that there are aspects that are not moot. For example, the motion states that if the Circuit Court were to find a violation of the Open Meetings Act, the plaintiffs would seek disclosure of certain materials relating to the closed meeting such as minutes or transcripts, et cetera.

The Court also must find in the circumstances that the claimed violation of the Open Meetings Act is not a frivolous claim. If it were, the Court, of course, would not grant relief from the stay since no party should be required to defend a frivolous action. The claim is not frivolous. The city has a defense to it, perhaps even a strong defense, but the claim itself is not a frivolous claim.

On the city's contention that the requirement to defend the lawsuit may somehow impact its ability to efficiently pursue this bankruptcy, the Court must find that there is really nothing to support or suggest that.

Accordingly, in the circumstances, the Court concludes that its discretion should be exercised in favor of granting the motion, and the motion is granted. Mr. Paterson, please prepare an order, have it approved as to form by city counsel -- the city's attorneys and have it -- and then submit it to the Court.

MR. PATERSON: Will do, your Honor. Thank you.

THE COURT: All right. Let's turn our attention back to the trial then. And let's stand by one second while the courtroom settles down again. Sir.

MR. HEIMAN: Good morning, your Honor. David Heiman of Jones Day for the city. I would like to just take a minute, with your indulgence, to mark the moment of the transition that was just the subject of your prior hearing, and we did not want to let this moment pass. At a time like this, many thoughts race through one's mind, and I'm sure in Mr. Orr's case hundreds or thousands of thoughts race through his mind based on the last 18 months. But as your Honor knows, his term, if I can call it that, essentially expired yesterday at the conclusion of the 18 months, and that term was dealt with by the four legal authorities, government entities, including Mr. Orr, that have some participation in this matter. That would be the state, the mayor, Mayor Duggan, city council, and Mr. Orr himself. And at least in my view, this should be looked upon as somewhat of a right of passage for the City of Detroit, a very momentous occasion even though we are, indeed, in the middle of a trial seeking confirmation of the plan of adjustment. So I would like to address both perhaps gratuitously all the benefits that have been derived from the implementation of 436 and explain to the Court, as I assume you've read in the newspapers as well as the papers that were filed, the joint notice that was filed, but an event that is perhaps new and different for those who have lived in Detroit the last few decades where four legal authorities that impact the City of Detroit have come together in a unified fashion in the best interest of Detroit.

So in doing that and explaining what we see is happening now, I would also like to make it clear to the Court that we -- that I rise without presumption. We are fully cognizant that it is and will continue to be the city's burden to demonstrate that it has earned the right to emerge from Chapter 9. We are in the process of doing that. We have every hope and expectation we will be able to do that, but we also totally recognize that the gavel remains in the hands of your Honor and that we submit ourselves to that process with the hope that we will swiftly emerge from Chapter 9.

As I said, Mr. Orr's statutory reign, if you will, has expired, but not without a lot of consideration on how to transition from Mr. Orr's supervision back to the city council and the mayor, and so what you've seen through the joint notice is a 9-0 resolution of the city -- city council, that is -- which is confirmed by the mayor, and as acknowledged and confirmed by Mr. Orr, that the city itself is ready to take back the reins through the mayor's office and city council. And the good news for the bankruptcy is that the city council, the mayor, and the state have recognized that we are here today this far in the progress -- in the process as a result of Mr. Orr's supervision, and it only makes good sense to provide that Mr. Orr shall see it to its conclusion hopefully and that his ability to continue to supervise the bankruptcy, the pursuit of the confirmation of the plan of adjustment as well as implementation of a plan of adjustment should it be confirmed should remain intact, and, therefore, the authorities have determined that he should stay in place for that limited purpose until the effective date of the plan.

With that, I would like to refer you to the specifics of the city council resolution. There is a recital on the first page that confirms that the city council is supportive of the plan of adjustment and seeks a smooth completion and that it has agreed to retain with Mr. Orr those powers necessary to see that occur. And Mr. Orr himself has issued Order #42, Emergency Manager Order Number 42, which delineates the allocation of responsibilities among himself, the city council, and the mayor, and, of course, his role will continue to be, as I said, the management of the bankruptcy proceeding and the implementation of the plan of adjustment, so with that -- and if the Court has any questions, I'd be happy to try to address them.

THE COURT: No. Thank you, sir.

MR. HEIMAN: Thank you.

MR. HERTZBERG: Good morning, your Honor. Robert Hertzberg, Pepper Hamilton, on behalf of the city. Tomorrow is a date that the Court set aside to handle the objection filed by the UAW. We've been in discussions with the UAW. We have a mediation now set up for tomorrow in a hope to try and resolve the dispute with the UAW. Based upon that, we would ask that the Court allow us to go to mediation tomorrow, adjourn the hearing on the UAW's objection, and allow them to come back if we're not able to resolve our differences in the future and have a full hearing.

THE COURT: Who is your mediation with?

MR. HERTZBERG: Mr. Driker.

THE COURT: Does the UAW support this request?

MR. HERTZBERG: I believe they do, your Honor.

THE COURT: Is there anyone here from the UAW?

MR. MACK: Richard Mack, your Honor, with AFSCME. We've actually filed objections as well over a similar issue, and we do, in fact, support the request.

THE COURT: Are you involved or is your client involved in the mediation also?

MR. MACK: Yes.

THE COURT: What time is the mediation set for?

MR. MACK: 9:30. I just got the e-mail a little bit ago.

THE COURT: All right. Well, it's been the Court's practice and policy when these kinds of situations arise to consult with the mediator and to follow the mediator's advice regarding my processes, and so that's what I'll do here, and I'll get back to you.

MR. HERTZBERG: Thank you, your Honor.

MR. MACK: Thank you, your Honor.

THE COURT: One more thing before we get underway. My apologies to you for not printing out the compilation of your remaining time for today. I'm showing for the city a balance of 46 hours and 53 minutes and for the objectors 67 hours and 9 minutes. And while we're on the subject, I want to have a discussion with you all tomorrow about the extent to which it is appropriate to reduce these times in light of the Syncora settlement.

MR. SHUMAKER: Certainly, your Honor. Greg Shumaker, Jones Day, for the city, your Honor. Just a couple of housekeeping matters that we wanted to raise with you.

THE COURT: Go ahead.

MR. SHUMAKER: First of all, your Honor, as you know, we broke last week, and the city and the objectors had multiple discussions about discovery in light of the Syncora settlement. I wanted to advise you -- your Honor probably noticed -- that FGIC issued two 30(b)(6) deposition notices, one to the city and one to Syncora. Those depositions are to take place tomorrow and -- tomorrow is going be Mr. Doak's deposition. He's going to be the gentleman from Miller Buckfire who is the 30(b)(6) witness for the city. And -- I'm sorry -- M.J. is the name of the woman who was being designated for Syncora. I don't know her last name. She is being deposed on Wednesday, so that's proceeding apace.

The city also, as we informed your Honor last probably Tuesday or two Tuesdays ago, put forth a supplemental expert report for Mr. Buckfire, and so that went out in the middle of last week, and the objectors agreed that they did not want to depose Mr. Buckfire, so that took place as well.

Another matter -- just a couple of other things. We understand that the objectors, FGIC in particular, will be submitting a supplemental expert report from Mr. Spencer, and I believe that's going to come on Friday of this week, if I'm not mistaken, and so that's also moving forward. And then also the parties got together about stipulating to two declarations from two witnesses at KCC, the voting tally -- voting tallier, and so we're putting together those declarations, and we'll be able to submit those to the Court later today or tomorrow.

The impact of UAW day on witness scheduling and order I wanted to raise with your Honor. What we were hoping to do is Mr. Malhotra will go today. We'll see how long he takes. He will have a significant amount of testimony.

Obviously don't know how long cross will last. But then Mr. Buckfire is scheduled to go after Mr. Malhotra. What the city plans on doing is trying to move up Mr. Kaunelis, who is a DWSD witness on the capital expenditures, going to move him up in front because the Doak deposition is going forward tomorrow. We're trying to work this so that then Mr. Doak can testify after Mr. Kaunelis, and then Mr. Orr would testify, so that's a slight modification to the order that was currently -- that's currently in place or that the city has filed. One issue, though, your Honor, because of UAW day perhaps moving to keep in mind is notice to the pro se objectors about Mr. Orr's appearance. Depending on how fast this moves, Mr. Orr could come up sometime tomorrow, and I just wanted to raise that with your Honor because I know that's something your Honor has been concerned about in the past.

THE COURT: So are you representing that if we adjourn the UAW testimony or portion of the trial off of tomorrow, that Mr. Doak would testify after Mr. Orr or still before?

MR. SHUMAKER: Well, we're hoping Mr. Doak could testify before Mr. Orr about the Syncora settlement so that your Honor has the benefit of his before Mr. Orr gets on and starts, you know, talking about why the Syncora settlement was a good thing. That's why we had ordered it the way we had.

THE COURT: It still feels a little aggressive to suggest that Mr. Orr might testify tomorrow, but I do want to thank you for alerting the Court to the possibility because we do want to try to notify people. It will either be tomorrow or Wednesday might be --

MR. SHUMAKER: That's fine, your Honor. Wonderful.

THE COURT: -- might be the message we should send.

MR. SHUMAKER: And then one final matter, your Honor, was during the break the city took the opportunity to review its exhibit list and to take a look at those exhibits that with the withdrawal of the objections by the DWSD parties, the counties, and Syncora, there are no longer any outstanding objections to those exhibits, and -- in other words, neither FGIC nor the COPs holders nor MIDDD has objected to them, so we would ask that those exhibits be admitted into the record pursuant to the Court's protocol previously. We have a list of those. There are about 144. I could read them into the record, but I also have copies that I could hand up to you and proceed in that way.

THE COURT: Let me suggest a slightly different procedure. Please share that list with the remaining objecting parties, and then perhaps after lunch I can hear from them on any issues arising from your request.

MR. SHUMAKER: Will do, your Honor.

THE COURT: Is that all right with you, sir?

MR. SOTO: Yes, your Honor.

MR. SHUMAKER: I think that's all I had, your Honor. Thank you.

THE COURT: All right.

MR. SOTO: Your Honor, with respect to those logistics -- by the way, Ed Soto, FGIC. With respect to those logistics, we have --

THE COURT: Pull the microphone closer to in front of you.

MR. SOTO: -- we have only an issue with the timing of Doak, which we thought we had discussed with the city. Mr. Doak can only be made available to be deposed tomorrow. We are going to, in fact, depose him tomorrow. We did get access to M.J. prior to that through the people at Syncora, but we had hoped to be able to take his deposition, as we've now read his 30-page expert report, prepare for his testimony and then do his testimony, and we hope to be able to do that on Friday, your Honor, because of the sequence of the difficulty of just trying to get it all together. From a timing standpoint, that's where we are.

One other thing, your Honor, the -- we're now -- and we've informed the city of this -- working on trying to obtain our fifth labor expert. We've gone through four of them who were unable to appear either because of timing or because of some other conflicts. We know the Court has given us an opportunity to do that. We know the time is getting short. We just wanted to let the Court know we're --

THE COURT: Right.

MR. SOTO: -- frantically deciding whether we need that expert or if we can obtain that expert.

THE COURT: Mr. Shumaker, it does feel appropriate to have Mr. Doak's testimony after his deposition, doesn't it?

MR. SHUMAKER: I would agree that would be fair, your Honor.

THE COURT: All right. Well, let's work that out then.

MR. SHUMAKER: Yes. And part of this complication is there are some witnesses can -- only can testify on Friday, so we're trying to --

THE COURT: And Friday is a half a day --

MR. SHUMAKER: That's right, your Honor. That's right.

THE COURT: -- or at least part -- we're going to stop at one.

MR. SHUMAKER: Correct; correct. So we will continue to work on that.

THE COURT: All right. All right.

MR. SHUMAKER: But the Mr. Orr issue is still out there because --

THE COURT: Right.

MR. WAGNER: Your Honor, Jonathan Wagner on behalf of the COPs. You may remember that if the -- when the UAW hearing was scheduled, Ms. Thomas, the executive director of the pension plans, was going to testify, and then we were going to do our cross, so if that's -- if we're going forward tomorrow, we'll do the cross tomorrow. If not, we'll do it probably at the beginning of our case.

THE COURT: Okay.

MR. WAGNER: The second point is there are, I think, six witnesses on the city's may call list. It would be good to have a date by which we know whether those witnesses are going to be called.

THE COURT: Any thoughts on that, Mr. Shumaker?

MR. SHUMAKER: I would think, your Honor, that we would be in a position to tell the objectors that by the end of the week. I think that's right.

THE COURT: Okay.

MR. SHUMAKER: Thank you.

THE COURT: Can we get underway now?

MR. STEWART: Your Honor, Geoffrey Stewart of Jones Day for the city. The city would call its next witness, Mr. Gaurav Malhotra.

THE COURT: Raise your right hand.

GAURAV MALHOTRA, CITY'S WITNESS, SWORN

THE COURT: Please sit down.

MR. STEWART: Your Honor, if I may approach, I have binders and USB drives for the exhibits. Just for the record, the binders are full of paper. We have five exhibits which are, in fact, the EY model of the city's finances, which are only in electronic form, so we've reduced them to USB drives, which --

THE COURT: Okay.

MR. STEWART: -- I would bring forward.

THE COURT: Thank you for that, sir. You may proceed.

MR. STEWART: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. STEWART:

Q Mr. Malhotra, could you please give for us your name and address?

A Gaurav Malhotra. I live in Chicago, Illinois.

Q Okay. And tell us if you could -- you, by the way, have testified before in the court, have you not?

A Yes, I have.

Q Okay. Tell us briefly, if you could, about your education.

A I went to -- for my undergrad to the University of Delhi where I graduated with a bachelor's in commerce, and then I went for my grad school to Case Western Reserve University where I got an MBA in finance and business policy.

Q What year did you receive your MBA from Case?

A In 2001.

Q Okay. What was your first job after you received your MBA?

A I joined Ernst & Young in the corporate finance practice.

Q In Chicago?

A In Cleveland.

Q In Cleveland. And how long were you with them in Cleveland?

A I was with Ernst & Young in Cleveland for, I think, approximately five years.

Q Okay. And then what happened?

A And then I moved to Michigan. I stayed here for five years, again, with Ernst & Young, doing restructuring and distressed M&A transactions following which the restructuring practice of Ernst & Young was sold to Giuliani Capital, and I continued to do restructuring advisory work there.

Q Okay. Let me stop you right there. You just used the phrase "restructuring and distressed asset analysis." Just for the record, tell us what that is.

A So restructuring advisory is where we help distressed clients evaluate their business plans, their operations, and long-term projections in order to -- how to recover as a part

of an overall restructuring strategy.
Q Okay. And then you said there came a time when that part of EY's practice was sold.
A That is correct.
Q And when was it sold, and who was it sold to?
A In 2004 the U.S. restructuring practice was sold to Giuliani Capital Advisors.
Q You better slow down. I'm having trouble following you. It just may be the acoustics of the room. So it was sold to who again?
A To Giuliani Capital Advisors.
Q Okay. All right. And did you still remain in the office you'd occupied before?
A Yes.
Q And did your practice change at all after Giuliani Capital Advisors purchased the practice?
A No. It was essentially a different name but continued to do restructuring.
Q Okay. Did there come a time when the name changed again?
A Yes. The Giuliani Capital Advisors restructuring and M&A practice was sold to Macquarie Capital Advisors.
Q Okay. And then how long did Macquarie control the practice?
A For about three years.
Q What year are we up to by now?

A   2009.
Q   Okay. And after that what came of the practice?
A   Well, I was offered an opportunity to come back to Ernst & Young --
Q   Okay.
A   -- and join the restructuring practice at EY, so I left Macquarie and came to Ernst & Young.
Q   What year did you return to EY?
A   It was 2009.
Q   '09. And you've been at Ernst & Young ever since?
A   That is correct.
Q   Been five years?
A   Yes.
Q   What is your title at Ernst & Young?
A   I am a principal and a senior managing director in our restructuring practice --
Q   Okay.
A   -- as well as I lead our central region restructuring practice.
Q   All right. And so tell the Court, if you could, the sort of work your restructuring practice has involved since you returned to Ernst & Young in 2009.
A   It has involved helping distressed companies and -- in terms of developing their business plans, taking some through bankruptcy, involving asset sales as well as developing long-

term business plans for either a city or a public school district.

Q Let me ask you just the names of some of the representative private sector clients that you've worked with since you returned to Ernst & Young.

A Schutt Sports, which we took through Chapter 11 process, ongoing with Liberty Medical that we are helping with right now are two that come to mind straightaway.

Q Now, in addition to the private sector clients, what work have you done for public sector clients?

A On the public sector side, we have been involved with the Detroit Public Schools.

Q And when did you start your involvement with the public schools?

A Sometime in late 2011.

Q Is that ongoing?

A It is still ongoing in some fashion, yes.

Q Okay. Any other public sector clients?

A Yes. We've also helped two other cities in terms of helping evaluate their cash flows and long-term projections.

Q And what cities are those, if you can disclose them?

A They're confidential in terms of our involvement with them.

Q Okay. When did you begin your work for the City of Detroit?

A   Approximately just over three years ago.
Q   And when you began your work, what was Ernst & Young hired to do?
A   Our role initially was to help the city assess its short-term cash flow projections.
Q   Okay. And what did that entail?
A   It entailed first trying to just get a clear understanding of what the city's cash position truly was for the general fund and trying to break out the cash that was restricted or that was related to enterprise funds, so we had to sort of manually create reports based on the information that was given that, to the best our ability, we could ascertain what the general fund's starting cash position was and from there on based on discussions with departments, going through budgets, going through bank balance -- bank statements, developing short-term projections to really highlight what the city's cash and liquidity position would be in the coming 12 months or so.
Q   Now, you used a term a moment ago "general fund."
A   Yes.
Q   What is the general fund?
A   The general fund is what essentially is the core operating fund that is not related to any enterprise fund, so it's where the majority of the taxes are collected and services such as police and fire and budget are paid for.

Q And then you used the term "enterprise fund." What is an enterprise fund? What's an example of an enterprise fund?
A Until now Detroit Water and Sewer Department has been an enterprise fund in which their operations are essentially break-even and not -- should not be impacting the operations of the general fund.
Q Now, let me direct your attention to spring of last year. Did there come a time in the spring of 2013 when the scope of EY's work changed?
A Yes.
Q How did it change?
A It began to evolve in terms of expanding the outlook of what the cash and revenue and expense projections were going to be over a longer time frame versus looking at it on a much shorter time frame.
Q What had been the time frame you were using?
A I would say all through 2011 and majority of the year 2012 we were looking at 12, 18, or 24 months of cash flows. That was the context of what we were working within.
Q Okay. And how did things change?
A Well, they changed in which we started to go over to ten-year projections and to look at what the city's financial profile would look like over a ten-year time frame under a couple of different scenarios, and then from there it just evolved into looking at 40-year estimates in terms of what

the city's revenues and expenses could be over a much longer time frame.

Q And what was the purpose of forecasting the city's financial position out so long as ten years or even forty years?

A Well, on the ten-year projections, we used that to really highlight what the city's cash and deficit position would be over the next ten years really to illustrate the cost and the weight of the legacy liabilities the city was carrying and what revenues it would have or not have in order to service those liabilities, and over forty years we had wanted to expand it to really ascertain the commitments that the city was making to its creditors that are long-term commitments as to what the potential was and how the city would make up for those commitments.

Q Now, the city filed for Chapter 9 protection on July 18, 2013?

A That is correct.

Q At that time, just describe for us what was the work EY was doing for the city? Just enumerate what projects EY had going on.

A We were developing the cash flow projections in detail. We were continuing to work on the ten-year plan on a department-by-department basis. We were also looking at the different claims information that was coming through. We were assisting with the -- assisting the city's management team with vendor management because of all the vendor issues that were taking place, and we were really trying to develop the -- at least at that point of time right around the filing is what sort of funds the city would have available for its unsecured obligations.

Q Okay. Now, in the 18 -- well, 14 months since the bankruptcy filing, has E&Y added additional tasks to its scope of work?

A We have been assisting with all those. In addition, our technology teams are helping the city evaluate its HR technology and ERP technology footprint, but the majority of these services have been related to what I mentioned earlier.

Q What is the total amount of fees Ernst & Young has charged or billed the city for since it began its work three years ago?

A Over the last three-plus years, I believe we've been paid roughly $20 million in total over the -- and majority of that I believe are during the bankruptcy process.

Q Now, do I understand correctly that the city negotiated something called a holdback arrangement with Ernst & Young?

A Yes.

Q What's being held back and why?

A Ten percent of all of our invoices post-bankruptcy separate and apart from the fee examiner holdback are being held back over and above, which was an additional accommodation we provided to -- provided we could wrap up the bankruptcy case prior to the end of December of this year.

Q So if the bankruptcy case is wrapped up before December 31, what happens to the money that's being held back?

A If the case is wrapped up by December 31st, the ten-percent holdbacks would be payable to EY.

Q And if it's not wrapped up, what happens?

A Those amounts are in no way payable to EY.

Q Now, you served as an expert witness before.

THE COURT: Excuse me one second. What does "wrapped up" mean?

THE WITNESS: Your Honor, I believe our engagement letter says that a plan -- it's tied to the plan of confirmation date is -- has to be prior to December 31st.

BY MR. STEWART:

Q Now, Mr. Malhotra, you've testified before in this proceeding and, in fact, have testified as an expert witness before, have you not?

A Yes, I have.

Q Before this case, you had never served as an expert witness before?

A No, I have not.

Q And fair to say that when you took on the engagement for the city, no one told you it would involve being an expert

witness; is that right?
A That is correct.
Q But you understand that the city has designated you as an expert witness for purposes of this hearing?
A Yes.
Q And you've submitted an expert report?
A Yes.
Q Now, you testified earlier that you work in the field of restructuring, and tell us, since you received your graduate degree, what percentage of your time has been spent in that field?
A I would say pretty much a hundred percent.
Q Okay. Now, in order to be a specialist in the field of financial restructuring, what sort of things does a professional need to know?
A Have a robust knowledge of the interplay of financial statements, be able to understand Excel working models to take large amounts of data and to be able to analyze trends as well as what are short-term events versus long-term trends, is to interview management teams and to understand at a very detail level, to break down large components of data into smaller pieces and then once you deconstruct the data to build back up with some robust assumptions.
Q Now, when you're dealing with a client that is a municipality, what else do you need to know?

A I think you have to know the interplay between the general fund versus enterprise funds and also how different departments come together in terms of the buildup of each department and the services that are being provided by certain departments, and so -- as well as to really understand clearly what the legacy liabilities are versus core operating cash flows are, but really to understand the different departments and how they come together is something that's important.
Q What knowledge do you need to have of the manner in which municipalities account for their funds?
A I think you have to have a pretty decent understanding of the overall impact of a general fund and its transfers and revenues and expenses and compared to how they break out from enterprise funds overall.
Q And do I understand correctly that municipalities use a principle called fund accounting and do not follow what is often known as generally accepted accounting principles?
A That is correct.
Q What do you need to know in order to apply what you've learned in the private sector to assignments in the public sector when it comes to understanding their accounting?
A It's actually pretty straightforward in terms of the principles that are applied with respect to financial reviews and analyses. I would say they are very identical in terms

of how the auditors who deal with municipalities may deal with versus situations in the corporate side may differ slightly, but from a financial review standpoint, the principles are pretty much similar of going through the financial analytics.

Q Now, and since the time of the bankruptcy -- actually, let me start earlier than that. In the past two years, what sort of analyses -- in other words, work product -- has Ernst & Young generated for the city?

A We have helped the city in developing ten-year projections on a department-by-department basis with detailed revenue and expense assumptions. We have then developed 40-year projections that show on a line item basis what the revenues and expenses could be predominantly for the general fund, and as a part of that, we have also overlaid the construct of the city's restructuring plan and its overall -- in terms of the settlements that have been reached with various creditors, how those payments are going to be funded over the next 10 and 40 years.

Q Okay. Now, in preparing these analyses, where do you get the information that you need in order to do your work?

A It's a combination of places. It starts with the city's management team and their core data and reports that are available in the system.

Q And just by name, who would some of those individuals be or by position? Excuse me.

A People like Rick Drumb from the finance department, folks that we dealt with extensively, people in the treasury department that we dealt with, John Hill, the CFO; Pam Scales, the budget director. So I would say there are a number of people that we have gone through to try and pull the data together in terms of the raw data. And then in the course of building up these projections, we have also relied on other subject matter experts where their expertise on particular topics has been taken into consideration. And then we sort of build it up piece by piece to ascertain how all of the information comes together before -- as we build up the projections.

Q You used the phrase "raw data." What's an example of some of the raw data you would have compiled or worked with in preparing your analyses?

A So we have this in our financial models, but it was raw data that we got from the city for 2008, 2009, '10, '11, and '12 historically that was the files that they used to develop their audited financial statements.

Q Okay. The audited financial statements were sometimes called a CAFR?

A That is correct.

Q Okay. And who audits them?

A KPMG.

Q That's another large auditing firm?
A Yes.
Q Okay. Now, you'd mentioned earlier that you relied upon the work of other advisors to the city.
A Yes.
Q Who are those entities or people?
A For pieces when it came to the quality of life, all the exit financing assumptions, we had and relied upon the discussions with Miller Buckfire.
Q Okay.
A When it came to developing specific revenue assumptions that required our economist to be involved, I relied on Bob Cline and Caroline Sallee. When it came to some of the reinvestment initiatives, I relied on the information given by Chuck Moore.
Q At Conway MacKenzie?
A That is correct.
Q Okay.
A When it came to understanding all of the other revenues and all of the expenditure line items, it was myself and my team that I was working with, and also we relied upon the plan of adjustment in terms of certain other revenues that were coming through as a part of the overall plan so I could sit back and see how these pieces were coming together and what impact they were having on the city's financial profile.

Q Now, you mentioned your team, and I apologize for not having asked you before. How large was your team at EY?
A The team that I have working here is roughly about ten or fifteen people at any given point of time.
Q Now, is there a standard methodology in your field that is used to create financial models?
A Yes. It's generally in Excel.
Q Okay. Walk us through how professionals in your field create financial models.
A So we start with the raw data that -- to the best of the information that we have available from the client, and then we really deconstruct it to understand what the different components are of that particular buildup versus just taking the high level information. We kind of understand the data at a very detailed level. We look at it on a line-by-line basis to understand what of that information is one-off events versus ongoing trends. We have discussions with the management team to understand our understanding of their data to make sure that we corroborate what we think we are seeing. We also then use either run rates as assumptions for short-term and long-term projections as well as we overlay specific changes that we know are going to happen based on discussions with the management team of the client to then at a very detailed level forecast changes, and then on a longer-term basis also rely upon information that we have from public

agencies for inflation-type assumptions to overlay those items that may not be specifically highlighted over the long term but may grow because of an inflationary component.

Q What do you do to test the accuracy of this information that you rely upon?

A We compare the raw data to the information in the audited financial statements. For some of the items where we can, we actually compare it to the cash receipts and disbursements activity of the client to ensure that we can understand the linkage between the financial statements and the cash activity, and so we scrub through the data to make sure we understand what the components are, and the process of the interviews with the management team is in large part a validation process also.

Q Now, a couple of times you've mentioned the computer application called Excel. Just for the record, what is Excel?

A It's a Microsoft application that helps on addition, subtraction, and just basic financial analyses.

Q And your model is actually put into a Microsoft Excel workbook?

A That is correct.

Q Okay. So tell us then how you went about preparing the financial analyses that you did prepare from the information that the city gave you in this case as opposed to as you do it, you know, theoretically.

A We started with getting the raw information by department for the last five years. By "raw information," I mean detailed sales and expense categories that were not only broken down by department but by fund because a particular department could have operations that impact different funds, and we started the process of first analyzing all of that information on a department-by-department basis. Then we actually took that department information and broke it down by fund so that we could focus our efforts on all of that activity across every department that was impacting the general fund. Once we did that, we were then at a much lower level of detail able to come up with for all of the revenue and expense line items after discussions with the management team what specifically items would change in a baseline scenario if nothing had changed, so went through and looked at the 2012-2013 information as well as the previous four years to ascertain what were ongoing trends where we saw big changes in either the revenue line items or the expense line items, what was driving that change, and so that's where we started to develop the forecast at a much more granular level to understand what each department and each department's fund position would be from a forecast standpoint.

Q Thank you.

MR. STEWART: Your Honor, I would proffer

Mr. Malhotra as an expert witness based upon his testimony about his qualifications and background.

THE COURT: Expert witness on --

MR. STEWART: Issues of restructuring and financial analysis, your Honor.

THE COURT: Any objections?

MR. SOTO: No objection, your Honor.

MR. WAGNER: No objection.

THE COURT: All right. You may proceed.

MR. STEWART: Thank you.

BY MR. STEWART:

Q If we could, Mr. Malhotra, let's now turn to the details of your work. Let's begin, if we could, with Exhibit 738. Do you have 738 before you, Mr. Malhotra?

A Yes, I do.

Q 738 is -- I think you've already testified about the sources you relied upon in your work, but I wanted to ask you in a little bit more detail about the organization of the effort that led to the construction of your financial models. Have you seen 738 before?

A Yes, I have.

Q And who prepared it?

A It was the Jones Day team along with our input.

Q Does this reflect in a schematic way the organization of the effort that was put together in order to prepare the

financial analyses for the city?
A   Yes, it does.
MR. STEWART: Your Honor, I would move admission of 738 as a demonstrative exhibit.
THE COURT: Any objections?
MR. SOTO: Well, your Honor, I see that it is a chart, and I see the names. I don't see how it is a schematic of what he did. I assume he will testify about that at some point, so I'm wondering if he shouldn't give some meat to these bones, and then I have no problem with it as a demonstrative. And I certainly don't mind him using it while he testifies about it.
THE COURT: Well, all right. Subject to that connection, the Court will admit it into evidence.
(City Exhibit 738 received at 10:44 a.m.)
BY MR. STEWART:
Q   Mr. Malhotra, so let's look at Exhibit 738. Your name is in the upper left-hand corner?
A   That's correct.
Q   In the upper right-hand corner who appears?
A   Kevyn Orr, Mayor Duggan, and John Hill.
Q   And why are they in the upper right-hand corner in this structure?
A   Because they're essentially the client at the end of the day that has to review and approve what we're seeing in

aggregate.
Q Okay. Now, on the left-hand side of Exhibit 738 is a column entitled "revenues."
A Yes.
Q On the right-hand side a column entitled "expenditures"?
A That is correct.
Q Do I understand correctly the left-hand side lists the sources of information you relied upon for revenues?
A That is correct.
Q Could you tell us then quickly what each of the persons or groups on the left-hand side contributed to your analysis?
A Sure. So from Bob Cline from EY, the detailed information that he provided us was with respect to the forecasts over ten and forty years for the income, wagering, and utility users' taxes under two different scenarios, and I was able to take the information that Bob had provided, have a number of discussions with him in terms of the assumptions and look at the output that was being provided by Bob as well as make sure that it was consistent with the numbers we're using and overall also look at some of the public sources of information that he had used with respect to the assumption, so that built up the -- once we had the final information from Bob, the input for the income, wagering, and utility taxes.
Q And then below Mr. Cline is Caroline Sallee?

A   Yes. With Ms. Sallee we did the similar process for property taxes and state revenue sharing in which I went through the files that they had sent over. We had discussions about it and also made sure that I understood the broad assumptions that were being used in addition to some of the public sources of data that were being relied upon.
Q   Okay. And the next, it's the EY restructuring team?
A   Yes. That's essentially my day-to-day team where I looked at the other revenue items and sales and charges for services, some other transfers that were coming into the general fund in addition to UTGO-type property tax collection, so -- that were related to debt service as well as the overall assumption of the DWSD revenue stream that has been incorporated into the plan of adjustment.
Q   And then city management is the next line.
A   Yes. And this is similar to the line item up above on other revenue items because there are a number of line items that make up the other revenue category, and we went through department by department to make sure we understood what were certain run rates and what changes were being made or should have been made to those line items going forward.
Q   Now, the next two boxes are for the advisors you've spoken of, Conway MacKenzie and Miller Buckfire. In a nutshell, what did they -- what input did they have to your work?

A So Mr. Moore provided us the information with respect to the department revenue initiatives on a department-by-department basis where I actually wanted to make sure that there was no double count between the other revenue line items or any of the information that Mr. Cline or Ms. Sallee used compared to the information that Mr. Moore was using, so that was a process to make sure that there was no double counting. And from Mr. Buckfire it was the assumptions in terms of the quality of life loan proceeds as well as the assumptions related to the exit financing.
Q And, finally, what inputs were there from the plan of adjustment itself?
A It was predominantly the proceeds from the grand bargain.
Q Okay. On the right-hand side under expenditures, the EY team, again, what did they give you in terms of information there?
A So I worked with my team there on looking at all of the salaries and benefit costs for the active employees as well as the expenditures related to the legacy liabilities of the city in terms of the assumptions we used for the contingency reserve, and those would be -- and the other expense categories with respect to the main operating costs of the city.
Q And actually all of the remaining boxes are people or entities that you dealt with on the revenue side as well.

Just quickly run down what their input was to you on the expenditure side.

A So in city management it was the input on the operating expenditures as well as the information we received on debt schedules to highlight the nonrestructured debt service. From Mr. Moore it was the information with respect to incremental costs required on a department-by-department basis and the blight budget. For Mr. Buckfire it was the costs and structure of the quality of life and exit financing. And then in terms of the plan of adjustment is where we have incorporated the settlements or the potential -- the settlements that were reached with the various classes in terms of what the financial implications of those would be.

Q Thank you. And we can take that down if you'd like. Now, did there come a time when you began the construction of the financial model?

A Yes.

Q When? When did that start?

A I would say it was early part of 2013 is where we really started to build out the projections over ten years.

Q And who was it on your team if there was only one person -- or who on your team constructed the model?

A It was several people, but I would say two or three of our analysts did the heavy lifting with respect to the actual construction of the model, but we had different people build up specific modules for different work streams, and that's how the models came together.

Q How well do you know the model personally?

A I know it very well.

Q What did EY do to test the model for its completeness?

A For its completeness, we made sure that, "A," the model was accurate, and we go through internal quality check processes. I spot-checked a significant number of places in the model to make sure that the accuracy was valid as well as from a completeness standpoint is the sources of information that we were relying upon for the input that I was able to tie back to the sources of data that were used for some of the assumptions.

MR. STEWART: Let's put up, if we could, Exhibit 112, and I believe that's an electronic document.

BY MR. STEWART:

Q Mr. Malhotra, we've put up on the screen here Exhibit 112. Can you tell us what Exhibit 112 is?

A Exhibit 112 is the ten-year financial projections model, which I think this would be the baseline scenario.

Q Now, at the bottom I see a number of tabs. What do those represent?

A Those are individual worksheets that contain information either on a summary or department-by-department basis.

Q How many worksheets are there?
A I think there's over 300-plus worksheets in this model.
Q Okay.
MR. STEWART: Your Honor, I'd move the admission of Exhibit 112.
THE COURT: Any objections?
MR. SOTO: No, your Honor.
BY MR. STEWART:
Q Now --
THE COURT: It is admitted.
MR. STEWART: I'm sorry, your Honor.
(City Exhibit 112 received at 10:52 a.m.)
BY MR. STEWART:
Q Mr. Malhotra, this is an Excel spreadsheet?
A Yes, it is.
Q And the spreadsheet itself sometimes is known as a workbook?
A Yes.
Q And the pages sometimes are called worksheets; correct?
A Correct.
Q Let's go to any worksheet you'd like. Just choose one, if you could.
A We can go to ESUM or --
Q Right there. Okay. Okay. Let's scroll to the center. Okay. Now, the construction of worksheets is such that

vertically you have something called columns?
A Yes.
Q Okay. And this column is entitled "Column A"; correct?
A That's correct.
Q What's in Column A?
A Those are -- highlight the revenue titles and the expense titles on this page.
Q Okay. And then across, those are called rows; correct?
A Yes.
Q What is Row 17, for example? What is that? What is that?
A That shows general fund reimbursements.
Q Okay. Now, when rows and columns intersect, you have something called a cell?
A Yes.
Q Let's highlight cell G-17. Now, up at the top there's a box. Do you see that? There's a -- I don't know what you call -- you tell me what you call it. Do you see at the top there's something that says "sum," and then there's a bunch of words after it or figures after it?
A Yes.
Q What is that?
A It's a formula.
Q It's a formula, and the formulas or the values of cells appear in that box?

A That's correct.
Q What does that formula represent, if you can tell?
A It's summing up from the EDET tab, which would be the detail tab, rows 21 through 23 of Column G, so this tab, for instance, would be a more summary view of the detail tab on the EDET tab.
Q Okay. So, in other words, these worksheets borrow from each other?
A Yes.
Q How complex is the borrowing of one worksheet to another?
A In my view, it's not overly complex. I mean it's -- they're formulas, and once you understand the logic, it's not overly complex.
Q Okay.

MR. STEWART: Let's, if we could, scroll to the right just to show the number -- no -- just of the workbook just to show the number of -- not the sheet, the workbook itself -- just to show the number of tabs we're talking about here.

BY MR. STEWART:
Q Each of those tabs, Mr. Malhotra, represents a set of calculations?
A I would say the information on the raw data that would be in the model would not be calculations, but a lot of these tabs would have some calculations on them unless they're raw

data files.

Q And so the tabs we see scrolling by would be where the raw data was captured or compiled?

A The tabs that we are looking at right now would be where -- would be the output of the information that would have been after the raw data had been analyzed.

Q Okay. And we're still scrolling. I should have asked you something earlier. You're aware that the Court has appointed an expert, Marti Kopacz of Phoenix, as the Court's expert?

A Yes, I am.

Q What access has Phoenix had to this model?

A Full access of working Excel models.

Q In this -- in the native format as we see it here on the screen?

A That is correct.

Q Okay. Now, what is done on your model to take all of this raw data and put it in one place?

A Well, it's sort of like that summary tab that we were looking at is you take all of the raw data that is developed that is provided by fund by department, and you take that information and then deconstruct it to basically highlight for every single department how that information is then broken out between each fund, so we take all of the information that is given to us by every department, break it down by every individual department for every single tab, and then that department is further broken down into a general fund component or the enterprise fund component. And then we sum up all of the general fund only tabs for every single department.

Q Now, let's turn in your book, if we could, to Exhibit 109.

MR. STEWART: And please put, Tom, if you could --

BY MR. STEWART:

Q Mr. Malhotra, could you tell us what is Exhibit 109?

A This is a sample of the ten-year projections of the city.

Q Okay. Is this the hard copy version of the model we were just looking at?

A Yes. I believe this is the July 2nd version, so it -- I think it is.

MR. STEWART: Your Honor, I'd move the admission of Exhibit 109.

THE COURT: Any objections?

MR. WAGNER: No, your Honor.

BY MR. STEWART:

Q Could you show us --

(City Exhibit 109 received at 10:58 a.m.)

THE COURT: It is admitted.

MR. STEWART: Sorry, your Honor.

BY MR. STEWART:

Q Mr. Malhotra, could you show us on Exhibit 109 where you'd see the summary page you described to us just a minute ago?
A It would be on page 6 of 82.
Q Okay. And so that is a page where all of the data we saw in the model ultimately bubbles up to to become a one-page analysis?
A Yes. For the baseline information, that would be the page that it would all sum up to.
Q Okay.
MR. STEWART: Let's now put up on the screen Exhibit 113.
BY MR. STEWART:
Q Mr. Malhotra, we've now placed on the screen Exhibit 113. Could you tell us what is Exhibit -- what is Exhibit 113?
A Exhibit 113 looks like the tab from the 40-year projections as the tab from what I can tell.
Q What's the relationship between the 40 -- is this the 40-year model?
A This should be the 40-year model, yes.
Q What is the relationship between the ten-year model -- and what's the date, by the way, of this version of the forty-year model?
A I believe this one is the July 2nd version.
Q What's the relationship between the 40-year model and the

10-year model?

A Well, the ten-year model is 300 plus tabs, so we have to bring in the summary information off the ten-year into the forty-year and then on a line-by-line item basis project over the forty years what the revenues and expenses would be using primarily the same sources I had talked about earlier, and then the forty-year model was used to really illustrate what -- how the city was going to pay for the overall settlements it has reached with various classes, so the forty-year was more of an expansion of the ten-year but looking at it purely from the lens more so of how the restructuring plan comes together.

Q Okay.

MR. STEWART: Now, let's put up Exhibit 111, please.

BY MR. STEWART:

Q Could you tell us, Mr. Malhotra, what is Exhibit 111?

A Exhibit 111 is the 40-year projections of the city.

Q Is this the hard copy version of the model we just looked at?

A Yes.

MR. STEWART: Your Honor, I'd move the admission of Exhibit 111.

THE COURT: Any objections?

MR. SOTO: No.

MR. WAGNER: No, your Honor.

MR. SOTO: No. Sorry.

THE COURT: It is admitted.

(City Exhibit 111 received at 11:02 a.m.)

BY MR. STEWART:

Q Now, during the period of time --

MR. STEWART: And you can take down 111 if you'd like.

BY MR. STEWART:

Q During the period of time you've been preparing the model, is it fair to say there have been a succession of models?

A Yes.

Q And some have had different forecast periods; correct?

A That is correct.

Q And some have had different assumptions in them?

A Yes.

Q Has EY archived each version of each model?

A We do the best we can. There's hundreds of versions, but I think most of them are saved somewhere.

Q Okay. Let me ask you just about a few of the models leading up to where we are today, and let's start with Exhibit 33. Mr. Malhotra, do you have Exhibit 33 in front of you?

A I do.

Q And could you tell us what is Exhibit 33?

A   Exhibit 33 is the original June 14th proposal for creditors.
Q   Did you prepare any part of Exhibit 33?
A   I did.
Q   Let's go, if we could --
MR. STEWART: And, your Honor, I am going -- I'm not going to move the admission of the entire exhibit because the witness did not prepare the entire exhibit. I would move to pages he did prepare and move those into evidence and leave it to another witness to get the larger document in.
BY MR. STEWART:
Q   Mr. Malhotra, let's go, if we could, to page 90, nine zero, of our document here.
MR. STEWART: It would be nine zero in the -- Tom, it would be -- apparently, your Honor, I'm advised it's already been admitted into evidence.
MR. SOTO: Your Honor, it's one of those that was -- the only objecting party was Syncora, and they're no longer here, so we have no objection to this.
THE COURT: All right. The Court will admit Exhibit 33.
(City Exhibit 33 received at 11:04 a.m.)
BY MR. STEWART:
Q   Okay. All right. But I'm still going to confine my questions to page 90 and 91. You have page 90 of the exhibit

before you, Mr. Malhotra. Could you tell me, first of all, what is Exhibit 190 -- I mean -- I'm sorry -- what is page 90? Confused myself.
A Page 90 shows the operating revenues and operating expenditures of the general fund for the next ten years as was presented in the June 13th proposal absent any restructuring.
Q And let's just go down briefly the revenues. First of all, we have various taxes and revenue sharing; correct?
A That is correct.
Q And from whom did you get those numbers?
A The municipal income taxes and state revenue sharing would have been provided by -- the income tax would have been provided by Bob Cline. State revenue sharing would have come from Caroline Sallee. And the wagering taxes would have come from Bob Cline, and the property taxes would have come from Caroline Sallee. And the utility users would have come from Bob Cline as well. I'm positive about the income taxes and property taxes. I don't know about the other two if Bob and Caroline were doing it for us at that point in time or not, but they were for income taxes and property taxes for sure.
Q All right. And these were projected out for the coming ten years; correct?
A That is correct.
Q And tell us how you went about being able to project

these numbers out for ten years.

A Well, we would have started by looking at each one of those categories on a historical basis, so for the income taxes it would have been what the city's historical performance was but also, more importantly, as to where the city was headed in terms of projected population and wage assumptions to ascertain what the income levels were assuming there were no changes in the property tax or in the income tax rates. State revenue sharing, we get input even from the state budget department. Wagering taxes was again based on what some of the historical casino revenues were and sort of using a small reduction based on the introduction of the new Ohio casinos and then a one-percent growth rate over the forecast period. For the sales and charges for services, it would have been looking at each one of the departments in detail to understand what the charges were for the services being offered. Property taxes would have been developed on a commercial and residential standpoint. The other revenue would have also been broken down in terms of what was the overall other taxes or other revenues that were not included in the services above, whether it was court fines or parking tickets, and then general fund reimbursements for the reimbursements that come from some of the historical -- on a by fund basis and even on a projected basis, and then what the UTGO millage was in certain non-general fund POCs, so --

Q Sure.
A -- it was the historical information combined with the forecast on a line-by-line basis.
Q While we're at it, could you tell us what is meant when you have a line that says "general fund reimbursements"?
A Those are items such as reimbursements from the Department of Transportation for their share of the insurance costs or risk management costs, come in as a general fund reimbursement, but there's a corresponding expense in the operating expenditures, so there's at times a net effect for some of these revenues and expenses based on how the city accounts for them.
Q Okay. And then you have transfers in for UTGO millage and non-general fund POCs. Tell us what that represents.
A The transfers in from the UTGO millage represents the -- would have represented the portion that comes in as UTGO tax collections. There would be a corresponding transfer out to reflect the transfer that would be made to the debt service fund, so this was basically reflected to show what the activity was. And also on non-general fund POCs there were a certain portion of the COPs that were allocated to the different enterprise funds, and we wanted to make sure that those reimbursements under a base case scenario or a no restructuring scenario were shown up above.
Q Okay. Now, the expenditures, without going into a lot of

detail, also done generally the same way?

A Yes.

Q At the bottom you have something called net operating surplus. Just, first of all, what is it?

A It is the difference between the operating revenues and the operating expenditures.

Q Okay. Let's go, if we could -- and, by the way, this was presented at the June 2013 meeting with the creditors; correct?

A That's correct.

Q Did you speak at that meeting?

A I did.

Q And what did you speak about at that meeting?

A Well, in addition to the city's precarious cash position, this was one of the -- a couple of the pages that I talked about that showed that on an operating basis the city was actually generating potentially a $3 billion surplus over the next ten years or roughly 300 million a year without accounting for any of the costs related to the city's legacy liabilities.

Q So let's go to the next page of Exhibit 33. Is this a continuation of the calculations we just looked at?

A Yes.

Q And what does this page reveal?

A So on this page, as we continue from the previous page where we had three -- the city was projecting almost $3 billion of surplus over ten years, this page showed the nonrestructured costs of debt service, the POCs, the swaps as they stood, the pension contributions under the assumption the city was using at that point of time, under changed assumptions that the city wanted to use at that point of time, the ongoing costs of health benefits for retirees, which in aggregate from the line items up above, it showed that the city would have almost $7 billion potentially in forthcoming legacy liability expenditures over the next ten years.

Q And you called these in this page legacy expenditures; correct?

A Yes.

Q What do you mean by "legacy"?

A Our way of looking at the legacy expenditures was what the -- the costs that were not associated with providing service or operations today, so it was -- we were trying to exclude the majority of the share of costs related to the active employees and supplies as well as exclude the costs associated with debt that the city had taken on in prior periods.

Q Now, we have a line that says "total surplus" and then in parentheses the word "deficit." What does that line represent?

A That line represents that the -- the delta between the operating surplus that we saw on the prior page, and if you reduce that operating surplus by the full impact of the cost of the legacy expenditures, what the delta is.
Q Okay. So so far in our analysis, on an operating basis, the city actually had a surplus, but once the legacy expenditures were taken into account, that turned into the deficit we see in the middle of the page?
A That's correct.
Q Okay. And the deficit is how much projected over ten years back in June of 2013?
A For the ten years, the projection showed in excess -- or just shy of $4 billion or roughly 390 to $400 million a year.
Q Below that is a series of lines under the heading "reinvestment in the city." What is that section of this page about?
A In that section, we were showing the information that we had gotten from Conway MacKenzie that was provided with respect to revenue and operating expenditure assumptions on a by department basis as well as capital investments and blight that were at that point in time estimated for the city, which in aggregate added up to about a billion dollars net.
Q But how could the city be spending money on reinvestment when it had a deficit at the levels we see in the middle of the -- of page 91?

A It was probably unlikely that the city would have been able to.
Q So why did we have -- why do you have here a section about reinvestment at all?
A Well, the reason we wanted to show it is because based on the discussions we had with the city that the reinvestment was a necessity. It was in order to get the city back and avoid a spiral, but that was the assumption as of then.
Q Okay. Is this analysis, page 90 and 91, sometimes called a baseline analysis?
A Yes.
Q Why is it called a baseline analysis?
A Because on 90 and 91 we have not incorporated any bankruptcy-type provisions, so it's sort of outside of a bankruptcy what the projections could look like, but it does not take into impact any of the restructuring activities that the city has undertaken as a part of the bankruptcy.
Q Okay. Thank you.

MR. STEWART: And we can take down that exhibit. Your Honor, I'm reminded I failed to move Exhibit 113 into evidence. That was the native -- in other words, the electronic version -- of the 40-year forecast, and I'd move it into evidence now.

THE COURT: Any objections?

MR. WAGNER: No, your Honor.

THE COURT: All right. It is admitted.

(City Exhibit 113 received at 11:15 a.m.)

MR. STEWART: Let's, if we could, put up Exhibit 3.

BY MR. STEWART:

Q Mr. Malhotra, Exhibit 3 is in front of you. Can you tell us what is Exhibit 3?

A That's the fourth amended disclosure statement.

Q Okay.

MR. STEWART: And, your Honor, I believe this has been admitted into evidence, although I'm susceptible of correction if I have that wrong.

BY MR. STEWART:

Q Mr. Malhotra, did this disclosure statement also set forth forecasts that Ernst & Young had prepared?

A Yes.

MR. STEWART: Let's go, if we could, to page 89 of 212, so we have to go to the appendix, Appendix A, page 89. No, that's not it.

BY MR. STEWART:

Q While they're doing that, let me just ask you some questions about the disclosure statement, Mr. Malhotra.

THE COURT: Excuse me. Excuse me just one second, please.

MR. STEWART: Yes.

THE COURT: So what I'm showing is -- I'm sorry.

One more second. What I'm showing is that on September 9th the document was admitted during the testimony of Terri Renshaw but only to show what she relied upon --

MR. STEWART: Okay.

THE COURT: -- for what she did, and then I'm also showing that, although Exhibit 3 was initially admitted as part of the final pretrial order, that was vacated and only Exhibit M to Exhibit 3 was subsequently admitted on September 8th.

MR. SOTO: Your Honor, we have no objection to the admission of Exhibit 3. I think the only party that had objected on the exhibit list, again, was Syncora. There's some of their objections which we would adopt, but this is not one of them.

THE COURT: All right. Would you like to offer Exhibit 3 then?

MR. STEWART: Yes, your Honor.

THE COURT: All right. Exhibit 3 is admitted for all purposes.

(City Exhibit 3 received at 11:17 a.m.)

BY MR. STEWART:

Q Now, Mr. Malhotra, I'm now going to direct you to one of the appendices of Exhibit 3, page 89 of 200 and -- I think of 212.

MR. STEWART: Let's go back, if we could. Just go one more page. Do you have -- sorry. It's page 99. Oops. Where were we? Just next page, please, and keep going. One more. Keep going. Keep going. There you go. Page 94.

BY MR. STEWART:

Q Tell us, if you could, what page 94 of 212 is on Exhibit 3.

A This would have been the same slightly updated baseline scenario that was used for the disclosure statement, so I believe this would be the May 5th version of the projections.

Q Okay. And did the disclosure statement also have a comparable summary of the 40-year model that E&Y had produced?

A I believe so, yes.

Q Okay. Let's move on. Let's go back, if we could, now to Exhibit 109 and use the hard copy form of 109, and this has been admitted into evidence. So a couple of months after the disclosure statement, you had a new edition of your model?

A Yes.

Q Okay. And that's what you have before you is Exhibit 109?

A That is correct.

Q Now, it appears to be 82 pages long?

A That is correct.

Q Now, the cover has this red language there. Can you tell me what that's doing on the cover of your model?

A It's our standard disclaimer.
Q Okay. What are you disclaiming?
A That the assumptions and the data are at the end of the day the product of the client.
Q Are you disclaiming the accuracy of the model?
A No.
Q Are you disclaiming that you believe it to be an accurate forecast?
A Yeah. Based on the assumptions, we believe this is -- it's accurate.
Q Okay. So now let's go to page 3.
MR. SOTO: You know, Judge, on that one -- forgive me for interrupting, but I couldn't read a thing of what he was -- what he had there, so I have no idea what he was disclaiming, so -- and I would point that out, your Honor.
MR. STEWART: Well, we could go back, and can we make it any bigger?
MR. SOTO: Could you? Thanks.
MR. STEWART: There we go. Probably going to have to read it in halves.
MR. SOTO: Thank you, Geoff. Thank you, your Honor.
BY MR. STEWART:
Q If we could, let's go to page 5. And what is page 5 of the model?
A It's a continuation of the assumptions --

Q Okay.
A -- that are being used, the primary assumptions that are being used in the model.
Q So the beginning of the model, we set forth what your assumptions are?
A Yes.
Q Okay. Now let's go to page 6. And just for the record -- I think we've seen this before -- what is page 6?
A Page 6 is the slightly updated baseline scenario that was used for the disclosure statement projections. I think it was around May 5th.
Q Okay. So this is an updated version of the forecast we saw that had also been in the June 2013 documentation; correct?
MR. WAGNER: Objection. Leading. I think in general there's been too much leading.
THE COURT: I agree, and that objection is sustained.
MR. STEWART: Okay.
BY MR. STEWART:
Q How does this relate to the pages we looked at, page 91 of Exhibit 33?
A 109 is the July 2nd update of the projections, and so we would have updated it since May 5th for the items that we knew we had changed because it was during this time frame

that there were a couple of settlements that were reached, but on the baseline scenario, other than some changes that we would have made for new information that we would have received, majority of this would have essentially remained the same or close to it.

Q What is the next page of the exhibit?

A Well, on this page of the exhibit we have tried to show the restructuring scenario specifically before distributions are made or could be made to unsecured creditors because what we have done on this page is taken the operating revenues and expenditures from the prior page, eliminated majority of the -- eliminated the majority of the unsecured creditor payments, included in here the reinvestment expenditures to show what funds the city would have available for the next ten years to make payments for its unsecured creditors.

Q Okay. Let's look at the next page. What is this page?

A Page 8 of 82 on Exhibit 4. I think it is a detailed version of the pages we saw two pages prior, which was the summary view of the baseline. This is a detailed view of the baseline.

Q Okay. Let's now go to page 10. This says it's a general fund department detail. What is a department detail?

A This is how we have built up the ten-year projections, so it shows the detail of the summary view and the summary detail view but now being broken down by department.

Q Let's go to the next page then. What is page 11?
A This is the summary of the budget department.
Q That's a department of the city?
A Yes.
Q And why is this page organized the way that it is organized?
A Because all the pages after this on every single department is organized the same way.
Q And how many such pages are there that go through the department detail?
A Probably 50-plus.
Q Let's go to one in particular just so I can ask you about it, which will be page 17 of 82. This is the detail for the fire department.
MR. STEWART: And can we blow that up so it's easier to see? Just blow up the left-hand half of it. Maybe that'll be easier.
BY MR. STEWART:
Q So, Mr. Malhotra, I want you to walk us through how this detail was done for, in this case, the fire department.
A So the information that is here on the left would have been the information that we would have gotten first in the raw data from the city by line item, and this would have probably been only for the general fund because fire just has the general fund essentially, and then we would have gone

through actually the details that broke up the licenses, permits, and charges, and the same things for sales and charges for services and then looked at each one of the expense categories in terms of the salaries, the overtime, what the pension allocation was, the basis for the fringe benefits that were allocated to the fire department, so there would be another layer down in terms of the detail. And based on that, we would have actually developed the projections on a headcount basis for the fire department.

Q What part of this sheet is purely historical information?

A The left part, 2008 through 2012.

Q Okay. So let's now expand the right side so we can see some of the projected information. Now, Mr. Malhotra, how did you go about projecting revenue and expense items as they related to the fire department?

A Well, when it came to the revenues, the fire department does not have a lot of revenues, so we would have looked at the assumptions with respect to like the first line here would have been the -- I believe it would be the inspection charges, but they had generally been following a consistent trend, and then based on discussions with management for any specific initiative that was being undertaken to increase the overall fees or the inspection charges, we would have increased it and then left it flat over the forecast period because there was not necessarily a plan in terms of how

those inspection charges would continue to go up.
Q Now -- go ahead. Have you finished?
A The second line, I think, is the sales and charges for services, and those, again, would be EMS fees or charges that could be generated by the fire department. And, again, between 12.6 and the 14.9, we would have been specifically highlighting any specific initiative based on discussions with the management team that were being used or looking at even what those charges were historically to come up with what the 2014 number would be and also for keeping that flat depending on the kind of revenue initiative it was. The grant revenue was essentially the SAFER grant in which we knew that the city has gotten the SAFER grant extended through fiscal year '15 and '16, so we left that in but dropped it '17, '18, and '19 in the baseline, but when you will look below in the revenue initiatives that are not shown on this page, we assumed that the grant would actually get renewed for two more years, but we did not want to incorporate that in the baseline that's shown down below in terms of the reinvestment initiatives.
Q Then under "expenditures," just in a nutshell, tell us how you went about coming up with the numbers that we see.
A So the biggest line item again, which is salaries and wages, that would have been developed based on -- again, we have schedules in the back -- based on the assumptions of the

actual headcount by department. We had that historically as well as the most current state, and we would have used the current assumptions of the headcount at the average salary level that we had been provided for that particular department and forecast that over the course of the time frame. And, again, we would have based headcount assumptions compared to what the headcount assumptions were a few months ago because there had been an ongoing attrition, and so we assumed in the baseline that the attrition would be replaced in the projections.

Q Okay. Now, at the bottom of this page -- let's go to the whole page once again. What do we have in the bottom couple of lines?

A So those are the operational restructuring and reinvestment initiatives, which was the information that was given to us by Conway MacKenzie on a department-by-department basis, but we ensured that there was -- that these expenditures were reviewed, so there was not a double counting of either a revenue or an expense between what was in the baseline versus not.

Q Okay. And this was done for how many of the city's departments?

A All the departments that impacted the general fund.

Q And if we could just flip to the next page and the page after that, what sort of departments do we have here? That's

fire. What's the next one?
A Health and wellness.
Q Do you see it on your screen, Mr. Malhotra? It may be easier to see it on the screen.
A Yes. The health and wellness department.
Q And after that? And let's do the next page after that.
A The human resources department.
Q Okay. And could we go on until we've gone through every department in the city?
A Yes.
Q And where were these all compiled in this forecast?
A All of the information for the general fund came together in the summary tab, which we had looked at earlier.
Q That's what? Page 6 and 7?
A Yes. Page 6 was the baseline view, which is where all of the individual departments would add up to, and then page 7 was more for restructured view.
Q Now, let's look at Exhibit -- we can put that down. Let's look at Exhibit 111, and if we can go back to page 4 of 11. What does page 4 do?
A Page 4 is -- shows the projected ten-year and forty-year view of the city under the restructuring view scenario, which shows what funds are available to pay unsecured claims over the next ten, twenty, thirty, or forty years.
Q Okay. All right.

MR. STEWART: So now let's go back to Exhibit 111 and, in particular, to pages 5 and 6. Sorry. Let's make it page 6 actually. Is that 6? I'm losing my eyesight. I'm sorry. Make it 109, page -- that's the wrong page -- make it page 109 -- sorry -- Exhibit 109, page 6, please, and let's highlight, if we could, the left-hand column that has the -- all the way down, please. There we go. Thank you. Okay.

BY MR. STEWART:

Q So I think I've already asked you, Mr. Malhotra, about the sources of some of the information you have here, and I believe we talked about other revenues.

MR. STEWART: Could we put up, if we could --

BY MR. STEWART:

Q We have sales and charges for services. Do you see that?

A Yes, I do.

Q And also other revenues?

A Yes, I do.

Q Okay.

MR. STEWART: Let's put up --

BY MR. STEWART:

Q I'm going to ask you about the details of sales and charges for services.

MR. STEWART: Let's put up demonstrative Exhibit 716. Okay.

BY MR. STEWART:

Q And, Mr. Malhotra, what I would like to do is ask you what the detail is that is behind the line that says "sales and charges for services." First of all, what is Exhibit 716?
A It shows the build-up of the sales and charges for services by department.
Q Who prepared Exhibit 716?
A We did.
Q Okay.
MR. STEWART: Your Honor, I'd move the admission of 716 solely for purposes of being a demonstrative exhibit.
MR. SOTO: No objection, your Honor.
MR. STEWART: Could we --
THE COURT: It is admitted.
(City Exhibit 716 received at 11:35 a.m.)
MR. STEWART: Sorry. I'm never going to get this right, your Honor.
BY MR. STEWART:
Q Mr. Malhotra, could you walk us through and tell us what items of revenue there are that underlie the line that's entitled "Sales and Charges for Services"?
A Yes. The main categories are by department. The first one is nondepartmental in which you have probably three or four main items that are captured in there, the first one being the municipal service fee. The second main item that

is also captured in there is the overall reimbursements that come from other departments for services that are provided by the general fund, so it's almost a netting out of an expense with a revenue. The PLD Department also has all of -- has the costs or the revenues related to its customers, which are continuing to show -- go down, which is as the grid is transitioned to a third party provider, the PLD Department is no longer going to be collecting revenues from those particular customers. The fire department is, again -- this specifically relates to predominantly the fees that are being charged also by EMS. That is sort of built up in the fire department. The 36th District Court as well, this is related to the fees that are historically charged, so -- and we can go down, but those are sort of the main components of the sales and charges for services.

Q Okay. And then if we went back to Exhibit 109, there's also this category entitled -- pardon me -- "Other Revenue."

MR. STEWART: Let's put up, if we could, Exhibit 717.

BY MR. STEWART:

Q Do you have Exhibit 717 before you, Mr. Malhotra?

A Yes, I do.

Q What is Exhibit 717?

A Exhibit 717 breaks down the other revenues into more detail in terms of how we -- the items that we had included

in other revenues in the summary.
Q Who prepared Exhibit 717?
A We did.
MR. STEWART: Your Honor, I'd move its admission as a demonstrative exhibit.
MR. SOTO: No objection, your Honor.
THE COURT: It is admitted.
(City Exhibit 717 received at 11:37 a.m.)
BY MR. STEWART:
Q Mr. Malhotra, could you walk us through what items comprise the line entry that has been entitled "Other Revenues"?
A The items there would be other taxes, which I believe is an industrial facility tax; the parking and court fines, which is predominantly parking tickets; grant revenue, which would be related to the grant revenues in specific departments such as the SAFER grant or the COPs grant. The licenses and permits would be fees charged by the building department and building permits and the inspections by even the fire department. The revenue from use of assets would be some rental income, some one-time asset sales. The general fund reimbursements would be, again, predominantly reimbursements coming from the Department of Transportation for paying the self-insurance funds. The transfers in from UTGO would be the component of property -- of tax collections

that were related to the UTGO millage. The department revenue initiatives would be the operating initiatives by department that would be shown on a department-by-department basis that would be flowing into other revenue.

Q Let me ask you about the transfers in for the UTGOs. Why is that treated as revenue?

A Because there is an incoming source that is coming in in terms of the taxes that are collected and then a corresponding transfer, though, to the debt service fund under a baseline scenario initially, yes.

Q And then the department revenue initiatives, I believe we've talked about those before. Are those existing revenues or projected revenues?

A Those are projected revenues coming through the reinvestment initiatives. We got that line from Conway MacKenzie.

MR. STEWART: So let's go back to Exhibit 109 and to the general fund summary that we were looking at there, and let's expand the lower left-hand corner. Now, we're going to want to go higher up to the expense part. See the -- yeah, there we are.

BY MR. STEWART:

Q What was the source of your information for the items, first of all, that are salaries, health benefits, and other operating expenses?

A On a historical basis, it would be the city's information that we got on a department-by-department basis of what salaries and wages were allocated by fund by department.

Q Okay. Let me direct your attention. The top line says "salaries over time and fringe"; correct?

A Yes.

Q And that's projected out for a number of years?

A That is correct.

Q What inflation assumption did you make with respect to wage inflation over that term of years?

A With respect to wage inflation in the first few years, we used the information that was at the time being discussed with the different unions with respect to five percent up front in terms of the wage increase, zero following, and then it was about 2-1/2, 2-1/2, 2-1/2 after that. Beyond the first five years, we used a two-percent wage inflation assumption.

Q Do you know how that compared with the wage rate of inflation Dr. Cline used in his projections of income taxes?

A The two percent should be similar.

Q Okay.

MR. STEWART: Now, if we go further down, under net operating surplus, we have -- oops -- let's see. Go, if you could, back to what we -- just stay with what we had originally, if you could. Thank you. You got to go to the next page. Let's go to the next page, if we could. And you see the upper left-hand corner? Go further down. Oops. There you go. Thank you.

BY MR. STEWART:

Q Under expenses we have a variety of expenses I wanted to ask you about. Let's talk about the reinvestment. You have OPEB payments for current and future retirees?

A That is correct.

Q Where did those -- where did those numbers come from?

A For the current retirees, we had the information based on what the historical performance of the city was with respect to payments for its existing plans as well as some of the information we would have received from Milliman on the cost of the plans on a per head basis.

Q Okay.

A And for future retirees, it was based on two percent of healthcare -- two percent of wages for the nonuniform employees, and for the uniform employees it was a million dollar fixed payment for the forecast period.

Q Now, let's go, if we could, to the overall sheet, to the overall page that we had, and as a result of your modeling exercise that you've described to us, Mr. Malhotra, have you reached an opinion looking at these pages of Exhibit 109 as to the reasonableness of the city's projections of its revenues and expenditures for the next ten years?

A Yes.
Q What is your opinion?
A My opinion is based on the assumptions here, the revenues and expenditures appear to be reasonable as shown here until the funds available for unsecured claims that the revenues and expenses seem reasonable.
Q Let's now go -- pardon me -- if we could, to Exhibit 111 and, in particular, to page 4 of 9. I believe you looked at this sheet before, Mr. Malhotra. As a result of the work you did that you described to us, have you reached an opinion about the reasonableness of the city's forecast of revenues and expenditures for the 40-year period that's set forth on page 4 of 9 of Exhibit 111?
A Yes.
Q What is your opinion?
A My opinion is that based on the assumptions we have here, these revenues and expenses appear reasonable for 40 years in terms of the line item up to the funds available for unsecured claims.
Q Thank you. Now, more recently you updated your July forecast just last week, did you not?
A That is correct.
Q Let's put up -- and tell us why you updated the July forecast.
A The primary change for that was the Syncora settlement.

It is why we updated the projections recently, and there were some other small changes as well.

MR. STEWART: Let's put up Exhibit 733, please.

BY MR. STEWART:

Q What is Exhibit 733?

A 733 is the ten-year projections that were prepared last week.

Q And who prepared Exhibit 733?

A We did in conjunction with the other advisors and the city.

Q What was Exhibit 733 based upon?

A It was the same information that we had in the prior versions other than an update for the Syncora settlement as well as some of the timing changes based on the updated information we have.

MR. STEWART: Your Honor, I'd move the admission of Exhibit 733.

MR. SOTO: No objections, your Honor.

MR. STEWART: Let's put up 734 if we could. Your Honor, I'm never going to get this right. I mean I just give up. I think you should imprison me or something. I've now messed this up, I think, seven times.

THE COURT: It is admitted.

(City Exhibit 733 received at 11:45 a.m.)

MR. STEWART: I apologize. Let's put up --

BY MR. STEWART:
Q Exhibit 734, Mr. Malhotra, is front of you. Can you tell us what is Exhibit 734?
A 734 is the 40-year projections that were prepared last week.
Q And why was there an update as of last week of the 40-year projections?
A It was to reflect the -- primarily the Syncora settlement, and there were other -- some small changes from a timing standpoint.
Q What's the relationship between the recent update for the 40-year projections and what we saw back in July?
A It's the -- essentially the same data. It's just been updated for the settlement and the timing of the changes.
Q Do these documents also exist in native format?
A Yes.

MR. STEWART: Do we have those loaded? If not, we can do it after the break.

BY MR. STEWART:
Q While we're waiting for that to happen, let me ask you this. Are you familiar with something in analytics called a bridge?
A Yes.
Q What is a bridge?
A It helps compare, in my view, the previous set of

projections to the current set of projections.

Q Did you prepare a bridge to span the change from the July projections to the September projections?

A Yes.

MR. STEWART: Let's put up Exhibit -- I'm sorry. Let's go to page 11 of this exhibit.

BY MR. STEWART:

Q What is page 11 of our exhibit?

A Page 11 shows the annual changes over the next ten years and forty years of the changes that were made to the July 2nd projections to the most recent projections.

MR. STEWART: Your Honor, I'm wondering if I remembered to move into evidence Exhibit 734. I'm not sure that I did.

MR. SOTO: Your Honor, our only point on Exhibit 734, the witness said there were some minor -- I think he called them changes. Could he describe what it is so we can find them or see them? I don't have a problem with it, but --

MR. STEWART: I'm doing it right now.

MR. SOTO: Is that what you're doing? Okay. Then no objection, your Honor.

THE COURT: All right. It is admitted.

(City Exhibit 734 received at 11:48 a.m.)

BY MR. STEWART:

Q All right. So let's focus, if we could, on page 11 of 14. Please tell us how this page connects the July forecast to the September forecast.

A So each one of these sections are highlighting the changes that have been made since the July projections, so the first section is the financing changes.

MR. STEWART: Let's blow up that left side of this so we can see those all the way down. There you go. Thank you.

BY MR. STEWART:

Q So please tell us what the changes were.

A The first section shows the financing changes in terms of the assumptions on the quality of life borrowings and amount of exit financing. The next section shows the changes in terms of the Syncora settlement as well as other items that were related to Syncora. The next section showed the 36th District Court settlement, and the fourth section showed the changes in terms of the timing of when the quality of life proceeds were being drawn and when the expenditures were made. And there's also a slight change in the contingency amount based on the new borrowing. The blight timing was updated. There was amount included for a draw from the state-controlled escrow as well as the professional fees were updated based on the latest information we had, and the overall reinvestment deferrals were also updated.

Q Okay.

MR. STEWART: Let's go back to the full view, if we could, again, Tom.

BY MR. STEWART:

Q And so what do these numbers mean as they're scheduled across the columns of this page?

A The first line shows a negative number in '15 and '16 which essentially represents that the city is borrowing less cash. The initial assumption in July was that the city would borrow $300 million in exit financing whereas the latest assumption that the -- that we are using is the city will only borrow $275 million of exit financing. The line below just shows the changes in the assumptions with respect to the principal and interest payments for the exit financing based on the latest information we had from Miller Buckfire. The POC settlements show for note C the Syncora portion of note C, which is a payment of roughly $2.4 million a year for 12 years. There were some nonbankruptcy settlement items, which was about a $5 million cash payment, as well as the extension of a tunnel lease or foregone rent from the tunnel until a period of time in which it capped out at about $8 million. We also updated for increased other fund reimbursements and increased DWSD revenue stream to allocate the increased cost of the Syncora settlement to DWSD and the other funds because they typically have about 11-1/2 percent allocation of the

POCs. The 36th District Court settlement was based on what's in the plan with respect to the settlement of claims. It's about $2 million over the next five years. The contingency was just changed to reflect the one-percent amount based on updated revenues. Quality of life proceeds, in July we had still assumed that we would have borrowed 52-1/2 million in 2014, which we did not, so we pushed it forward to 2015. Also, the timing of certain expenditures that were incorporated through fiscal year '14 of 131.2 million were forecasted to be made in the following year in terms of when the cash is really going to go out. Blight timing in terms of where the city was, instead of $100 million expense in 2015, it was taken down to 80, so this reflected the $20 million variance for 2015 that would subsequently get caught up over the following four years. We also had now shown the full draw of the available escrow proceeds. While the city has to continue to reserve for some self-insurance reasons, there is -- the remaining balance in the escrow proceeds was assumed to be drawn. We also did on an advisor-by-advisor basis analysis of the invoices that the city has been receiving and updated the estimate of the professional fees through the end of December 2015 based on the information we had from the various professionals. And then we had -- we changed some of the reinvestment deferrals so increased a portion of the deferrals in '16 and '17 cumulatively between

2017 of about 25-plus million dollars and then caught those up in the subsequent years in the forecast period, so there was a timing change in terms of how the reinvestments were being spread.

Q Let me ask about the professional fees. Those increased between your July forecast and your September forecast by $52 million?

A That is correct.

Q How did that happen?

A We asked for all the professionals to give us their estimates, and we wanted to -- we included them in the forecast.

Q And who are the professionals we're talking about whose projections or invoices are combined in that line, "additional professional fees"?

A It is a combination of the city's advisors, which includes the financial and the legal advisors, as well as the Retiree Committee's advisors and the other advisors the city has been using in this process. It included some estimates through December.

Q Is there a detail on this document or another document that sets -- that breaks that down by advisor?

A Yes. We have the information by advisor. It's not -- I don't think it's in this document, but we have the supporting schedules that break down all of the variances.

Q Okay. All right. So now you've told us about --

THE COURT: Excuse me. Do you have that here?

THE WITNESS: I don't have it here, but I can get it over the break, but I do have it, yes, your Honor.

THE COURT: Please.

BY MR. STEWART:

Q Now, you've described for us, Mr. Malhotra, this bridge, and so if you take all these numbers, how do they connect the two forecasts?

A If you take the July forecast, you incorporate these changes, you will get to the September forecast.

Q Okay. Now, we've looked at the general fund summary before. It has all sorts of lines. Why are there so few lines, relatively speaking, on the bridge compared on the -- to the general fund summary?

A Because these are the only line items that changed.

Q Okay. Now, let's go, if we could, to page 10 of this exhibit. What is page 10 of the exhibit?

A Page 10 of this exhibit is the 40-year bridge, which is a summary view of the bridge that we were just looking at in detail, and it just breaks down the financing charges changes, the impact of the Syncora settlement plus some of the other impacts from the nonbankruptcy changes with Syncora, but it's just a summary view of what we were just looking at, the detail view over 40 years.

Q And how does it connect the July 40-year forecast to the September 40-year forecast?
A The detail line items would be the only changes that would have been made since the July forecast.
Q Okay. Let's, if we could, now go to Exhibit 733. Okay. And this is the ten-year; correct?
A That is correct.
Q Exhibit 109 was the ten-year forecast for the -- in July, and, of course, this the one in September. What differences are there in the format of these two forecasts?
A The September forecast on Exhibit 733 is about 113 pages. The July projections for the ten-year were about 82 pages. The first -- the format of the first 82 pages is essentially identical, but in these projections we have included just a different way of looking at the numbers, so none of the numbers have essentially changed, but we recut the ten-year projections as well based on input that we were receiving as to a more -- a simpler view of looking at the department budgets post-restructuring.
Q Okay. And where does that simpler view begin?
A It should be on page 83 of this.
MR. STEWART: Let's go, if we could, to page 83. Back up to page 82 actually first.
BY MR. STEWART:
Q So these are Appendices E to F?

A Yes.
Q Okay. So what is it that begins on page 83?
A So what page 83 does is it's, again, a summary view of the general fund, revenues and expenditures, in which all of the restructuring revenue initiatives, restructuring expenses have been flown -- have been followed through by department, so this is a sum of a department view again, but unlike the restructuring initiatives or expenditures or revenues being broken out separately or just using the historical nonrestructured legacy liabilities, what we have tried to do here is to show a more simplistic view of the general fund, probably a more realistic view as to how the financial information will come about post-restructure.
Q Does this analysis have a name?
A It's a post-restructuring view.
Q Have you heard the phrase used "the mayor's view"?
A Yes. At times we have referred to this format and another format as the mayor's view because it is a better format to kind of look at the overall picture.
Q Did the mayor ask for it to be done this way?
A No, not directly. We did it.
Q What conversations did you have with the Court's expert, Ms. Kopacz, about preparing a different view to set forth the data in the way you've just described to us?
A I mentioned to the Court's expert that this is another

way that we are looking at it, you know, based on some of the comments that we had also read through in the report as to how to make this more user friendly since we've been looking at it over the evolution for the last couple of years as to how to sort of make this a much more effective document going forward. I'm sure there will be some more changes to the format, but this is along the lines of making it more user friendly going forward.

Q Does this view also have department-by-department breakdowns?

A It does.

Q Let's go to the one for the fire department, if we could.

THE COURT: Actually, before we do that, let's stop now for lunch.

MR. STEWART: Your Honor, in three minutes I can wrap up this whole section --

THE COURT: Oh, all right. Go for it.

MR. STEWART: -- because it's just one page and then two questions, and then we --

THE COURT: Okay.

MR. STEWART: -- move on to something perhaps more interesting.

MR. SOTO: I don't believe it.

BY MR. STEWART:

Q Do you have the fire department before you, Mr. Malhotra?

A Yes, I do.

Q How does this compare to the sheet we looked at earlier in the other view for the fire department?

A It should be very similar in terms of the line items, but the sales and charges for services, like, for instance, in 2015 would be a summation of what was in the baseline plus the revenue initiatives below the line that were highlighted would now be captured together.

Q Okay. You've heard of the -- pardon me -- the phrase "harmonization"?

A Yes.

Q What is harmonization?

A It's syncing up essentially of two different files' formats.

Q Okay. What role does this part of the exhibit play in the process of harmonization between the forecast of Ernst & Young and the budgeting process of the city?

A I think it's the first couple of steps because 2015 is going to be a transition year for the budget department as well as as we continue to look at the projections, but this is along the road of trying to harmonize the budget department, but like I said, there will still continue to be some changes the way the budget department creates the budget, but this will definitely go -- be sort of the first step of that harmonization process.

MR. STEWART: Thank you. Your Honor, if this is a good time to break, this would be an appropriate time for me, too.

THE COURT: Okay. We'll be in recess until 1:30, please.

THE CLERK: All rise. Court is in recess.

(Recess at 12:03 p.m., until 1:30 p.m.)

THE CLERK: All rise. Court is back in session. You may be seated. Recalling Case Number 13-53846, City of Detroit, Michigan.

THE COURT: You may proceed.

MR. STEWART: Thank you, your Honor. Your Honor, may I approach the bench, please?

THE COURT: Yes.

MR. STEWART: And may I also approach the witness?

THE COURT: Yes.

BY MR. STEWART:

Q Mr. Malhotra -- for the record, Geoffrey Stewart, Jones Day, for the city. Mr. Malhotra, I placed before you a document marked as Exhibit 767. Could you tell the Court what Exhibit 767 is?

A This exhibit shows the breakdown of professional fees by advisor for fiscal year '14 and the estimates through fiscal year '15 and then the total column for professional fees by advisor and also the breakdown of the variance that we had

spoken about earlier.
Q Is this a detail of fees that you testified to before the lunch break?
A Yes, the variance of the professional fees by advisor. That is correct.
Q Okay. And the detail that Judge Rhodes asked you to prepare and bring to Court this afternoon?
A That is correct.
MR. STEWART: Your Honor, I'd move the admission of Exhibit 767.
THE COURT: Any objections?
MR. WAGNER: No objection, your Honor.
MR. SOTO: No objection.
THE COURT: It is admitted.
(City Exhibit 767 received at 1:32 p.m.)
MR. STEWART: I also wanted to go back to some other exhibits we spoke of this morning and move their admission. Could we first put up Exhibit 757?
BY MR. STEWART:
Q Mr. Malhotra, do you see exhibit 757 on your screen?
A I do.
Q Could you tell us what Exhibit 757 is?
A 757 looks like the ten-year projections. I'm just trying to see which version they would be.
Q I'm sorry.

A   I'm just trying to figure out which version they would be.
Q   Perhaps at the bottom there would be a time or a date shown on the first page.
A   I would be able to tell if you could please go to the e-summary tab. If you scroll to the bottom right, please. These appear to be the September projections of the ten years.
Q   In native format?
A   That is correct.
MR. STEWART: Your Honor, I'd move the admission of Exhibit 757.
THE COURT: Any objections?
MR. SOTO: No objection, your Honor. I would note for the record that he couldn't tell what it was from just the front page.
THE COURT: I noticed. Okay. 757 is admitted.
(City Exhibit 757 received at 1:33 p.m.)
MR. STEWART: Let's put up 758.
BY MR. STEWART:
Q   Could you tell -- if you'd like, go to the second or third page of 758. Can you tell us, Mr. Malhotra, what is Exhibit 758?
A   758 is the post-restructuring scenario which we spoke about earlier from pages 83 onwards, which is a recut of the

ten-year financials under a different format.

Q Did you prepare 758?

A Yes.

MR. STEWART: Your Honor, I'd move the admission of 758.

MR. SOTO: No objection, your Honor.

THE COURT: It is admitted.

(City Exhibit 758 received at 1:34 p.m.)

MR. STEWART: Let's look up 759, please, 759.

BY MR. STEWART:

Q Mr. Malhotra, do you have Exhibit 759 before you?

A I do.

Q What is Exhibit 759?

A 759 should be the 40-year projections and should be the September version, but I can just confirm if you go to the 40-year tab. Yeah. I believe these are the September projections.

MR. STEWART: Your Honor, I'd move the admission of Exhibit 759.

MR. SOTO: No objection, your Honor.

THE COURT: It is admitted.

(City Exhibit 759 received at 1:35 p.m.)

THE COURT: I meant to announce at the beginning of court here after lunch that the mediator did recommend adjourning tomorrow's proceedings relating to the UAW claim, so the Court will agree to do that. Do you have a new date in mind for that?

MR. HERTZBERG: We hadn't discussed a date, and what I suggest is let's see how it goes tomorrow, and then I can talk to the other side about slotting in a date and come back to you.

THE COURT: I do want a date.

MR. HERTZBERG: Okay.

THE COURT: I don't want to leave it open.

MR. HERTZBERG: I'll take good care of it, your Honor.

THE COURT: Before you leave the lectern, Mr. Hertzberg -- and I don't know if you're the right person to talk to about this, but we had an inquiry this morning from Mr. Flynn on behalf of the Detroit Fire Fighters Association. They were also scheduled for their issues tomorrow, and he was asking about whether and how that was going to proceed. Is that your issue or someone else's?

MR. HERTZBERG: I'm not aware of that issue, your Honor. Let me check over here. Your Honor, could I suggest that Mr. Flynn check with Heather Lennox? And we can track it down, and then we can come back and report to you.

THE COURT: Okay. I will do that, but I will ask you to try to communicate to Ms. Lennox to reach out to Mr. Flynn also.

MR. HERTZBERG: I will, your Honor.

THE COURT: All right.

MR. STEWART: Your Honor, I'm sorry if I jumped the gun even after the lunch break, but I have a note to myself now stuck on the lectern which says "wait."

THE COURT: Always good advice.

BY MR. STEWART:

Q So, Mr. Malhotra, let me -- let's move on to a new area. You understand that the city has settled with the claims of some of its creditors?

A Yes.

Q What is the extent of your knowledge of those settlements?

A It's pretty extensive.

Q And do you understand the city proposes to issue securities as part of some of those settlements?

A Yes.

MR. STEWART: Let's put up Exhibit 728.

BY MR. STEWART:

Q Do you see Exhibit 728 before you, Mr. Malhotra?

A I do.

Q What is Exhibit 728?

A Exhibit 728 highlights the new notes that are going to be issued as a part of the overall restructuring in order to settle the claims of various classes.

Q Who prepared Exhibit 728?
A It was our team along with the Jones Day team.
MR. STEWART: Your Honor, I'd move the admission of 728 as a demonstrative exhibit.
THE COURT: Any objections?
MR. SOTO: No objection as a demonstrative.
THE COURT: It is admitted.
(City Exhibit 728 received at 1:38 p.m.)
BY MR. STEWART:
Q Mr. Malhotra, let's go, if we could, through the exhibit, and at the top there's something called restructured UTGO notes. Please tell us what those are.
A Those are the restructured unlimited tax general obligation notes that will be issued in $288 million in face value and would be paid off over 14 years at various interest rates by tranche, but essentially these notes are going to be paid off over the same time frame and at the same interest rate as the original UTGO notes.
Q So what about them has been restructured?
A The face value and the claim amount compared to the claim amount.
Q And do you know what the original face value of the UTGO claims was?
A The claim amount is about 388 million.
Q What's the next line?

A New LTGO bonds.

Q And what are those for?

A Those are new limited tax general obligation bonds that are being issued by the city in order to settle the LTGO -- settle with the LTGO class, but the city does have the option to pay off the entire amount in cash at emergence.

Q And please tell us about the face value and other terms of the new LTGO bonds.

A The bonds would be $55 million in face value payable over 23 years at an interest rate of 5.65 percent if the city does not pay the -- those notes off earlier in its entirety in cash.

Q And who will be the holders of these new notes?

A They would be the LTGO bondholders.

Q Okay. Now, below that is something called the new B notes. What are the new B notes?

A The new B notes are new notes that are being issued as a part of the plan for reaching settlement with the classes of the LTGOs, the OPEBs, as well as a portion of the COPs and other unsecured creditors. They would be $632 million of notes payable over 30 years at an interest rate of four percent for the first 20 years and six percent for the last decade, and they're going to be interest only for the first ten years.

Q And you told us who the holders would be of the B notes?

A Yes. It would be a combination of the classes for OPEB, LTGOs, the COPs, notes, and the other unsecured creditors.
Q Now, have you heard of something called a COPs reserve?
A Yes.
Q What is the COPs reserve?
A The COPs reserve is the -- it's a portion of the B notes that was set aside in connection with the COPs litigation.
MR. STEWART: Let's put up demonstrative Exhibit 751, please.
BY MR. STEWART:
Q Do you see Exhibit 751 before you, Mr. Malhotra?
A I do.
Q Who prepared 751?
A We did along with the Jones Day team.
Q And what does 751 purport to depict?
A It breaks down the overall B notes of $632 million into as to how they get allocated between the different classes.
MR. STEWART: I'd move the admission of demonstrative Exhibit 751, your Honor, but only as a demonstrative.
MR. SOTO: No objection, your Honor.
THE COURT: It is admitted.
(City Exhibit 751 received at 1:42 p.m.)
BY MR. STEWART:
Q Mr. Malhotra, on the left-hand side we see a pie chart;

correct?
A That is correct.
Q What part of the pie chart represents the COPs reserve?
A The $162 million.
Q And then there is a segment to the right, a bar chart, I guess. Why is that there?
A That was there to illustrate as to depending on how the COPs litigation plays out, how the COPs reserve would get allocated between the OPEB class, the LTGOs, and the other unsecured creditors.
Q Now, you mentioned the COPs litigation. What are you referring to?
A There's ongoing litigation in terms of the validity of the COPs.
Q And does that litigation affect the -- or how, if at all, does that litigation affect the COPs reserve?
A Well, if the litigation -- from my understanding, if the litigation goes in favor of the city, the $162 million of COPs reserve would be broken out pretty much between the OPEB, the LTGOs, and the other unsecured creditors for the most part.
Q And if it goes against the city, how does it get broken up?
A If it goes against the city, the city would be reserving that $162 million of the B notes for the COPs holders.

Q Okay. Let's go back to Exhibit 728 now.

MR. SOTO: Excuse me, your Honor. Just to clarify something in that last one, is that -- if you'd go back to the last one --

MR. STEWART: Yeah.

MR. SOTO: It says sixth amended plan. Is that what's intended there?

MR. STEWART: Let me ask.

BY MR. STEWART:

Q Mr. Malhotra, this says sixth amended plan, does it not?

A Yes, it does.

Q Do you know why it says sixth amended plan?

A This chart did not reflect on this particular page the component of the COPs reserve that gets crystallized for Syncora as a part of the seventh amended plan, so that portion would change to reflect the Syncora settlement.

Q This is how things stood before there was a Syncora settlement?

A That is correct.

Q Now, if we could go back to 728. Right. We're back to 728, and there's a category called new C notes. What are the new C notes?

A The new C notes are new notes that are being issued for Syncora in a face value of $21 million that would be payable over 12 years at an interest rate of five percent, so it's

approximately $2.4 million a year.
Q Is there a particular stream of revenue that is pledged to service the new C notes?
A I don't know if there's a revenue item that's particularly pledged, but it is tied into some parking, but I don't know if the parking revenue is pledged.
Q So let's look at the balance of 728. In the lower left-hand corner we have a pie chart that says face value. What is that intended to reflect?
A That reflects all the new notes that are going to be issued under the plan.
Q And to the right there is a bar chart that says "debt service." What is debt service intended to depict here?
A It shows the cost of servicing the new notes that are being issued over the next approximately 40 years.
Q Okay. So could you walk us through the bar chart and show us -- the bars are segmented by color, are they not?
A Yes.
Q If you could please walk us through the chart to show us how the debt service depiction works here.
A So the first column or the first decade really from 2014 to 2023, lion's share of that debt service is the UTGO bonds because, as I mentioned earlier, they're getting -- going to get repaid over 14 years consistent with their original repayment schedule, so the yellow gets -- UTGO bonds get paid

off in the first decade, and then there's a sliver in the second decade. The second component is the LTGO bonds, which is in purple, and in the assumptions that we have in the projections, the city is assuming that the $55 million will be paid off in cash at emergence versus being paid off over 23 years, which is why that is only in the first stack chart. The third section, which is the section in orange, represents the servicing of the B notes, and the reason that is smaller in the first ten years compared to the next two columns is because that -- the new B notes are interest only for the first ten years, and the last sliver is the new C notes, which are getting paid off over 12 years, which is why we have the stack in the first column and a small amount in the second decade.

Q And then starting in year 2034 and thereafter, what notes, if any, are still being serviced?

A At '34 and onwards it's only the new B notes that are being serviced.

Q Okay. All right.

MR. STEWART: Thank you. You can take that down.

BY MR. STEWART:

Q Now, I think I've asked you about settlements the city has reached with creditors, and let me go through them now.

MR. STEWART: Let's put up Exhibit 718.

BY MR. STEWART:

Q Do you see demonstrative Exhibit 718, Mr. Malhotra?
A Yes, I do.
Q Who prepared this exhibit?
A We did along with the Jones Day team.
Q And very briefly, what is it? What does it purport to depict?
A It shows a summary of the settlement of the Class 7 claims and also shows what the claims actually were.
Q And do I understand correctly Class 7 claims are the LTGO claims, the LTGO claims?
A Yes.
Q Please walk us through this, the terms of the settlement.
A So as a part of the settlement, the LTGO class is going to get new LTGO bonds.
Q Actually, stop.

MR. STEWART: Your Honor, I move into evidence as a demonstrative exhibit Exhibit 718.

MR. SOTO: No objection, your Honor.

BY MR. STEWART:
Q Sorry I interrupted you, Mr. Malhotra.

THE COURT: It is admitted.

(City Exhibit 718 received at 1:49 p.m.)

BY MR. STEWART:
Q Now, could you walk us through Exhibit 718?
A Yes. The settlement on -- with Class 7 is essentially to

settle the claims of the LTGO bondholders on the series that are listed here. As a part of the settlement, the class is going to get new LTGO bonds in the amount of $55 million. In addition, as a part of the settlement with Syncora, there is a portion of the COPs reserve that now -- that was initially being attributable to the LTGO notes that gets crystallized and is given, and the LTGO class is given new B notes. So essentially it's $55 million of new LTGO bonds and $4.2 million of B notes assuming a Syncora settlement in exchange for $164 million of claims. The interest is 5.65 percent on the new LTGO bonds, and it is four to six percent on the B notes, as I mentioned earlier, with a maturity of 23 years for the new LTGO bonds and 30 years on the B notes. However, the city is going to in its current assumptions pay the $55 million with the exit financing in settlement of the new -- with the LTGO class.

Q Now, in the lower right-hand corner is a circle that says "recovery illustrative." Could you tell me what that is?

A That shows under a five-percent discount rate what sort of recovery is generated in the -- as a part of the settlement against the claims of Class 7.

MR. STEWART: Let's put up Exhibit 719, please.

BY MR. STEWART:

Q Mr. Malhotra, do you see Exhibit 719 before you?

A Yes, I do.

Q Who prepared Exhibit 719?
A We did with the Jones Day team.
Q What does this represent?
A This represents the settlement with Class 8, the unlimited tax GO bonds claims in which the existing claim is being restructured as new -- as restructured UTGO bonds.
Q Let me stop you there so I can move the admission of our exhibit.

MR. STEWART: Your Honor, I'd move the admission of Exhibit 719 as a demonstrative exhibit.

MR. SOTO: No objection, your Honor, as a demonstrative.

MR. WAGNER: No objection.

THE COURT: It is admitted.

(City Exhibit 719 received at 1:52 p.m.)

BY MR. STEWART:
Q Please continue, Mr. Malhotra.
A The face value of the new notes is -- of the new restructured UTGO bonds is going to be $288 million, and the interest rate and the maturity of the these bonds will be the same as it was as the original UTGO bonds. They will be paid over the course of approximately 14 years consistent with the way they were being scheduled to be paid off earlier, and there is a portion of stub UTGO bonds that is reinstated, but that's not a part of the settlement, but the overall

settlement of the UTGO bonds is the $288 million.

Q What happens to the stub UTGO bonds that have been reinstated?

A The stub UTGO bonds that are reinstated are broken down into two components. They, too, will be being paid consistent with the collections from the UTGO tax millage. The 20 million of those bonds will be paid into the income stabilization fund, and approximately $23 million will be paid into the General Retirement System.

Q What is the income stabilization fund?

A It's a fund that has been established to assist those retirees whose pension does get cut and who are below certain income threshold levels in order to provide assistance to get their income back to either the level it was pre-cut or back to a threshold level.

Q Now, once again, in the lower right-hand corner we have a circle speaking of recoveries. What is that?

A That shows the illustrative recovery using a five-percent discount rate.

Q And what is the recovery?

A Seventy-four percent.

Q Seventy-four percent of what?

A Of their claim.

MR. STEWART: Let's put up 737 now.

BY MR. STEWART:

Q Mr. Malhotra, you have Exhibit 737 before you. Who prepared this exhibit?
A We did along with the input from the Jones Day team.
Q And what does it represent?
A It represents the settlement with Syncora of Class -- of part of Class 9.
MR. STEWART: Your Honor, I would move the admission of Exhibit 737 as a demonstrative exhibit.
MR. SOTO: No objection, your Honor.
THE COURT: It is admitted.
(City Exhibit 737 received at 1:55 p.m.)
BY MR. STEWART:
Q If you could, Mr. Malhotra, please walk us through Exhibit 737 and what it depicts.
A It shows that the settlement with Syncora is -- in exchange for their claim is going to be -- take the form of new B notes in the amount of $23-1/2 million, which would essentially be coming out of the COPs reserve and at an interest rate of four to six percent and payable over 30 years consistent with the overall B notes. In addition, Syncora will be getting new C notes in the face value of $21.3 million at a five-percent interest rate payable over 12 years. In addition, Syncora will also receive as a part of the bankruptcy settlement credits in the nominal amount of $6.3 million.

Q Credits to do what?
A My understanding is it's credits that can be used in terms of purchases of real estate down the road.
Q Okay. And then what's the illustrative recovery for Syncora?
A The illustrative recovery including the $6.3 million of credits, assuming those are at par, was 13 percent.
Q Okay. Now, you had mentioned that when it came to the B notes, the 23.5 million came from the COPs reserve.
A That is correct.

MR. STEWART: Let's put up, if we could, Exhibit 727.

BY MR. STEWART:
Q Could you tell me, first of all, what is Exhibit 727?
A 727 shows the breakdown of the new B note -- of the B notes of $632 million and who the holders of those B notes will be.
Q Okay. Now, in the pie chart on the left a segment has been pulled out. What does that segment represent?
A On the left that segment represents the original COPs reserve is the one that is in brackets.
Q Okay. And then the -- that's the COPs reserve, but it's been subdivided now. Can you tell me why it has been subdivided?
A It's been subdivided because there's a portion of the

COPs -- original COPs reserve in the amount of $24 million that's going to now become B notes for Syncora. That remainder of the COPs reserve that was initially reserved for Syncora in the amount of $15 million is now split between the OPEB and LTGO classes, so the $15 million is broken down between OPEB and LTGOs. Syncora gets its $24 million, and $123 million remains in the COPs reserve.

Q How does this splitting of the $15 million differ from the original allocation of the COPs reserve among OPEB, LTGO and the other unsecured creditors?

A I believe it is higher. The split of the $15 million is higher in favor of the OPEB and the LTGOs compared to the previous split.

Q Now, the purple segment of our chart says 123 million. What does that represent?

A That represents the remaining COPs reserve.

Q And who are the claimants, to your understanding, on the remaining part of the COPs reserve?

A My understanding is it's in litigation, and it's with FGIC.

Q So FGIC seeks it, but if FGIC doesn't get it, it goes to these other people?

A That is my understanding.

Q Now, before we move from Class 9, let's go back, by the way, to -- let's just leave it here. You understand, do you

not, that under the plan FGIC is also put into Class 9?
A That is correct.
Q What is the status, if any, to your knowledge, to the extent you're free to disclose it, of FGIC's possible settlement with the city?
A My understanding from reading the seventh plan is that FGIC has an option to opt into a similar settlement as or the same settlement as Syncora, but I don't know all the details.
Q If FGIC did opt in, what would the effect be on the COPs reserve?
A If they were to opt in under the same structure, a portion of that $123 million would get allocated to FGIC, and the remaining portion at a certain percentage would -- my guess is get allocated between the unsecureds, the LTGOs --
MR. SOTO: Objection, your Honor. I don't think he's here to guess.
MR. STEWART: Okay. We can move on. That's fine. Let's put up Exhibit 720.
BY MR. STEWART:
Q Do you see Exhibit 720?
A I do.
Q What is Exhibit 720?
A 720 shows the settlement with the -- with Class 12, the OPEB claims.
Q And who prepared 720?

A We did with the Jones Day team.

MR. STEWART: Your Honor, I'd move the admission of Exhibit 720 as a demonstrative exhibit.

MR. SOTO: No objection.

THE COURT: It is admitted.

(City Exhibit 720 received at 2:01 p.m.)

BY MR. STEWART:

Q Please describe for us, Mr. Malhotra, what is set forth in Exhibit 720.

A On Exhibit 720 shows the settlement with the -- with Class 12, and it shows that the original claim of four point -- in exchange for the original claim of $4.303 billion, which represented the OPEB claim pursuant to the settlement, the settlement is going to be $450 million of B notes contributed to GRS and PFRS VEBAs in total and also as a -- pursuant to the Syncora settlement, $11 million of additional B notes that would be coming out of the COPs reserve.

Q So let me stop you there. What is a VEBA?

A It's a voluntary employee beneficiary association trust.

Q And what does a VEBA do?

A It's supposed to go forward, manage the benefit plans for the retirees or the employees that it is set up for.

Q And do I understand correctly all of the value going to Class 12 is in B notes?

A That is correct. There are some other start-up costs, but the value that is going to the VEBA trust is in the form of B notes.
Q Now, on the amount line, we have on the right-hand side the 11.0 million. Tell us where those B notes come from.
A They come from the original COPs reserve -- from the original COPs reserve, from the portion that was left behind after the Syncora settlement.
Q And is that consistent with the exhibit we looked at a minute ago that showed how it was broken up?
A Yes. That's the breakdown of the $15 million.
Q Please let's go to the line about interest. Tell us, please, what is the interest relating to the B notes?
A It is four percent for the first two decades and six percent for the last decade.
Q And maturity?
A It's 30 years.
Q And under "other" you have a few items. Please tell us what those are.
A That shows certain start-up costs that are also going -- are benefitting the VEBA, which is $8 million from the rate stabilization fund and approximately $3-1/2 million from charitable contributions as well as advance of the October 2015 interest on the excess B notes to be advanced earlier.
Q Why were these start-up costs added as part of the

settlement with Class 12?
A It's a part of the settlement to essentially get the VEBAs going.
Q Okay. And what's the recovery of Class 12 as you calculated it?
A Ten percent.
MR. STEWART: And we can take that down. Actually, no. Before you take it down -- sorry about that -- put up 721 or take that down and put up 721.
BY MR. STEWART:
Q What is Exhibit 721, Mr. Malhotra?
A 721 shows the nominal dollars and as a percentage of general fund revenue, the comparison of both costs and percentage both post-restructuring and before restructuring in terms of what the trends were over the next 20 years.
Q Who prepared Exhibit 721?
A We did.
MR. STEWART: Your Honor, I'd move the admission of Exhibit 721 as a demonstrative exhibit.
MR. SOTO: No objection as a demonstrative.
THE COURT: It is admitted.
(City Exhibit 721 received at 2:05 p.m.)
BY MR. STEWART:
Q Mr. Malhotra, let's focus on 721. There are two different sets of bars and two different sets of lines.

First of all, if you could tell us what the bars represent in the exhibit.

A The pink or orange bars that are on that chart represent the projected payments on retiree healthcare obligations for the existing retirees and forthcoming retirees over a 20-year period.

Q Where did these projections come from?

A We got the inflation assumptions with respect to retiree healthcare from Milliman, and we used the count of retirees that we had.

Q All right. So the top bars, they show what for each year?

A Show what the retiree healthcare payments would have been absent a restructuring.

Q Okay. And then below that we have a line. What does that line represent?

A The line represents what those payments for retiree healthcare are as a percentage of general fund revenue as to how it was going to continue to increase over the next 20 years.

Q So, for example, what would the number be for 2026 as a percentage of general fund revenue absent restructuring?

A It would show that absent the restructuring the retiree healthcare as a percentage of general fund revenue would approximately be 23 percent, so 23 cents of every dollar would be used to fund retiree healthcare.

Q So now let's look at the lower part of the chart. First of all, explain to us what the bars mean. I guess they're light blue.

A The light blue represents the portion of the B note that is the city's obligation going forward in terms of this class is going to be -- is shown in the blue chart. In addition, we have added the ongoing potential cost of retiree healthcare for active employees that will be retiring in the future to ensure we can do an apples to apples comparison.

Q Why is the number higher in 2015 than it is in 2016?

A Because the existing run rate that the city is on for fiscal year '15 was slightly higher than January 1, 2015, when the city transitions to the new VEBA plans.

Q Why does it rise as it does in 2026?

A That's because that's when the city starts servicing the principal on the B note, and we wanted to make sure that we can show that it's not just the first ten years where it was more of an interest only comparison but going forward 2026 onwards once we -- once the city is servicing the principal on the B notes, what that delta still is.

Q Explain for us, if you would, the -- looks like a green line across the bottom of the chart.

A It shows the retiree healthcare costs as a percentage of revenue, general fund revenue.

Q So as a result of the settlement with the OPEB class, how have the city -- how has the city's exposure to OPEB cost changed?
A The city, as a part of the settlement, is not exposed to OPEB costs any longer other than for the commitments that the city is making to provide an amount -- a nominal amount for its active employees and what their retiree healthcare plans would be or their healthcare contribution would be, but in terms of the city's obligations for its existing retirees, the city's obligations are limited to it servicing the B notes.

MR. STEWART: Let's put up Exhibit 722.

BY MR. STEWART:
Q Could you please tell us what is Exhibit 722?
A It is a settlement with Class 17 claims for the 36th District Court.
Q And who prepared Exhibit 722?
A It was the Jones Day team primarily with some input from us as well.

MR. STEWART: Your Honor, I would move the admission of 722 as a demonstrative exhibit.

MR. SOTO: No objection.

MR. WAGNER: No objection.

THE COURT: It is admitted.

(City Exhibit 722 received at 2:10 p.m.)

BY MR. STEWART:

Q Please describe to us, if you could, Mr. Malhotra, the settlement with Class 17 as set forth in our exhibit.

A It shows that as a part of the settlement in the claims that were approximately $6 million for those claims that are less than $100,000, 33 percent of the claim would be paid in cash at emergence, and for those individual claims that are -- or those claims that are greater than $100,000 each, 33 percent of the claims would be payable in five equal annual installments at -- and there's a simple interest rate of five percent.

Q And what's the illustrative recovery of Class 17?

A Thirty-three percent.

Q I don't know if I remembered to ask you what the illustrative recovery was of Class 12.

A Ten percent.

Q Do you remember what that was? How much?

A Ten percent.

Q Ten percent. Okay

MR. STEWART: We can take that down.

BY MR. STEWART:

Q Let me move to ask you about something else. Among other things, what occasion did you have to look at the city's pension liabilities?

A We've looked at the city's pension liabilities,

especially over the course of the last year, last 18 months.
Q Let's go back to Exhibit 33 and, in particular, to page 91. I believe we looked at this page before today. This is, Mr. Malhotra, a page from the proposal to creditors of June of last year that you talked about earlier. What analysis had you done as of that time of the city's exposure to pension liabilities?
A At that point in time, the main work that was done with respect to the pension liabilities was under a variety of assumptions like the changes in the rate of investment return or the amortization period of the unfunded liability, what the city's required contributions would be over the next ten years.
Q And what had you found that those contributions would be in 2023 as matters stood back in June of 2013?
A Based on the assumptions that were being used for the preparation of this report, the pension contributions were going to be close to $3 billion under the assumptions that were being used for this report.
Q So has the city reached a settlement with the Retirement Systems?
A Yes.
MR. STEWART: And just for the record, let's put up Exhibit 723. Maybe that will be simpler.
BY MR. STEWART:

Q Do you see Exhibit 723, Mr. Malhotra?
A I do.
Q What is this?
A It shows the key items of the settlement with GRS and PFRS as a part of the plan of adjustment.
Q Okay. And just for the record, could you tell us what are GRS and PFRS?
A The General Retirement System and the Police and Fire Retirement System.
Q Do you know off the top of your head what class each is in?
A Class 10 and 11.
Q Now, tell us --

MR. STEWART: Your Honor, if I could, I would move the admission of Exhibit 723 as a demonstrative exhibit.

MR. SOTO: No objection, your Honor.

MR. WAGNER: Yeah. No objection as a demonstrative.

THE COURT: It is admitted.

(City Exhibit 723 received at 2:14 p.m.)

BY MR. STEWART:
Q Mr. Malhotra, could you explain to us what is set forth on Exhibit 723?
A Yes. It shows the components of some of the changes between what the assumptions were and what the funding status was of the -- each of the pension plans compared to where

they are as a part of the plan of adjustment.

Q Okay. Let's start at the top. There's something called an assumed rate of return. Please tell us how that has changed.

A That has changed from 7.9 percent for GRS and eight percent for PFRS to 6.75 percent for GRS and PFRS, which is fixed for the next -- through 2023.

Q And do you know how the rate of 6.75 percent was derived?

A It was a part of the settlement.

Q Below that is UAAL?

A That's right.

Q First of all, what is UAAL?

A That's the unfunded actuarial accrued liability.

Q And please describe to us what this part of the demonstrative shows.

A It shows that the pre-petition UAAL for GRS and PFRS was about 1.879 billion and 1.25 billion respectively, so collectively roughly about $3.1 billion, and as of June 2013 and as a part of the plan of adjustment, the June 2014 UAAL is 894 million for GRS and 553 million for PFRS.

Q And then underneath that it says "Target." How did those targets come to be calculated?

A Those were calculated overall as the UAAL that would be remaining based on the targeted funding percentage status, so 70 percent for GRS and 78 percent for PFRS.

Q And that takes us to the next line, which is funding status. What does the term "funding status" mean?
A Funding status means the overall comparison of the assets in the plan to the liabilities in the plan.
Q And what -- tell us -- walk us through what the funding status percentages were and what they are projected to become.
A They were 53 and 71 percent, and the target is by 2053 to have these plans fully funded.
Q Do you know what the funding percentage is today?
A I believe it's pretty close to the target as of 2023, but that's what I believe it is.
Q Do you know why today's funding status is so close to the target in 2023?
A Well, the assets have returned better, so the assets have done better than what -- so the funding status has improved since June of 2013.
Q Do you know of a term called "defunding" as it applies to retirement systems?
A I have a general understanding.
Q What, if anything, is going on with these retirement systems in terms of defunding in the coming years?
A In the coming years, from the information that I have seen, there's going to be ongoing defunding of these plans based on the contributions that are going in relative to the

assets that are coming out of the pension systems.
Q And do you know why that is?
A It's the nature of the demographics and the profiles of the plan.
Q Our next line says "POA liability reduction." Could you tell us what that's -- what that describes?
A That describes some of the changes that have taken place as a part of the overall plan of adjustment in each one of the plans.
Q Okay. So what does "plan freeze" mean?
A It means that there's no more accrual of benefits under these plans, so they are frozen, which has an impact of reducing the liability of the plans.
Q And then there's a reference to monthly pension reduction.
A Yes.
Q Can you tell us what that is?
A In GRS that's a 4-1/2 percent cut in the actual pension checks that are going out, and there's no change in that under PFRS, which also has an impact from a liability reduction standpoint as a part of the plan of adjustment.
Q Okay. And then there is a reference to COLA. Is that cost of living allowance?
A Yes.
Q What has happened to the cost of living allowance?

A It has been eliminated for GRS, and it has been reduced by 55 percent for PFRS.
Q And then finally it's -- there's something called an ASF recoupment. What is that?
A That is basically some of the excess interest that was earned that is being transferred back into the General Retirement System in the neighborhood of $200 million.
Q Then at the bottom we have the segment entitled "Future Contributions." Please tell us what those are and, more importantly, how you calculated them.
A Those contributions through 2023 are 719 million and 261 million, and the majority of that funding is coming through either the contributions through the grand bargain or from the DWSD contributions, and beyond 2024 to 2053, that shows the contributions required to amortize the UAAL at the end of 2023 as to what the cost would be assuming a 6.75-percent interest rate. And majority of those contributions, though, would be paid by the general fund, although there will still be some portion through 2024 in that decade from external funding.
Q And so the total of future contributions turns out to be what?
A Through 2023 it is just shy of a billion dollars, and then from 2024 to 2053, the nominal dollars over that time frame are roughly $2-1/2 billion, $2.8 billion.

Q And so the total at the very bottom of the contributions the city is facing turns out to be what?
A Just about $3.8 billion.
MR. STEWART: So let's put up Exhibit 732.
THE COURT: Excuse me. Before we leave this one --
MR. STEWART: Sorry.
THE COURT: Thank you. What does the phrase we see here, "equivalent to 8.8-percent reduction in liability," mean?
THE WITNESS: Your Honor, it means that as a part of the overall changes from the ASF recoupment, the actual GRS liability has been reduced by approximately $200 million.
THE COURT: What is 8.8 percent? What is that a percent of?
THE WITNESS: It would be a percentage of the actual total accrued liability, your Honor, versus just the UAAL. It would be the accrued liability in its entirety.
THE COURT: Does the plan commit the city to make the payments in your section of the chart here called "Future Contributions"?
THE WITNESS: Those contributions are assumed in the plan, your Honor, and the city --
THE COURT: They are what?
THE WITNESS: They are assumed to be made in the plan, your Honor, so the city is in the projections making

those payments beyond 2024 into the pension systems in the plan.

THE COURT: My question was a slightly different one. Does the plan commit the city, legally commit the city to make those payments?

THE WITNESS: My understanding is the city is committed to fund the unfunded liability. I just don't know -- the city and the Retirement Systems have to decide what the amortization methodology is of the UAAL at the end -- at the end of year ten, and the city is committed to fund that underfunded liability. Depending on what amortization schedule gets picked, the payments can change slightly because of the interest rate, but my understanding is the city is committed to make the payments beyond 2024 into those pension systems.

THE COURT: Do you know the answer to my question?

MR. STEWART: Your Honor, I confess that I do not.

THE COURT: Anybody know the answer to my question?

MR. CULLEN: The answer is yes, your Honor.

THE COURT: All right. Thank you.

BY MR. STEWART:

Q Let me ask this. How would the change in amortization after 2024 affect the contribution level?

A It depends on the amortization methodology. What we have used in the projections is a straight line principle in which the city is making higher payments in the first decade, and over the course of the 30 years it makes lower payments going forward. You can change the amortization methodology to make it like a level payment over 30 years in which the city will have lower payments in the first, say, ten years, but over the course of the 30 years the city will end up paying more because it has to pay more interest, so it's more on the methodology aspect as to how that liability gets serviced.

MR. STEWART: Can we now put up Exhibit 732?

BY MR. STEWART:

Q Mr. Malhotra, what is Exhibit 732?

A 732 shows the pension contributions for the General Retirement System and the Police and Fire Retirement System over the first ten years and the sources of the funding.

Q And who prepared Exhibit 732?

A We did.

MR. STEWART: Your Honor, I would move the admission of Exhibit 732 as a demonstrative exhibit.

MR. SOTO: No objection.

MR. WAGNER: Same.

THE COURT: It is admitted.

(City Exhibit 732 received at 2:25 p.m.)

BY MR. STEWART:

Q Mr. Malhotra, please explain to us what is depicted in Exhibit 732.

A 732 for the General Retirement System shows that the total contributions going into the retirement -- General Retirement System are 719 million through 2023. $428.5 million of that is coming through DWSD. $31.7 million in nominal dollars is coming through UTGOs, which are really the stub UTGOs. $98.8 million is coming from the state settlement. $45 million is coming from DIA, and the remaining 114.6 million is coming from the general/other funds, which is reimbursement from other funds. Of that 114.6 approximately $90 million is general fund dollars.
Q Nine zero?
A That's right, about 90 million. That's right.
Q Why is such a large segment of the GRS side of this coming from the DWSD?
A It's a part of the overall pension settlement in terms of the required dollars for the -- for GRS.
Q Okay. Now, to the right we have another pie chart; correct?
A Yes.
Q Why is it smaller than the one on the left?
A It's smaller because the overall contributions to the police and fire system are 261 million compared to the 719 million on the left side. And one thing I would just clarify, the DWSD contributions -- sorry -- are coming in over nine years because they're fully repaying their unfunded

liability over a much shorter time frame, so I just wanted to clarify that as well.

Q Let's go back and deal with it before we go to the PFRS. You're saying that the 428.5 million is from the DWSD; correct?

A That is correct.

Q What does that represent with respect to the DWSD?

A It represents DWSD paying its UAAL that exists today but paying it over the course of the next nine years in its entirety in addition to some professional fees and admin expenses that are being allocated for to DWSD, but they're essentially paying their UAAL at a much faster rate compared to the rest of the General Retirement System.

Q How does one know how much of the UAAL for the GRS is attributable to the DWSD as opposed to attributable to everybody else?

Q It's given to us by Milliman.

Q By the actuaries?

A That is correct.

Q Then you mentioned the nine years. Tell me, once again, why they're paying it in nine years instead of some other period of time.

A They're paying it over nine years as a part of an overall settlement because in aggregate the total dollars that are coming from DWSD are still significantly lower than what DWSD

would have been responsible for outside of a restructuring.
Q Now let's go back to the PFRS, and I believe there are two sources of payment there. Please describe those to us.
A The blue chart represents the -- the blue part of the pie chart represents the money that is going to come in from the foundations into PFRS over the first ten years and -- through 2023, and $96 million is coming in from the state.
Q All right. Now, the contributions you've talked about, are any of those the result of something known as the grand bargain?
A Yes.
Q What is the grand bargain?
A The grand bargain in terms of the financial elements that are -- the contributions that are coming into the city, there's approximately $366 million of contributions that are supposed to come in from the foundations over a 20-year time frame and nominal dollars -- excuse me -- approximately $100 million from DIA in nominal dollars over 20 years and from the state approximately $194.8 million that are coming in up front, which is their share of $350 million at a present value.
MR. STEWART: Let me ask to put up Exhibit 724.
BY MR. STEWART:
Q Do you have Exhibit 724 before you?
A I do.

Q Is that a summary of the terms of the grand bargain?
A Yes.
Q Who prepared this?
A Jones Day team along with our input.
MR. STEWART: Your Honor, I'd move the admission for demonstrative purposes alone of Exhibit 724.
MR. SOTO: No objection, your Honor.
MR. WAGNER: No objection.
THE COURT: It is admitted.
(City Exhibit 724 received at 2:31 p.m.)
BY MR. STEWART:
Q Mr. Malhotra, I probably should have put this up before I asked you the question I asked a minute ago, but could you walk us through what the economic terms are for the grand bargain?
A Yes. The state contribution agreement is -- provides for $194.8 million in cash, which is equal to the PV of $350 million over 20 years at a 6.75-percent discount rate.
Q What does PV mean?
A Present value.
Q And why is there -- and that's at a discount rate of 6.75 percent?
A That's correct.
Q Where did that discount rate come from?
A The state was using the same discount rate that the

pension systems are using.
Q Okay. And why was the period of 20 years chosen?
A The general parameters of the contributions coming in for the grand bargain was over 20 years.
Q So the state contribution, how much in dollars is it going to end up being?
A I'm sorry.
Q How much will the state contribution end up being in actual dollars?
A The present value dollars are $194.8 million, which would be dollars much earlier, versus $350 million over 20 years.
Q Do you know when it is the state is going to make that payment?
A I do not know the exact date. It's, of course, tied to the effective date of the plan. I do not know the exact date.
Q Let me ask a different way. Do you know what the state will do versus making a single payment versus spreading the payment out over a period of time?
A The state is planning to make a single payment.
Q And then going further we have the income stabilization payments. Can you tell me what those are?
A Those are the payments that are going into the income stabilization fund that are being paid through the stub UTGOs, so this would be no less than $20 million over 14

years in which the city continues to collect its UTGO taxes per the millage, and a portion of that money is going to be paid into the income stabilization fund.

Q Why is that not shown on your table here?

A That is basically money that's coming -- it's not new money that's coming from the state. This is UTGO collections that are going to be set aside, and it's just a part of the overall state settlement in terms of the state also contributing the 194.8 million is to ensure that this 20 million will be available for the income stabilization fund that will be funded through the collection of UTGO taxes.

Q Please describe to us then the economic elements of the DIA settlement.

A The foundations are required to contribute $366 million of nominal amount over 20 years, and the DIA is required to contribute $100 million in nominal dollars over 20 years.

Q And how does the grand bargain then affect the city's unfunded actuarial accrued liabilities?

A It definitely will help reduce it or at least reduces the city's requirement of funding those contributions.

Q Now, let me ask you --

MR. STEWART: Set's put up Exhibit 732, please.

BY MR. STEWART:

Q What is -- I believe we looked at 732 a minute ago, and I'd ask you about the portion of this that's coming from the

DWSD, and that's the $428.5 million; correct?
A That is correct.
Q Have you performed a calculation of the overall economic effect on the DWSD of the city's plan of adjustment?
A Yes.
MR. STEWART: Let's put up Exhibit 201.
THE COURT: Excuse me. Before we do that, can we go back to the screen that was up and now the one before this one and back to the next one, please? Am I missing something, or is the pie chart on the left for the General Retirement System not showing the foundations' contribution?
THE WITNESS: Your Honor, this chart represents the first ten years only, so the foundations' money that's coming into the General Retirement Systems is coming in the second decade, and so it's --
THE COURT: Okay.
THE WITNESS: -- a timing issue.
THE COURT: Okay. Thank you.
BY MR. STEWART:
Q Mr. Malhotra, I have Exhibit 201 on the screen, and we've been able to blow it up. I realize this can be hard to read. That's why it's in the binders, and it may be easier for some --
THE COURT: I can read it. Thank you.
MR. STEWART: -- to look at in hard copy.

BY MR. STEWART:
Q Please tell us, if you could, Mr. Malhotra, first of all, who prepared Exhibit 201.
A This was a schedule we had prepared some time ago.
Q And what is it a schedule of?
A It was -- it's a schedule that shows the pension payments under the plan of adjustment and the OPEB payments under the plan of adjustment for DWSD as compared to those under no restructuring scenario.
Q Okay. So let me, if I could, ask you about it. At the top -- and this was based on an Excel spreadsheet, I assume?
A That is correct.
Q Let's look at the top. The top segment says POA, and what does that part of our exhibit discuss?
A The pension payments and the professional fees and the pension administration costs that are assumed to come in from DWSD as a part of the plan of adjustment.
Q And what period of time is covered by the POA segment of Exhibit 201?
A It went through 40 years.
Q Okay. Now, we, first of all, have pension payments at the top. What are those?
A Those are the payments that are coming in from DWSD over the next nine years in terms of DWSD fully funding its UAAL over the next nine years.

Q And then professional fees, what is that for?
A Professional fees is the allocation to DWSD of the total professional fees that were projected at that point of time for DWSD to get its pro rata share.
Q Would that be higher today?
A Yes.
Q Do you know how much higher it would be today?
A It would probably be seven or eight -- could be seven or $8 million higher.
Q What's the next line?
A Pension administration, administrative costs.
Q Okay. And what are those?
A Those are admin costs related to the General Retirement System and DWSD's allocation.
Q Below that?
A That represents the OPEB for current retirees, so the allocation of the B note to DWSD for its pro rata -- on the basis of its pro rata share.
Q And that would be going forward as long as there are B notes out there?
A Yes.
Q What's POC a reference to?
A Similar in terms of an allocation to DWSD of the B notes or the reserve in some fashion to what would be allocated to DWSD.

Q Has that changed recently?
A We have -- well, this schedule does not reflect the Syncora settlement.
Q What would the effect of the Syncora settlement be on this line?
A It would go up slightly.
Q How much?
A Probably a hundred or $200,000 per year.
Q What does the reference to swaps mean?
A That's a part of the overall swaps settlement and a portion that could be allocated to DWSD.
Q Okay. So let's go back so we can see the full view. As a result of this, you have something called total DWSD legacy payments. What does that represent?
A The total DWSD legacy payments represents the summation of the subtotal up above -- that's the subtotal DWSD legacy payments -- plus what DWSD could theoretically be paying -- or could be paying for its pension and OPEB obligations for its current active employees.
Q And what is the assumption this part of the exhibit is based on?
A The assumption is that DWSD, similar to the rest of the general nonuniform employees, will be contributing approximately 5.75 percent with respect to the pension for active employees and on the future retirees would be paying

two percent of payroll.

Q So this segment shows what the effect would be on DWSD under the plan. Do I understand that correctly?

A That is correct.

Q So let's go down to no restructuring. And before getting into any numbers, what do you mean by "no restructuring"?

A No restructuring -- when we developed the schedule, it was meant to reflect what DWSD's obligations were going to be had none of the OPEB or POC obligations or swap obligations been settled or restructured, and with respect to the pension payment, given the fact that there are multiple scenarios, all we did is we took the Gabriel, Roeder report and saw what the 2015 pension payment was attributable to DWSD and kept that flat.

Q So let's go look at the full view. You have a line, "Total DWSD Legacy Payments," and so what does that represent?

A That represents what the DWSD legacy payments would be absent a restructuring and assuming these very conservative pension payments.

Q And at the bottom we have "Savings/Additional Cost." What are those calculations intended to depict?

A What they were intended to do was to show how much savings are being generated as a part of the restructuring that benefit DWSD.

Q And let's go back to the full view, and what did you determine in terms of the overall economic effect on DWSD of the plan as it exists -- proposed, I should say, today? Go ahead.
A We saw that the total additional -- the total savings for 2015 to 2023 just on a conservative basis would be approximately $172.8 million -- could be higher than that -- just for those nine years, and then DWSD continued to benefit from these savings going into the next two decades partly because, of course, they have assumed to pay their pension faster, but, more importantly, there's significant savings in the OPEB costs for DWSD as a part of this plan of adjustment.
MR. STEWART: Your Honor, I would like to move Exhibit 201 into evidence.
MR. SOTO: No objection, your Honor.
MR. WAGNER: Same.
THE COURT: It is admitted.
(City Exhibit 201 received at 2:44 p.m.)
BY MR. STEWART:
Q Let me ask you -- let's go, if we could, now to Exhibit 734 again and to page 3 of 14. Could you tell us, Mr. Malhotra, what page 3 of 14 of Exhibit 734 sets forth?
A It sets forth per the September projections under the assumptions in there -- the first section on top is -- first section over the next ten years by different creditor

classes, what distributions are going to be in nominal dollars for those classes and the source of that funding over the next ten years, and that same has been repeated down below for 40 years along with recovery calculations using a five-percent discount rate.

Q So this is a table; correct?

A That's correct.

MR. STEWART: If we can, let's blow up the top part and the left side of the top part so we can all see it more legibly. That's fine. Good. All right.

BY MR. STEWART:

Q And so we have for the ten-year the various settlements that we've talked about; correct?

A That's correct.

Q All right. Then walk us through this table and show how you've scheduled out these various settlements.

A So for Class 7, which is the limited tax general obligation bonds, those are assumed to get paid $55 million in full upon the effective date, so -- or right around the effective date, so there is no interest that is being paid on that. In addition, they're getting a portion of the B notes as well.

Q Without going through each of these, tell us how this table correlates to the settlements you described to us earlier when we went through the various demonstratives.

A They're the same.
Q Okay. And it shows the amount of the claim and then what the claimant is getting; correct?
A That's right. And this table reflects the cash over the first ten years, and the table below it showed over forty.
Q So let's go to the 40-year now. Why, by the way, has it been necessary to extend this table out to 40 years instead of just stopping at 10?
A Because the commitments that the city is making in terms of its B notes as well as its pension obligation commitments at the end of ten years go nearly forty years, and that's the reason we've developed a forty-year forecast.
Q So let's now focus on the right side of the part that we have -- we've expanded here, and tell us, if you could, what that depicts.
A The right side shows the nominal dollars that are getting paid in the first column over the 40-year time frame and the present value calculation assuming a five-percent discount rate for all of these classes.
Q And then you have percentages there. Well, first of all, let me ask this. Why do we -- the middle column is PV for present value; correct?
A That is correct.
Q Why have you reduced these to present value?
A Because these are getting paid over a period of time to

reflect what the value today is assuming a five-percent discount rate.

Q Okay. And then you have a percentage column. Tell us again what that stands for.

A It stands for the percentage of the present value divided by the claim.

Q And if we just look from the creditor line over to the percentage line, that will tell us what each class is getting as a percentage is. Have I read that correctly?

A That is correct.

Q So let's go now on the same exhibit to page 7. You can just leave it like that for now. So I want to recap with you where we've been in your testimony, Mr. Malhotra. As we look at our page, have we now gone over all the elements of revenues and expenditures for the city?

A On this page 7, we have gone through all of the revenues and operating expenditures, but the settlements or the payments are shown on the following page.

Q You're getting ahead of me. I wanted to go to the very bottom line on this page and have you describe for me what that represents.

A That represents the funds available for unsecured claims.

Q When you say "funds available for unsecured claims," what are you referring to?

A It refers to the amount of cash the city will have available to meet its unsecured -- to meet its obligations as proposed under the plan of adjustment under these assumptions going forward.

Q So let's now go to the next page, which would be eight of fourteen. Now, eight of fourteen has a line called "Sources." Do you see that?

A Yes.

Q And what do you mean when you use the word or you refer to sources?

A An inflow of cash.

Q And what's the relation between what we just looked at, which is funds available for unsecured claims, and where we begin on page 8 with sources?

A It should be the same amount. It's carrying forward from the previous page.

Q So that's the first line?

A That is correct.

Q Okay. Show us the additional sources then that we have in the coming years as set forth on this page of our exhibit.

A Those are shown below in terms of the amounts that are coming from DWSD for its pension obligations, its OPEB obligations and POC, which both are essentially their pro rata share of B note payments, some of the reimbursements from other funds that include library and parking, the funding from the grand bargain, which includes the foundations, the DIA, and the state settlement, to come up with the total sources that are going to be available for making distributions.

Q And my eyes aren't as good as they once were, but it appears to be 1664.5 as the total sources for the ten-year period or the period that will end in 2023?

A That's correct.

Q So now let's go to uses, if we could. What do you mean, first of all, by the phrase "uses"?

A An outflow of cash.

Q Okay. So let's go through them. Tell us what the top part of uses is.

A The top part is the PFRS and GRS pension contributions that are going to be made over the next ten years in aggregate, some PFRS and GRS OPEB payments for current retirees.

Q So we have a subtotal for retiree distributions; correct?

A That's correct.

MR. STEWART: Let's go back to the full view so we can see what that adds up to if we can just expand that on the right-hand side.

BY MR. STEWART:

Q That comes up to how much?

A Just shy of a billion dollars.

Q And below that we have "note and cash payments." Are we on the same part of the document?

MR. STEWART: Actually, what you just had. Put that back up. Thanks. There we go.

BY MR. STEWART:

Q What notes are we talking about here?

A The same notes we went through earlier, UTGOs, LTGOs, the B notes, and the C notes.

Q And what do they add up to as uses during this period?

A $620 million.

Q Okay. And then so we add up the uses, and what do they aggregate to?

A Just north of a billion six, 1.61 billion.

Q Okay.

MR. STEWART: So let's now go back to the full view again. I'm sorry to go back and forth this way.

BY MR. STEWART:

Q So we then have a line that says surplus or deficit. Do you see that?

A Yes.

Q And where does that number come from?

A It's just the delta between the total sources and the total uses.

Q Okay. And below that we have ending cash balance.

A That's correct.

MR. STEWART: Let's go back to the full view again.

BY MR. STEWART:
Q And the ending cash balance is going -- is projected to be how much as of the end of 2015?
A The end of 2015 the ending cash balance is projected to be 75.6 million.
Q Now, in the years after 2015, how much does that number change?
A Not much. It only goes up to $80 million.
Q Do you know why it is the ending cash balance remains the way it is over the period of these years?
A That's because under these assumptions, the city is distributing what it is collecting from an overall perspective.
Q Has the city -- what policy decision, if any, has the city made with respect to the cash balance it intends to keep on hand in the coming ten years?
A Well, the assumption that's used in here is a two month of payroll and benefits minimum cash balance or at the same time to at least hold five percent of -- excuse me -- five percent of the following year's budgeted expenditures to -- for the city to have that in cash at the end of the previous fiscal year.
Q And although we didn't focus on it, fair to say that if we looked at the previous page, we'd see an entry for contingency there?

A Yes.
Q And why don't we go to the previous page and look at it briefly at the bottom left? What is that a reference to?
A That is a contingency for unforeseen items of either a revenue reduction or an increase in an expense, and we've assumed a one percent of revenue contingency throughout this forecast period.
Q Let's go then to the following page one more time and look at the cash. Are you aware of recent legislation in Michigan that would require the city to maintain reserves of five percent of expenses?
A Yes.
Q And where is that reflected in your analysis?
A Our assumption is that in the ending cash balance of the 75 or $80 million at the end of any fiscal year the city should still have -- will still have at least five percent of its following year's budgeted expenditures reserved in that cash number, so it's basically at least a minimum cash threshold over the forecast period.
Q Now, you've reviewed with us for some period of time today the model that you prepared and the settlements and so on. What does this analysis tell us in terms of the city's ability in the coming years to satisfy its operating expenses?
A Based on these assumptions, the city should be able to

satisfy its operating expenses.

Q What does this analysis say in the coming years about the city's ability to pay its obligations under the plan?

A Based on the assumptions in this forecast, the city should have the ability to pay its obligations as scheduled in these distributions.

Q And, finally, what does this analysis say in terms of the city's ability to maintain a cash reserve in the coming years?

A Based on these assumptions, the city should be able to maintain a cash balance consistent with these assumptions.

Q Let's go now to page 4 of this --

THE COURT: Excuse me. Before we leave this page, is the five-percent contingency that the law requires reflected here in the line called "Ending Cash Balance"? Is that your testimony?

THE WITNESS: Yes, your Honor. That's the way we are anticipating it, that these are June 30th, so these are fiscal year-end cash balances, and so the city should at least have five percent of the following year's expenditures, which are roughly approximately a billion dollars. So the city should at least have at any given point of time five percent of those budgeted expenditures in its cash balance.

BY MR. STEWART:

Q Let me ask one thing about timing. Is it the case that the city's revenue receipts are not steady month to month over the course of the year?

A That is correct.

Q What is the time during the year when the cash on hand typically is at its lowest?

A Typically it is at the end of the fiscal year before the summer taxes start flowing in.

Q Sorry. Summer taxes?

A Sorry. Summer property taxes start coming into the city in the July, August time frame, so end of the fiscal year generally is a low point in terms of the city's cash balance.

Q Let's, if we could, then go to page --

THE COURT: All right. Before we move on, let's go ahead and take our afternoon recess at this time, and we'll reconvene at 3:15, please.

THE CLERK: All rise. Court is in recess.

(Recess at 3:00 p.m., until 3:17 p.m.)

THE CLERK: All rise. Court is back in session. You may be seated.

MR. HERTZBERG: Your Honor, Robert Hertzberg. We are trying to track down who Mr. Flynn is, and we're not aware of what it is. We're going to check with Mr. Legghio and Ms. Patek, but unless the Court has any other information, we're struggling right now on it.

THE COURT: The only additional information I can share with you is that he called my office today asking what the consequences would be for tomorrow's hearing if he withdrew his joinder in the DPOA objections, and, of course, we were not able to answer that question, so --

MR. HERTZBERG: So it sounds like he --

THE COURT: -- we suggested that he reach out, you know, to you all to try to work it out, whatever you could do in terms of answering that question.

MR. HERTZBERG: It sounds like maybe he filed an objection, he wants withdrawal, because we looked on the pro se list also in the -- a scheduling order, and his name was not in there.

THE COURT: No.

MR. HERTZBERG: Okay.

THE COURT: I mean --

MR. HERTZBERG: We'll keep trying to track it down, though.

THE COURT: Let me ask you -- maybe the most efficient way to get your question answered is for you to talk to my assistant, Chris, directly --

MR. HERTZBERG: Okay.

THE COURT: -- you know, here in the next few minutes, and she might be able to fill you in a little bit better.

MR. HERTZBERG: Okay. Thank you, your Honor.

THE COURT: Okay.

MR. STEWART: Your Honor, one -- I think I neglected to move into evidence demonstrative Exhibit 727, which I would move into evidence now. Maybe we should put it up so that others can see the document we're talking about. And I would move it into evidence as a demonstrative exhibit.

THE COURT: Any objections?

MR. WAGNER: No.

MR. SOTO: No, your Honor.

THE COURT: All right. It is admitted.

(City Exhibit 727 received at 3:19 p.m.)

BY MR. STEWART:

Q So if we could, let's now go to page 4 of Exhibit 734. Mr. Malhotra, do you have page 4 of Exhibit 734 in front of you?

A I do.

Q And is this a sources and uses for the 40-year period?

A Yes.

Q And what does it have -- and the first column is for the first ten years; correct?

A That is correct.

Q But then there are three more columns. Tell us, if you could, what those three columns are intended to represent.

A They represent the revenue and expenditures over the next three decades.

Q Now, where, if at all, here do the city's obligations under the plan appear under the 30 years that begin in 2024?

A They are not included in here on this particular page.

Q Okay. Is there a page -- let's go to the next page then. We've been looking at the sources page; correct?

A That is correct.

Q Let's go to the next page, page 5. And, first of all, the top line, is that the carry-over from the previous page?

A That is correct.

Q And then further down, where does it appear what the city's ongoing obligations will be under the plan if the plan were confirmed?

A Under the uses.

Q Okay. Where in particular should we be looking?

A Under the uses you would see under the retiree payments the PFRS and GRS payments extending all the way into 40 years to reflect the amortization of the UAAL over the time frame, and it shows that the second decade payments are higher, of course, compared to the following two decades, and then further down below it shows the obligations of the city under the new notes, so it's the UTGOs, the LTGOs, the B notes, and the payments on the C notes as well over the forecast period.

Q What is your analysis -- so this is the analysis for the 40-year period; correct?

A Yes. Under these assumptions, yes.

Q What does your analysis indicate in terms of the city's ability in the coming 40 years to pay its operating expenses?
A Based on the assumptions that are included here, I believe the city should be able to have the resources to make its obligations.
Q And what does it indicate in terms of the city's ability in that time frame to pay its obligations under the plan?
A Based on the assumptions that are included in these set of projections, it shows that the city should be able to meet its obligations.
Q And, finally, what does it indicate in terms of the city's ability to retain a sufficient cash balance over those 40 years after having met its other obligations?
A So it shows under these obligations the city will have $80 million of cash and up to 160 -- $160 million of cash at the end of 2053, so the city is always maintaining a minimum cash balance.
Q Now, under these two forecasts, you have included C notes; correct?
A That is correct.
Q Now, have you -- what C notes have you included in these two forecasts?
A The C notes related to Syncora.
Q Now, how would this change, if at all, if FGIC chose to opt into a settlement like the Syncora settlement?

A Using the same assumptions as the Syncora settlement, the cost of FGIC opting in is somewhere between 85 and $90 million over a 12-year time frame, so we would have to look at the assumptions with respect to the costs, the reinvestment expenses to ascertain -- and certain policy decisions that will have to be made by the leadership team of the city to ascertain the appropriate way of handling a FGIC settlement -- potential FGIC opt-in.

Q If they opted in. Okay. Let's go, if we could, to Exhibit 614. Let me ask a background question or two. Who prepared Exhibit 614?

A We did.

Q And what does it purport to set forth?

A It shows the COPs balances under the three components, those COPs that had a fixed rate interest rate, those COPs that had a variable interest rate through -- due 2029, and those portion of the COPs that had a variable interest rate and they were due in 2034.

MR. STEWART: Your Honor, I would move the admission of Exhibit 614 as a set of calculations.

THE COURT: Any objections?

MR. SOTO: No, your Honor.

THE COURT: It is admitted.

(City Exhibit 614 received at 3:25 p.m.)

BY MR. STEWART:

Q Can you tell me why you prepared Exhibit 614?
A It was at the request of counsel.
Q Counsel being who?
A Mr. Bruce Bennett.
Q And let's go through the calculations, if we could. Tell us, first of all, at the highest level what these calculations purport to be calculating?
A The first three sections just calculate the total principal and interest payments that would be due under these three sets of COPs that were outstanding and with the LIBOR assumptions over the forecast period that were provided to us based on the spread that exists under the existing agreements.
Q Let me stop you there. The upper left-hand corner it says "fixed rate." Is that referring to any particular part of the COPs?
A The fixed interest rate, yes.
Q Okay. What part of the COPs does variable rate 2029 refer to?
A The ones with the outstanding balance of 299.2 million.
Q Okay.
A Those ones had a variable interest rate.
Q And what part of the COPs does the entry "variable rate 2034" refer to?
A The COPs had about $500.8 million of principal that was

outstanding that had a variable interest rate component.

Q And then there's a reference here to LIBOR in different ways. First of all, what is LIBOR?

A It's the London Interbank Offered Rate.

Q Why is it relevant here?

A It's a forward looking interest rate curve or more like an index that is used often.

Q Okay. And as a result of doing the analysis that you did on these three issues of COPs, what did you calculate?

A We calculated what the payments would be. We got the LIBOR forward forecast from Miller Buckfire, and we did the calculation as to what the payments of interest and principal would be on these COPs in the three different tranches that we were looking at.

Q And where does that -- where does the sum of that appear on Exhibit 614?

A Under the total payment section.

Q I see. And is that the bold number we see as the sum there that starts with 39.7?

A Yes.

Q And were those added up to some overall amount at some point?

A Yes.

Q Where is the sum of all those?

A In the total payments.

Q Okay. If we looked at the lower right, would there be a number that sums up all the total payments?
A It doesn't appear to be the case.
Q Okay. So once you had calculated the total payments, what did you next do?
A We were asked to discount those payments at a 6.75-percent discount rate.
Q Why a 6.75 discount rate?
A That was what was given to us by counsel.
Q And did you do that?
A Yes.
Q And what was the result of your calculation?
A It showed that based on that payment stream, if you were to discount it at 6.75 percent, it would equate to a sum of about a billion one.
Q And is that what is shown in the lower left-hand corner --
A Yes.
Q -- of the exhibit?
MR. WAGNER: Your Honor, just --
BY MR. STEWART:
Q Right now --
MR. WAGNER: I'm sorry. Just before we leave the document, it does have a notation, which is very hard to read, and you can't see it on the screen, "Privileged and

confidential settlement communication in court-ordered mediation, not to be presented to or admitted into evidence in any action or proceeding." I mean it's just numbers, so maybe we don't have an objection to it, but that shouldn't be taken as any sort of waiver that the mediation -- that documents covered by the mediation order can be selectively produced and shown to witnesses.

THE COURT: Okay. Thank you.

BY MR. STEWART:

Q If we could now go to Exhibit 742, what is Exhibit 742?

A 742 shows the present value at 6.75 percent of the payments to the Retirement Systems for a 40-year period.

Q And who calculated the numbers we see on Exhibit 742?

A We calculated the payments based on the 6.75-percent discount rate.

Q And why did you do that?

A At the request of counsel.

Q And who was the counsel who requested that of you?

A Bruce Bennett.

Q Let's put up --

MR. STEWART: Your Honor, I would move into evidence Exhibit 742 as a demonstrative exhibit.

MR. SOTO: No objection, your Honor.

MR. WAGNER: Same.

THE COURT: It is admitted.

(City Exhibit 742 received at 3:30 p.m.)

MR. STEWART: Let's put up briefly Exhibit 749, and we'll come back to this.

BY MR. STEWART:

Q What is Exhibit 749?

A 749 shows --

Q First of all, who prepared Exhibit 749?

A We did.

Q Okay. And why did you prepare it?

A The top part of 749, which shows the GRS and PFRS, was the backup for the contributions by source that are going into GRS and PFRS respectively. The section at the bottom starting at Row 42 we added at the request of counsel to present value those contributions at a 6.75-percent discount rate.

MR. STEWART: Your Honor, I'd move into evidence Exhibit 749.

MR. SOTO: No objection, your Honor.

MR. WAGNER: Same.

THE COURT: It is admitted.

(City Exhibit 749 received at 3:31 p.m.)

BY MR. STEWART:

Q Let's now go back to 742. Tell me, if you could, Mr. Malhotra, what Exhibit 742 discloses to us. What does it describe?

A   It describes the total payments that are going into the pension systems by various source over the course of the next 40 years,, what the present value of those contributions would be at 6.75-percent discount rate.

Q   And what did you determine that that present value would be?

A   As this chart shows, it would be about $976 million for GRS and about 608 million for PFRS.

Q   Thank you.

MR. STEWART: We can take that down.

BY MR. STEWART:

Q   Let's, if we could, go to Exhibit 733 and, in particular, to page 6 of our document, of this exhibit. Can you tell me, Mr. Malhotra, what is page 6 of Exhibit 733?

A   Page 6 is the ten-year projections under a pre-restructuring or sort of a no bankruptcy scenario.

Q   Is this the baseline scenario you disclosed to us earlier?

A   Yes.

Q   And what was the date on which you prepared page 6 of Exhibit 733?

MR. SOTO: What exhibit is that?

MR. STEWART: 733.

MR. SOTO: Thank you.

THE WITNESS: It was slightly updated in September, but most of the schedule has generally remained intact other than some changes, but I would have updated it in September consistent with the rest of the projections.

BY MR. STEWART:

Q All right. And the page we have before us, tell us just in very general terms what it sets forth.

A It shows that under a no restructuring scenario, the city's revenues over the next ten years were forecasted to be approximately 10.4 billion, operating expenditures in total of about 7.4 billion, so an operating surplus of roughly three billion and legacy liabilities of the original debt and UTGO debt service, POC principal and interest, the POC swaps had the settlement not been made, the pension contributions based on the assumptions that were being used from the June 13th proposal and the health benefits for the retirees, the legacy expenditures were roughly seven billion, so resulting in a deficit of approximately four billion over the next ten years.

Q And then this below that talks about reinvestment in the city?

A That's correct.

Q What's that a reference to?

A That refers to the latest reinvestment forecast, which was a net 876 million.

Q Okay. So let's go to the next page, please. What does

the next page cover?
A   It just covers the restructuring scenario and what the funds available for unsecured claims were.
Q   Now, so page 6 is the baseline, and page 7 is the restructuring; is that right?
A   Yes. Page 7 lays out a restructuring of the amounts available for unsecured claims.
Q   Okay. And in terms of the plan of adjustment, what does page 7 describe? Let me ask a different question. Fair to say page 7 is the representation of what would happen if the plan were confirmed?
A   That is correct. Under these assumptions, these would be the funds that would then get allocated to the various creditors if the plan were confirmed.
Q   And what does page 6 represent today?
A   Page 6 would represent what would happen if there was no bankruptcy or if the city was just continuing as though nothing had happened.
Q   Have you heard of something called a dismissal analysis?
MR. SOTO: Objection, your Honor.
MR. STEWART: I think I'm allowed to ask him if he's heard of it.
MR. SOTO: Well, I don't want to have another one of these where we waived it.
THE COURT: What is the objection, sir?

MR. SOTO: In his expert report and during his deposition Mr. Malhotra did not offer us -- he offered no opinions regarding a dismissal analysis, exactly none. He was specifically asked, as the city's Rule 30(b)(6) witness, if he had prepared a dismissal analysis, and his answer was a very clear, no, I had not, because he had not been asked to. And what the city is about to try to do is to try to backfill on the fact that this witness did not prepare a dismissal analysis by asking him if he can prepare one or if the baseline could be arguably one. When he answered his questions at deposition and when he gave his expert report, the baseline already existed, and yet he knew and he testified and he admitted on behalf of the city that he had not prepared a dismissal analysis. And it would be highly prejudicial at this point to allow the city to try to turn Mr. Malhotra into something that he already admitted he was not.

MR. STEWART: The question was, "Have you heard" --

THE COURT: Excuse me one second.

MR. WAGNER: We join the objection, very eloquently stated.

THE COURT: You, too?

MS. O'GORMAN: Yes.

MR. STEWART: The question was has he heard of something called a dismissal analysis.

THE COURT: True enough, and normally I would deal with objections on a question-by-question basis, but where are you going with this?

MR. STEWART: I'm going to ask him how this is different from a dismissal analysis.

THE COURT: How what is different?

MR. STEWART: This document is different.

THE COURT: What's the purpose of asking that?

MR. STEWART: It would be a foundation to something else, but it would also be useful so that we could see what we do have versus what we do not have.

MR. SOTO: Your Honor, this --

THE COURT: Is that just another way of saying you want to use this as your dismissal analysis?

MR. STEWART: No. It's what it is. I, frankly, don't think it's very far from one, but I'm not saying it is a dismissal analysis. On the other hand, I think it's very probative of other issues in the case.

THE COURT: What other issues?

MR. STEWART: Well, it's probative of what the legacy liabilities look like if the case is dismissed. It's probative of what the city's cash flows look like if the case is dismissed. It's probative of all those things. The question he was asked is did he do a dismissal analysis, and he said he did not. Fair point. They didn't ask further questions than that, but I don't think that should handcuff him to talk about the things that he did do.

THE COURT: Well, but wasn't the city asked to provide whatever -- well, wasn't the city asked to provide whatever testimony it was going to provide about a dismissal analysis, and isn't this that testimony?

MR. STEWART: It is not that testimony. He was asked about dismissal analysis. He was not asked to prepare one and so on. This, though, as Mr. Soto correctly says, has been in the record one way or the other for over a year. He was questioned about this at no small length, and he did testify about this, so there's no surprise as to this document. In fact, as we remember, this is something we first saw in June of 2013, so I don't believe that. If the objection instead is, well, this isn't called a dismissal analysis, and you're not offering it as such, I'll say that's certainly true, but on the other hand, I don't think it is an absolutely irrelevant exercise that he went through, and I think certain of the things that are shown here as a result of the meticulous modeling we have been through all too much today are improbative or not probative of anything. And I would add, finally, much of this would even go to weight and could be dealt with on cross-examination.

MR. SOTO: Your Honor, if I can respond when you feel it's necessary.

THE COURT: It feels to me like the relevance that you offer for this is a dismissal analysis, although you deny that, so I'm going to sustain the objection.

MR. STEWART: Okay. Let me then ask a few questions, and I will wrap up.

BY MR. STEWART:

Q What does -- what do these two pages of Exhibit 733 set forth?

A Page 6 shows the baseline scenario or pre-restructuring scenario, and page 7 -- which basically shows the deficit, and page 7 shows the post-restructuring scenario and the funds available for unsecured claims.

Q Did you discuss this with any of the other advisors to the city?

A Yes. These pages have been in our -- in the ten-year projections, and so they've been discussed with all the other advisors.

Q What did you say, if anything, to Mr. Buckfire about it?

A Page 6 and 7 have been a package, so what we've talked about at length is the cost of the legacy liabilities and the projection of the legacy liabilities of the city.

Q What discussions, if any, have you had with Mr. Orr about your baseline analysis?

A It was similar in terms of the assumptions behind the projections and the cost of the legacy liabilities for the city.

Q Thank you.

MR. STEWART: Your Honor, one last thing. I'm not sure I moved Exhibit 742 into evidence, so if I failed to do so, I would move it in now. If you could put that up --

THE COURT: Any objections?

MR. SOTO: No objection, your Honor.

MR. WAGER: As a demonstrative, that's fine.

MR. STEWART: As a demonstrative. That's right.

THE COURT: All right. It is admitted.

(City Exhibit 742 received at 3:42 p.m.)

MR. STEWART: Thank you. Your Honor, that is all I have with Mr. Malhotra.

MR. SOTO: Your Honor, not to impose on the Court, but if the Court wouldn't mind if I could turn the podium a little.

THE COURT: Fine.

MR. SOTO: Okay. Thanks.

THE COURT: Yep.

CROSS-EXAMINATION

BY MR. SOTO:

Q Mr. Malhotra, I had a neck operation, and I'm not supposed to turn to the right. That's why I'm --
Mr. Malhotra, we haven't met, and my name is Ed Soto. I have a few questions on some of the exhibits that you just went

over. And I think I'll hit those first, and then we'll go to some questions I have about your expert opinions and your prior testimony. All right. So, first of all, if I could ask you to take a look at Exhibit 728. I just had a question about your testimony on that.

MR. SOTO: And if we could put up Exhibit 728 --

BY MR. SOTO:

Q So looking at Exhibit 728, under the column of interest where it says -- so on the first line where it says "restructured UTG notes," and it goes to interest, various, 3.7 to 5.375, you see that?

A Yes.

Q Okay. So as to that interest rate, in calculating it, did you take into account whether or not the UTG notes were taxable or nontaxable?

A No, because those interest rates are the same as they were on the original UTGO bonds.

Q Okay. And going down to the --

THE COURT: Excuse me one second. I want to nip this issue in the bud. I want you just to answer the question. Do you see how you didn't just answer the last question? It was, "Did you take into account the tax," whatever. You said, "No, because." Please just answer the question. We'll be here, I think, much less time.

BY MR. SOTO:

Q And then again with respect to the new LTGO bonds where you have a 5.65 percent, do you know whether the underlying obligations of those LTGO bonds are taxable or nontaxable?
A No.
Q You don't know?
A I don't know.
Q And then again with respect to the new B notes where it's four percent and four percent and six percent, do you know if the obligations reflected under those notes are taxable or untaxable?
A I do not.
Q And then again with respect to the new C notes where it was five percent, do you know if the obligations reflected by the new C notes are taxable or untaxable?
A No, I do not.
Q And with respect to the restructured UTGO notes, do you know if those obligations are taxable or untaxable?
A I do not.
Q All right.
MR. SOTO: If you could put up 737. That's my next slide I had a question on.
BY MR. SOTO:
Q So looking at -- I think it's -- yeah, 737, what discount rate did you use to determine the value of the B notes?
A We used five percent.

Q Five percent? Okay. And what discount rate did you use to determine the value of the C notes?
A We used a five-percent discount rate to calculate the present value.
Q And how did you value the settlement credits of -- I think it's 6.3 million?
A In the 13 percent, they were included at the value of 6.3 million.
Q That's it?
A Yes.
Q Did you value the extension of the tunnel lease in connection with this exhibit?
A No.
Q Did you value what Syncora got under the development agreement in connection with this exhibit?
A No.
Q Did you value any other consideration received by Syncora like the $5 million in cash in arriving at this exhibit?
A No.
Q So if I could -- this is so hard to read, but Exhibit 614 -- on Exhibit 614, if the city intends to reject the service contracts, did you calculate the rejection damages in connection with your preparation of this exhibit?
A There were no rejection damages that were a part of this exhibit.

Q All right. Let's change gears just a second. It's true, isn't it, that in your view the biggest source of untapped revenue for the City of Detroit is asset sales; correct?
A Yes. That is a primary -- that was a primary opportunity, yes.
Q And it's also true that other cities all over the country have privatized assets, and by that I mean they've taken public assets and sold them and, therefore, made them private; correct?
A They've entered P3 partnerships, yes.
Q But in all of your projections that we just went through, you didn't consider the impact of the sale of even a single piece of the art from the DIA collection, the impact that would have on the city's revenues, did you?
A That is correct.
Q And so the record is clear, you also didn't consider the impact that the sale of the entire collection of the DIA would have on the city's revenue either, did you?
A That is correct.
Q And you also didn't consider the impact that any alternative form of monetization of that art -- for example, a loan against that art or a lease against that art, you didn't consider what impact that would have on the city's revenues; right?
A We included the proceeds from the grand bargain, so I

don't know if that's what you mean by "alternate" or not, but that's --

Q Other than the grand bargain, you didn't include any other potential monetization of the art?

A That is correct.

Q And you haven't run any alternative ten-year or forty-year forecast that provided for a different treatment of the art than what is currently contemplated by what is referred to as the grand bargain; correct?

A Not that I recall. That is correct.

Q And you didn't perform that alternative analysis because you weren't asked to; correct?

A That's correct.

Q Switching gears again, Mr. Malhotra, you talked briefly about the new B notes that are included in the plan of adjustment, and in the 40-year projection you summarize hypothetical distributions to creditors; right?

A That is correct.

Q And you've included a present value calculation of the new B notes using a five-percent discount rate; right?

A We have used a five-percent discount rate to calculate the present value of recoveries, yes.

Q And you base this discount rate in part on what the average interest rate on the outstanding limited tax general obligation debt is of the city or I think you called it the

LTGO debt rate; right?
A That's one of the factors.
Q And so when you considered the appropriateness of a five-percent discount rate for the present valuing of, you know, creditor distributions, you looked at the LTGO interest rates but not at their yields; correct?
A That is correct.
Q And just to clarify for the Court, the interest rate is a static rate; right? It's set at the time of the issuance of the bonds; correct?
A That is correct unless it's a floating rate, yes.
Q And a bond's yield reflects not only the interest rate but also the price the bond is trading at on the open market; right?
A Sure.
Q So the bond's yields tells us how the market values that bond, right, which would include not only the interest rate but also other factors that might impact the price of the bond on the open market; correct?
A Potentially, yes.
Q But you didn't know at the time that you did your analysis whether or not the new B notes were going to be LTGO bonds or some other type of obligation; right?
A That is correct.
Q And you don't know if the market will value the new B

notes in the same way the market values the city's LTGO debt, do you?

A The market will value what the market will value. I do not know what the market will value.

Q Thank you. I agree. Now, you also based the five-percent discount rate for present valuing the new B notes in part on the long-term interest rates of AA-rated municipal bonds; right?

A That is correct.

Q But you don't know whether the city will be a AA-rated municipality for purposes of bond financing upon emergence of Chapter 9, do you?

A I do not.

Q Switching gears again, Mr. Malhotra, you've been working with the city now on various projects, if I understood your testimony, since May of 2011; correct?

A That is correct.

Q And before the city filed its Chapter 9 petition, the city was already engaged in restructuring efforts to improve its fiscal condition; correct?

A That is correct.

Q And prior to that Chapter 9 filing, the emergency manager put together an operating plan; correct?

A I would have to think back. I believe that's the case, but I would have to see it just to get the exact date.

Q Let me hone in on then something you did testify. And on June 14th, 2013, prior to the commencement of this Chapter 9 case, the city provided creditors with a proposal that you referred to earlier, the proposal to creditors; right?
A That is correct.
Q You had some input on the creation of that proposal; correct?
A I did.
Q And that proposal to creditors included restructuring and reinvestment initiatives, didn't it?
A That is correct.
Q And so you understand as you worked on that proposal that the city didn't need to file a Chapter 9 filing in order to identify and propose a plan of action with respect to those operational restructuring reinvestment initiatives that it had proposed in the proposal to creditors in June of 2013; correct?
A You would have to repeat that question. It was way too long.
Q So you understood as you worked on that proposal that the city didn't need to file a Chapter 9 filing in order to identify and propose reinvestment initiatives like they did in the proposal to creditors; correct?
A I want to make sure I answer this in -- the way I understand your question is --

Q Oh, please do. If I can help you, let me know.
A Yeah. If you could just break that down into two components because all I'm -- this sounds like there's two questions in there. The city identified at that point --
Q You knew -- so, for example, in June of 2013, you knew you were working on a proposal that included reinvestment initiatives; correct?
A Yes.
Q And you knew there was no Chapter 9 filing; right?
A At that point in time, there wasn't.
Q And yet you knew you were proposing a proposal to creditors that included reinvestment initiatives; correct?
A Yes. It was meant to -- yes.
Q Okay. Now, the city was proposing to do those initiatives outside of Chapter 9; right?
A The city was highlighting the need that it had for the different departments, and I'm highlighting the funding required for those costs, but --
Q And, in fact, it was proposing those initiatives, wasn't it, in a proposal to creditors?
A It was proposing what the city wanted to do in terms of right-sizing the city's operations.
Q And you were doing that outside of Chapter 9; correct?
A That is correct.
Q Now, Mr. Malhotra, you had done work for the Detroit

Public Schools before your engagement by the City of Detroit here; right?
A That is correct.
Q But you hadn't done a forecast of an actual city or municipality before you performed the forecasts for the City of Detroit in this Chapter 9; correct?
A That is correct.
Q Before you worked for the City of Detroit in this Chapter 9 proceeding, you had never done forecasting specifically for any city; correct?
A Yes. That's correct.
Q And you haven't published any publications on forecasting; right?
A Not on -- no, I have not.
Q And you don't hold yourself out as an expert in Chapter 9 bankruptcy, do you?
A No, I don't.
Q In fact, this is the first Chapter 9 bankruptcy that you've worked on; correct?
A It is.
Q Now, the model that you used for the forecasting was created by you and the folks at E&Y for the City of Detroit; correct?
A Yes.
Q It didn't exist before E&Y created it in this engagement;

correct?
A That's correct.
Q And in connection with your work for the city when you were pulling together that model, you didn't look at any other Chapter 9 financial models; correct?
A We did not look at other Chapter 9 financial models.
Q And, in fact, when you were putting together your model, you didn't know the components of financial models used in other Chapter 9 cases, did you?
A The components of -- no. I think the components of financial models are revenues and expenses, so I don't know about if there's a Chapter 9 model somewhere. I did not look at other Chapter 9 models.
Q One second. Let me hand you your deposition, see if --
A Okay.
Q It's a copy of your July 15th, 2014, deposition, and I'll ask you to look at page 38 starting at line 5 to line 9. Did I ask you this question --
MR. STEWART: Could we wait till I can get to it in my --
MR. SOTO: Sure.
MR. STEWART: Go ahead.
BY MR. SOTO:
Q "Question: That wasn't my question. You haven't looked at any other Chapter 9 financial

models; correct?

Answer: I did not go and look at other Chapter 9 financial models. That is correct."

Is that your -- is that your answer to that question?

A Yes.

Q And you were telling the truth then?

A Yes.

Q And, in fact, when you were putting together your financial model, you didn't know the components is the next question I asked you. Do you recall -- looking again at line 16 through 20 of page 39, did I ask you this question, and did you give this answer?

MR. SOTO: Geoff, you ready?

MR. STEWART: Oh, yeah. I would object. I don't think it's proper impeachment, your Honor, because I don't think there was an inconsistent answer, but -- so I don't think it's appropriate, but I'll leave that up to Court.

THE COURT: You may proceed.

BY MR. SOTO:

Q "Question: You don't know what financial models have been used in Chapter 9's; correct?" is the question.

"Answer: I do not know the components of the financial models of other Chapter 9 cases. That is correct."

Did I ask that question? Did you give that answer?
A Yeah. That was a question that was asked, and that was the answer that I gave at that time, yes.
Q And you were telling the truth then; correct?
A Yes.
Q And you can't identify any Chapter 9 bankruptcy where an expert has done forecasting similar to what you've done in this case; right?
A That is correct.
Q In fact, before you put together your expert report in this case, you didn't attempt to investigate what had been done in other Chapter 9 bankruptcies; right?
A What had done with financial models in bankruptcies?
Q Right.
A That is -- could you ask me that question once again, please?
Q Sure. The question I asked before was can you identify any Chapter 9 bankruptcy where an expert has done forecasting similar to what you've done in this case?
A I do not -- yes, I cannot.
Q Okay. Switching gears again so you get in the context, it's correct, isn't it, that as of the time of your analysis and, in fact, even when you were deposed, the city had made no arrangement with Ernst & Young to continue updating your

forecast after this bankruptcy is done; right?
A Yeah. We had not reached a formal arrangement. That is correct --
Q And the scope --
A -- at that point in time.
Q I'm sorry. Go ahead. I didn't mean to interrupt.
A At that point in time.
Q And the scope of Ernst & Young's role in the event that the plan of adjustment is confirmed has not been agreed upon yet, has it?
A It has.
Q Okay. Fair enough. Can you tell the Court what it is?
A EY's restructuring team is going to continue to assist the city through December of 2015 in monitoring cash flows and helping with actual versus forecast performance. Separately, EY is engaged to help the city on its HR implementation technology and its ERP program.
Q And, again, through December of 2015 on both of those?
A I'm not sure of the exact date of -- the outside date of both of those. I'm confident of the date for the restructuring services.
Q But it's a fact, isn't it, that you've produced many versions of your -- I think I saw many today -- of your ten-year projection and your forty-year projection; correct?
A Yes.

Q And that's because you've had to continuously update the forecasts as assumptions change and other inputs change; correct?
A That is correct.
Q And you agree that any of the assumptions in your model can change over a ten-year and forty-year period; correct?
A Some assumptions can change over a ten-year and forty-year period.
Q And you agree that the timing of the reinvestment expenditures, for example, as they're paced could change, which, again, would affect the assumptions in your model; right?
A If you change the timing assumptions from what they are today, the numbers will change.
Q And you agree that unforeseen changes can have an impact on your forecast; right?
A Yes.
Q And, again, you haven't included a line item in your forecasts -- I went back to look -- in which you've provided for ongoing professional fees of Ernst & Young for a ten-year period or a forty-year period consistent with your projections; right?
A The fees for Ernst & Young for the forthcoming year after the current fiscal year will be funded through specific projects, but there are no additional fees over ten and forty

years.
Q Because you might not be there over ten or forty years; correct?
A That is correct.
Q And it would also be fair to say that the assumptions in your forecast depend on certain policy choices by Detroit officials; correct?
A Yes.
Q And in the future during the ten-year period addressed by your ten-year forecast, there might be different decision-makers who are responsible for determining Detroit's policies; right?
A Yes. People -- yes.
Q You would agree that the projections that you testified about this morning and actually through the afternoon are dependent on the successful implementation of the city's budget and the reliability of other estimates and assumptions that are the basis of your projections; correct?
A I'd request you to break that question down, please.
Q Sure. Would you agree that the projections that you testified about today are dependent on the successful implementation of the city's budget, that they stick to the budget that's part of your projections?
A The city generally does a one-year budget or two -- they're going to go to a triennial budget. The 2015 budget

is going to be a transitional year, so the city is going to use these projections to form the basis of a budget, so I'm just not sure that I completely understand your question because there isn't -- the budget is going to continue to evolve and is an iterative process that continues to get amended, so 15 and 16 and 17 will be essentially based on the projections that are existing today.

Q So it's your view that, for example, the projections that you created have both form of budgets in it. They presume certain things are going to be done and certain items are going to be in the city's budget; correct? That's part of your projection for ten years. That's also part of your projection for forty years; correct?

A Yes.

Q And if those presumptions are not carried on by the city, if they're not included, for example, in the one-year budgets that you just discussed, they would have an impact on your projections; correct?

A I'm trying to just think of specifics. If you change the assumptions, the numbers do change.

MR. SOTO: Thank you, Mr. Malhotra. Your Honor, we have to proffer two clips of Mr. Malhotra's testimony as a 30(b)(6) witness for the city. We would proffer them at this time and play them at this time.

THE COURT: Any objections?

MR. STEWART: I need to know what clips they are and what page and lines they are.

MR. SOTO: Sure. They are the -- they're both from the July 15th, 2014, deposition. They are page 144, lines 9 through 12, and page 115, line 25, through page 116, line 6. They have actually both been played before in this courtroom.

MR. STEWART: I have no objection, but we'll have to on redirect, your Honor, deal with a completeness issue as to the second clip.

THE COURT: Okay. Mr. Stewart, can you pull that microphone closer to you, please?

MR. STEWART: Very good.

THE COURT: All right. You may proceed, sir.

MR. SOTO: And actually I'm only playing the first clip, so you won't have to worry about it. I don't know why I said that. The first clip, which is page 144, nine through twelve, is the only one we're proffering. If you could play it --

(Deposition clip of Mr. Malhotra's deposition played as follows:)

"Question: You haven't been asked to look at what would happen if the petition is dismissed by the city or the state; correct?

Answer: That is correct."

(Deposition clip concluded)

MR. SOTO: No further questions, your Honor.

THE COURT: Okay.

MR. WAGNER: Your Honor, Jonathan Wagner on behalf of the COPs. May I proceed?

THE COURT: Yes, please.

CROSS-EXAMINATION

BY MR. WAGNER:

Q Good afternoon, Mr. Malhotra. You and I have never met, have we?

A I don't believe so, no.

Q I also have some questions -- a few questions about the exhibits that we're seeing for the first time today.

MR. WAGNER: Can you put up Exhibit 742?

BY MR. WAGNER:

Q Now, this is one of the calculations that you were instructed to perform at the direction of counsel; is that correct?

A That is correct.

Q Now, the totals there by my math equal about 1.6 billion; is that fair?

A Yes.

Q And if the UAAL was 3.1 billion, then the -- or if the liability -- if the amount of the claim was 3.1 billion, then the return rate for the pension classes would be about 51, 52 percent, 1.6 over 3.1?

A Could you ask me that question again? I apologize.
Q If you add those two together and you divide by 3.1 billion, which is the size of the pension claim you testified to earlier today, that's a recovery rate of about 52, 53 percent; right?
A That math sounds right.
Q Okay. But that's not anywhere in the plan, is it?
THE COURT: Excuse me one second. We've had a disconnect here. The question was not or not entirely about the math. The question was whether the recovery rate is 50 or 51 percent.
THE WITNESS: Your Honor, under -- using $1.6 billion of a present value over a $3.2 billion claim and where the $1.6 billion has been calculated at a 6.75-percent discount rate, that recovery percentage equates as long as the claim is also valued at $3.2 billion.
THE COURT: Okay.
BY MR. WAGNER:
Q But the percentages in the plan are 59 and 60 percent, are they not?
A Are we using a five-percent discount rate?
Q That's what you used in the plan; correct?
A That is the same -- that is the five percent discount rate we have used, yes.
Q And the plan has been amended several times since you

first laid out -- since the city first laid out the 59- and 60-percent return rates?
A Yes. The plan has been amended.
Q The plan was amended as late as two weeks ago; correct?
A That is correct.
Q And it still uses 59 and 60 percent; right?
A Yes. We use the same discount rate.
Q And your projections that you prepared originally showed a recovery rate of 59 and 60 percent, did they not?
A Yes. They showed a 59- or 60-percent on that claim amount and the distributions assuming a five-percent discount rate.
Q Okay. And the projections that you prepared just a week ago also show 59- and 60-percent recovery, do they not?
A Based on the same assumptions that I just answered earlier, yes.
Q And, again, the only reason you prepared -- used 6.75 is because your counsel told you to; right?
A That is correct.
MR. WAGNER: Now, can you put up Exhibit 723? No. The city has to put it up, 723.
BY MR. WAGNER:
Q Now, here you showed UAAL pre-petition of a billion eight for GRS and a billion 250 for PFRS; correct?
A That's correct.

Q And now -- this is as of 2014 -- you've had a substantial reduction in the UAAL; correct?
A Yes.
Q I think you testified that the unfunded liability has gone from 53 percent -- about 53 percent and 71 percent to in the 70s for both of them; is that correct?
A I think I said it was pretty close to the target. PFRS may be slightly higher. I do not remember the exact funded percentage status today. I think GRS may be close to 70, and PFRS may be a little higher, but I do not remember the exact numbers.
Q I'm right for PFRS you've already hit the target; right?
A Yes.
Q And by the way, the billion 879 and a billion 250, that was calculated and used -- that was calculated using a 6.75 discount rate; correct?
A That is correct.
Q And if you used a higher discount rate, the UAAL would be smaller, correct, or the unfunded portion would be smaller?
A If that is the only assumption that you changed, the numbers would be different.
Q And you also testified that the 6.75 was a negotiated rate; right?
A It was a part of the settlement, yes.
Q And are you aware that the retiree has said that the 6.75

is not based on pension practice?
A I'm not aware of that.
Q Okay. And are you aware that the expert for the Retiree Committee --
MR. STEWART: Objection, your Honor. I'd like to know why he's asking one witness about the testimony of another.
THE COURT: Well, let me hear the whole question, and then I'll hear your objection. Go ahead, sir.
BY MR. WAGNER:
Q Are you aware that the Retiree Committee expert has testified that the 6.75 is an outlier?
MR. STEWART: I'd repeat my objection, your Honor.
MR. WAGNER: Well, he's testified to why he used particular numbers. I think I'm entitled to show because he has given testimony about the UAAL that the numbers he's used misstate the UAAL.
THE COURT: The objection is sustained.
BY MR. WAGNER:
Q Now, this past year I'm right that the returns have exceeded 6.75 percent?
A Yes.
Q And that's why the unfunded liability has gone down; correct?
A That's only one of the reasons.

Q We'll get to that in a minute. You testified concerning the fees that have been incurred. This is Exhibit 767. I think the total fees are 182 million for 2014 and 2015; correct?
A That is correct. It includes an estimate as well for fiscal year '15, but that is what the schedule shows. That is correct.
Q Now, does this figure also include the fees prior to 2014?
A No.
Q Do you know what the fees have been from the time -- all the professional fees from the time you were retained in 2011 until this chart?
A I do not.
Q Was it $10 million? Was it more than $10 million?
A My recollection is it would be less than $10 million.
Q Okay. But just the 182 million, that exceeds the amount of the COP reserve, does it not?
A The $182 million is larger than the $162 million COPs reserve.
Q You also gave some testimony about the return to COPs. The total amount of COPs are a billion four; right?
A That's the COPs claim.
Q And the interest rate on those COPs under the B notes at the beginning is four percent; right?

A Yes. The B notes the interest rate is four percent for the first decade.

Q So am I right that the debt service on another ten percent of the COPs, 140 million, would be $5-1/2 million? Putting aside amortization, just the interest cost would be 5-1/2 -- about 5.6 million, 140 times .04?

A Yeah. I mean that -- overall in terms of the actual incremental interest, if you're just looking at interest, I think that would be the rough math.

Q Now, you also gave some testimony about a plan freeze. Do you recall that?

A Yes.

Q And I think you said there'd be no more accrual of benefits under the plan on account of a plan freeze. Do you recall that?

A Yes, under the old plan.

Q And do you recall that you said that that would reduce the pension liability?

A Yes.

Q And there's no dispute about that, is there?

A I do not know there's a dispute or not.

Q Okay.

MR. WAGNER: Can you put up Exhibit 1009? Your Honor, this is a letter from Milliman. It's already in evidence based on your Honor's September 2nd order.

BY MR. WAGNER:

Q Can you turn to page 3 of the document?

MR. STEWART: Do you have a hard copy version of that?

MR. WAGNER: I don't with me. I didn't realize he'd be testifying about these issues, so I didn't know.

MR. STEWART: Excuse me a moment.

MR. WAGNER: Now, can you blow up the portion that says "estimated plan freeze impact"?

BY MR. WAGNER:

Q Do you see it says, "Our preliminary result as of June 30, 2013, based on an investment return assumption of 6.75 is that the impact of the plan freeze represents a decrease of roughly 95 billion -- 95 million or roughly 12 percent of the active liability"? Do you see that?

A Yes.

MR. WAGNER: And can you just go to page one of the document, and can you highlight the "re." line?

BY MR. WAGNER:

Q So this is for -- this is for GRS; right?

A Yes.

Q So the impact of a plan freeze with respect to GRS is a reduction of liability of 95 million; right?

MR. STEWART: Objection.

THE COURT: What is your objection?

MR. STEWART: That's what the document says. A question is -- I don't know if he's saying that that's what the document says or whether he's asking the witness his independent view.

THE COURT: Which is it?

MR. WAGNER: I'm asking if he knows. He testified he got input from Milliman. I'm asking whether he -- if that's his understanding.

THE WITNESS: That's what the document says.

MR. WAGNER: Can you turn to Exhibit 1010? Can you put up Exhibit 1010?

THE COURT: Well, let me say, counsel, that we don't need you to have this witness read into the record documents that are already in evidence. If there's some other purpose, go for it, but --

MR. WAGNER: That's fine.

BY MR. WAGNER:

Q Now, you discounted the state contribution at a rate of 6.75 percent?

A That is correct.

Q And why did you do that? Is that also at the instruction of counsel?

A That was part of the discussion with the state.

Q And was the 6.75 supposed to represent any risk that payment would not be made?

A That's a question I guess to ask the state, but the 6.75-percent discount rate used to calculate the present value of the $350 million the state is contributing was based on an overall agreement with the state.
Q So that was simply another agreement that was negotiated; correct?
A Yes.
MR. WAGNER: Nothing further, your Honor.

CROSS-EXAMINATION

BY MS. O'GORMAN:
Q Good afternoon, Mr. Malhotra. My name is Debra O'Gorman. I represent MIDDD. Now, you're not an expert in tax policy, are you?
A I am not.
Q And you're not an expert in tax forecasting, are you?
A I am not.
Q You're not an economist, are you?
A I am not.
Q You have no expertise in pensions; correct?
A I'm not an actuary.
Q You don't have any expertise in urban policy or planning, do you?
A No, I do not.
Q You don't have any expertise in blight reduction, do you?
A No, I do not.

Q Are you an expert in art valuation?
A No.
Q Are you a CPA?
A I am not.
Q And you've never before been qualified as an expert in accounting; correct?
A That is correct.
Q Now, in preparing your forecast, you relied on many others to provide assumptions for you; is that correct?
A Input, yes.
Q And these were other experts as well as various people from the city; correct?
A Yes.
Q And as to the anticipated tax revenues that are built into your forecasts, you didn't perform your own work in that regard; correct?
A We had experts for that, but I did look through the assumptions.
Q Thank you. You answered my question. So you relied on Mr. Cline and Ms. Sallee for that information?
A I relied on Ms. Sallee and Bob Cline.
Q And you're not offering any opinions on tax policy; correct?
A That's correct.
Q And you're not offering any opinions on whether the city

could seek to increase taxes, are you?
A I'm not making any comment on policy, tax policy.
Q And you're not offering any opinion on whether the city could ask the state to collect taxes on their behalf, are you?
A That is correct.
Q Would you agree that Mr. Cline and Ms. Sallee are the most knowledgeable about the analysis they performed with respect to tax revenues?
A Yes, for each of the purposes that they -- for each of the tax lines that they forecasted, yes.
Q And would you agree that taxes are the biggest driver of city revenues?
A Yes.
Q And they're the primary source of revenue for any municipality; correct?
A They are. They are. Taxes are a primary source of revenues and -- yes.
Q Okay. And you relied on others for that work; right?
A I relied on experts for that work.
Q Okay. And you also relied on Conway MacKenzie; correct?
A Yes, for specific revenue and expense items.
Q And those were the reinvestment initiative items that you relied on Conway MacKenzie for?
A Yes, and, as I said, in conjunction with the work that we

had already done to make sure there was no double counting.
Q And you didn't do any independent analysis or testing of those numbers, did you?
A I did.
Q You did?
A Yes. I just said I made sure that none of the operating revenue initiatives or any of the operating expenditures were double counted in any fashion in the baseline.
Q So you just avoided the double counting, but you did no other analysis of the accuracy of any of the numbers themselves?
A In terms of the analysis, I mean we also went through the headcount assumptions in a lot of detail in terms of what were the average revenue -- average salary assumptions that were being used in terms of all the headcount that was coming in and regardless of any double counting to make sure that the fringe rates and the average salary levels and the headcount assumptions were vetted by department.
Q Okay. But you would agree that Conway MacKenzie would be the most knowledgeable about their work; correct?
A Yes. People who only do specific work, yes, are more knowledgeable about their work.
Q Okay. And you also relied on Miller Buckfire for your assumptions?
A For the quality of life loan and the exit financing

assumptions, yes.
Q Did you verify the accuracy of Miller Buckfire's work?
A I had supporting information that was provided by the financing sources, and we had discussions about the structure based on what input they got from the financing sources, so we did spend a lot of time discussing those versus just plugging them into a model.
Q Okay. Did you also rely on Milliman in forming your assumptions?
A Yes. We used Milliman's input on the assumptions in some of the legacy liabilities.
Q And Milliman would be most knowledgeable about the work that they performed; correct?
A Yes.
Q And you were asked by Mr. Soto about policy choices by future decision-makers. Would you be required to speculate in order to determine what policy choices Detroit's future leaders would make over the next ten years?
A Could you ask me that question again, please?
Q Would it be speculation on your part for you to determine now today what Detroit's future leaders -- what decisions they would make?
A Yeah. I cannot decide or comment on all the policy decisions the future governments make.
Q So you'd be speculating; right?

A Yes. I mean they -- yes. If any --
Q Okay. Thank you.
A I can't comment on all the policy decisions or policy decisions that government leaders will make in the future.
Q Because you'd have no way of knowing what will happen; right?
A Well, I would not know of anything about tax policies that -- yes. I would not know what some administration does down the road in the future.
Q You wouldn't know what decisions would be made in the future; correct?
A That is correct, in the future.
Q Okay. Now, you didn't use any kind of mathematical formula in identifying the historical trends that went into your forecast; correct?
A No, that's not.
Q In what way is that incorrect?
A Well, I just want to make sure I'm -- there are lots of line items if you've gone through individual line items, and in terms of looking at the trends, we've looked at some of the line items that needed either an average or we used some of the last 2013 numbers in terms of the forecast, so --
Q So you used averages, but you didn't use a regression analysis or any kind of sophisticated mathematical modeling; correct?

A I don't know if regression analysis is sophisticated mathematical modeling, but in terms of the actual costs that were in specific departments or revenues, we did use mathematical formulas in our forecasting.
Q But I'm asking you a different question about historical trends. Didn't you just take a couple of years of data and do an average and make some adjustments and carry those numbers forward? Isn't that what you did?
A No. I think we went through a very robust process of looking through and understanding what the changes were, what the assumptions were. We spoke to the management team. We reviewed those numbers with the management team and then started to come up with forecasts versus just look at a couple of years and put a number in there.
Q Right. So you had historical data, and you made some adjustments based on your conversations with city department heads; right?
A And analyses of each of those line items to understand what was in there, what were one-time trends, what was repeating numbers and going -- that would impact the forecast going forward.
Q Now, would you agree that increased taxes would be a potential source of revenue for the city? I'm just asking if it could be a potential source of revenue.
A Leaving everything else aside and leaving everything else

the same, if taxes go up, the revenues -- the overall picture will look better.
Q Right. And you were instructed by the emergency manager to assume that tax rates would remain constant; correct?
A That's right.
Q And you were also asked to assume by the emergency manager that there would be no new taxes, you know, additional taxes that don't exist today?
A That is correct.
Q And you've done no analysis of the collection of delinquent taxes in your model?
A We have not.
Q And I wanted to ask you about the B and C notes that we talked about earlier. Now, the new B notes are interest only for ten years; correct?
A That is correct.
Q And those are unsecured obligations of the city; correct?
A Yes.
Q And you don't know whether they're taxable or not?
A I do not.
Q Now, would you agree that as a general proposition that a higher rate of return would typically be demanded by the market for a taxable bond versus a nontaxable bond?
A I don't want to -- I can't comment on that.
Q Now, under the plan the city is issuing new C notes;

correct?
A That is correct.
Q And those have a 12-year maturity as opposed to 30 years with B notes; correct?
A That is correct.
Q And would you agree that notes with shorter maturities would typically have less payment risk than those with longer maturities?
A I would not want to comment on that.
Q And the new C notes amortize principal with the first annual payment; correct?
A That is correct.
Q And the B notes are interest only; correct?
A They are interest only for the first ten years.
Q And the C notes pay what interest rate?
A Five percent.
Q And the B notes pay four percent for the first 20 years; correct?
A That is correct.
Q Would you agree that the amortizations -- that under the new C notes there's less of a risk of nonpayment than the B notes?
A The money is coming from the city. The risk profile is the risk profile.
Q But the new C notes, there is a payment of principal from

the start; correct?
A That is correct. I'm saying the source of the funding is the same. It's the city, its cash flows.
Q Well, that's not really true, is it, because the C notes are paid from parking revenues; correct?
A At the end of the day, the C notes are paid through improvement in parking revenues, but it's going to come out of the general fund at the end of the day.
Q Okay. Well, is there any segregation of funds for payment of the new B notes?
A No.
Q They come from the general obligations of the city; correct?
A Yes.
Q Have you taken into account improvements in the economy in the last four or five years in your forecast?
A In terms of the tax forecasts?
Q Generally, the economy in general.
A I would think that the pieces that impact Detroit, for instance, for what we have seen in the trends and the sales and charges for services -- I don't know if it's anything related to the improvement in economy versus not, but I've looked at in detail all the revenue items that are impacting Detroit, so I don't know if -- what you would ascertain to an improvement in economy versus not.

Q But you do agree that the economy of Detroit has been improving since 2008, 2009; correct?
A I would say that overall since 2008, 2009 I think the economy overall has improved.
Q And you didn't make any specific effort to include those improvements in your forecast; correct?
A Well, we have looked at the trends from 2008, 2009 in all of the department financials, so my point is they would be imbedded in there if there was any direct improvement.

MS. O'GORMAN: Okay. Thank you. That's all I have.

THE COURT: Any other cross-examination of the witness?

MR. SOTO: No, your Honor.

THE COURT: Redirect?

MR. STEWART: No redirect, your Honor.

THE COURT: Stand by one second, please. So to what extent, sir, did you make independent judgment about the reasonableness of the assumptions in the city's ten-year forecast or projections?

THE WITNESS: It was quite extensive, your Honor.

THE COURT: It was. Are you familiar with the concept of critical assumption?

THE WITNESS: Yes.

THE COURT: Okay. I want to ask you what are the two or three most critical assumptions in the city's ten-year forecast or projections that concern you the most?

THE WITNESS: The first one, your Honor, one would be the unfunded pension liability of the city at the end of the ten years because -- and a lot of this in terms of the settlements of the creditors we have boxed in what the city's liability will be. On the side of the pensions, we are still using calculations to estimate what that ten-year unfunded liability will be. So that would be my first one as a concern because it's an unknown. It's an estimate, but it's still not boxed in in terms of how we have boxed in our best ability of the other claims.

The second assumption in terms of what would give me concern is we are trying to get five-year labor agreements, and we just want to make sure that even after those five years there are various assumptions in the plan with respect to retiree healthcare for our current active employees that have been taken down significantly, so just so that the city has gone through a painful process of dealing with the retiree healthcare of its current retirees so that it does not happen again could be a five-year contract, so I just don't know what happens after those five years.

Those would be the top two, and then the last one, which is more general, is just the implementation of the plan now because the roadwork has been created in some fashion. Our blueprint is existing, but I think the same amount of rigor has to now go into the implementation or probably even more rigor than in sort of developing the blueprint, and I would say those, in my view --

THE COURT: What concerns you about the implementation of the plan? Can you be more specific about what your concerns are?

THE WITNESS: There's a lot of change, your Honor -- I mean that has to happen over the next four to five years with respect to the -- all of the department revenue initiatives as well as the process improvements, and so I am -- from all the time I've spent with the mayor and the CFO, I'm very comfortable there in terms of the implementation ability, but it's just the speed of the implementation. We have significant uptick in revenues in the plan that are based on reinvestments. Yes, they come five years down the road, but -- so I think we will just have to make sure that we have the rigor to implement the plan.

THE COURT: Make sure we have the what?

THE WITNESS: A rigorous focus on implementing the plan. I'm less concerned about line items moving up and down in terms of costs, but I would not want to have a change in terms of taking one-time CAPEX items and converting that into long-term increased cost of the -- increasing the fixed cost structure of the city long term.

THE COURT: Well, do you have any concern about willingness or the ability of the city to implement the plan?

THE WITNESS: From all the conversations I have had with the leadership team, I have -- I do not have concern about the willingness to implement the plan. The ability of the collective team to implement the plan is a function of time and focus on these particular efforts once the city exits from bankruptcy. And I've been involved with the city for over three and a half years and understand the practical limitations that the city will be faced with of implementing the plan post-bankruptcy, and it's that constant focus of making sure that the city is going to implement this plan is critical.

THE COURT: Did you testify earlier that E&Y's contract with the city has been extended through 2015?

THE WITNESS: That is correct, your Honor.

THE COURT: Calendar year or fiscal year?

THE WITNESS: December 31st, 2015.

THE COURT: December 31st. And will part of that work continue the work that E&Y has done with respect to cash management?

THE WITNESS: Yes, your Honor.

THE COURT: What is your judgment on whether the city will be able to take over those cash management functions that E&Y does now and will do through December of 2015 at that time?

THE WITNESS: It will -- it depends, your Honor, on the people that are hired over the course of the next few months, and so it's hard for me to comment today. Today I wouldn't be comfortable saying that I could just hand it over, but I think as the existing team at the city continues to get some more resources around them, there is a potential that these cash management services can be transitioned, especially once we have a little more stability through this transitional year that the city is going to be going through.

THE COURT: What would the consequences be if the city did not renew the contract after December of 2015 or find a substitute contractor to do the work and it were not ready to assume proper cash management functions?

THE WITNESS: The risk in that scenario, your Honor, is exactly twofold, one, because of the state law and having a clear amount -- a handle on cash before you're going into the next budget year because you have to maintain that five percent, so it's a controls issue in terms of that may get impacted, and really so -- and I would say what would get impacted is the long-term forecast ability of the city will get impacted because a lot of -- a lot of the issues have come up because the city did these one-year budgets or one-year outlooks whereas looking at cash flows over a longer time frame and managing cash over the long term, so that is the risk that we run into in which we can again focus back into the very short term and make decisions based on the outlook of a very short term.

THE COURT: So is it fair to say that it is your judgment that maintaining adequate cash flow competency either by an outside contractor or adequate inside resources is critical to the implementation and feasibility of the plan?

THE WITNESS: I do, your Honor.

THE COURT: All right. That's all I have. Any follow-up questions? All right. Before we break for the day -- you're excused, sir.

(Witness excused at 4:45 p.m.)

THE COURT: I think that rather than start on another witness, we will recess here in a moment, but, Ms. Lennox, I want to talk to you, please.

MS. LENNOX: Yes, sir.

THE COURT: First, I have a news flash for you.

MS. LENNOX: Okay.

THE COURT: You have a message from my assistant, Chris. Please call her.

MS. LENNOX: Okay. I will do that, your Honor.

THE COURT: Have you had any conversation with Mr. Flynn about the plans to deal with the Detroit Fire Fighters' issues tomorrow?

MS. LENNOX: I have, your Honor, and --

THE COURT: Where are we with that?

MS. LENNOX: So I guess we were confused where this came from, and apparently it came from an entry that your Honor put on the docket on September 3rd stating that the issues for the UAW and the DFFA will be presented on September 30th.

THE COURT: Right.

MS. LENNOX: Well, the DFFA had never designated any witnesses. They were not -- they did not indicate to us that they were planning to put on a fact case, and so we were a little confused by what DFFA issues because they hadn't designated witnesses. After I spoke with Mr. Flynn, he indicated that they do not intend to present factual issues. In fact, they will be withdrawing the objections to confirmation as to certain factual matters. They are preserving their objections with respect to the legal issues, which, as your Honor may recall, Mr. Legghio and I argued back in July. So I believe it is their view -- and we would concur since they don't plan to present witnesses -- that they would have no need to come into court tomorrow unless your Honor has questions for them that you'd like them to answer.

THE COURT: Okay. Thank you for that report. Has the mediation with the Detroit Fire Fighters Association concluded yet?

MS. LENNOX: It has not concluded. I can report that we've made --

THE COURT: It has not concluded?

MS. LENNOX: No. And I believe they're planning to meet again this Wednesday. I can report that we have made significant progress actually since last time we were before your Honor. Certainly it's our view that we'd like to conclude this as soon as we can.

THE COURT: All right. So it sounds like we will be proceeding with our regular trial schedule tomorrow uninterrupted by any previously slotted in issues. Does that sound right? Wednesday we do have to carve out some time for objections to claims; right?

MS. LENNOX: Correct, your Honor.

THE COURT: That's what --

MS. LENNOX: I believe the MIDD trial is on Wednesday as well.

THE COURT: You believe what?

MS. LENNOX: The MIDD objection is up Wednesday.

THE COURT: I think that's what Ms. Sikula wants to talk to you about.

MS. LENNOX: Okay.

THE COURT: All right. Anything further for today? Sir?

MR. STEWART: Nothing further from me, your Honor.

THE COURT: Thank you.

MS. LENNOX: Thank you, your Honor.

MR. SHUMAKER: Your Honor, one thing on Mr. Orr. I just wanted to let you know that I've been talking with Mr. Soto about when Mr. Doak will testify, and I don't think that that's going to happen until Thursday or Friday, which would mean tomorrow's lineup would be Mr. Buckfire, Mr. Kaunelis from the DWSD, and then Mr. Orr. And I just wanted to advise your Honor of that for notice purposes.

THE COURT: All right.

MR. SHUMAKER: Thank you, your Honor.

THE COURT: Anything else for today? All right. We're in recess until tomorrow morning then.

THE CLERK: All rise. Court is adjourned.

(Proceedings concluded at 4:49 p.m.)

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I certify that the foregoing is a correct transcript from the sound recording of the proceedings in the above-entitled matter.

/s/ Lois Garrett October 3, 2014

Lois Garrett

EXHIBIT H

CHARLES MOORE
IN THE UNITED STATES BANKRUPTCY COURT
FOR THE EASTERN DISTRICT OF MICHIGAN

In re:) Chapter 9
CITY OF DETROIT, MICHIGAN,) Case No. 13-53846
Debtor.) Hon. Steven W. Rhodes

____

The Videotaped Deposition of CHARLES MOORE - Volume 2,
in his personal capacity as a Rule 30(b)(6) witness,
Taken at 1114 Washington Boulevard,
Detroit, Michigan,
Commencing at 9:00 a.m.,
Thursday, July 24, 2014,
Before Cheri L. Poplin, CSR-5132, RPR, CRR.

CHARLES MOORE
APPEARANCES:

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ALSO PRESENT:
John Schmitzer - Video Technician

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CHARLES MOORE

Detroit, Michigan
Thursday, July 24, 2014
9:00 a.m.

CHARLES MOORE,
was thereupon called as a witness herein, and after having been previously duly sworn to testify to the truth, the whole truth and nothing but the truth, was examined and testified as follows:

EXAMINATION

BY MR. NEAL:
Q. Good morning, Mr. Moore.
A. Good morning.
Q. You recognize that you are still under oath?
A. Yes.
MR. NEAL: I think just for housekeeping purposes, because there may be new people in the room, such as myself, the parties in the room and on the phone should identify themselves for the record. Bob, do you want to begin?
MR. HAMILTON: Robert Hamilton, Jones Day, on behalf of the City of Detroit.
MS. NELSON: Laird Nelson from Jones Day on behalf of the City.

CHARLES MOORE

MR. ULLMAN: Anthony Ullman, Dentons, for the Retiree Committee.

MS. QUADROZZI: Jaye Quadrozzi, Young & Associates, on behalf of Oakland County.

MR. YITZCHAKI: Doron Yitzchaki on behalf of the State of Michigan.

MS. GREEN: Jennifer Green, Clark Hill, on behalf of the Retirement Systems for the City of Detroit.

MR. JAMES: Mark James, Williams, Williams, Rattner & Plunkett on behalf of Financial Guaranty Insurance Company.

MS. ROGERS: Courtney Rogers for U.S. Bank, National Association, as Trustee for the water and sewer bonds.

MR. SCHWINGER: Robert Schwinger from Chadbourne & Parke for Assured Guaranty Municipal Corporation.

MS. HITCHINS: Kathleen Hitchins with Sidley Austin on behalf of National Public Finance Guarantee Corporation.

MR. NEAL: Guy Neal, Sidley Austin, National Public Finance Guarantee Corporation.

BY MR. NEAL:

CHARLES MOORE

Q. Mr. Moore, you have been designated in response to a couple 30(b)(6) deposition notices, and I'm going to show you those designations to you and ask you to confirm that you are so designated on these topics. So I'm going to show you what's in the binder set as Tab 1. It's a document that has previously been marked as Malhotra Exhibit Number 2. And, Mr. Moore, I would turn your attention to Topic Number 3-F.
A. Yes.
Q. There is a deposition topic Number 3-f reads, "Any planned or projected collection issues." And on the next page you are designated as the City's designee for Subtopic f. Do you see that?
A. I do, yes.
Q. And you are prepared to testify on that issue today?
A. Yes.
Q. Turning to Topic Number 9. There are three subtopics in Deposition Topic Number 9. That would be 9-a, "The methodology used for the City's determination of the amount of the DWSD's full allocable share of the past, present and future GRS UAAL." Do you see that, sir?
A. I do, yes.
Q. The next topic is Topic 9-e, "Any pro forma impact on rates and the potential impact of higher rates on

CHARLES MOORE

wholesale contract renewals." Do you see that, sir?
A. Yes.
Q. And Topic 9-g, "The use(s) that will be made under the Plan of the 428.5 million to be contributed by the DWSD." Do you see that?
A. Yes.
Q. Oh, excuse me. I missed the intervening b, c, and d. I'm not going to read those out loud. But I misread the notice. Why don't we just turn to the next page. It says here at the top of the next page, ". . . Mr. Charles Moore to testify on its behalf for the general topic and subtopics (a) through (e) and (g)." Do you see that?
A. Yes.
Q. Okay. With that clarification, are you prepared to testify today on Subtopics a through e and g?

MR. HAMILTON: Well, but you left out some of our objections in there, but that's okay.

Go ahead and answer the question.
A. Yes.

BY MR. NEAL:
Q. Okay. I'd like to show you what's in Tab 2 of our binder set. Mr. Moore, I'm going to hand you a document previously marked as Malhotra Number 4. For

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the record, Malhotra Number 4 is the City of Detroit's Identification of 30(b)(6) Witnesses in response to Oakland County's Notice of Rule 30(b)(6) Deposition to the City of Detroit. Direct your attention to Topic Number 1, "All financial projections for DWSD operations through June 30th, 2023." Do you see that, sir?
A. Yes.
Q. And you're prepared to testify today on that topic?
A. Yes.
Q. Deposition Topic Number 5, "The factual and legal basis for and the assumptions underlying Exhibits L and M to the Plan." Do you see that, sir?
A. I see that.
Q. And you are prepared to testify today on that topic?
A. If you look at the response, I'm prepared to testify to the factual basis but not the legal basis for the assumptions.
Q. Deposition Topic Number 6, "The factual and legal basis for the Plan proposal for DWSD to pre-fund pension liabilities, including the means by which such pre-funding will be made and the effect on DWSD's operations of such pre-funding."

Sir, you've been designated to testify as

CHARLES MOORE

to the factual basis with respect to this topic?
A. Yes.
Q. And just two more, sir. Deposition Topic Number 7, "The factual and legal basis to require the DWSD to fund 100 percent of the GRS for fiscal years 2014 to 2023." Do you see that, sir?
A. Yes.
Q. And it appears that this topic has been reworded as follows: "The factual basis to require the DWSD to fund the UAAL of the GRS for fiscal years 2014 to 2023." And with that rewording, you are designated to testify on this topic?
A. Yes.
Q. Lastly, sir, the very last topic in Malhotra 4, Deposition Topic Number 21, "The City's determination of the size of the PFRS and GRS Pension Claims, and its decision to utilize a 6.75 percent discount rate to value liabilities and a 6.75 percent investment return rate."
And you have been designated to testify on the City's behalf with respect to the size of the PFRS and GRS pension claims; is that correct?
A. Yes.
Q. And you're prepared to do so today?

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A. Yes.
Q. I'm going to show you what is Tab 3 in our binder set, a document previously marked as Orr Exhibit Number 19. Orr Exhibit Number 19 is Plan Confirmation Factual Propositions. I believe this was filed on the docket as Docket Number 5704-1. First, sir, have you seen this document before?
A. I have not.
Q. I'm going to point you to several of these topics. The first one where your name appears is 1-b Romanette iii, "Restructuring and reinvestment initiatives are reasonably expected to lead to a slightly increased" -- let me start again. "Restructuring and reinvestment initiatives are reasonably expected to lead to slightly increased revenues and decreased expenses over the next ten years."
Do you see your name there?
A. I do.
Q. Do you anticipate providing testimony on this issue?
A. Today or at the confirmation hearing?
Q. At the confirmation hearing.
A. I have not been told on which topics that I would be testifying to, but I think it's reasonable to assume that I would be testifying to those topics or to that

CHARLES MOORE

topic.
Q. Can we make the same assumption with respect to Topic 4-f, Page 5 of the document? 4-f, "Restructuring and reinvestment initiatives help the City provide adequate levels of municipal services."
A. There are three sub bullets below that. Do you want me to just focus on f right now?
Q. Why don't you just read to yourself f-i, Romanette i, Romanette ii, and Romanette iii where your name appears under each. Excuse me. I misstated that. It's early in the morning. F-ii and f-iii. That's where your name appears.
A. I think it's reasonable to assume that I might be asked to testify to those two items at the confirmation hearing, yes.
Q. Turning to Page 7. Topic Number 6-c and 6-c Romanette i. Is it reasonable to assume that you may provide testimony at the confirmation hearing on those topics?
A. It is reasonable to assume that I may provide testimony at the confirmation hearing on 6-c Romanette i.
Q. And moving up, so I don't forget this one, 6-b Romanette iii, "The Plan's distribution percentages

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should be regarded as lower than calculated based on settlement assumption of 6.75 percent."
Is it reasonable to assume that you may provide testimony on this topic?
A. It is reasonable to assume that.
Q. Okay, sir. I'm going to show you Tab 4 of the binder set, but it was a document that was marked yesterday, and that's your expert report. Sir, I'm going to hand you what is Moore Exhibit Number 1 from yesterday's deposition. Ask you to turn to Pages 8 and 9.
First, let me ask you what was your understanding of the scope of your engagement related to your expert report?
A. When I was initially engaged, and when I say I, I'm referring to Conway MacKenzie, in January of 2013, there was not a specific scope item that related to preparation of an expert report. However, as the City filed for Chapter 9 and the Chapter 9 proceeding continued, it became clear to me that the City would like for me to prepare an expert report related to the reinvestment initiatives.
Q. Is that a shorthand way of calling it or do you also call it restructuring and reinvestment initiatives? How do you refer to it?

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A. Sure. In this document, that is essentially a shorthand way of referring to it. The reinvestment initiatives are a defined term in my expert report. The -- in the Disclosure Statement, the 70-page document is titled "Restructuring and Reinvestment Initiatives," which contain all of the financial information tying into what are referred to here as the reinvestment initiatives.
Q. Do Pages 8 and 9, do they provide a summary of all the opinions that you provide in this expert report?
A. Yes.
Q. Do they provide a summary of all the opinions that you intend to provide as an expert in this case?
A. It is unclear to me if I may be asked to provide additional opinions, but at least as it relates to this report, these are my opinions.
Q. For clarification, sir, are you providing an expert opinion on the City's ten-year projections?
A. Could you define what you mean by ten-year projections?
Q. Well, I will show you later, but I'm making specific reference to Exhibit M that contains the DWSD ten-year projections.
A. I am not making an expert opinion at this point in

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this expert report on Exhibit M to the Disclosure Statement, and when I say Disclosure Statement, I'm referring to the Fourth-Amended Disclosure Statement filed May 5th.
Q. Are you providing an expert opinion on the City's 40-year projections?
A. Can you clarify what you mean by the 40-year projections?
Q. Certainly. It may take me a minute to find it. Sir, rather than hold up the deposition -- oh. No. Very good. Exhibit K to the Disclosure Statement, and I'll just show it to you for purposes of completeness here. Tab F in the binder set. Sir, I'm going to hand you what has previously been marked as McCormick Exhibit Number 13.
MR. ULLMAN: What tab is that?
MR. NEAL: It's Tab F in the binder set. It's Exhibit K to the Disclosure Statement, Forty-Year Financial Projections.
BY MR. NEAL:
Q. And, sir, can you identify this document?
A. This is a document referred to as Plan of Adjustment, 40-year projections.
Q. And who prepared this document?

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A. This is a document that was prepared by Ernst & Young.
Q. And what involvement did Conway MacKenzie have in the preparation of this document?
A. There are certain line items within the 40-year projections for which Conway MacKenzie provided input in values.
Q. Can you identify those line items?
A. Yes. The -- Conway MacKenzie had involvement in the PFRS and GRS pension contributions as well as if you look at Page, I believe it's 4 of 9, the print is on top of it, but Exhibit 3-A under the "Revenue" section where it says "Restructuring" near the bottom, "Department Revenue Initiatives," and then down below under "Expenditures," under the "Restructuring" section, "Additional Operating Expenditures," the reorganization and then in parenthetical "Capital Investments, Blight, and Reinvestment Deferrals."
Q. Are you providing any expert opinion with respect to either Exhibit K or any of the numbers contained therein?
MR. HAMILTON: I'm going to object to form.
But you can go ahead and answer if you understand the question.
A. As I just went through, the -- there are line items

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within Exhibit K that tie directly to my expert report. Within my expert report, I don't have opinions specifically related to the 40-year projections, so at this point I have not been asked to render an expert opinion on the 40-year projections other than what is contained within my expert report.
BY MR. NEAL:
Q. Mr. Moore, I'm going to go back to the -- the ten-year projections for DWSD. Are you providing any opinion testimony with respect to the forecasted revenues and expenses that the DWSD may expect in future years?
MR. HAMILTON: Object to form.
You can answer.
A. It's unclear if I will be asked to provide opinion testimony on Exhibit M.
BY MR. NEAL:
Q. Are you providing any opinion testimony at all with respect to the DWSD?
MR. HAMILTON: Object to form.
You can answer.
A. Again, it's unclear if I will be asked to provide any opinion testimony to Exhibit M.
BY MR. NEAL:
Q. Is there anything in Moore Exhibit Number 1, your

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expert report, that provides an opinion with respect to any matters related to the DWSD?
A. No, sir.
Q. My understanding is that Conway MacKenzie was engaged around the January 2013 time period; is that correct?
A. That's correct.
Q. And what was Conway MacKenzie hired to do with respect to the DWSD?
A. First of all, to clarify, Conway MacKenzie was engaged by the City of Detroit, I think it was implied in what you said but just to be clear, and Conway MacKenzie was engaged to be the operational restructuring advisor to the City. The initial activity that Conway MacKenzie was asked to perform related to DWSD began in about July of 2013, and that was to assist in the development of ten-year projections for the water and sewer funds.
Q. Okay. So between the time period of January 2013 and the end of June of 2013, what -- what was Conway MacKenzie asked to do or what did -- let me rephrase it. What did Conway MacKenzie do with respect to the DWSD?
A. Again, just to clarify, from January of 2013 until July of 2013?

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Q. Yes.
A. Very little, if any, activity related to DWSD.
Q. So starting in the July 2013 time frame, you said that you were asked to assist in the development of ten-year projections for the water and sewer funds; is that right?
A. Yes.
Q. And who asked you to provide that assistance?
A. The Emergency Manager.
Q. Do you recall specifically what he asked you to do?
A. This was in conjunction with activities being undertaken by Miller Buckfire, and there were thoughts about potential alternatives for DWSD, and to facilitate pursuing those alternatives, there was a need -- it was identified that there was a need for ten-year financial projections for the water and sewer funds, and so Conway MacKenzie was specifically to assist in the development of those financial projections for use in pursuing various alternatives.
Q. What were those alternatives?
A. As I understood it at that time, the alternatives could include formation of a regional authority, a transaction with a third party or a separate private party, or no transaction or no changes at all.

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Q. At this time was the City -- is it your understanding that the City was looking for ways to monetize the DWSD?
A. I have heard that word used a number of times throughout the 18 months that I've been engaged by the City. I can't recall specifically when I would have heard that the first time, if that was before July of 2013 or after.
Q. Do you recall the context in which the word "monetize" or "monetization" was used?
A. Generally I recall it being used in the context of figuring out ways to potentially create value or realize value on an asset of the City.
Q. And that value would be created or realized for whom?
A. Well, in the context of a transaction, that value could potentially, and I underscore the word "potentially," benefit the general fund of the City of Detroit.
Q. And a transaction could include a regional authority or a third party sale or Operating Agreement?
A. Yes. Possibly. There are other benefits that could be realized from a transaction as well. The general fund of the City is one example. The DWSD itself could also benefit. And then there could be other

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beneficiaries as well from different types of transactions.
Q. So that we're speaking the same language, when you say a transaction, a transaction could include an authority, a sale, or an Operating Agreement?
A. Yes. That's what I'm referring to when I say transaction.
Q. Not just an authority?
A. Correct.
Q. Okay. When you started this process in July of 2013, was there a particular dollar amount you were looking for out of the DWSD?
MR. HAMILTON: Object to form.
You can answer.
A. When you say a dollar amount that we were looking for out of DWSD, can you clarify that?
BY MR. NEAL:
Q. Sure. Were you looking for a certain dollar amount in the form of a -- of a lease payment, transaction payment, a PILOT payment?
A. No.
Q. So there was no dollar amount in mind?
A. Correct.
Q. But going back over different ways to -- what are the

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different ways in which to realize value? Would it be -- a lease payment would be one of them?

A. Certainly. And since I'm not the investment banker on the engagement, I can list out some areas that I have been made aware of, but I'm sure that my listing is not going to be complete or all-inclusive. The lease payment that you just referred to to the extent that that lease payment benefits DWSD or -- and/or the general fund of the City, that could certainly be a benefit. And if you could repeat the question just so I make sure that I answer any other --

Q. Sure. I appreciate that. I will move on. Sticking with the lease payment for now, how does that provide any benefit to the DWSD?

A. Well, to the extent that there is a lease payment made and a portion of those lease payments or lease proceeds go to DWSD, presumably that would be a benefit for DWSD, but it would all have to depend on what the other terms and conditions surrounding the lease payment are.

Q. The lease payment would go from -- would not go to DWSD, would it?

A. We're talking about a hypothetical here. A lease payment -- and I have no idea what different types of

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transactions there could be.

Q. Okay.

A. So I'm -- my point is is that I can't exclude a scenario whereby some portion of a lease payment could either be retained with DWSD or somehow otherwise benefit DWSD.

Q. At any time did Conway MacKenzie explore or evaluate a PILOT payment?

A. Could you explain what you mean by explore or evaluate?

Q. Are you familiar with what a PILOT payment is?

A. Yes.

Q. And that would be a payment in lieu of taxes; correct?

A. Yes.

Q. And the purpose of a -- of structuring a PILOT payment is to make up for lost tax revenue; correct?

A. Yes.

Q. Did you look into structuring any type of transaction that would result in a PILOT payment?

A. Subsequent to the activities that we're talking about here, I had some involvement in discussions with the counties, as they're commonly referred to, the surrounding county -- counties, and in those discussions, certainly there were discussions

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surrounding specific lease payments, and at that point I was involved in discussions that constituted amounts of a lease payment, but not at this time that we're referring to in the July 2013 time period.

Q. Okay. Sticking with the July 2013 time period, what exactly were you doing with respect to DWSD?

A. As I mentioned before, specifically developing a ten-year or assisting in the development of a 10-Year Business Plan, ten-year set of financial projections for the water and sewer funds, so that -- those activities were being undertaken without regard to what transaction alternatives would be pursued or considered.

Q. Who were you working with at the DWSD in connection with this effort to put together and develop a ten-year business plan and a ten-year set of financials?

A. There were four primary individuals. However, there were a significant number of other people that were interacted with, but the four primary individuals were Sue McCormick, Nickie Bateson, Bill Wolfson, and then Bart Foster. I include Bart Foster even though he's not an employee of DWSD.

Q. And who were your primary team members on the Conway

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MacKenzie side?

A. Sure. I had two colleagues of mine that were very actively involved in this process. Mike Hausman, Hausman, and Wade Johnston, J-o-h-n-s-t-o-n.

Q. Mr. Moore, can you describe generally the process by which you put together these financials? In other words, how long did it take? How many meetings were held? Just big picture, what was the process in putting together the ten-year business plan and financials?

A. Sure. It followed the process that we would normally undertake for pretty much any organization in terms of developing longer term financial projections, and in no particular order and certainly not listing every activity that would have been undertaken, first seeking to understand historical financial information, a significant number of meetings and interviews with management itself, understanding how the operation is being handled or -- or how it's being operated today as well as various factors that may impact its operation in the future, understanding in this case previous activities that had been explored, as an example, operational studies that were conducted as to potential operational savings that could be

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realized, management's own plans, their financial projections that existed at that time, the changes from the standpoint of the litigation that had been dismissed, however, focal points of that that were being implemented by the management team. And all of that took place from approximately mid July until the end of September, so I believe that we completed the ten-year financial projection on or around September 30th of 2013.

Just one further point. We certainly interacted with other advisors as well. Other advisors include, number one, there was an engineering group specifically tasked with developing the capital improvement plan during that ten-year period, OHM Advisors. And then we also interacted with Miller Buckfire and the Emergency Manager and his staff.

Q. How is Miller Buckfire's role distinct from the role of Conway MacKenzie?

A. Miller Buckfire as the investment banker for the City was specifically looking at transaction alternatives or ways to harness value, those are my words, not their words, out of DWSD, and in order to do that, Miller Buckfire needs good financial information. The -- DWSD had some amount of financial projections

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when we were asked to take on the task, but they only went out a few years, and they were not developed in the type of format that an investment banker typically would be looking for. That was one of the reasons why we were tasked with that activity. So getting into the details of developing these ten-year projections is something that is more our forte than say a -- an investment banker.

Q. To your knowledge, had DWSD ever prepared a set of ten-year business plan and -- let me restart.

To your knowledge, had DWSD ever prepared a ten-year business plan or set of projections?

A. I don't know.

Q. Did they have a five-year set of projections when you started this project?

A. I believe that's the duration of the projections that existed at the time that we began our process.

Q. And can you describe your personal level of involvement between this July, August, and September time frame?

A. Yes. Mike Hausman, a managing director with Conway MacKenzie, was the point person with Wade Johnston assisting him, and I probably had at least ten conversations with Mr. Hausman and Mr. Johnston during

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that time period from July through September. The conversations would have revolved around number -- early on in the process the information and the approach that they were using, followed by the observations of the information that they had reviewed, the cooperation that they were receiving. We had been instructed to complete the projections by the end of September, and so I certainly was focused in on making sure that we were on track to deliver what we were asked to do. I had a pretty significant amount of involvement as it relates to how some of the legacy costs would be handled in the projections, and then I queried Mr. Hausman and Mr. Johnston on several of the assumptions that underlie various line items in the projections.

Q. Had you ever prepared a business plan for a water or sewer district before?

A. Over the last 20 years, I have worked on well over a hundred financial projections, so I can't say if I've worked on specifically water or sewer operations or not. I have been involved with developing projections for municipalities. I just can't recall if they would have included water or sewer operations or not.

Q. Do you know if either Mr. Hausman or Mr. Johnston had

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ever prepared a business plan before for a water or a sewer district?

A. I don't know.

Q. I'm going to show you what is Tab Number 6 in our binder set. Mr. Moore, this has previously been marked as Orr Exhibit Number 10. Orr Exhibit Number 10 is Detroit Water and Sewer Department 10-Year Business Plan dated October 2nd, 2013. Sir, have you seen this document before?

A. Yes.

Q. And is this the --

MR. NEAL: Whoever's on the phone, if you could go on mute, that would be great.

BY MR. NEAL:

Q. Is this the final version of the Detroit Water and Sewer Department 10-Year Business Plan that you and your team prepared?

A. When you say final version, I just want to clarify. This was final as of this point. Exhibit M to the Disclosure Statement has certain updates to the 10-Year Business Plan. But yes, this is the -- the final that was presented to a number of parties on October 2nd.

Q. And who was it presented to?

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A. There were probably 40 or more people in the room where this was presented, but that would have included representatives of at least Wayne, Oakland, and Macomb Counties and various advisors of theirs. There may have been other people involved as well, other external parties to whom this was presented.
Q. Were you involved in negotiations with the counties prior to October 2nd, 2013?
A. No.
Q. Do you know if the City had been involved in negotiations with the counties between the time of its Chapter 9 bankruptcy filing July 18th and August 2nd of 2013?
A. When you say the City, are you including its advisors?
Q. Yes, sir.
A. It is unclear to me what conversations, if any, may have taken place with the counties prior to this time.
Q. And what was the purpose of the meeting?
A. To present two documents. One was the business plan. I think actually we may have used a shortened version of it for the actual presentation, but we would have distributed this full document. And the other document was a -- a document prepared by Miller Buckfire which utilized quite a bit of the information

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in the business plan but talked a little bit more about the basis for a proposed lease payment.
Q. Mr. Moore, I'm going to show you what is Tab 7 of the binder set previously marked, twice. One is Orr Exhibit 9 and McCormick Exhibit 30. Sir, can you identify the document I just handed you?
A. This appears to be that second document that I was referring to that was prepared by Miller Buckfire that was also discussed at the October 2nd meeting.
Q. If we could go back to Orr Number 10, your firm's 10-Year Business Plan. If I could ask you to turn to Page 40 of that document.
A. This is Bates stamp 70 -- ending 7084?
Q. Yes, sir.
A. Yes. I'm there.
Q. Actually going back one page to Page 39. It's Section VII, "Estimated Cost Savings"; is that correct?
A. Yes.
Q. So you and your team prepared a section in this report on the estimated cost savings that would be realized in the event of a transaction?
A. Yes. This section was prepared based on certain assumptions as it relates to how these costs

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associated with the line items that you see there would be addressed.
Q. And they may appear elsewhere, sir, but at least I can spot those assumptions on Pages 6 and 7 of the document. Is that where some of them at least reside?
A. Yes. It does appear multiple places throughout the document, and specifically on Page 7 the assumption -- the individual assumption that I'm referring to is the second bullet under "Lease Payment," "Anticipated savings that have been factored into the lease payment include legacy liabilities retained by the City of Detroit . . ." And so what this is specifically getting at or what I was referring to in my comment earlier is the assumption about how certain costs would be handled as part of a -- assumed to be handled as part of a transaction.
Q. So going back to Page 40.
A. Yes.
Q. The table here based on bullet point one represents a summary of the estimated payment and expense reductions including legacy and debt service savings?
A. Yes.
Q. Do they include any operational savings?
A. Yes.

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Q. Where are they?
A. The line item that is entitled "Optimization" are operational -- projected operational savings.
Q. And how are those numbers determined? In other words, what did you look at? Who did you talk to?
A. Sure. We spent a significant amount of time with the management team. We also reviewed the report that had been prepared by an outfit within perhaps the two years or so before we performed our work, and if I recall correctly, I think that was EMA --
Q. Yes.
A. -- was the name of the firm. And that contained a number of operational savings. So between discussing with management what was possible, looking at various trends in the expenses, understanding how the system was anticipated to be operated in the future, as well as benchmarking that against, at a minimum, the EMA information, there were a number of cost savings primarily related to labor that were built into the business plan. What you see here are actually only 50 percent of those. So there were certain labor -- or I'll call it optimization savings identified in total, and then as it relates to this specific table, only 50 percent of those are included here.

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Q. And why only 50 percent?
A. If I recall correctly, this is based on -- this -- this was based on a specific lease scenario, and the underlying thinking was you would want the management team to be incentivized to deliver on these savings, and having the system retain some portion of the benefit, which here 50 percent is used, is a way of providing management that incentive.
Q. There is a line item here on Page 40 for debt service savings. Do you see that?
A. Yes.
Q. And there's also a section in your report, that's Section 10 starting on Page 51, that concerns debt service.
A. Yes.
Q. So how did you arrive at the debt service savings?
A. This actually is all based on information that was provided by Miller Buckfire, so Conway MacKenzie did not do anything as it relates to calculation of the potential savings that you're referring to for debt service.
Q. So going back to Page 40, the bottom line in the chart is for the -- says "Lease Payment"; right?
A. Yes.

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Q. So at this time on October 2nd, 2013, it was contemplated that the lease payment would be determined by the total cost savings that DWSD would experience if there were a transaction?
A. I would characterize it a little bit differently. This is really providing a basis for how this level of lease payment could be supported, but the lease payment itself would be a payment for a number of factors, including a transfer of control.
Q. At this time was there any consideration by the City and its professional advisors to keep the savings within the systems?
A. Well, I just went through right now under this -- this page here --
Q. Yes.
A. -- 50 percent of the optimization of what is referred to as the operational savings are being retained in the system.
Q. And what would that total be? Is it reflected in the chart?
A. It is not reflected in this chart here. But if you -- if -- if you add up all of those rows, we don't have a total here on the far right, --
Q. Sure.

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A. -- but if you were to add -- if you were to add up the water and the sewer system amounts, that same amount in total is being retained by the system.
Q. Any other savings being retained by the system?
A. Well, what's not contemplated in here is additional savings that could result as a result of a different management approach. So perhaps if there was a regional authority or perhaps as a result of a private operator, there could be additional savings that could be realized that would be retained by the system.
Q. Was any analysis undertaken to determine the amount of those additional savings if there were a change in management?
A. No. We typically would stay away from something like that because those aren't our assumptions to make. Obviously it would depend on who that other party is and the approach that they would take.
Q. Was there ever a time when the lease payment that was being proposed was not tied to anticipated cost savings?
MR. HAMILTON: I'm going to object because of the way you've worded that question. I have to instruct the witness not to answer to the extent his answer would disclose anything that was discussed or

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done in connection with court-ordered mediation.
But putting -- if you can answer the question with respect to anything that was considered outside of the mediation, you should do so.
THE WITNESS: Understood.
A. I want to -- Mr. Neal, if I can clarify.
BY MR. NEAL:
Q. Sure.
A. Because I think your question is different than what I had responded to before. I think your question was is there a time that the lease payment was not tied to cost savings. As I indicated before, what is really shown here is how a lease payment could be supported because of these cost savings, but the lease payment itself has not been specifically tied to the actual cost savings. So there have been times that the lease payment that has been discussed has varied, but in each of those instances the cost savings are more to show how a lease payment could be supported rather than the basis for the lease payment.
Q. Thank you. At this time was the City asking for a lease payment in the amount reflected here on Page 40, that is, 94.2 million in 2015 going all the way up to 228.5, I believe, million in 2023?

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A. I believe that's what was being requested. This -- this is sort of the transition point from the work that Conway MacKenzie was doing to then getting into the investment banker approach that Miller Buckfire used.
Q. What was the county's reaction to the -- can I call this a proposal, sir? Would you characterize this as a proposal?
A. When you say this, can you clarify what this is?
Q. Yes. Or Exhibit 10, your 10-Year Business Plan and the lease payment reflected on Page 40.
A. The document itself is just the business plan. It contains information about a potential lease payment. I don't know if the word "proposal" is used in here. From Conway MacKenzie's standpoint, we were not developing a business plan for a specific proposal. The output of our work, I believe, was generally used to make various proposals. But I don't -- I would not consider this a proposal. I don't know if that word is used anywhere in this document.
Q. What was the county's reaction to the 10-Year Business Plan as reflected in Orr Exhibit 10?
A. Can you clarify what you mean by their reaction?
Q. Sure. I will be a little more focused. What was

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their reaction to the estimated cost savings that are reflected in Orr Exhibit 10?
A. Well, I don't know specifically what the reaction is, but what I can tell you is that as a result of this meeting, actually the -- I don't know if it was a consortium of the counties or one county in particular, but an accounting firm by the name of UHY was engaged. They -- by the county or counties. They attended this meeting and then subsequent to this meeting undertook a variety of due diligence efforts through which we provided them additional information. And that transpired over the period of, if I recall correctly, the month of October, maybe into early November.
Q. And did you have any direct interaction with this accounting firm during this time period?
A. I personally did not. I have interacted with an individual that I believe oversaw the team for UHY, but not in detail, more just acknowledging that they were undertaking efforts, due diligence efforts, but Mr. Hausman and Mr. Johnston interacted with them quite a bit.
Q. Let me state it a different way. Did the counties agree with the calculations reflected on Page 40? Did

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they agree with your estimated cost savings for each of the years from 2015 to 2023?
A. I don't know if they agreed with them or not. I know that a transaction at least at this point hasn't gotten done.
Q. But you don't know if the counties or their representatives had a view or opinion with respect to your calculation of the estimated cost savings at this time?
A. Well, when you say at this time, are you referring to just October 2nd or following October 2nd?
Q. Well, I know there was a tremendous amount of activity. If it -- if you can answer the question in the October, November, December time frame.
A. Yes. So what I do recall is a fair amount of correspondence from one county in particular, Oakland County, from Mr. Daddow indicating various questions and views on these two documents, the two documents that we previously discussed that were presented on October 2nd, 2013.
Q. And do you recall whether Oakland agreed or disagreed with the cost savings estimates as reflected on Page 40 of Orr 10?
A. Well, rather than speculate on whether they agree or

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disagree, I would let the communications from the county or counties speak for themselves.
Q. Is it fair to say there was a -- that Oakland County disagreed with the cost savings summary that you prepared?
MR. HAMILTON: Can you put a time period on that question or do I have to object again?
MR. NEAL: I'm happy to put a time frame on it.
BY MR. NEAL:
Q. And that's in the October, November, December time frame.
A. What I seem to recall is that there were -- there was not necessarily a good understanding of a number of the calculations. I think that lack of understanding perhaps caused them to not agree, but at the same time -- and -- and there are a variety of -- obviously there's a lot of information here, so I'm using a very general statement. I think that a significant amount of information was provided on areas where there may not have been a good understanding and -- and the perception as a result that they didn't agree. I am aware also of, and this is information that was very commonly reported on in the -- in the press, their

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differing views on the amount of capital improvement that was required. So I -- that's the information that was coming my way.

Q. During this time period did you ever receive emails directly or copies of emails from Robert Daddow of Oakland County?

A. Yes.

Q. And did you ever respond to emails that -- that he sent to your team about your estimate of the cost savings?

A. Specifically between October and December, I recall one response in particular that we, we being Conway MacKenzie, had significant involvement in terms of providing information for the response, help -- helping to draft the response. I don't recall how many communications there were from Mr. Daddow during that October through December time period beyond I think it was the initial communication from Mr. Daddow, the reply to which I was just referring to where we had pretty significant involvement. I don't know if we provided significant input on any other responses. We were not, when I say we again, Conway MacKenzie, was not the primary point for communications with the counties. That was Miller

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Buckfire.

Q. Last question along these lines and I'll move on. In the October through December time period, did you have meetings with Oakland County? You being you, Mr. Moore, not the broader group. But, I mean, did you have any meetings with Oakland County in this time period?

A. I've -- we've covered the October 2nd meeting.

Q. Yes.

A. Following the October 2nd meeting, the following week was a comprehensive mediation day, and counsel will stop me if I'm going too far on this, I don't think this is, but at the beginning of the mediation day Conway MacKenzie presented information that we have here, again, these documents, to all of the parties involved in the mediation, and I believe the counties were there then. I'm not positive about that, but I think the counties were there then. After that time, through the end of December, I don't -- I don't believe that I met with anyone else from the counties. There was a time that I had a sit-down discussion with Brooks Patterson, the Oakland County Executive. I can't recall when exactly that was. But we did -- we did discuss the -- the process that was being

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undertaken. That may have been before the end of December. I don't recall.

Q. What was your understanding of the City's motivation for pursuing a proposed authority?

A. There could have been multiple reasons for it. Certainly one that was -- or I should say two primary items that I believe that I heard mentioned multiple times was positioning DWSD as a stronger entity and realizing value from DWSD.

Q. Are those two motivations or one?

A. Two.

Q. Okay. So the first would be positioning DWSD as a stronger entity, and the second would be -- if you could say it again.

A. Sure. Realizing value. I think that's what I said.

Q. Okay. And how would an authority position DWSD as a stronger entity?

A. Well, to the extent that you have stronger management, that could potentially strengthen it. To the extent that the cost structure is different, that could position it as a stronger entity. There are a variety of -- of ways that the -- the management and operation of the entity could potentially be improved through some sort of transaction.

CHARLES MOORE

Q. Was one of the reasons to pursue an authority to obtain a better credit rating for the systems?

A. Certainly I heard that numerous times. The general belief that DWSD was tainted to a certain extent by its association with the City of Detroit and on a standalone basis may be a stronger rated credit.

Q. And was it the belief that if the authority would be a stronger rated credit, that it would be able to obtain lower financing costs?

MR. HAMILTON: Object to form.

You can answer.

A. That was the assumption, yes.

BY MR. NEAL:

Q. And that would lead to debt service savings?

A. Presumably, yes.

Q. And that was the assumption of the Emergency Manager and his professional advisors?

A. Yes. And that is what is essentially contained, although Conway MacKenzie did not develop that when we were discussing before on Page 40 of this October 2nd document the debt savings or debt service savings. That was the underlying principle there.

Q. Did Conway MacKenzie perform any analysis with respect to debt service savings as they related to the -- the

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DWSD at any time?
A. No.
Q. Conway MacKenzie relied upon the work of Miller Buckfire and others?
A. Yes.
Q. Okay. Was the proposed lease payment to the City presented as something that would be user rate neutral to the counties?
A. I don't know about the word "user," but certainly we used multiple times the words "rate neutral." Management views rate increases of four percent per year to be what is referred to as rate neutral, and that is -- other than two years for the water fund, within this ten-year projection, those are the implied rate increases every year.
Q. So if the lease payment did not require rates to be raised higher than four percent a year, it would be considered rate neutral?
A. I think that's a fair statement.
Q. Okay. Was there a general agreement among the Emergency Manager and his professional advisors that in the absence of the regional authority that DWSD's financing costs would be higher?
A. Higher than what?

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Q. Higher than what they would be if an authority were created.
A. I'm not sure that I understood your question. It seems like what we just talked about, which is --
Q. It's the inverse of that.
A. Yes. Yes. If it's the inverse of it, then yes. If there are savings with an authority, then as compared to the authority, it would be higher.
Q. Going back to Page 40 of Orr Exhibit 10. The lease payment that's reflected there. How would these funds be used by the City as proposed?
A. There's -- there's no proposal as to how these funds would be used, and I know Conway MacKenzie never took a position as it relates to this document as to how those proceeds would be used.
Q. Let me ask it a little differently. The answer may very well be the same. At -- during this time period, were you plugging in any revenue stream from DWSD into any of your models that Conway MacKenzie was preparing, for instance, the restructuring or reinvestment initiatives?
MR. HAMILTON: I'm going to object to the form of that question. He's already testified they -- if you say the models, that includes the ten-year

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projections they were working on for DWSD, and I don't think you intend to do that in your question, do you?
MR. NEAL: No. I can be more specific.
BY MR. NEAL:
Q. Let me ask the question more broadly. Were you looking to fill a hole at all with this lease payment with respect to any of the operations of the City's general fund or any proposed Plan of Adjustment that was being contemplated at the time?
A. As it relates to what's referred to as the restructuring and reinvestments, this -- in the Disclosure Statement, the 70-page document, it's Exhibit 5 in my expert report, --
Q. Yes.
A. -- there never has been and there still is not any cash from DWSD that plays a role in that. As it relates to the City's overall projections, as an example, what you referred to before, the 40-year projections or the ten-year projections, certainly from time to time throughout this entire process there have been funds that come from DWSD. In the ordinary course, there are funds that come from DWSD as an allocation of costs for services that are provided by the City. Scenarios that involve changes to cost

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reimbursement certainly have been looked at throughout this entire process.
Q. Other than legacy liability costs, at any time did you consider a dollar amount that the City would or should obtain from the DWSD?
A. The only reason I'm hesitating here is I want to make sure that I don't run into any issues with the mediation. I think I can -- I think I can answer the question yes. I'm not sure if I can go further than that.
Q. Well, let me see if you can answer the question if I restrict the time period. Leading up to the filing of the Fourth-Amended Plan of Adjustment on May 5th, 2014, was the City at any time looking to obtain a certain dollar amount from DWSD aside from the legacy obligations to help fund its plan?
MR. HAMILTON: Again, I'm going to have to object and instruct the witness not to disclose anything that was considered in connection with court-ordered mediation.
A. So we've already discussed the October 2nd document, and this contains a lease payment, specific amounts.
BY MR. NEAL:
Q. Yes.

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A. Subsequent to that, there were discussions around a specific lease payment.
Q. Yes.
A. And I'm referring to in the January time period, January and February time period. After that, I really did not have any discussions with DWSD -- or I'm sorry, with -- with the counties, that is, from about early March on. I think mediation was ordered in April. So I can speak to what was discussed in the January and February time period, but that's probably it.
Q. Mr. Moore, that's very fair, and I'll show you a couple of the presentations that you prepared in that time period, and we'll deal with them in due course.
A. Okay.
MR. HAMILTON: Before we do that, can we take a break?
MR. NEAL: Yes. Now would be a good time.
VIDEO TECHNICIAN: The time is 10:14 a.m. We are now off the record.
(Recess taken at 10:14 a.m.)
(Back on the record at 10:26 a.m.)
BY MR. NEAL:
Q. Mr. Moore, I'm going to show you what is Tab 22 in our

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binder set.
MR. NEAL: If I could have this marked. I don't know where we are in terms of exhibit numbers. Are we continuing with the numbering scheme from yesterday? Do we know which number we left off on yesterday? Can anyone provide assistance? I think we went through Number 7 yesterday I'm told. So if were could mark this as Number 8. This will be Moore Number 8.
MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 8
10:27 a.m.
MS. QUADROZZI: And I'm sorry. What tab is this?
MR. NEAL: Tab 22.
BY MR. NEAL:
Q. Mr. Moore, if you could take a moment and familiarize yourself with this document. It purports to be an email from Kevin Haggard dated Monday, October 21, 2013, to Bob Daddow and you are cc'd it appears.
A. Yes.
Q. Mr. Moore, have you seen this -- these email exchanges before?
A. I don't specifically recall the email at the top here

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from Mr. Haggard on which I'm copied. Obviously you can imagine I have thousands of emails related to the City. But certainly the document that's attached here, Conway/Miller Buckfire Response, that's what I was referring to either -- earlier as it relates to something that my team and I provided a significant amount of input to.
Q. Do you recall seeing, independently of any email chain, the email from Robert Daddow to Ken Buckfire that's at the bottom of Page 1 and continues on to Pages 2, 3, and 4?
A. Actually that's the one that I don't recall specifically. I know that I'm not on that email. But it is part of Kevin's email. So I just don't -- I don't recall reviewing that one from Bob Daddow to Ken Buckfire.
Q. Do you ever recall Mr. Daddow or anyone from Oakland claiming that all the purported savings of the proposed new authority are going to the City and no benefits are going to the DWSD or words to that effect?
A. I generally -- I generally recall him saying something like that, yes. Or reading something where he had put that in.

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Q. And do you agree or disagree with that position?
A. I disagree with that.
Q. On what basis?
A. Well, I specifically pointed out before the optimization savings, 50 percent of those were staying with the system, not to mention what I indicated before. What we did not do is we did not incorporate in with the projections any other potential savings that could be realized as a result of a different management team, a different approach to the operation.
Q. So focusing on the attachment, the caption is "City of Detroit: DWSD, Oakland County Business Issues Memo, Conway/Miller Buckfire Response, October 18th, 2013." Do you see that?
A. Yes.
Q. And this is a document you recall working on?
A. Yes.
Q. I see that it's broken down between the Miller Buckfire response and the Conway MacKenzie comments. Do you see that?
A. Yes.
Q. Did you provide any input with respect to the Miller Buckfire response?

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A. I don't recall. It's very possible, yes. We -- we both would have prepared responses and then reviewed each other's work, if I recall correctly, to provide any comments for additional clarifications.

Q. Thank you. I'm going to show you what is in Tab 24 of our binder set. This is a document previously marked as Orr Number 13. My first question, sir, is, have you seen this document before?

A. Yes.

Q. Did Conway MacKenzie provide any input with respect to this document?

A. No.

Q. And for the record, it purports to be an analysis of DWSD's savings dated December 2013. So when I asked you if you'd seen it before, had you seen it at or about the time this document was prepared?

A. I saw it after it was prepared.

Q. In what context? At a meeting?

A. I believe that I received it directly from Miller Buckfire, I can't recall who from Miller Buckfire, after it had been presented to, at a minimum, Oakland County. I'm not sure if any other counties received it.

Q. If you'd turn to Page 3. I'm not sure if you can

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provide an answer to my questions, but let me take a stab at it. You see the chart -- well, I don't know what you would call it. On Page 3. You're on Page 3, sir?

A. Yes, I am.

Q. And Page 3 is captioned "Use of Savings"; correct? And it's broken down between the City and the counties; correct?

A. Yes.

Q. So let me just ask you, did you prepare or provide any input with respect to the estimated NPV numbers that are reflected on this page?

A. No.

Q. Do you know what is meant by City of Detroit Retail Capital Improvements that's in one of the boxes on this chart?

A. Again, I did not prepare this document. I can only speculate in terms of the City of Detroit has -- DWSD is comprised of a lot of infrastructure around southeastern Michigan, and there is a retail part servicing the City of Detroit that I would assume that's what that's referring to.

Q. But you don't know for certain?

A. I don't know for certain.

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Q. And you don't know how the number was arrived at?

A. I do not.

Q. On the next slide, Slide 4, there's a chart here, and one of the -- one of the shades in this bar chart is "DWSD Business Plan." Ask you, sir, do you know what that is in reference to?

A. No. I did not prepare this document.

Q. So in terms of the proposed breakdowns reflected in this chart, you're not in a position to provide any testimony on it?

A. Correct. It's not my document.

Q. Is it your document?

A. It is not my document.

Q. Very good. Show you what is marked as Tab -- what's in our binder set as Tab 25, previously marked as Orr Exhibit Number 14. Orr Exhibit Number 14 is Comparison of DWSD Frameworks, January 2nd, 2014, a document that appears to have been prepared by Miller Buckfire.

A. Yes.

Q. Have you seen this document before?

A. I have.

Q. When did you first see it?

A. I believe that I saw it on or around January 2nd.

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Q. And what input did you and your team have with respect to Orr Exhibit 14?

A. I don't recall if we provided input to this document or not.

Q. And who was the intended audience for this document; do you know?

A. I don't recall. There was -- I don't recall if it was intended for internal purposes, at least initially, which I'm inclined to recall that's -- I seem to recall that may be the case. But right around that same time is when significant mediation activities were occurring, so it could have been prepared for use in mediation.

Q. If you turn to Slide 10 of this document. Did you or your team have any input in the -- in the construction of this slide, which is "Change in Transaction Savings"?

A. I don't recall if we had any input on this document at all.

Q. This document aside, did you prepare any different calculations of any proposed savings that could be achieved between the October 2nd time frame and the January 2nd time frame?

A. Not that I recall.

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Q. There came a time when the Emergency Manager and his advisors were proposing a $47 million annual lease payment; is that right?
A. Yes.
Q. And when was that time period?
A. I believe that was in January of 2014.
Q. And what supported the -- what was the basis for the $47 million lease payment that was being proposed?
A. That was something that Mr. Buckfire came up with. I -- again, going back to what I indicated earlier, any of the lease payments, there are a whole host of items that go into a lease payment, including transfer of control. There were -- as part of just the $47 million, there were specific costs that were identified that were anticipated to be dealt with as part of the Chapter 9 process which supported payment of that $47 million.
Q. And what were those specific costs that were identified?
A. The OPEB costs. By OPEB, other post-employment benefits. And also, if I recall correctly, savings that related to the Certificates of Participation.
Q. And how would those savings be achieved at that time period?

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A. It was based on what the anticipated treatment of those claims was going to be.
Q. Under a Plan of Adjustment?
A. Yes.
Q. So the operating assumption by the Emergency Manager and his advisors at that time is that to the extent the plan achieves savings on the part of OPEB and COPs in particular that DWSD should pay for its share?
A. I can't tell you what the thinking was, but what I'm referring to, again, going back to there were a variety of times that specific items were pointed to that would support the payment of a lease payment, and in that regard, to the extent that as a result of the treatment of certain claims costs that DWSD would otherwise be paying free up room to make a lease payment, that's what I was referring to.
Q. Such that the lease payment would be cost neutral to the DWSD?
A. Yes.
Q. During the period of January 2nd through early April of 2014, can you describe the level of Conway MacKenzie's involvement with negotiations over the creation of a new authority?
A. Somewhere in, I believe it may have been later

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January, Stacy Fox, the Deputy Emergency Manager, became involved -- I think she had been involved before, but she took much more of a leadership role in interacting with the counties on behalf of the City. It had -- it seemed at that point that the discussions had hit some significant roadblocks, and so Ms. Fox asked me to get involved in the process, so I participated in multiple meetings with county representatives, and that would have been, as I recall, beginning in January, continuing through February and into early March, I believe, and that would have included face-to-face meetings as well as conference calls.
Q. And generally, broadly speaking, what was the purpose of those meetings?
A. To provide information that the counties were looking for, to understand other issues that the counties had, and essentially get to a conclusion in the most expeditious manner as to whether there was the possibility of a transaction to form a regional authority or not.
Q. And you were unable to get to such a conclusion during this time period, is that correct, between January and April of 2014?

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A. When you say such a conclusion, you're referring to the response that I just gave?
Q. Exactly.
A. Okay. We did not embark upon the process that I was advocating to get to that answer.
Q. Why not?
A. I think that there were a variety of reasons, some that were cited. The counties wanted support for payment of professionals. That was one factor. Another factor is the counties were looking for, I'll use the word a backstop from the State of Michigan as it relates to bad debts of DWSD, and the State was not able to provide the type of response that the counties were looking for, and, probably my words, not their words, but I think that that was deemed sort of a non-starter if that didn't exist. And there may have been -- oh. Another item. I think it's fair to say that the City, and when I say the City, the EM team and the advisors, didn't see eye to eye with the counties, in particular Oakland County, as it relates to the information that was critical to getting to the next point. The counties were looking for information that just did not exist but which the City did not feel was critical at that point to get to where we

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were trying to go.
Q. Can you give me a couple of examples?
A. The 2013 audited financials, fiscal year 2013 audited financials.
Q. Did you view that as an unreasonable request by the counties?
A. What I indicated quite specifically is that I can understand how that information would be important, but really what we were -- the whole focus was to conduct diligence around the future business plan, and the 2013 audit report is certainly something that could be reviewed when it becomes available as part of confirmatory due diligence, but the critical element that we were -- that we should all be focused on was the future, not what happened in the past, because it would be the future operations of DWSD that would be critical.
Q. But isn't it fair to say you can only project future operations by looking at past performance?
A. Oh, there was plenty of past or historical information. So we had plenty of historical information. The -- I think the point of contention is -- I'm involved in a lot of transactions all the time, and people seem to be able to conduct diligence

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without having the most recent audit report because they look at historical information and they look at, most importantly, the future information, which is what they're really buying into. So while that may be a condition or part of confirmatory due diligence, in my mind I did not think that that was a reasonable -- that item I'm referring to in particular, the 2013 audit report, as a reasonable basis to say without that that they would not be able to conduct due diligence.
Q. Going back to the issue of professional fees, what was the City requesting at that time?
A. Not the City. The counties were requesting payment for professionals.
Q. And what was the City's response?
A. I think the City actually indicated, Mr. Orr and Ms. Fox, indicated that that is something that we could talk about. I don't know if the City ever gave a concrete response, especially because of the -- the issue as it relates to the proposed backstop from the state. The City had conversations with the State about assisting with payment of professionals. There was going to be potentially a timing issue by when the State would be able to go through its process to

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appropriate funds -- appropriate funds for the counties' professionals, and the City was looking at potentially providing interim funds for those fees between now and when the State would be able to go through its process.
Q. Did the counties take particular issue with the $47 million proposed lease payment?
A. What do you mean by particular issue?
Q. The number's too high, the number's not supported. Any issue with respect to the 47 million.
A. I think I probably heard both of those items.
Q. I assume you attempted to respond to those concerns; right?
A. Yes, sir.
Q. Were -- did you view it as your role to try to justify the $47 million payment?
A. Certainly I -- I felt that it was important to provide information to the counties that supported what we had indicated, which is specific cost savings alone would cover this proposed $47 million lease payment, and in that regard information was provided to the counties specifically as it relates to OPEB costs, both without any sort of restructuring in what was being contemplated as well as the potential treatment of the

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Certificates of Participation.
Q. What explains the shift from the City in proposing a lease payment that's 90 plus million a year in the early years to 200 plus million in the outer years to the $47 million fixed lease payment?
A. I was not actively involved in those discussions from the time period of October through say early January.
Q. When did these -- well, let me ask the question differently. At a certain point in time in the spring of 2014 these negotiations over the formation of a new authority broke off; correct?
A. I don't -- I don't know if I could characterize it that way. Simply stated, we had proposed a process, a specific process with the counties, as I indicated, and that was late February time period. There were a number of roadblocks to embark upon that process and so as a result that process did not occur. And then there were a series of letters that went back and forth between the counties and the City. So there weren't many activities going on during that period, which would include March into April, and then mediation was ordered, and I had not been a part of that mediation. So it would seem to me that discussions continue but in the context of mediation.

CHARLES MOORE

Q. I believe in the March 2014 time frame Brooks Patterson made a statement that no deal is better than a bad deal. Do you recall that statement being made?

A. I recall that statement being made, at least reported in the press many times over about a six-month period, from September to -- or maybe October until that time period.

Q. Do you recall Mr. Patterson making a statement that the City is -- has a take it or leave it approach?

A. I don't recall Mr. Patterson saying that.

Q. Do you know how much money the City spent in terms of professional fees on the effort to create an authority up through the filing of the May 5th Plan of Adjustment?

A. I don't.

Q. As part of your engagement, do you have to record your time?

A. Yes, sir.

Q. And do you provide a short description of the -- of the work and tasks performed?

A. Yes.

Q. And all of your fees go through the fee examiner process; is that right?

A. Yes.

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Q. And how much has your firm been paid to date for its engagement by the City of Detroit from 20 -- excuse me, January 2013 to the present?

A. Just for a clarification, there are two elements to our engagement. When we were engaged in January of 2013 -- or after we were engaged in January of 2013, there were a number of instances departments where there were critical positions that were not filled. The City was having a very difficult time finding qualified resources to fill those positions. They -- the City asked -- the CFO at that time asked Conway MacKenzie to provide interim management resources, which we do quite often, for a number of positions, and so beginning around July of 2013, we have utilized subcontractors for various interim management positions. It's obviously -- I shouldn't say obviously. But the reason why we've used subcontractors is it's a very cost-effective way of doing it. Rather than using Conway MacKenzie professionals at their billing rates, we utilize qualified candidates at lower billing rates for those positions. So with that said, through the end of May, which is the last invoice that we have submitted, we have billed approximately eleven and a half million

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dollars and then an additional \$1.6 million for all of these interim management roles. So that's about \$13.1 million in total.

Q. I'm going to show you what is Tab I in the binder set, a document previously marked Porter Number 11. I suspect after three weeks of asking witnesses about this document we have the right person. Tab I in the binder set, Porter Number 11, Exhibit L to the Disclosure Statement, DWSD Current and Historical Financial Information. Have you seen this before?

A. Yes, sir.

Q. Did Conway MacKenzie prepare this exhibit?

A. Yes.

Q. And can you describe generally the process by which Conway MacKenzie prepared it?

A. We, we being Conway MacKenzie, compiled this information from previous annual financial statements.

Q. And these would be previous audited financial statements for the water and sewer funds?

A. Yes. And the item that I -- I think June 30th of 2013 are preliminary at the time that we compiled this. I don't think that the audit was finalized.

Q. For your benefit, sir, I think there's a footnote that may direct you on that point.

CHARLES MOORE

A. Yeah. Exactly. Thank you.

Q. And where -- where do audited results stand for fiscal year ended June 30th, 2013? Where do they stand today?

A. I have actually lost touch of that over the last couple of weeks. There was communication in late June that I was reviewing on some of the final items that were necessary in order to finalize the June -- June 30th, 2013, audited financials. I don't know if they have been finalized at this point or not, but at least as of, if I recall correctly, late June that was not the case.

Q. Let me ask you, sir -- this was filed, as you know, on May 5, 2014. Between now -- between that period of time and today, was there any comparison made between the preliminary results and any subsequent refinement of those results or final results for fiscal year June 30th, 2013?

A. The information that I reviewed, again, I believe it was in late June, contained financial information, and I reviewed that, but one of my colleagues reviewed it in more detail, Mr. Johnston, and I don't believe that we put together a comparison on that, but if I recall correctly, I don't believe that there were any

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significant changes to this information.

Q. You're not aware of any material changes?

A. Correct. At least not that I recall.

Q. Does Exhibit L reflect how both the Water and Sewer Fund have historically reported their operating results?

A. There are -- when you look at the line items that are listed here, there are two different ways that we look at the information, and DWSD presents information in these different ways. The line -- as an example, the -- what's labeled as Page 182 of 212, the line items that you see there, "Source of Supply," "Low-lift Pumping," "High-lift Pumping, those are almost what you could consider cost centers rather than the types of cost elements that a lot of people look at. And so we prepare and certainly DWSD prepares and presents information in a different format oftentimes which is based on more traditional line items, such as salaries and benefits and a variety of those types of costs that would be underlying these various cost centers.

Q. Do you know the difference between low-lift pumping and high-lift pumping?

A. I don't know specifically, no. I could guess, but I'm

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not going to speculate.

Q. Did you work with anyone at the DWSD or any of the DWSD consultants in preparing Exhibit L?

A. Yes. Both Exhibits L and M, we worked closely with the management team to ensure that they were in agreement with this information.

Q. And were they in agreement?

A. Yes.

Q. Do you recall any areas of disagreement with respect to Exhibit L?

A. No.

Q. Okay. Show you what is in the plan binder as Tab J. If you give me a moment, sir. This may have been an exhibit yesterday, in which case we should use it again. I'm told it was not used yesterday. Sir, I just handed you what is previously marked as Porter 12, Exhibit M, DWSD Financial Projections. We talked briefly about this document earlier today. Sir, can you identify it?

A. Yes. This is Exhibit M to the Fourth-Amended Disclosure Statement filed around May 5th of 2014, and it contains the updated ten-year financial projections for the water and sewer funds.

Q. We went over this briefly this morning. You prepared

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a 10-Year Business Plan and ten-year set of projections that were dated October 2nd, 2013; right?

A. Yes.

Q. And then you brought those projections forward with respect to what is now Exhibit M in the May 5th Disclosure Statement?

A. Yes.

Q. And this Exhibit M would be the product of the Conway MacKenzie team?

A. Yes. We would have also interacted with the DWSD management team to have them review this product as well.

Q. Did the DWSD management team sign off on these projections?

A. Yes.

Q. The assumptions that are contained within Exhibit M, --

A. Yes.

Q. -- whose assumptions are those? If you understand where I'm going with that.

A. Well, these are the assumptions that underlie these numbers. These numbers were prepared by Conway MacKenzie. There are projections that -- as an example, DWSD is in the process of seeking financing

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for the Sewer Fund right now, and as part of that, it has prepared financials -- financial projections, and from time to time what we will do is actually make sure that our numbers reconcile to those, so there are instances where the assumptions that you see here are assumptions that we have included. DWSD may have used different assumptions. But typically they are -- there are offsetting items to bring us back down to the same net point.

Q. I'm not sure I understand your prior answer. Let's try to unpack it a little bit. DWSD historically used perhaps in some instances a different set of assumptions?

A. The -- DWSD prepares its own projections from time to time for different purposes. It has recently prepared a set of projections that don't go out ten years but projections that are being used for financing for the Sewer Fund, and if you were to compare those projections to these, they would not match in every instance. There are different assumptions that underlie those projections versus these. However, to get to the second point, whereas they may have higher revenue, there would be a higher cost associated with that. So from a net standpoint, we are within a

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million dollars of their projections, so they're incredibly close compared to anything that DWSD has prepared on its own.
Q. Was there a reason you chose not to use the DW -- the DWSD set of projections?
A. They did not exist at the time that these were prepared.
Q. They were subsequently prepared by DWSD management and consultants?
A. Yes. And when you say consultants, specifically Mr. Bart Foster, who, although he's been working with the department for many, many, many years, officially is not an employee.
Q. Understood. So your primary contacts with DWSD I believe you testified earlier, Ms. McCormick, Ms. Bateson, Mr. Foster, and Mr. Wolfson; correct?
A. Yes.
Q. Any changes in assumption between what the DWSD projections contain and what these projections in Exhibit M contain?
A. Yes. As I indicated, there are a variety of line items where there are different assumptions that are used, so some lines may be higher, but they would have corresponding offsets as well. Most importantly, the

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projections are incredibly close from a bottom line perspective. Also, there are differences in allocations between water and sewer that are very easily reconcilable, how DWSD and its projections allocated amounts differently between water and sewer, and that's -- that's one other change.
Q. So the total for water and sewer may be the same, but the allocation between the two for a revenue or expense item may be slightly different?
A. That's right. Even with those differences in allocations, to put it in perspective, we're talking about maybe $2 million, and so once you re -- once you reconcile those allocations, you're incredibly close from a net basis.
Q. Turning to Page 3 of Porter 12. I want to ask you about the assumptions relating to financing. So as part of the assumptions for this Exhibit M for existing debt is that it represents existing debt amortization on currently outstanding DWSD debt; correct?
A. Yes.
Q. So this -- this set of projections does not include any -- does not assume that the DWSD bonds will be restructured; is that correct?

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A. Not necessarily. As -- first of all, this area in particular was provided by Miller Buckfire. So similar to in the October 2nd business plan, this is not something that Conway MacKenzie develops at all. The -- if I recall correctly, the proposed treatment of DWSD bonds in the plan have an option whereby the existing terms are continued to be paid, and that -- but there are other things that would not show up in these projections that happen in that instance. And so that is essentially the path that's been modeled here.
Q. So the -- the interest rate -- excuse me. The interest expense for both water and sewer reflected in years 2014 to 2023 is the same interest expense that is due and owing under the existing DWSD bonds; correct?
A. Yes.
Q. Same with respect to the amortization of bond issuance cost?
A. I believe so, yes.
Q. Looking at the base year -- is that an appropriate terminology, sir, base year being 2014?
A. That's not a term that I would use, but I understand what you're getting at.

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Q. What would you use?
A. I would say the initial year.
Q. Very good. Let's stick with that.
A. Okay.
Q. The initial year numbers for 2014, how have they tracked to the year-end numbers that were achieved as of June 30th, 2014?
A. I review the packet of information that DWSD produces for its Finance Committee, and through April, I believe that's the last month that I have reviewed, through April of 2014, revenues are down, and that is primarily due to a weather-related item. Usage last year -- the fiscal year begins July 1st obviously. There was not the water usage in the first fiscal year quarter that was anticipated, and so that sort of set DWSD behind from the get-go. I think things have tracked pretty close to budget from a revenue standpoint since that time. If I recall correctly, water may be down seven or eight percent below budget through April of 2014.
Q. What about with respect to sewer?
A. Sewer I think is less so. One of the reasons, and this -- this will certainly be the case going forward, is a transition to billing more just a fixed flat

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amount. So I believe sewer is down, I'm thinking maybe five percent. I just -- I can't recall exactly. That will not be the case going forward, though, with how sewer billing is handled.
Q. So if we were to focus just on the consolidated systems, Slide Number 4, Page Number 4, total operating revenues, 894.4 million; correct?
A. Yes.
Q. So as of July 24th, can you tell me whether that number is -- is right?
A. I can't. The last -- as I indicated, I think the last financials that I've reviewed would have been through April 30th of 2014. What -- in addition, I should just point out a few other items. While revenue is below budget, expenses are below budget by even more.
Q. That's where I was going next.
A. Yes.
Q. So that's helpful. Thank you. Do you know of any changes that you would consider material with respect to the initial year results?
A. No.
Q. And the projections for the subsequent years all are based off of initial year projections; correct?
MR. HAMILTON: Object to form.

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You can answer.
A. Generally, yes, because it's all about growth or reduction based on the initial year. I'd have to walk through each line item. There may be some that are not based on growth or decline from that initial year.
BY MR. NEAL:
Q. So let me ask the question this way. Do you believe that there are any differences between DWSD's actual performance in fiscal year 2014 and the projections for fiscal year 2014 that weren't revision of any of these projections for the years beyond 2014?
A. No, I don't.
Q. Was DWSD able to pay all of its bond debt in full during fiscal year 2014?
A. Yes. I understand that's the case.
Q. Looking at it another way, did DWSD default on any of its bonds during fiscal year 2014?
A. Not that I'm aware of.
Q. Have you seen the fiscal year 2015 budget for DWSD?
A. Yes, I have. It's been a little while. When we -- when Conway MacKenzie developed this, we looked at the fiscal year '15 budget as well. So it's -- it's been a little while, but yes, I've generally viewed that before.

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Q. And how do those -- how does that budget compare with the Disclosure Statement, Exhibit M?
A. I can't recall offhand the comparison.
Q. Do you know if they sync up?
A. Well, as I indicated before, from a sewer fund standpoint, and that's where we focused primarily because DWSD has prepared five-year projections for the sewer fund in anticipation of financing, and those sync up very well. I have not done a comparison between the sewer fund for fiscal year '15 and the fiscal year '15 budget, but I'm going to make the assumption that those are close, so based on those couple of assumptions, I'm -- I'm pretty sure that 2015, especially on a net basis, would sync up very closely.
Q. What about with respect to the water fund?
A. The DWSD -- two responses there. First, I, again, have not done a comparison of the 2015 budget to this. My colleagues may have. I just -- I can't recall looking at that comparison. Secondly, DWSD has not prepared an updated projection for the water fund like it did for the sewer fund for the sewer fund financing.
Q. Show you what is Tab 15 in the binder set and Tab 16.

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I'm going to walk you through these documents in a second, sir. You've been provided what has previously been marked as Malhotra Exhibit Number 12. I'm now going to provide you a similar looking document that was marked as Malhotra 13. I have a representation to make on the record. We took the Malhotra Exhibit 12 and 13 off of the court reporter website. The clarity of these two documents is less than ideal, so what we did is stapled to it a clean copy on Page 2, so Pages 1 and 2 of each exhibit are -- should be identical.
A. Okay.
Q. You may want to operate off of the clean page unless your eyesight is better than mine.
A. I'll do so based on your representation that they're the same.
Q. Okay. And it's the same with respect to Malhotra 13. Have you seen these two documents before?
A. Yes.
Q. What involvement did you -- well, please identify these documents if you can.
A. These documents represent savings that DWSD is anticipated to realize as a result of the proposed terms in the Plan of Adjustment for certain creditors, and there are two different scenarios represented

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here.

Q. And one scenario is presented in Malhotra 12 and the other scenario in Malhotra 13; correct?

A. Yes.

Q. How would you describe the scenario in Malhotra 12?

A. The scenario in Malhotra 12, the primary difference between 12 and 13 is the pension payments under the no restructuring comparative set are set at 31.3 million per year going all the way out through 2043, whereas in Exhibit 13 the pension payments are listed as the amounts under what are referred to as the June 4th Milliman letters assuming a continued pension plan with the contributions necessary based on the actuarial assumptions used in those letters.

Q. Can you describe generally the prospe -- process by which these -- these two documents were created? And I'm talking just the basic mechanics. Did -- did you prepare this chart or did you simply provide data inputs to the E & Y team?

A. Neither actually. E & Y prepared these. I did not provide any inputs to this.

Q. I may have missed your earlier answer. When did you first see these charts?

A. Sometime last week. A colleague of mine that has been

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involved in DWSD, Mr. Johnston, was involved, not from the standpoint of providing input I don't believe, but just the distribution of these as they were being developed, and he provided them to me.

Q. I'm going to go about it a different way based on your answer, Mr. Moore. Recognizing that you didn't prepare these charts, there are purported savings that are reflected in them, and I'm going to just go through some of the line items to see what your involvement or your team's involvement was in determining those savings. Okay?

A. Okay.

Q. We'll come back to the pension payment, but if we could start with -- and it's the same on both exhibits for Malhotra 12. Let's start with the professional fees. On Malhotra 12 it's $20 million for fiscal year 2015. Do you see that?

A. Yes.

Q. Do you know what comprises those fees?

A. Yes.

Q. And what are -- what's the composition of the $20 million number? How does it break down?

A. While I did not prepare that calculation, I've reviewed that and so I understand that it is based on

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a total budgeted amount of professional fees of 130 million and four different potential allocation bases, head count, pension, OPEB, and Certificates of Participation, and the portion of -- that DWSD represents compared to the total for each of those four items to then come up with four different potential amounts for allocation to DWSD of that $130 million total budgeted professional fee amount, and then an average of those four was taken, which, if I recall correctly, resulted in $20.7 million and $20 million as used here.

Q. And did you do that work?

A. No.

Q. Did your team members do that work?

A. No.

Q. What about with respect to the pension administrative costs? I recognize there's a -- there's a lengthy footnote, and I'm not going to ask you to repeat what's in that footnote. So the same question. What role did you play personally or Conway MacKenzie team members in determining the number that's reflected here for pension admin costs?

A. Prior to the time of the Fourth-Amended Disclosure Statement being filed, the actuary for the City,

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Milliman, was conducting various analyses, and those analyses were utilized in the projections that were included in the Disclosure Statement, Fourth-Amended Disclosure Statement, and I would have weighed in on various assumptions that Milliman was using as well as reviewed the actual analyses.

Q. The next line, "OPEB current retirees." What role did you and Conway MacKenzie have in arriving at the numbers reflected here?

A. None.

Q. Same question with respect to the POC.

A. None.

Q. Same question with respect to the swaps.

A. None.

Q. Are these numbers that are reflected in the POA scenario for fiscal years 2015 through 2023 incorporated into your ten-year financial projections?

A. Yes.

Q. Turning to the difference between Malhotra 12 and Malhotra 13 as it relates to the -- the investment return for the pensions. Give me a moment, sir. I lost track. So for clarity of the record, Malhotra 12, Footnote 8, what is being utilized here is the 7.9 percent investment rate -- investment return

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assumption; correct?
A. Yes.
Q. And a 30-year UAAL amortization; correct?
A. Yes.
Q. And in Malhotra 13, same footnote. What is being utilized here, however, is a seven percent investment return assumption and an 18-year UAAL amortization; is that correct?
A. Yes. I would just point out one item. The Footnote 8 in Exhibit 13 is based on contributions that cover this time period. Footnote 8 in Malhotra 12 is based on taking the amount for fiscal year '15, the contribution -- projected contribution amount from the Gabriel Roeder June 30th, 2013, actuarial valuation report and running that forward every year. There's not a -- a ten-year projection that existed as it relates to that. The last time that I saw projected information from Gabriel Roeder using these assumptions was after the June 30th of 2011 actuarial valuation wherein actually the unfunded position was lower than it is now, and that projected contribution requirement's growing to the point where I think the last year in that scenario was 2021 and the pension contributions were just north of $40 million per year.

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And so my point here is that I think that the numbers on Malhotra 12 under the no restructuring scenario for pension payments could be low.
Q. Could potentially understate the pension liabilities in the outer years?
A. Could potentially understate the pension payments that would be required at least in the initial years based on what I had seen from Gabriel Roeder in the past through 2021.
Q. How have the pension costs of DWSD been allocated historically by the DWSD?
A. First of all, DWSD participates in the general retirement system, and, Mr. Neal, I apologize if -- if I go through information that you already know, but it would be important as sort of a logical argument here as I go through each step. So DWSD is a division within the general retirement system. Individuals that participate in the general retirement system may be flagged as belonging to the DWSD division. And so those individuals will have a liability associated with them for accrued benefits. In addition to that, those individuals may accrue benefits in the future, which is commonly referred to as normal cost. The DWSD calculation for what it should contribute to GRS

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in the past has been a combination of the anticipated normal cost for future benefits to be earned that year as well as the -- the amortization of the UAAL, unfunded actuarial accrued liability, that is specifically associated with DWSD for that year.
Q. So, in essence, the DWSD would be charged both the normal cost and the -- and its share of its UAAL for its DWSD employees?
A. Yes.
Q. And do you know whether those payments were made as part of operations and maintenance expenses historically?
A. Yes. My understanding is that they were part of O&M, operations and maintenance.
Q. And how did you obtain that understanding?
A. When I looked at the financial statements, I -- again, the financial statements sometimes were in the form of more cost centers, sometimes the underlying cost elements. When you look at the cost elements that support the cost centers, they are part of operations and maintenance, and that includes fringe payments in addition to wages.
Q. Show you what is in the plan binder as Tab E, McCormick Exhibit 10. Mr. Moore, I handed you what

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has previously been marked as McCormick 10. This is a section of the Disclosure Statement dated May 5, 2014, Section IV, "Means of Implementation of the Plan." And my questions are going to be restricted to B-2 on this very first page.
A. Okay.
Q. What role did you have in determining the DWSD pension funding contribution as set forth here on McCormick 10?
A. I worked with the City's actuary, its attorneys, and Ernst & Young in the calculation of that amount. And by the City's actuary, I'm referring to Milliman.
Q. And when you say that amount, you mean the 428.5 million?
A. Yes. That was the amount that you were asking about.
Q. And how is that amount calculated?
A. Could you clarify what you mean by that question?
Q. Yes. How did you determine ultimately that 428.5 million represents the UAAL for the DWSD?
A. There are three components that make up the 428.5 million. The first component we discussed earlier, which is $20 million related to professional fees. The second component relates to DWSD's share, allocable share of administrative costs for the

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pension, and that's approximately two and a half -- it is two and a half million dollars per year for nine years. And then the third element, which is the largest component of it, is the amount of contributions necessary to pay the calculated unfunded liability as of June 30th, 2014, in full by June 30th of 2023.
Q. And did you -- for that third component, did you rely upon Milliman to provide you with that number?
A. Yes.
Q. Did you do any independent calculations?
A. Yes.
Q. Describe your -- the work you did independent of Milliman.
A. Just simple present value type calculations. The underlying assumption within the Plan of Adjustment is that benefits under the defined benefit plans that exist today, GRS and PFRS, will be frozen, and in that regard the unfunded -- unfunded liability related to the accrued benefits which has been calculated for DWSD as of June 30th of 2014 at approximately $292 million is essentially paid off over that nine-year period. So when you look at just simple payments using an equal payment in the middle of each

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year using a 6.75 percent interest rate, you can get to this specific amount, this amount being the approximately $42 million per year.
Q. Have you heard the term "bumping" before?
A. I've heard that term many times.
Q. Have you heard it in the context of your -- in the context of the City of Detroit and in specific the DWSD?
A. I have heard that term in the context of my engagement with the City of Detroit in a variety of departments.
Q. And what does it mean to you?
A. It's commonly -- at least when I have heard that term, it's commonly used in the context of a term within Collective Bargaining Agreements that allow for an individual that may be -- whose job may be impacted to bump into or move into a different area.
Q. Could there be a scenario where someone spends 15 years at the Department of Transportation, spends his last five years at DWSD, and that DWSD has to assume the entire UAAL for that individual?
A. My understanding based on conversations directly with the GRS pension system is that employees have one flag, and that is the department to which they're associated, whether that's where they are actively

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employed now or where they retired from, and the liability associated with that employee follows -- or -- or is then assigned to whatever department they're -- or whatever division they're flagged with.
Q. Was any analysis undertaken to determine whether the DWSD is a net beneficiary of the bumping or whether it's a -- comes out on the short end with respect to the bumping?
A. Well, bumping is just one way that someone could move from one department to another. There are a whole host of other reasons besides --
Q. They could move independent from bumping?
A. Yes. The answer to your question is no, no analysis has taken place that I'm aware of that would quantify the impact.
Q. Do you know what percentage of DWSD's payroll works on non-DWSD projects?
A. I don't.
Q. Do you know what are the average years of service for each W -- DWSD employee?
A. I don't know if I've ever seen that just for DWSD. I certainly have seen that information for GRS as a whole.
Q. Has the Conway MacKenzie team reached a conclusion

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that the DWSD head count is currently excessive?
A. The business plan itself contemplates head count going down to approximately 1,000 by the year -- fiscal year 2020, and right now the last head count that I saw for DWSD is just south of 1600, but you would not be able to, and this is the view both of Conway MacKenzie and DWSD management, you would not be able to eliminate 600 positions right now. So there are a number of things that have to happen to facilitate getting to that 1,000, but we certainly believe that that is possible.
Q. Do you know what the peak head count was for DWSD in the past ten years?
A. I have seen historical reports that have labor well into the 2,000s and I believe even north of 2500.
Q. Did you ever look to determine whether the head count of DWSD grew as the City's financial problems increased over the past decade?
A. I can't recall.
Q. Going back to McCormick 10 en and the provision here B-2 on DWSD pension funding contribution. It states here that this amount should be paid over a nine-year period ending June 30th, 2023; is that correct?
A. Yes.

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Q. Why nine years?
A. There are a couple of factors here. As you can see, the interest rate that's being used is 6.75 percent, so that's why, as I referenced earlier, the calculated amount of the unfunded liability for DWSD as of June 30th of 2014 is approximately 292 million. The total payments over the nine-year period is approximately 380 million. I think it's maybe 383. I can't recall the exact number. Because of the interest cost there. The longer the period of time that is used to repay that liability which already exists, the greater the total payments would be. So as an example, if you were to take that $292 million and pay it off over 40 years, DWSD would be paying approximately $21 million per year instead of $42 million per year, but it would end up paying well over $800 million for that liability as compared to approximately 380 million, and when you look at the rate here, this is quite simple finance, which is to say if you have the cash, it would be better to pay off higher priced debt than to let that go on if you are -- if your cost of capital -- or you can otherwise raise capital for a lower cost.
Q. But these considerations are not unique to the DWSD, are they?

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A. Well, the principle that I just indicated is a general finance concept.
Q. And, generally speaking, UAAL is amortized over a 30-year period; correct?
A. No. That's incorrect. We're talking about two different things here. First of all, I've been -- I've attempted to be very careful to say that $292 million is an unfunded amount. UAAL stands for unfunded actuarial accrued liability. It's using an actuarial value of the assets which may or may not be the actual value of the assets, market value of the assets. In addition to that, this is a closed and frozen plan. There's no new accrual of benefits. So what you were referring to with an amortization of a UAAL, that's the amortization of an unfunded actuarial amount and in the context of a plan that is still accruing benefits. The last point is there's no set standard in terms of 30 years. As a matter of fact, most plans are moving towards a shorter period of amortization, plus you have to get into whether it's an open 30-year or closed 30-year period. So there are a variety of factors that go into amortizing UAAL, but regardless, that's a completely separate topic than what we have here, which is an unfunded liability associated with a closed frozen plan.

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Q. What's the basis for your statement that most plans are moving towards a shorter period?
A. I have reviewed many municipal plans and that is a trend that I have seen.
Q. There's no other city department that is paying off its UAAL over a nine-year period; correct?
A. In the context of this plan, and, again, I'm going to use the word "unfunded liability" versus UAAL, and I understand it's probably even used in our own documents, but to be technically correct, the unfunded liability, there are no other divisions within GRS that contemplate paying their unfunded amount as of June 30th of 2014 over nine years.
Q. So why should the DWSD have to do so?
A. Therein we go back to a couple of reasons. But first and foremost, if you have the cash to pay it, that's a wise thing to do based on the interest rate associated with that liability versus the anticipated costs for other debt that DWSD is expected to raise.
Q. Has the DWSD management or its consultants requested that this amount be paid over nine years as opposed to a longer period of time?

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A. Not that I'm aware of.
Q. Who made this determination that it's in the best interest of the DWSD?
A. This is just one factor that I was pointing to.
Q. Okay.
A. In terms of the decision that DWSD would fund this unfunded liability over nine years, that was a decision ultimately made by the Emergency Manager in conjunction with -- or based on the advice and input from his advisors in the context of this plan.
Q. Did Conway MacKenzie provide any advice or input?
A. Yes.
Q. And what was your advice and input? That it's a good thing to do?
A. Yes.
Q. For the reasons you've already said?
A. Yes.
Q. Did anyone disagree or express a different view in these meetings, excluding meetings that involved counsel of course?
A. I don't think that I had any meetings that did not include counsel.
Q. Okay. I mean, was nine years chosen because there would be no other pension contributions being made by

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the City into the GRS during that nine-year period?
A. There is certainly a factor that comes into play here. First of all, nine years takes us to June 30th of 2023. That's when the first segment of the projections ends. As -- as you probably have seen, beyond the ten years, the information is less detail. It's based on a decade-by-decade basis. So through June 30th of 2023 is the -- the time period that we're talking about here. There are actually contributions coming from the general fund now. Initially the City did not contemplate that it would be making any other contributions itself to GRS during that time period. That has changed. And the amount that goes towards blight has been reduced from $500 million down to $420 million, and as a result of that, the amount going into the general retirement system during this time period includes money from the general fund.
Q. How much money?
A. There is 2.5 million a year coming from library. There's, I believe it's 92 million coming from the general fund, just the general City operations. So if you add those two amounts together, which would be 22 million or thereabouts -- this is an exhibit to the Disclosure Statement, so I'm going off the top of my

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head, but if you were to provide that exhibit to me, I could tell you exactly. The -- so if you were to take 22 and a half million I believe from the -- from the library and add I believe it's $92 million to that from the general fund, that would be the total amount coming from the City to GRS during this time period. There are other sources of funds, though, as well.
Q. Any other factor that goes to the determination of nine years versus any other period of time?
A. Well, the negotiations that have taken place as it relates to the pension systems and the Retiree Committee and the unions, especially as it relates to the treatment of accrued benefits under the defined benefit plans, have had elements associated with June 30th of 2023 as important inputs to those negotiations, one of which is funding level, and so the funding level related to the --
MR. ULLMAN: I'll just interrupt. To the extent you're getting into things that were the subject of mediation, I just want to caution you not to disclose that.
THE WITNESS: Thank you.
BY MR. NEAL:
Q. Can you answer the question without disclosing

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media -- mediation communications?
MR. HAMILTON: Can we -- I think we're probably -- what is the pending question? Can you read back the pending question for me, please? Not his -- not what he just said but the previous question.
(The requested portion of the record was read by the reporter at 11:54 a.m.)
COURT REPORTER: Any other factor that goes to the determination of nine years versus any other period of time?
MR. HAMILTON: What I'd like to do, I'd like to confer with the witness for a second to make sure we don't -- that we address the concern about mediation, but I do believe he can answer this question, but I'd like to confer with the witness for a second.
MR. NEAL: Please do.
VIDEO TECHNICIAN: The time is 11:54 a.m. We are now off the record.
(Recess taken at 11:54 a.m.)
(Back on the record at 11:56 a.m.)
MR. HAMILTON: So what I would like to do is just have the court reporter read back the question

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again that's pending and have the witness answer the question. Is that okay with you?
MR. NEAL: Yes.
MR. HAMILTON: All right.
MR. ULLMAN: Are we striking what's already on the record or . . .?
MR. HAMILTON: No. Just starting over.
MR. ULLMAN: So just for confirmation, what you've said so far does not reveal any confidential mediation --
MR. HAMILTON: We don't believe it does. We believe it's appropriate to say how the number -- what the number is designed to do in the plan, and that's appropriate. We're not going to disclose what happened in mediation that may have led to that. But what the number is in the plan and why it's there I don't think is -- requires us to disclose what was in mediation, and the witness is going to answer the question to that -- to that extent.
MR. ULLMAN: Okay. I think we'll just reserve our rights to what's on the transcript and to the extent we think it improperly discloses anything from the mediation, we'll make an appropriate motion or consult with you as to how to deal with it.

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MR. HAMILTON: We're not making any representations as to what happened in mediation and his answer isn't going to do that.

MR. ULLMAN: Let's proceed.

MR. GREEN: Retirement Systems will join Mr. Ullman's reservation because the answer did state that negotiations took place between the pension system and the Retiree Committee, so just to be clear.

MR. HAMILTON: I'm not talking about his reference to the mediation earlier in his earlier answer. I'm talking about the answer he's going to give now.

MR. GREEN: Right. So we're just reserving the right to the prior answer that was already on the record.

MR. HAMILTON: I don't think he disclosed too much in that one, but go ahead.

(The requested portion of the record was read by the reporter at 11:58 a.m.)

COURT REPORTER: Any other factor that goes to the determination of nine years versus any other period of time?

A. As I indicated previously, June 30th of 2023 is the end of this first time period, so there are a number

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of factors that we look at as of that date to say we want the City to be positioned a certain way financially at that point, and so having contributions during that time period provides a basis for getting the City to a certain point versus contributions outside of that ten-year period, and, again, that -- those -- if contributions occur during this nine-year period, that allows the City to understand what it's going to have in the way of liabilities beyond that ten-year period.

BY MR. NEAL:

Q. So one of the factors is trying to reach a certain funding level for the GRS at the end of this period, that being June 30th, 2023; correct?

A. Yes.

Q. And the desire was to reach a funding level at or about 70 percent?

A. Yes.

Q. And in the absence of this pension contribution from the DWSD, you would not be able to achieve the 70 percent funding level; correct?

A. Well, we could, but we would have to go about it in different ways.

Q. And what would those different ways be generally?

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A. Perhaps greater cuts to pension benefits, accrued pension benefits.

Q. Did Milliman recommend this nine-year amortization period?

A. No. Milliman just ran the analyses based on inputs from the City and its advisors.

Q. So the nine-year amortization period is not an actuarially determined period of time within which to amortize the unfunded liabilities?

A. I'm not sure I understand that question.

Q. So there -- I'll rephrase it. So there is no actuary, Milliman or otherwise, that said nine years is the state-of-the-art and the actuarial practice for amortizing unfunded liabilities?

A. Correct. I did not hear them make that statement.

Q. Nor did you hear them give an opinion one way or the other as to whether you should choose nine years, 15 years, or 30 years?

A. Correct.

Q. You gave Milliman a set of assumptions and they came back to you with what the funding levels would have to be; correct?

A. The -- just so we're clear, when you say the funding levels, what the project -- or what the contributions

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would need to be.

Q. Yes. Thank you. That was helpful. Cleaned up a messy question.

Did anyone at the City, including its professional advisors, determine what the impact would be if this amount, this unfunded liability was amortized over 30 years as opposed to nine?

MR. ULLMAN: Objection. Form.

A. I know that I've looked at what that contribution would be, but in terms of what the impact would be, it could impact a lot of things and there are a lot of moving parts, so it's a question of whether those other parts would move. So from that standpoint, it's -- it's really not just one other scenario, if you will. There are a variety of things that could come into play if the proje -- or if the contributions took place over a period longer than nine years.

BY MR. NEAL:

Q. And what are those variety of things, those moving pieces?

A. Well, as I just indicated, what the level of benefit reduction is plays into that. What contributions would be taking place in the sources to make those contributions after 2023 also comes into play.

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Q. So there is the potential that benefit reductions to all retirees would be lower if the DWSD funded over a longer period of time?

A. The reductions would be higher. You would need greater reductions or -- or more reductions potentially, but it all depends on the various parameters that you use.

Q. Thank you. I'm 0 for two in my last questions. Let me try to wrap this section up and I think we should take a lunch break so I can get some sugar in my system.

Is the Grand Bargain -- you've heard of the term "Grand Bargain"; correct?

A. Yes.

Q. Is that dependent on approval of the 428.5 million pension allocation?

A. No. Those are completely separate items.

Q. Is any part of the plan dependent upon the approval of this 428.5 pension allocation?

MR. HAMILTON: Object to form.

A. Not that I'm aware of.

MR. NEAL: I think now would be a good time for -- for a lunch break.

VIDEO TECHNICIAN: The time is 12:03 p.m.

CHARLES MOORE

We are now off the record.

(Recess taken at 12:03 p.m.)

(Back on the record at 12:50 p.m.)

BY MR. NEAL:

Q. Good afternoon, Mr. Moore.

A. Good afternoon.

Q. The 6.75 percent investment return that is used to calculate the DWSD pension contribution, how is that percentage selected?

A. That was the product of negotiation.

Q. In essence, a settlement between the City and the retirees?

A. Yes.

Q. What happens if projections are worse than projected? That is, what happens during that nine-year period if the projections come in at six percent? Does that mean --

MR. HAMILTON: You mean the returns?

MR. ULLMAN: Objection. Form.

BY MR. NEAL:

Q. Returns.

MR. HAMILTON: Yeah.

BY MR. NEAL:

Q. What does that mean with respect to DWSD's payment

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obligation?

MR. ULLMAN: I'm going to object to the form.

A. I just want to make sure that I understand the question.

BY MR. NEAL:

Q. Yes.

A. You're asking what happens if the actual return on plan assets associated with DWSD is worse than the 6.75 percent?

Q. As always, you do a better job than I do in framing the question. That is my question.

A. Okay. The payments that are contemplated in this nine-year period are not in any way a full settlement on that unfunded liability. It is -- they are the payments that are necessary in order to fund the unfunded liability amount as of June 30th of 2014. So to the extent that actual performance or return on plan assets is lower and therefore the contributions that are made do not fully pay for or fund the unfunded amount, then DWSD would have an additional amount to be funded.

Q. Now, what if investment returns are greater than projected?

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A. Then we would have a situation where, all else being equal, potentially at the end of this period that we're talking about, June 30th of 2023, that the amount related to DWSD for GRS for the previously accrued benefits could be greater than 100 percent funded at that time.

Q. Does that mean the DWSD gets a refund or rebate of sorts?

A. That wouldn't be likely, but there are a variety of factors that could happen over time, so my guess, and this is purely a guess because there's nothing set in this regard, is that if, for instance, it's funded at 105 percent at June 30th of 2023, it would be funded at that level to allow for or to absorb any future negative variances, negative variances not just related to return on plan assets but also actuarial variances.

Q. All right. Let me explore that a little further. What if -- different scenario. What if the City, unfortunately and regrettably, has to file for bankruptcy again in 2024? Will the DWSD employees have their share of the -- of their pension contributions a hundred percent funded by virtue of this 428.5 payment over nine years?

CHARLES MOORE

A. That's a hypothetical that I can't speculate on.
Q. Well, let's -- let's talk about the actual, and, that is, under the plan, as projected by 2023, the GRS will be 70 percent funded; correct?
A. Yes.
Q. Such that that 70 percent funding ratio applies to all employees and retirees that are subject to the GRS; correct?
A. Yes. GRS does maintain separate reporting for the four different divisions within GRS.
Q. So would it be fair to say at that point or not that if you're a DWSD employee you'd be a hundred percent funded but if you're a DOT employee you're only 70 percent funded?
A. Well, I'm going to continue on with the hypothetical as far as I can.
Q. Yes.
A. Just based on what we have in the plan, and if everything goes exactly as we anticipate, plan assets, return, 6.75 percent year, there are no unanticipated actuarial variances, positive or negative, and we get to June 30th of 2023, I would anticipate that the actuarial valuation report for GRS at that time, assuming that there are still four divisions of GRS,

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would show DWSD funded at 100 percent and the other three divisions at something less than 100 percent.
Q. At the time of the bankruptcy last year, July 18th, 2013, was there such a breakdown within each department?
A. Each division.
Q. Each division.
A. Yes.
Q. But you can't say one way or another whether in that hypothetical, a bankruptcy filing in 2024, whether the DWSD employees would get a hundred percent of their pension whereas a DOT employee would get 70 percent?
A. That seems to me like a legal issue that I'm not in a position to respond to.
Q. Are you expressing a view or an opinion as to whether or not this DWSD pension allocation should be treated as a current expense under the water or sewer indentures?
A. That's how it's been treated in the projections, so based on the information that I have, that and how it has been handled previously, that is how we've included it.
Q. But are you, Charles Moore, saying that's how it should be treated?

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A. I have not received all of the guidance that I think should be obtained before making a conclusion on that. Certainly as we sit here today, I'm not expressing an opinion on that. I'm just conveying how we have presented it.
Q. What other guidance are you awaiting?
A. We have sought questions of the City's accountants in terms of treatment, and I'm sure that there will also be legal input to that as well.
Q. And who are the City's accountants?
A. I believe the questions have been posed to Plante Moran at this point in time. The auditors for the City are KPMG.
Q. And when do you expect to hear back from Plante Moran?
A. I would expect fairly shortly, fairly shortly being within the next month I would assume.
Q. Do you have a view or an opinion as to whether DWSD's payment of its 428.5 million over nine years is something that is feasible for DWSD to do?
A. The projections -- the projections, specifically Exhibit L to the Disclosure Statement, would indicate that there is adequate cash to be able to do that.
Q. You testified in December 2013 in this case; is that right?

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A. I believe that's when my deposition related to the post petition financing occurred, yes.
Q. And I'm going to read you part of that transcript and then show it to you. It's just a couple sentences. You testified that "DWSD does not operate at a deficit. The surplus, however, cannot flow to the general fund, so the proposal to creditors was based on a general fund projection, and as a result, the subsequent activities occurred related to the enterprise fund operations of the water and sewer funds."
Do you recall that testimony?
A. Not really. And I don't know what the question was that I was responding to. May I look at the question?
Q. Let me see if there is -- is a question. Okay. Let me hand you -- yes. The question starts at the bottom of Page 68 of this mini transcript and continues on to Page 69.
A. Okay. I see -- I've read the preceding question and what you pointed me to.
Q. And that was your understanding then and that is your understanding today; correct?
A. Just to clarify, the information that you read, which was my response, seemed to be getting at the fact that

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we did not look at DWSD during the January to June 2013 time period, and I was responding that DWSD is a separate enterprise fund and therefore it's not included in the general fund, only enterprise funds that operate on a deficit or at a deficit were, and that DWSD does not operate at a deficit.
Q. Well, let me just ask you. The second sentence that I read earlier, I'll read it again, "The surplus, however, cannot flow to the general fund," and the sentence continues from there. Do you see where I'm reading?
A. Yes.
Q. And that was your understanding then and that's your understanding today, correct, that there's no surplus that can flow from the general fund -- excuse me, can flow from the DWSD to the general fund; correct?
A. I would just expand on that a little bit. Certainly my understanding then is the same as it is now, which is that funds to reimburse for the cost of services can flow from an enterprise fund to the general fund, but just in general, if an enterprise fund makes a profit, those profits can't flow over to the general fund.
Q. Are you familiar with the concept of closed loop?

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Have you heard that term used before?
A. I have, yes.
Q. And what -- what's your understanding of that term as it relates to DWSD?
A. Essentially that the profits, if there are any, stay within the system.
Q. I want to spend five -- five minutes or so on -- on your background unrelated to the City of Detroit. Now, have you provided professional services to Chapter 11 debtors?
A. Yes, I have.
Q. Can you identify the Chapter 11 debtors that you've provided services to over the past five years?
A. Sure. Let's see here. I'm involved in a case right now, The Budd Company which filed in Chicago. I was involved in the Greektown Casino and Hotel bankruptcy. These are debtor side cases.
Q. That's all I'm asking for. Thank you.
A. Within the last five years, just on the debtor side alone, that may be it. But I typically will work on 25 cases a year, so I'd have to go back and review my files for any other debtor side cases that I've worked on in the five-year period besides City of Detroit obviously.

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Q. Let me expand the question a little bit. What are some of your larger debtor side engagements in your career, Chapter 11 cases?
A. Certainly. Again, off the top of my head, it's -- it's going to be fairly difficult because there are so many, but certainly Greektown Casino and Hotel was a very large debtor side case. The Budd Company is a very large debtor side case. And these are only Chapter 11 filings? Okay. One thing to just make clear, probably -- it would depend on any given year, but less than half of my work is done within bankruptcy court versus out-of-court work, even though the vast majority of my work is done on the debtor side. Hastings Manufacturing, Willard Corporation. I'd have to go back and look at my records for other large Chapter 11 cases.
Q. In any of those engagements, had you been asked to prepare a liquidation analysis?
A. Yes.
Q. And what is your understanding of a liquidation analysis in the context of a Chapter 11 case?
A. A liquidation analysis is oftentimes used in what's referred to as best interest to creditors to determine whether what is being proposed will be at least what

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creditors could get if the entity or the assets were liquidated.
Q. Recognizing that municipalities cannot nor should liquidate. You and I would agree on that; correct?
A. Yes.
Q. And understanding that you had a brief exchange yesterday with Mr. Soto about a dismissal analysis, have you or your team at Conway MacKenzie prepared a, for lack of a better term, a dismissal analysis for the DWSD?
A. No. The business plan that we put together essentially contemplates the operation of DWSD outside of Chapter 9. However, there are certain line items, which we've covered here today, that have been adjusted based on the proposed treatment of those liabilities, but when it comes to the operations of the DWSD projections, those would not differ whether DWSD was operating as part of the Chapter 9 process or not.
Q. Do you know if anyone outside of Conway MacKenzie prepared a dismissal analysis for the DWSD?
A. I don't know.
Q. The adjustments that were made in Exhibit M, which is your -- Exhibit M to the Disclosure Statement, which

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is Porter Exhibit Number 12, the adjustments that were made to account for a post restructuring environment include adjustments for pension; is that right?
A. Yes. Both accrued and prospectively earned benefits.
Q. It also includes adjustments for OPEB; correct?
A. Yes.
Q. It includes adjustments for the DWSD's allocated share of the COPs; correct?
A. Yes.
Q. It includes the pension admin fee; correct?
A. I would say that in -- in a sense it does because it calls out separately administrative charges. Those have always been paid by DWSD, but they have been just taken out of the contributions that DWSD makes. So I would not say that there is really a change. It's more of a change in approach or presentation.
Q. It also includes payment of professional fees for the City's Chapter 9 professionals; correct?
A. Yes.
Q. Before I go on, and I know we covered this briefly before lunch, the professional fee number is not based on time actually devoted to DWSD matters; correct?
A. The professional fee number that you're referring to is the $20 million?

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Q. Yes, sir.
A. It -- it is -- that's correct. The calculation is based off of, as I indicated before, the $130 million allocated under four different methods and then using an average of those four methods.
Q. Do you know if the professional fees devoted to DWSD matters is more or less than the $20 million that is reflected in the ten-year projections?
A. I don't know. Obviously the City has not actually incurred or paid, at least to the best of my knowledge, $130 million yet, so that $130 million takes into account fees to be earned and/or paid in the future, which certainly could get to $20 million or more related to DWSD if it's not already there.
Q. So going back to the restructured obligations under the ten-year projections that you and your team prepared, pension, OPEB, COPs, the pension admin fee subject to your qualification -- or clarification, excuse me, and professional fees; correct?
A. Yes. The swaps as well.
Q. Thank you. Anything else?
A. Well, it doesn't have a -- an impact on the numbers, again, as I indicated, which we received from Miller Buckfire. It does take into account the option that

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is included in the plan for DWSD bondholders.
Q. And that is the option to elect to receive existing rate DWSD bonds; correct?
A. That's correct.
Q. Anything else?
A. No. I believe that's it.
Q. So I have listed here seven items. I just want to go over it with you again. Pension, number one; OPEB, number two; COPs, number three; pension admin, number four; professional fees, number five; swaps, number six; and the option to elect existing rate DWSD bonds is number seven?
MR. HAMILTON: If that's a question, I'm going to object to form because I don't think that's fair to characterize pension admin as a change given what his testimony was, but . . .
MR. NEAL: And I'll accept what his testimony was.
BY MR. NEAL:
Q. I'm not trying to put words in your mouth. But do you -- other than those seven items, can you think of any other items or obligations that are being restructured in the Chapter 9 plan that are reflected in the ten-year business projections for DWSD?

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A. No others that I can think of.
Q. If the Chapter 9 case were dismissed, the DWSD would have to pay its unrestructured obligations with respect to let's just assume all of the items, items one through seven that we went through; is that right?
A. I haven't done that specific analysis, and I'm sure that there are legal considerations involved in what DWSD would have to do if the Chapter 9 case was dismissed.
Q. Do you have any basis to believe that the DWSD would not be able to charge rates sufficient to pay these obligations as well as its -- all of these obligations under the ten-year forecast if the Chapter 9 case were dismissed?
A. Certainly it would be a concern.
Q. What do you mean by a concern?
A. Well, there are multiple aspects of what DWSD or any utility, for that matter, charges. It's one thing to say we're going to increase rates as necessary to cover costs, but an important consideration is affordability, and to the extent that you have to -- or to the extent that you increase rates beyond what would be considered affordable, then what you would see is that it really doesn't matter what rates you

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charge if you're not actually collecting. And so based on how you asked the question, while DWSD may be able to increase the rates to whatever, and I'm not -- and I'm not fully aware of the various legal framework within the State of Michigan for caps or other constraints on increasing those rates, assuming that there aren't any, even if DWSD was able to raise its rates as necessary to cover these costs, you would still have to at a minimum consider the affordability aspect.
Q. Well, recognizing that you view it as a concern and taking into consideration your prior answer, have you prepared any analysis that would demonstrate whether or not the DWSD would be able to charge rates sufficient to meet all of these obligations outside of a Chapter 9 case?
A. I have not been asked to prepare that analysis.
Q. Have you seen an analysis prepared by anyone?
A. Not that I recall.
MR. NEAL: Can I have what's in Tab 35 of the binder set?
BY MR. NEAL:
Q. Mr. Moore, I've handed you what has previously been marked as Orr Exhibit Number 18. And as an aside, I

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can't stress to you how difficult it is to take Orr and Moore depositions in the same week. You can ignore that comment. I'm going to represent on the record this is an appendix. I think it's Appendix 1-A, Feasibility Report. Well --
MR. HAMILTON: II-A.
MR. NEAL: II-A. Thank you.
BY MR. NEAL:
Q. That has a cover letter dated July 17th, 2014, Foster Group letterhead, letter to Ms. Sue McCormick. The first question is, have you seen this document before?
A. I have not.
Q. Have you ever prepared a feasibility report for a bond issuance?
A. I don't believe that I have.
Q. Have you ever prepared any rate analysis or rate studies for a water or sewer department?
A. That has come into play with previous work that I've done, yes.
Q. What previous work are you referring to?
A. In the Jefferson County, Alabama, case, that was an important topic, and while certainly I was not serving as a rate consultant, I looked at analyses associated with their issues.

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Q. You were a consultant for a preeminent bond insurance company; is that correct?
A. I was.
Q. If I could have you turn to the last page, A-25. What I ask you to do here, sir, is to read Points 1 through 6, and my question is going to be the same with respect to each point, and that is, do you have any information that would lead you to disagree with any of the factual propositions in 1 through 6?
A. Would you like me to read those out loud or to myself?
Q. Read them to yourself.
A. Okay. Thank you.
Q. Take as much time as you need.
MR. HAMILTON: While he's reading them, counsel, I don't want to get into a philosophical dispute as to the difference between a factual proposition and an opinion, but given the first sentence on that -- of those, it's -- I'm not sure if your question is asking the witness to distinguish between facts and opinions or if he's disagreeing with anything, whether it's a fact or an opinion, on this page. Because your question was just about facts.
MR. NEAL: Then I will broaden my question to include anything.

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BY MR. NEAL:
Q. Do you disagree with either the fact or the opinions?
A. Can you restate your question one more time?
Q. Certainly. I will reframe it. You've had an opportunity in the past few minutes to review what you said is for the first time what is on Page A-25 of Exhibit -- of Orr Exhibit 18; correct?
A. Yes.
Q. And you've read through all the items on Page A-25; correct?
A. Items 1 through 6, yes.
Q. Do you have any disagreement with any of the facts or opinions that are set forth in Items 1 through 6 on Page A-25?
A. None of the underlying data that I would assume -- which would support these items has been provided to me, so I'm not in a position to have an opinion either way, to agree or to disagree or even to take a position as it relates to these.
Q. Thank you. You can put the document aside.
What is the subject of litigation, and there are several subjects of litigation for the DWSD parties in this case, is the Interest Rate Reset Chart in the Plan of Adjustment. Have you seen that chart

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before?
A. I've scanned it.
Q. What involvement did you have in the determination of whether or not to impair or leave unimpaired certain series of bonds?
A. I had no involvement.
Q. What involvement did you have, if any, with respect to whether or not to strip or modify the call protection features of certain of the DWSD bonds?
A. I had no involvement.
Q. Do you have any view or opinion as to whether or not the proposed new interest rates under the plan are market?
A. No, I don't.
Q. As you may know, the DWSD is pursuing a new sewer bond issuance in the rough approximate amount of 150 million. What involvement do you have in that process?
A. I made mention of that a few times earlier today in my testimony, and my involvement has been, first of all, to understand the projections, the draft projections that have been put together by DWSD in support of that financing and differences that exist between Exhibit M and those projections for the sewer fund. In addition

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to that, I participated in a meeting with DWSD management and several others, including DWSD's bond counsel, to address a number of questions as it relates to the Plan of Adjustment and Exhibit M, and through my colleagues, Mr. Hausman and Mr. Johnston, I have essentially kept tabs on the status of the financing process.
Q. Have you done any analysis to determine whether the DWSD will experience higher financing costs as a result of the proposed impairment of certain of the DWSD bonds?
A. No.
Q. Do you know if that matter has been discussed amongst the Emergency Manager and his professionals outside of counsel and outside of mediation?
A. I'm not sure if it's been discussed outside of counsel or mediation.
Q. Do you know if any sensitivity analysis has been conducted to determine what if scenarios, that is, if the D -- the new DWSD bonds are rated below investment grade or above investment grade?
MR. HAMILTON: Object and instruct the witness not to disclose any information in response to that question that was developed in connection with

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court-ordered mediation.
A. I'm not aware if any of that analysis has been developed outside of use with counsel or as part of the mediation process.
BY MR. NEAL:
Q. As part of the ten-year projections that you put together as Exhibit M, are you projecting that the DWSD will have to access the capital markets beyond the 150 million new sewer bond issuance proposed for this year?
A. Yes.
Q. And you have an assumption in Exhibit M as to the cost of financing; correct?
A. Yes.
Q. I just want to make sure I'm reading the right line. You could certainly pull it up. It's Porter Exhibit 12. I believe it's Page 3.
A. Yes.
Q. And so you have an assumption as to the cost of financing that the interest rate will be approximately 4.63 percent?
A. Yes.
Q. And that's based on a Miller Buckfire analysis?
A. Correct.

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Q. And you did not perform any such analysis yourself or as a group within Conway MacKenzie?
A. Correct.
Q. And excuse me. I should have -- maybe I could be able to find this myself, but since I have the author here, where is the cost of -- where are the future financings reflected in your projections?
A. Okay. So let me point you to a couple of things here. If you look at Page 6, this is on a consolidated basis, which is probably the easiest way to show this to you. What you have here at the top is the projected capital spending and then down below you have the sources and uses. The improvement and extension fund refers to revenue-financed capital improvements, and then you have down below that this relates to the new debt that is anticipated to be obtained. And so the bond issuance row is that new debt, and I believe that that totals approximately $1.6 billion.
Q. Sorry. What totals? Where would I -- what would I total to reach that total?
A. Sure. Do you see the section called "Construction Bond Fund"?
Q. Yes.

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A. The second row, "Plus: Bond issuance."
Q. Um-hmm.
A. And beginning in 2015, 123.8, 253.6, 208.5. Those across I believe will total to approximately 1.6 billion.
Q. Thank you. And this is for the consolidated systems; correct?
A. Correct.
Q. Okay. Just a few more questions, sir, and then I'm going to yield to others in the room. I want to go just all the way back to your expert report, so Moore Exhibit Number 1. And I suspect this may be self-evident, but I'm good at belaboring the obvious. If you could look at Pages 6 through 8. And this would include a section that provides an overview of the reinvestment initiatives that are the subject of your expert report; is that correct?
A. Yes.
Q. And, generally speaking, that's about $1.7 billion that the City proposes to invest through fiscal year ending June 30th, 2023; correct?
A. Just to clarify, I use three words here: Investment, which is 1.7 billion, revenue initiatives, which are 482 million, and then cost reductions or cost savings

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of 358 million. The three of those together are a net approximately $877 million, and that's what -- the three together is what we refer to as reinvestment initiatives. So investment is 1.7 billion. You had used the word "reinvestment," I believe.
Q. I take it would this jump out at me on Slide -- Page 8, that you have your subtotal for investment is 1.7; correct?
A. Yes. If you -- actually if you look at Page 7.
Q. Um-hmm.
A. The second paragraph which begins "As set more fully."
Q. Okay.
A. You see $1.7 billion there, and the rest of that paragraph just breaks out the 1.7 into six categories, and then below that it indicates cost, this is in the paragraph after that, cost savings of 358 million and then revenue initiatives of 482 million, and on Page 8, then, you see the total net reinvestment initiatives of approximately 877 million.
MR. HAMILTON: If you'll look at Exhibit 3, there's a really cool graphic representation of that if you want to see it. The second page of Exhibit 3 of his report. We worked hard on that.
MS. NELSON: We did.

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MR. NEAL: Let the record note Jones Day is proud of Exhibit 3.
BY MR. NEAL:
Q. The total of the investment -- none of these investment initiatives go toward or benefit the DWSD; correct?
A. Not directly.
Q. Any benefits would be indirect based on improving life within the City of Detroit?
A. That certainly could be one of them. The -- the strength of the City in general I would assume could have indirect benefits to DWSD as well.
Q. But a decision was made not to direct -- not to invest directly within the DWSD; right?
A. I'm not sure I understand your question.
Q. Let me go back. There's no direct investment of any of these proceeds within the DWSD; correct?
A. No. But separately within Exhibit M there's approximately $2.9 billion in capital improvements that are being invested in DWSD. Part of that actually relates to its operations, including enhanced information systems and other operational efficiencies. So that is included within Exhibit M. This relates to the general fund as well as any

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enterprise funds that are operating at a -- with a subsidy from the general fund.
Q. What about with respect to the department cost savings initiatives?
A. Same thing. That is included in Exhibit M, not included here.
Q. And, lastly, the revenue initiatives?
A. Same response.
MR. NEAL: If we can go off the record. I need five minutes to see if I have just a few more questions.
VIDEO TECHNICIAN: The time is 1:34 p.m. We are now off the record.
(Recess taken at 1:34 p.m.)
(Back on the record at 1:39 p.m.)
EXAMINATION
BY MS. QUADROZZI:
Q. Good afternoon.
A. Good afternoon.
Q. I have a few questions for you. Just a few.
Can you take a look at Exhibit M? I think it was identified as Porter 12 in front of you.
MR. HAMILTON: That's correct.
MR. ULLMAN: Do you remember what tab

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number that was?

MR. NEAL: J.

A. Yes. I have it.

BY MS. QUADROZZI:

Q. The capital improvement line -- lines in Exhibit M are based on the OHM report; correct?

A. For the most part.

Q. Okay.

A. They're --

Q. I want to talk to you about the not most part, in particular those. So if you take a look at what is, and I'm using the numbers that you previously looked at, so Page 193 out of 212 --

A. Yes.

Q. -- at the bottom. There is a line underneath "Capital spending." It describes OHM Advisors, CIP estimates, and then there is a line item "Unidentified capital projects." And those are for the years 2020 through 2023.

A. Yes.

Q. From where did you derive those numbers?

A. These numbers are a placeholder based on the City -- I'm sorry, DWSD and its operating metrics by that time in terms of how much cash that it would have. There

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was capacity to take on additional capital improvements. So while there were not specific projects that were identified outside of the OHM work, we put this in as a placeholder to provide for even more capital improvements if those were necessary to show that they would be able to -- that DWSD would be able to fund those.

Q. Let me just make sure that I understand that. The placeholder that you're describing, was that a function just of a roll forward of dollars based on your forecasts that would be in the system?

A. I'm not sure I understand your question.

Q. Okay. Well, let me see if I can make it clearer for you. What I'm trying to understand is whether or not there were any factors other than the forecasts, the financial forecasts, that you used that allowed you to decide what the size of those placeholders would be.

A. No. The amounts that you see, those four years, are based purely on capacity, if you will, to fund additional projects to the extent that those projects would be identified and validated.

Q. So, for example, if your assumptions that led to the 2014 and 2015 revenue numbers proved to be incorrect, those placeholder amounts could -- would be subject to

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change based on what the actuals in those years yielded?

A. Not necessarily.

Q. Okay. Explain to me how that is not correct.

A. To the extent that actual results for, as you say, 2014 and 2015 differ than what's in here, favorably or un -- or unfavorably, what would be more likely to happen is that in the future years, '16, '17, '18, as an example, rates would likely be adjusted to make up for that one way or another, and so you would have quite a bit of operating experience that would take place between '14 and '15, as you mentioned before, you would get out to 2020, and as the process occurs every year, rates are set taking into account not only what the costs are anticipated to be but also what has happened in the past.

Q. Okay. Let's -- let's stay with that for a minute. Let's assume that the results of '14 and '15 are unfavorable. Let's assume that the revenue is not as you had projected. Let's then assume that you keep everything else constant, that rates don't go up. Fair to say that the amounts for the capital projects, unidentified capital projects in those outlying years would have to be adjusted?

CHARLES MOORE

A. No.

Q. Okay. Other than raising rates, would the -- would the other option be to increase financing?

A. No.

Q. What would be the third option?

A. Most likely cost would be adjusted so that to the extent that there's a variance in revenue, cost would also be adjusted, and, as I indicated earlier, right now revenues for fiscal year '14 at least to date as far as I saw them, which I believe was through April of 2014, revenue was below plan, but expenses are also below plan, and they're even more favorable in terms of a variance than the revenue variance. So we would have a situation where the net for 2014 would potentially come in better than the net, and it's really all about the net cash flow in the end. Revenue can be higher or lower, expenses can be higher or lower, but it's about the net amount of cash flow that the operation generates.

Q. Would you agree that it has been historically the case, based on your expert review of the DWSD financials, that the manner in which DWSD has operated is to provide a decrease in capital expenditures in order to make up in the bottom line a loss in revenue

CHARLES MOORE

over the past say seven of the last ten years?

A. No. I would not agree with that. If you look at the OHM study, their ten-year capital improvement plan, you can actually see, and I'd have to have the study in front of me, but there are years within the ten-year period that you're referencing, several years, where you see a pretty significant spike in capital improvements that were undertaken. So this has not been a situation where capital improvement dollars have actually been shrinking. There was a lot spent on capital within the last ten years.

Q. To your knowledge, based on the DWSD, so I'm not talking the OHM, I'm talking the typical five-year DWSD Capital Improvement Plans that they perform within that department. You're familiar with those?

A. Yes.

Q. Okay. So based on just those, is -- is it fair to say that DWSD has underspent its Capital Improvement Plans in each of the last seven of ten years?

A. I don't recall looking at that specific analysis, meaning going back and looking at five-year plans and comparing that to what was actually spent, so I don't think I can answer that question.

Q. I think when you were speaking this morning with

CHARLES MOORE

Mr. Neal, you indicated that DWSD, you might have called it executive staff, I might have the wording wrong, approved your -- the work that you had done in connection with Exhibit M, and my question to you is, who specifically at DWSD did you review Exhibit M with who said yes, we sign off on this?

A. My colleague, Wade Johnston, who I referenced earlier, before Exhibit M was included with the Disclosure Statement, I made sure that the DWS -- DWSD management team, that was for sure Ms. Bateson, it may have been Mr. Wolfson and it may have been Mr. Foster as well, did not have any remaining concerns on this information before it went into the Disclosure Statement.

Q. Would it surprise you that Ms. McCormick testified that she did not see Exhibit M prior to the time that it was included in the Plan of Adjustment?

A. No. That doesn't surprise me, especially based on the answer that I just gave.

Q. Does it surprise you that that was also Ms. Bateson's testimony?

MR. HAMILTON: I'm not sure it was, but let's assume it was. Would it surprise you?

A. If -- if Ms. Bateson -- I guess I would like to

CHARLES MOORE

understand the specific question and I'd like to see the answer. She may not have seen a cover page that says Exhibit M on it. But that would definitely surprise me if there was an indication that she had not seen these projections.

BY MS. QUADROZZI:

Q. Okay. When you were talking this morning, this might have been this afternoon, with Mr. Neal, you were talking about the -- your involvement in connection with the discussions about a regional authority. Do you remember that testimony generally?

A. Yes.

Q. You talked in specific with Mr. Neal about your involvement in connection with a proposal, you can correct me if you don't like that word, that included a $47 million a year lease payment. Do you remember that?

A. Yes.

Q. And you also remember that there -- prior to that 47 million number there was an analysis that Conway MacKenzie and you were involved in that had a larger lease payment; correct?

A. Yes. We discussed two things this morning.

Q. Right.

CHARLES MOORE

A. The business plan that had a higher lease payment in it, and then when I was brought in by Ms. Fox around the end of January, the discussions were around a $47 million constant lease payment over 40 years.

Q. Okay. And I wasn't trying to reget your testimony. I was just kind of trying to bring you back to where I'm now going to leap off with with some questions. Were you involved at all in a analysis that had a $44 million a year constant payment?

A. I don't recall a $44 million. It certainly could be. I just don't recall right now.

Q. Okay. Let me -- let me see if we can -- if we can -- if I can refresh your recollection at all, understanding it's not a memory test. In January -- in December '13, January '14, during the discussions with the counties, were you involved in any meetings at which there was a proposal outlined by Miller Buckfire with a constant $44 million lease payment?

A. Not that I can recall. My first involvement with the counties after the initial time period in October was in January.

Q. Do you recall in January any discussions with anyone at Miller Buckfire or anyone else within Conway MacKenzie, including Mr. Hausman, about whether or not

CHARLES MOORE

there had been a refinement of the -- of a constant lease payment that made a jump from 44 to 47?
A. Not that I can recall. The $47 million number is the one that always sticks out in my head, and I just don't recall discussions around $44 million. It certainly could be the case. Again, I -- I just don't recall offhand discussions around 44 million.
Q. Okay. One more area, sir. If you can take a look at -- this was Orr Exhibit 10. The tab is Tab 6.
A. What did this relate to?
Q. I don't believe that we --
MR. HAMILTON: It's the October 2nd 10-Year Business Plan.
BY MS. QUADROZZI:
Q. Yeah. I don't believe it was separately marked, but if you recall, there was a bit of discussion this morning about in particular Page 40 of that.
A. Yes. I have it.
Q. Okay. Now, you -- and you can take a look at Page 40 if you want, but I just have a few questions on this. You talked with Mr. Neal this morning about optimization savings and how that was the line item where only 50 percent was included in the business plan number and the other amount was to be a benefit

CHARLES MOORE

that DWSD achieved. Do you remember that testimony?
A. A benefit that DWSD would retain.
Q. Correct.
A. Yes.
Q. My question to you, sir, is, and correct me if I'm wrong, your testimony also was that you -- that optimization savings was something that you analyzed in connection with the EMA report?
A. The --
MR. HAMILTON: Go ahead.
A. The EMA report, as I testified earlier today, that was something that was looked at. The optimization savings is more based on the discussions with management on the initiatives that they're undertaking, and one of the -- one of the activities that we looked at or that we undertook specifically was to sit down with management and understand the items in the EMA report versus -- and get management's thoughts on the achievability of those as well as why certain items could not be undertaken.
BY MS. QUADROZZI:
Q. And those items in the EMA report were a portion or were considered and rolled into the optimization savings that you have on that -- on that table?

CHARLES MOORE

A. The EMA report largely related to head count, and there were a variety of reasons why the EMA number was not used. This is the plan that management is pursuing right now as it relates to head count in particular.
Q. Well, you're aware, sir, that the EMA report was done in 2012?
A. Yeah. I had indicated within the last two years, yes.
Q. Okay. And you are aware that the -- the EMA report, just for clarification, was not improved -- approved in its entirety by the City Council; correct?
A. I actually don't know that.
Q. Okay. The activities that were recommended in the EMA report had begun to be put into place at DWSD within calendar year 2013; correct?
A. Yes.
Q. So they were working along those lines, the head count reductions, at least the portion that they were doing of the EMA report, that was happening in 2013?
A. Yes.
Q. And continuing to this day?
A. Yes.
Q. What of this optimization savings is attributable to the bankruptcy, sir?

CHARLES MOORE

A. Well, as we've talked about here, the -- I think Mr. Neal essentially asked this question already. As it relates to adjustments to the projections, specifically for the Chapter 9 process, we covered what he referred to as seven categories, Mr. Hamilton objected about pension administrative costs, but as you can tell, I didn't respond and we didn't cover anything related to optimization as part of the Chapter 9 process. So these activities are activities that can and are being effectuated regardless of whether the City is in bankruptcy or not.
MS. QUADROZZI: Okay. I don't have any other questions.
MR. HAMILTON: Anybody else?
VIDEO TECHNICIAN: This concludes today's deposition. The time is 1:57 p.m. We are now off the record.
(The deposition was concluded at 1:57 p.m. Signature of the witness was not requested by counsel for the respective parties hereto.)

CHARLES MOORE

CERTIFICATE OF NOTARY

STATE OF MICHIGAN)
) SS
COUNTY OF WAYNE)

I, Cheri L. Poplin, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to either party nor interested in the event of this cause.

Cheri L. Poplin, CSR 5132, RPR, CRR
Notary Public,
Wayne County, Michigan

My Commission expires: August 21, 2019

EXHIBIT I

CITY OF DETROIT
OFFICE OF THE CHIEF FINANCIAL OFFICER

Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 1100
Detroit, MI 48226
Phone: (313) 628-2535
Fax: (313) 224-2135
E-Mail: OCFO@detroitmi.gov

March 31, 2021

The Honorable Detroit City Council
Coleman A. Young Municipal Center
2 Woodward Avenue
Detroit, MI 48226

Re: FY 2021 – 2030 Long-Term Forecast Report for Legacy Pension Plans and Debt Obligations

Dear Honorable City Council Members:

The Office of the Chief Financial Officer (OCFO) respectfully submits its annual Long-Term Forecast Report for Legacy Pension Plans and Debt Obligations. The OCFO also publishes this report on the City's website.

This report is provided in accordance with the requirements included in Detroit Financial Review Commission (FRC) Resolution 2020-03, which granted the City its waiver of active FRC oversight through June 30, 2021. It includes long-term forecasts for the City's legacy pension plans, debt obligations, revenues and expenditures, and the assumptions used for the analysis.

Best regards,

Jay B. Rising

Jay B. Rising
Acting CFO

Att: FY 2021 – 2030 Long-Term Forecast Report for Legacy Pension Plans and Debt Obligations

Cc: Mayor Michael E. Duggan, City of Detroit
Hakim Berry, Chief Operating Officer
Tanya Stoudemire, Chief Deputy CFO/Policy & Administration Director
John Naglick, Jr., Chief Deputy CFO/Finance Director
Christa McLellan, Deputy CFO/Treasurer
Steve Watson, Deputy CFO/Budget Director
Avery Peeples, City Council Liaison

Long-Term Forecast Report

FY 2021–2030

Office of the Chief Financial Officer
Office of Budget

March 31, 2021

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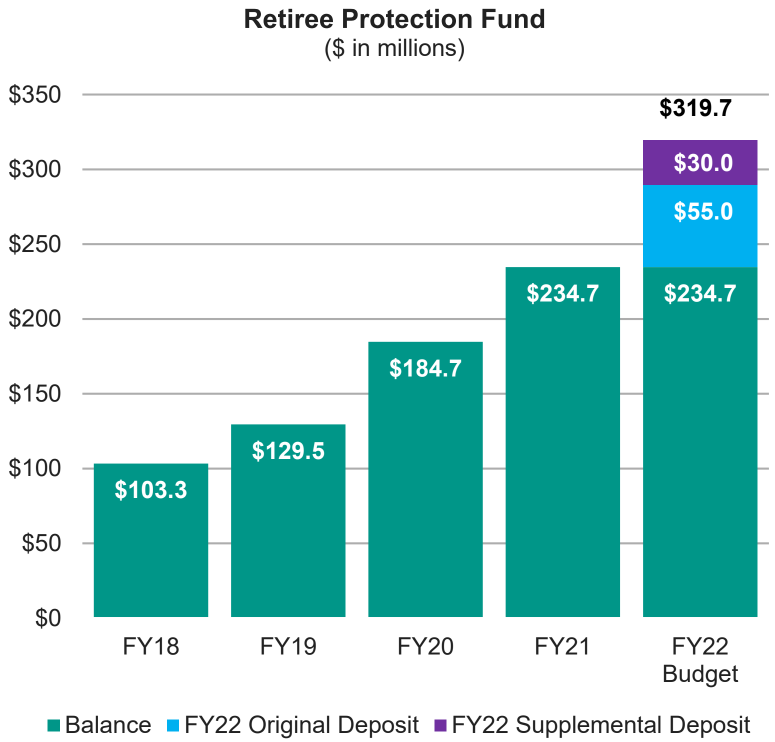
Executive Summary

- Detroit continues to face long-term financial challenges following the COVID-19 pandemic's impact on the economy and City's finances
- In response, we have proactively maintained balanced budgets through the pandemic and have not wavered in our commitment to our retirees and meeting our long-term obligations
- The proposed FY 2022 – FY 2025 Four-Year Financial Plan includes all of the originally scheduled Retiree Protection Fund ("RPF") deposits, plus an additional $30M in FY22
- To achieve fiscal sustainability, we will need to identify additional RPF funding, reduce recurring spending through new efficiencies and innovations, and continue to grow and diversify our revenues
- Targeted one-time investments that achieve these goals will be crucial to the City's future

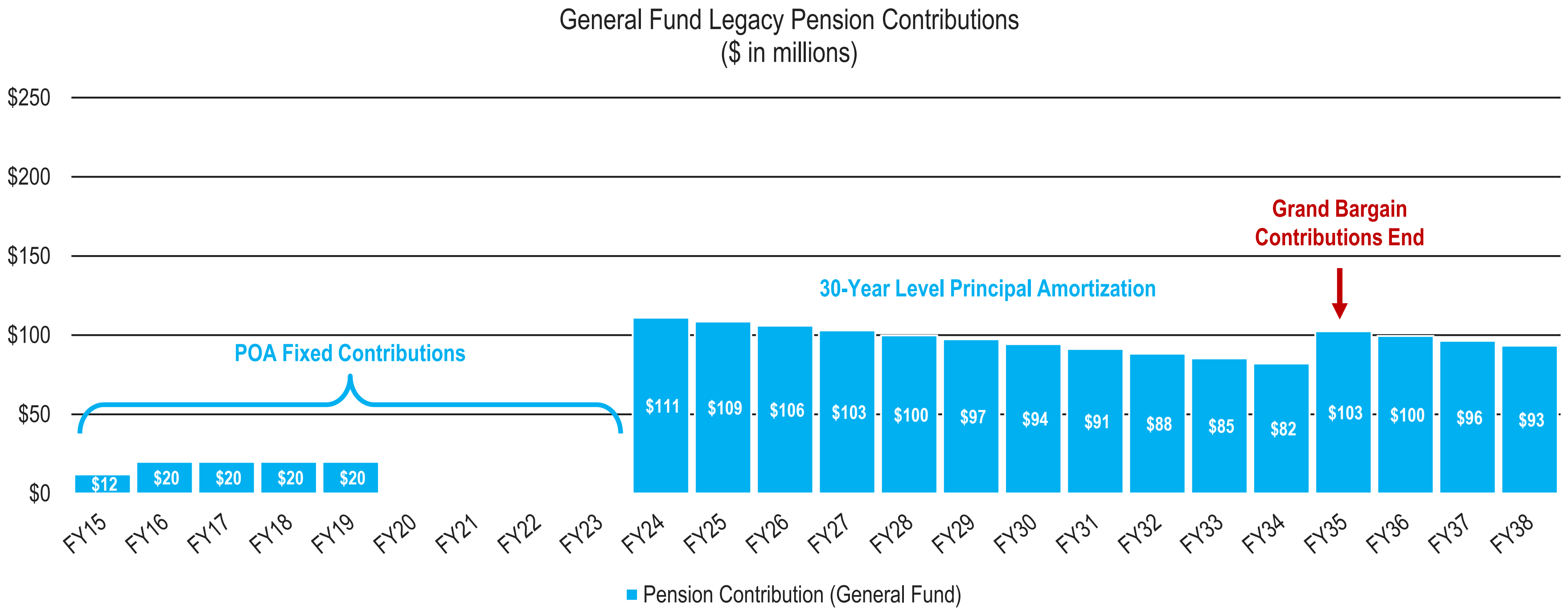
Legacy Pension Obligations

Legacy Pensions Background



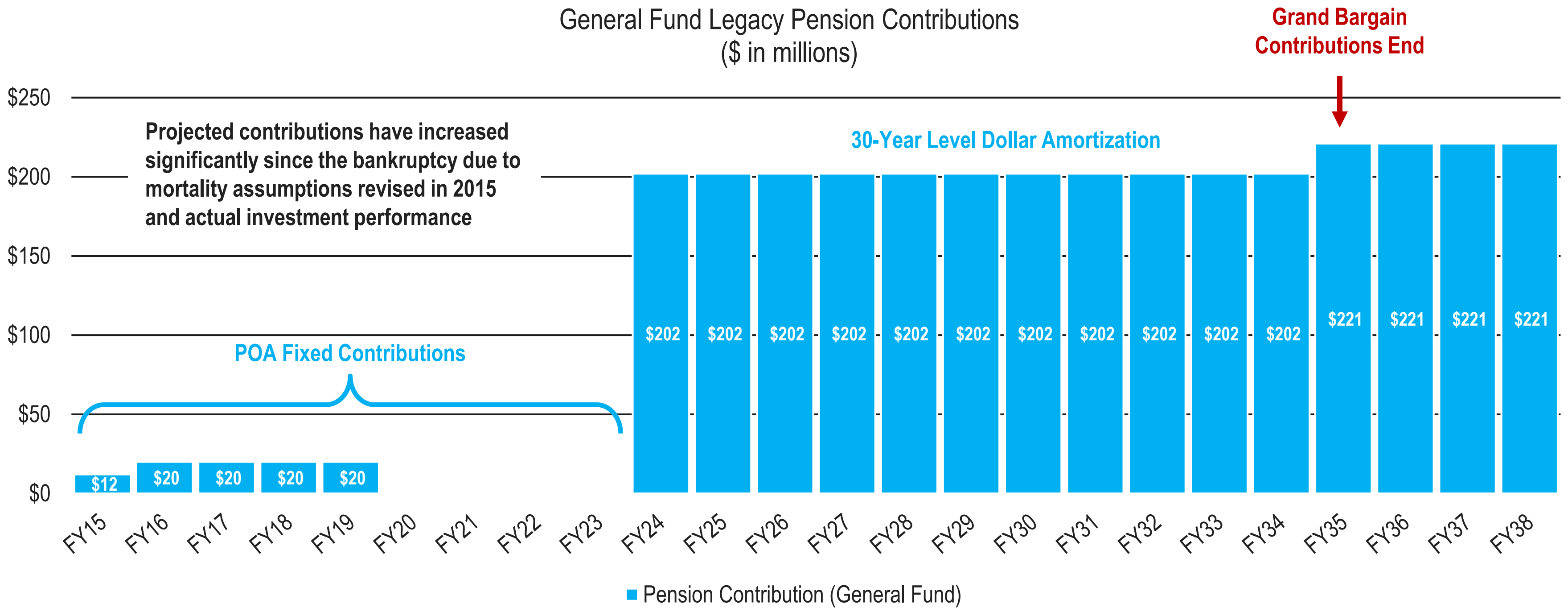
- The Bankruptcy Plan of Adjustment gave the City a 10-year "pension holiday" for the legacy plans to rebuild the tax base by investing in operations, capital, and blight removal
- It assumed only the fixed "Grand Bargain" pension contributions prior to FY 2024 followed by a 30-year amortization
- Instead of waiting for this "pension cliff" in FY 2024, the City began setting aside surplus funds in 2016
- The City established the Retiree Protection Fund ("RPF") in FY 2018 to conservatively invest the funds in a new irrevocable trust that can only be used for future pension funding and to help the City build room within its recurring budget over time
- The FY 2022 Budget includes the scheduled $55M deposit, plus another $30M supplemental deposit, for a total of $85M
- The RPF is critical to the City's pension funding strategy, and more funding will be needed to sustain annual pension contributions

Plan of Adjustment ("POA") Requirement (with October 2014 POA Projections)



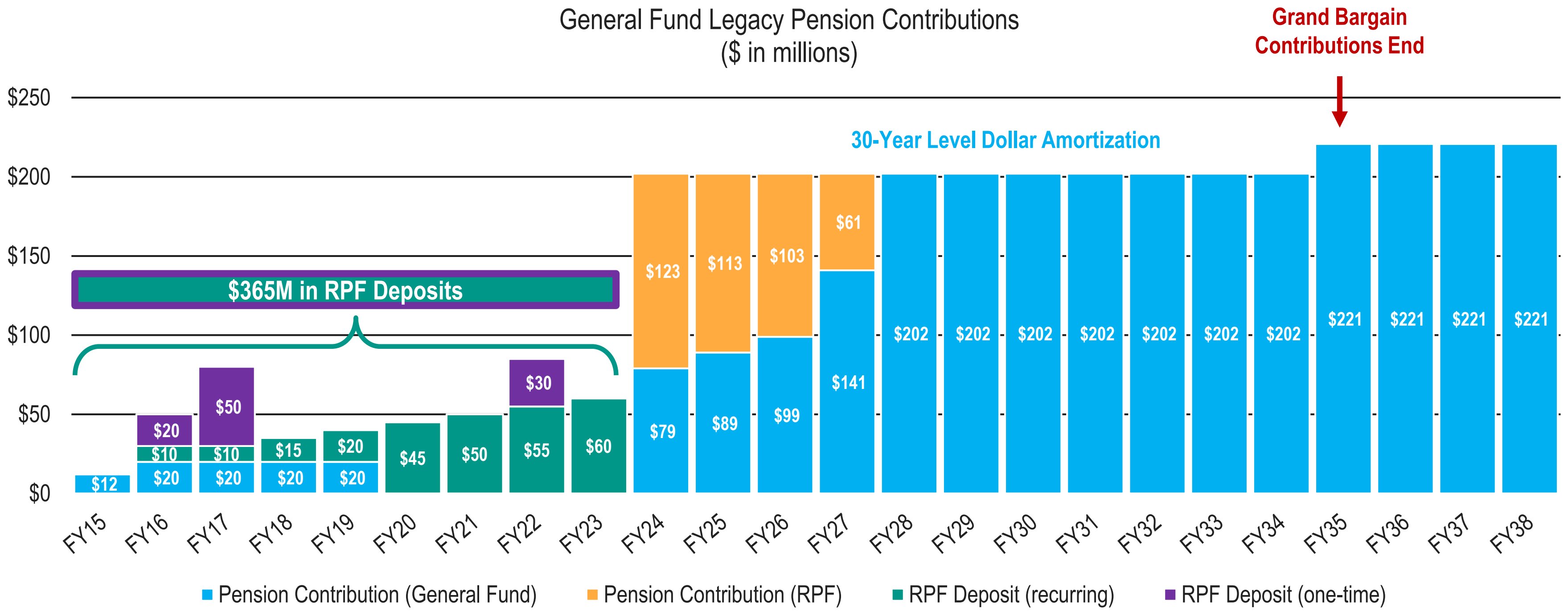
* Excludes "Grand Bargain" contributions from State of Michigan, Foundation for Detroit's Future (FDF), and Detroit Institute of Arts (DIA). DWSD and Library liabilities and contributions are separate.

Plan of Adjustment ("POA") Requirement (with City's March 2021 Projections)



* Excludes "Grand Bargain" contributions from State of Michigan, Foundation for Detroit's Future (FDF), and Detroit Institute of Arts (DIA). DWSD and Library liabilities and contributions are separate.

Retiree Protection Fund Plan (with City's March 2021 Projections)



* Excludes "Grand Bargain" contributions from State of Michigan, Foundation for Detroit's Future (FDF), and Detroit Institute of Arts (DIA). DWSD and Library liabilities and contributions are separate.

FY 2022 Pension Plan and RPF Review

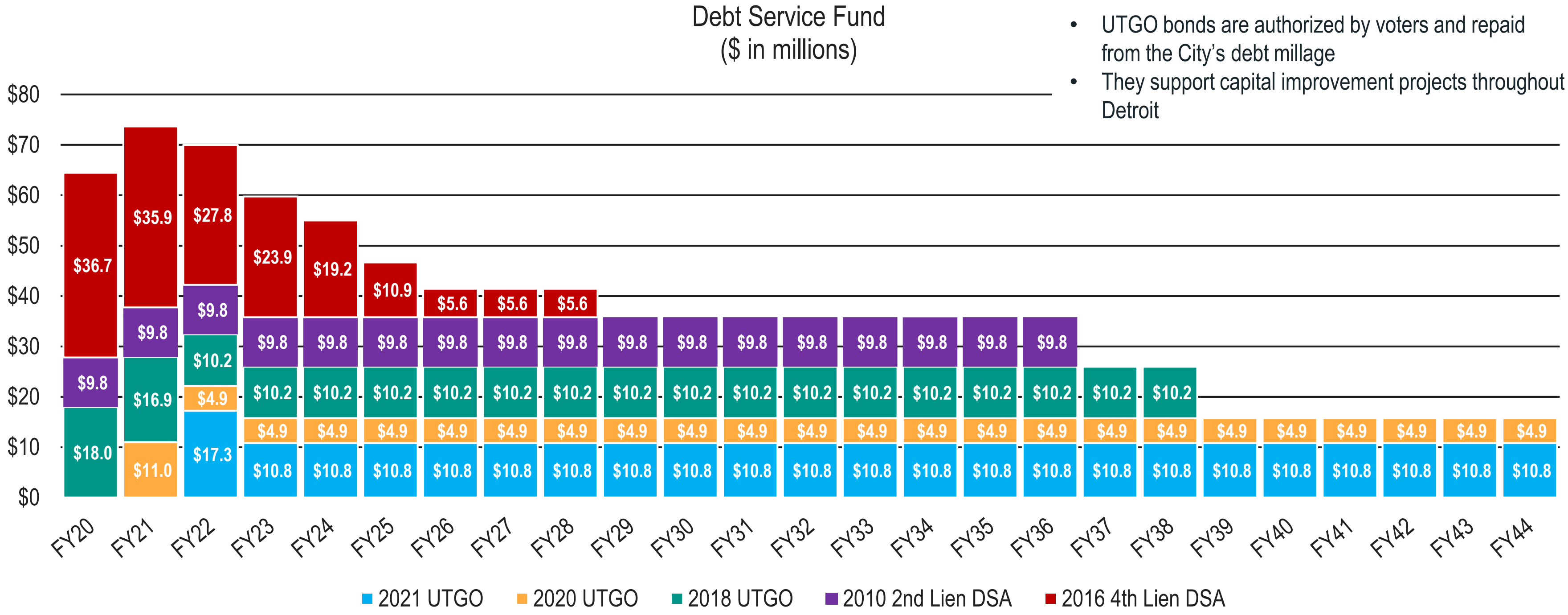
- Prior to developing the FY 2022 Budget recommendation, the OCFO reviewed the latest actuarial valuations, pension plan returns, and RPF returns
- No change to funding policy assumptions
- Projected FY 2024 net contribution from General Fund increased $36M vs. last year's review
  - Projected increases last year and this year are driven by investment performance below 6.75% assumed rate of return

Pension Model Updates and Assumptions	
Actuarial Valuation(1)	FY 2019 valuation
Latest Pension Plan Returns	**-0.96% GRS, 1.6% PFRS** **FY 2020 actual return**
Future Pension Plan Returns	6.75% projected
Amortization / Funding Policy(2)	30-year level dollar
FY 2024 Projected Contribution	$233.2M gross ($31.2M) FDF/DIA/DWSD/DPL(3) **$202M net from General Fund**
Latest RPF Returns	5.8% FY 2020 actual return
Future RPF Returns	1.56% for FY 2021 and declining to 1% post-FY 2023

(1) Actuarial valuations for FY 2020 may be completed by spring 2021.
(2) The Retirement Systems have not yet established funding policies
(3) Foundation for Detroit's Future and Detroit Institute of Arts are the "Grand Bargain" outside sources through FY 2034. Detroit Water and Sewerage Department and Detroit Public Library pension liabilities do not impact the General Fund.

Debt Obligations

Unlimited Tax General Obligation Debt Service

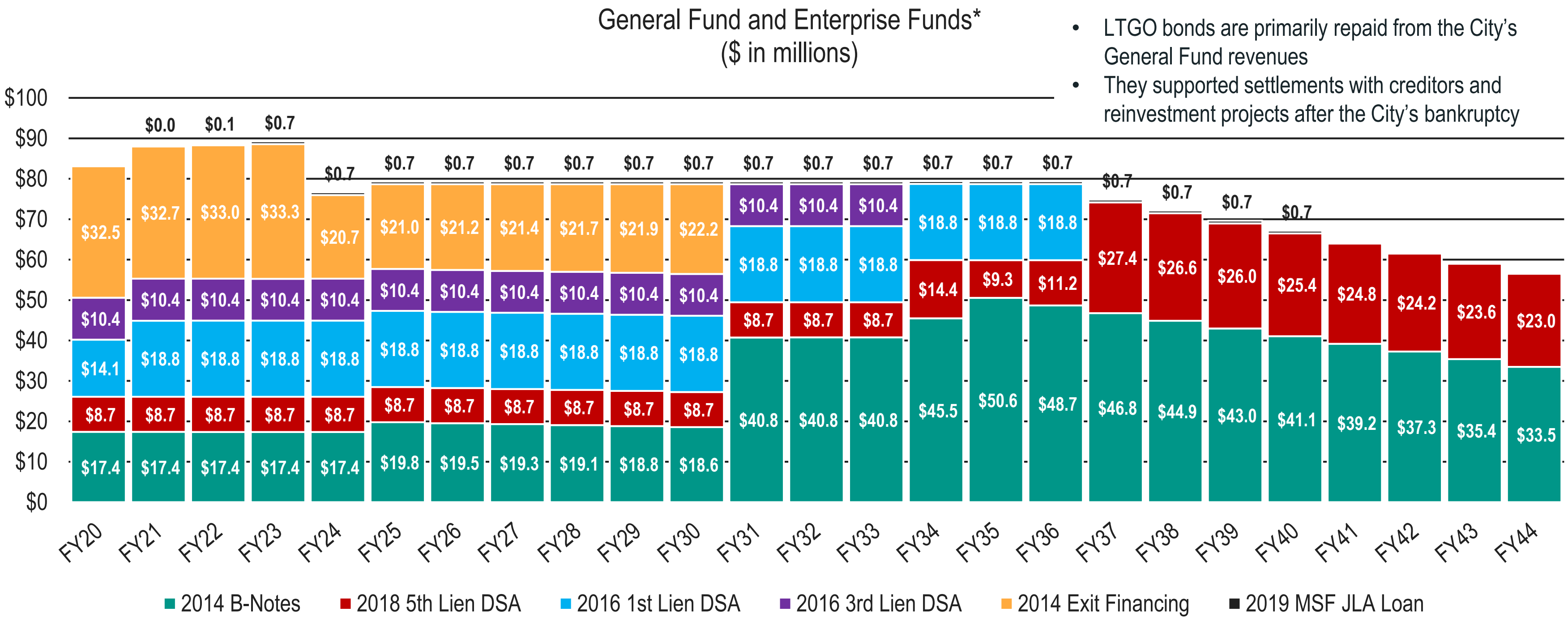


- UTGO bonds are authorized by voters and repaid from the City's debt millage
- They support capital improvement projects throughout Detroit

* Does not include projected debt service for remaining authorizations for unissued $40M in Capital Improvement UTGO bonds and $75M in Neighborhood Improvement Plan UTGO bonds.

Source: OCFO – Office of the Treasury

Limited Tax General Obligation Debt Service

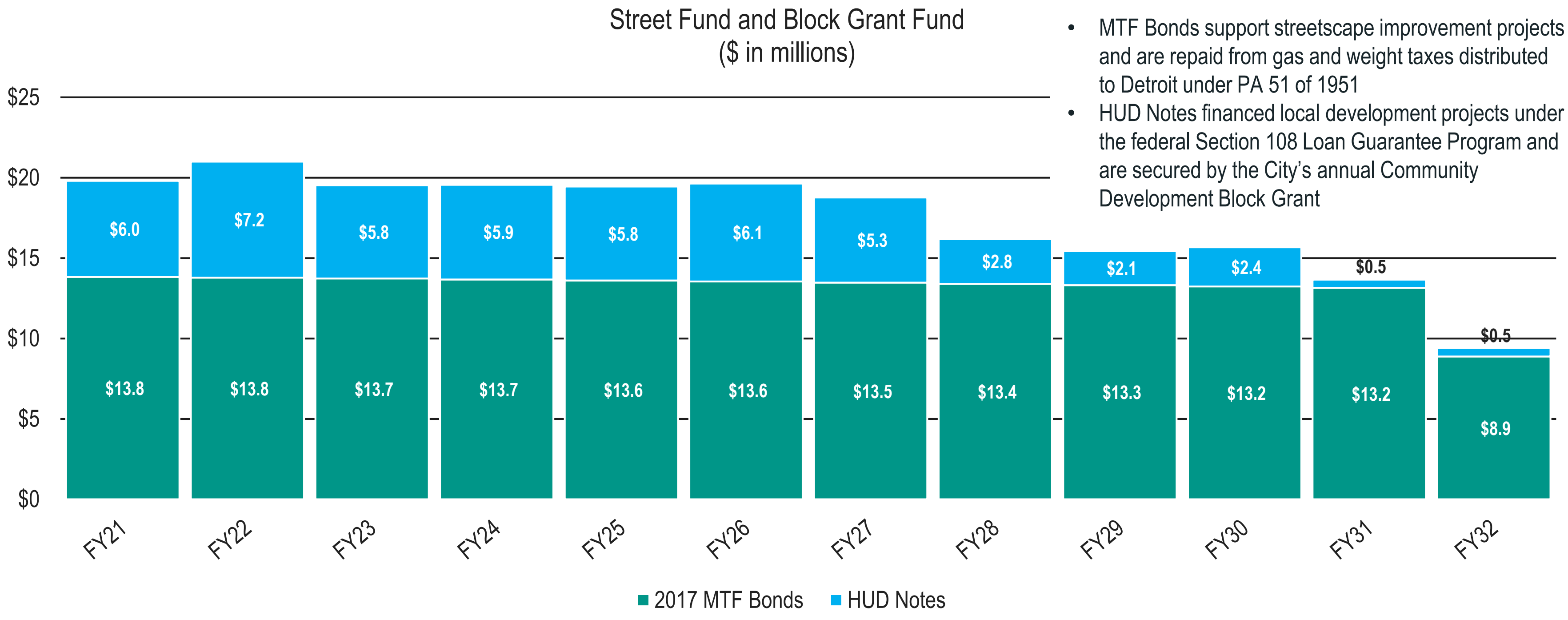


- LTGO bonds are primarily repaid from the City's General Fund revenues
- They supported settlements with creditors and reinvestment projects after the City's bankruptcy

* 2014 B-Notes are split approximately 80% General Fund and 20% Enterprise Funds.

Source: OCFO – Office of the Treasury

Michigan Transportation Fund Bonds and HUD Notes Debt Service



- MTF Bonds support streetscape improvement projects and are repaid from gas and weight taxes distributed to Detroit under PA 51 of 1951
- HUD Notes financed local development projects under the federal Section 108 Loan Guarantee Program and are secured by the City's annual Community Development Block Grant

Source: OCFO – Office of the Treasury

Long-Term Forecast

Baseline Forecast Assumptions

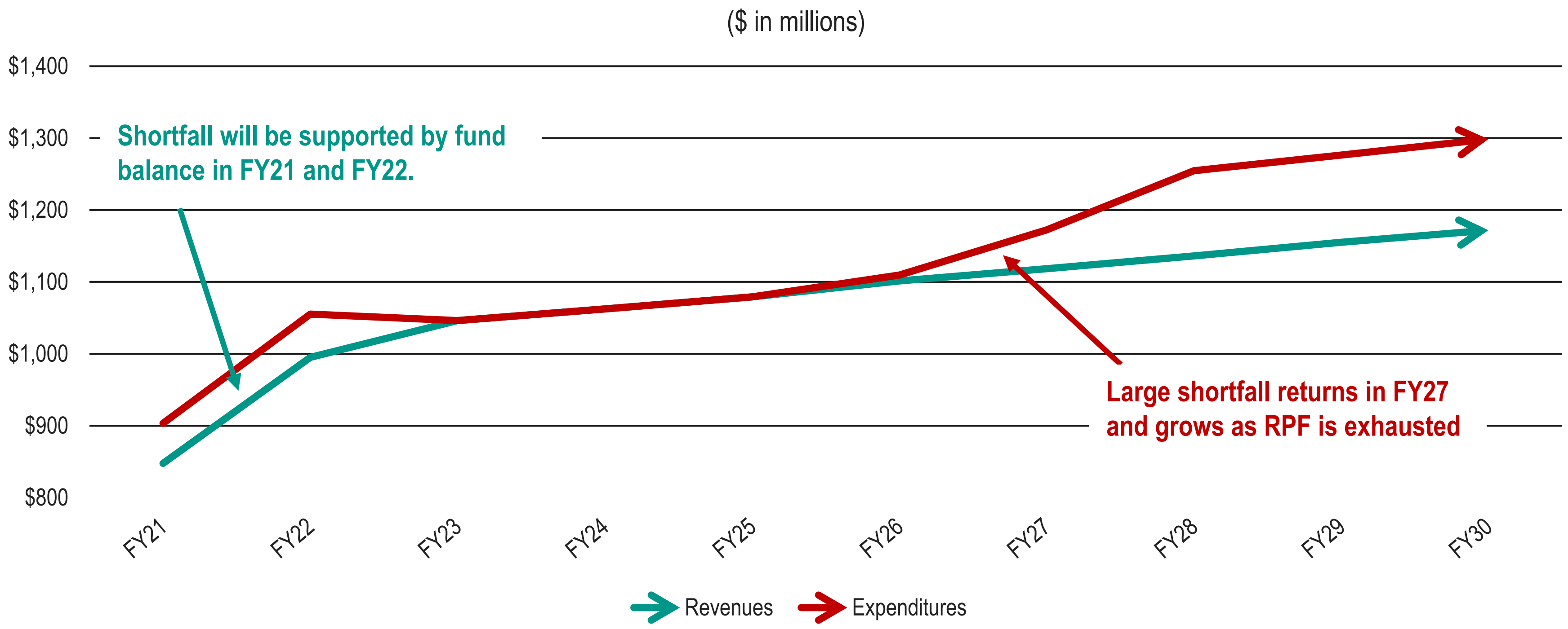
Revenues

- Based on the approved February 2021 Revenue Estimating Conference results for FY 2022 – FY 2025
- Revenue growth generally continues along revenue conference trends after FY 2025
- Forecast does not include one-time federal American Rescue Plan Act funding
- Forecast does not include potential significant negative effects of the proposed charter revisions presented to the Governor

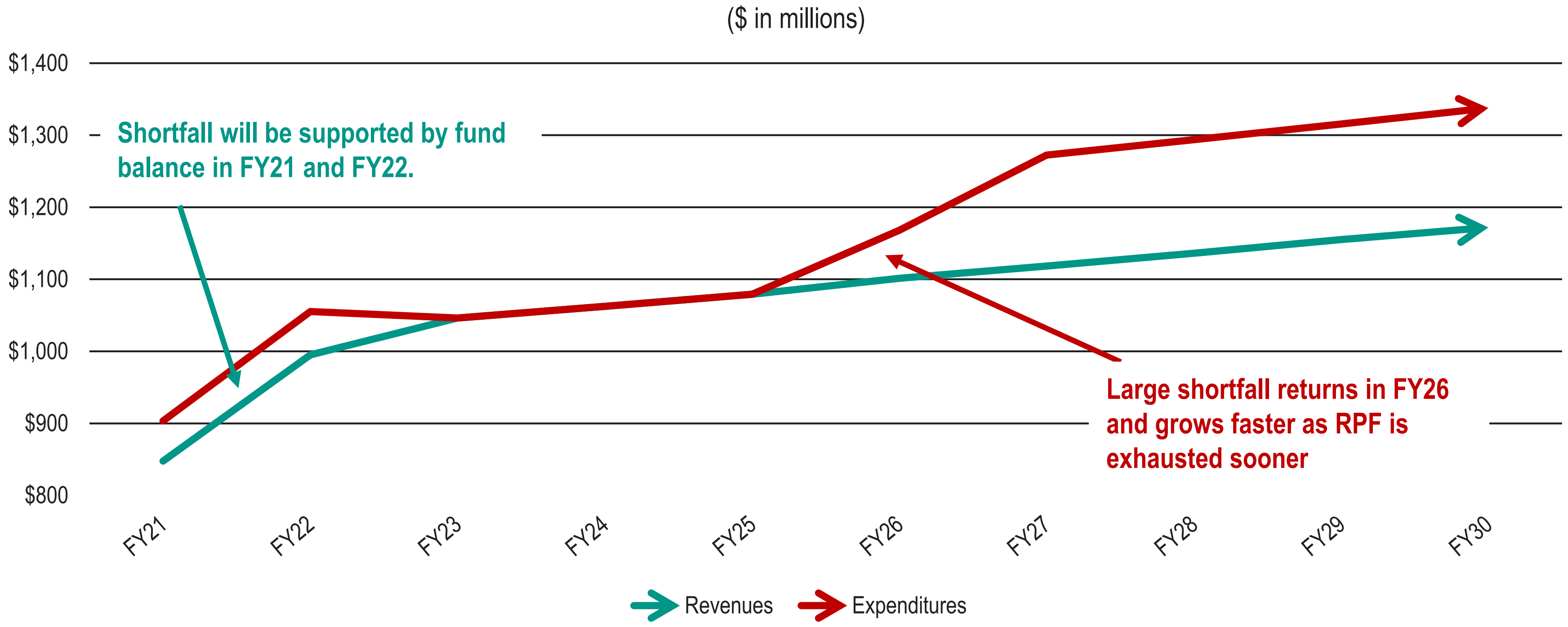
Expenditures

- Generally forecasted from FY 2020 actuals and known adjustments
- Annual wage growth based on current labor agreements and inflationary increases thereafter
- Healthcare, dental, and vision benefits include inflationary growth
- Legacy Pension cost based on proposed FY 2022 budget and 30-year level dollar amortization
    - An additional graph is provided to show the impact of a 20-year level dollar amortization
- Debt service based on existing debt service schedules
- Other operating expenditures include 2% inflationary growth
- Includes turnover, overtime, and other savings based on proposed FY 2022-2025 four-year financial plan
- Forecast does not include one-time spending from fund balance (e.g., blight, capital); it only includes recurring revenues and expenses
- Projections do not assume any corrective action beyond the four-year financial plan that would be taken to balance the budget

FY 2021-2030 Long-Term Forecast Baseline



FY 2021-2030 Long-Term Forecast
Baseline with 20-Year Pension Amortization



* The Retirement Systems are considering a 20-year level dollar amortization as the funding policies for the legacy pension plans.

Potential Upside and Downside Risks

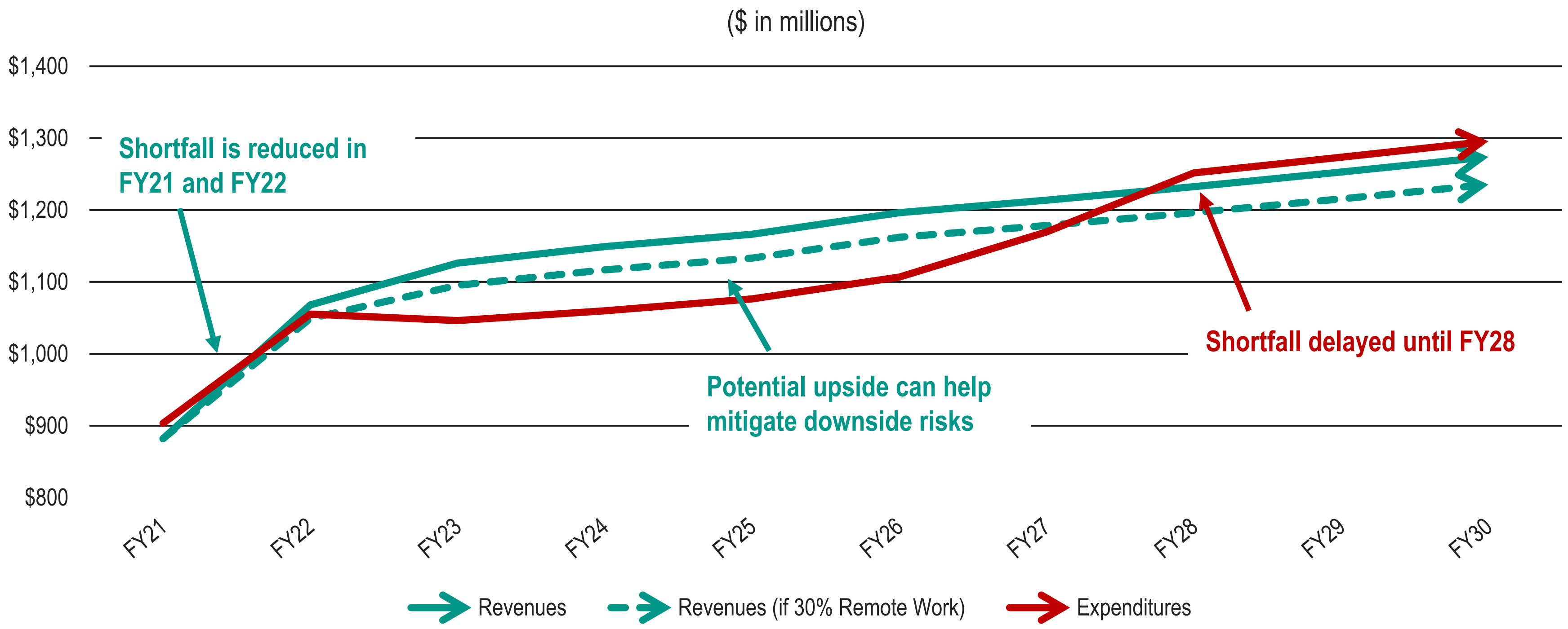
Potential Upside (added to forecast)

- Income and property taxes from economic development projects underway
- Internet gaming and sports betting taxes (launched Jan 2021)
- State-shared excise tax from adult-use marijuana (City authorized in Nov 2020, implementation underway)
- Departmental revenue gains from Emergency Medical Services and Municipal Parking improvements
- Potential income tax gains by reducing the resident poverty rate by 10% during the forecast period

Downside Risk (not included in forecast)

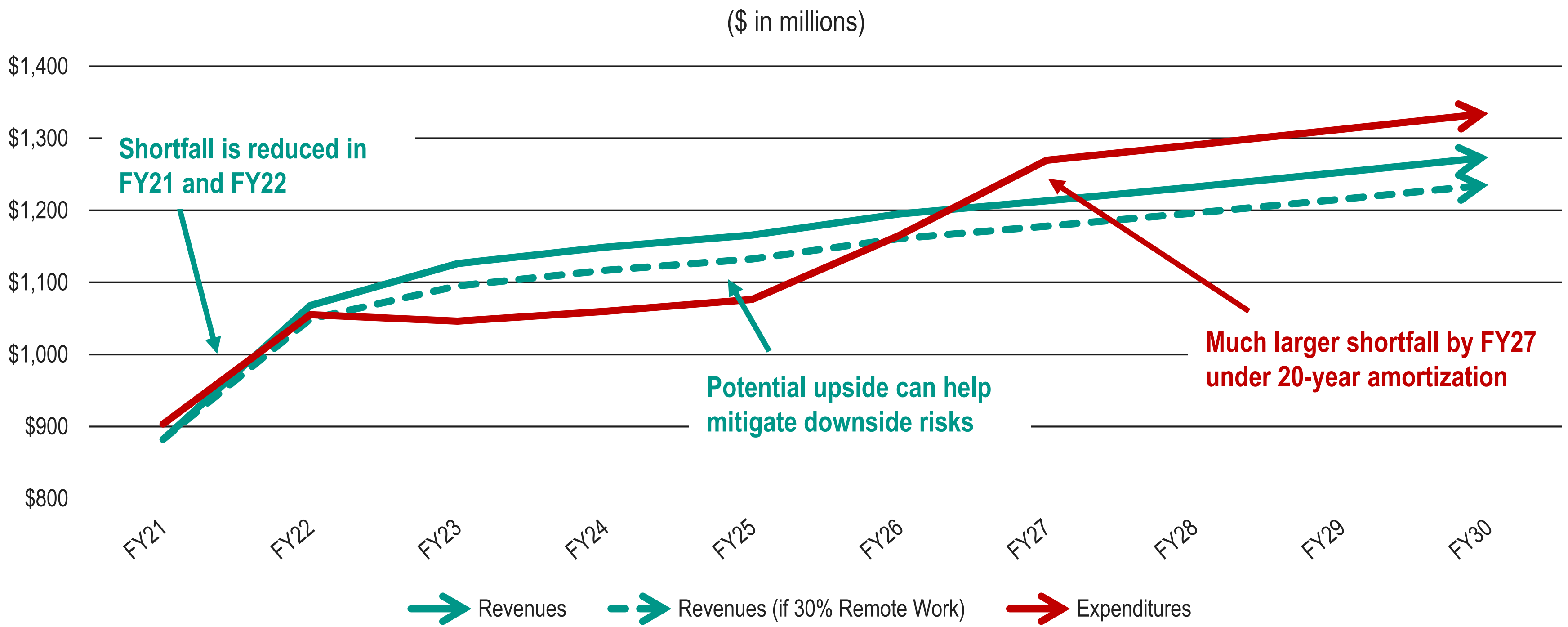
- Slower on-site casino recovery than expected
- Slower than anticipated recovery from recession
- Larger income tax losses from nonresidents who continue to work remotely (reduces taxable income)
    - Baseline assumes an ongoing 10% remote work loss, and a 30% loss is shown to illustrate risk
- Longer lasting changes in local economic activity due to workplace and behavior changes
- Future state and federal budget pressures causing reductions in local funding

FY 2021-2030 Long-Term Forecast with Potential Upside



* Baseline forecast assumes an ongoing 10% nonresident income tax loss from commuters who continue to work remotely. The dotted line shows the impact if the ongoing loss is 30% instead.

FY 2021-2030 Long-Term Forecast with Potential Upside and 20-Year Amortization



* The Retirement Systems are considering a 20-year level dollar amortization as the funding policies for the legacy pension plans.

* Baseline forecast assumes an ongoing 10% nonresident income tax loss from commuters who continue to work remotely. The dotted line shows the impact if the ongoing loss is 30% instead.

Long-Term Forecast Report

EXHIBIT J

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

September 28, 2020

Board Trustees, General Retirement System of the City of Detroit;
Board Trustees, Police and Fire Retirement System of the City of Detroit;
Investment Committee Trustees, General Retirement System of the City of Detroit; and
Investment Committee Trustees, Police and Fire Retirement System of the City of Detroit
One Detroit Center
500 Woodward Avenue, Suite 3000
Detroit, Michigan 48226

Attention: Mr. David Cetlinski, Executive Director

Re: City Funding Presentations

Dear Trustees:

We have been asked to provide comments on the City's recent presentation regarding the development of a funding policy for 2024 and beyond. Please note that we have not received numerical details of the City's proposal and have not been asked or attempted to verify the numerical accuracy of the presentations. Therefore, our comments are limited to the general information contained in the presentations and the City's verbal comments made at the meetings.

We appreciate this opportunity to comment and we commend the City for the initiative they have taken regarding the development of a funding policy for 2024 and beyond. However, as the actuary for the Retirement Systems, we have some concerns about the funding policy that is being proposed by the City. They are outlined below.

The City stated that its budget is not sustainable with a 30-year level dollar amortization.

The City has established a Retiree Protection Fund (RPF) and included projections using those funds to partially offset contributions based on a 30-year level dollar amortization, referred to in the presentation as the RPF Plan. A 30-year amortization is the longest allowable under Michigan law. The City then states "But City Budget not sustainable with current RPF Plan" on a slide that shows a City budget shortfall each year from FY 2020 to FY 2029. This is of critical importance to the Retirement Systems.

As part of the verbal presentation, the City representatives indicated that the City's financial situation had worsened during the pandemic. They indicated that not only has there been significant lost tax revenue due to the shutdowns, but that they believe tax revenue may be permanently reduced. They also indicated that they successfully closed near term budget gaps only by taking advantage of funds available through the CARES act.

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

As actuaries for the Retirement Systems, we do not have the data (nor the technical expertise) to assess the City's financial situation. However, assuming those comments to be accurate, ***the Retirement Systems face significant risk that the City will default on <u>any</u> funding policy, even the absolute minimum 30-year amortization***.

The City's argument relative to their financial position seems to favor accelerating contributions rather than delaying or reducing them and supports our continued recommendation of getting as much money as possible into the retirement system trust as soon as possible, preferably now.

The City is proposing a benefit payment plan that allows for the Retirement Systems to run out of money.

The City's proposal discusses a fixed initial 30-year rolling amortization (of unfunded liability) method that is intended to transition to pay-as-you go funding in 2045 (when benefit payments are projected to be lower than the fixed contributions). As we understand it, the proposed annual contribution amount would increase by 1% every year. ***There is a risk with a fixed contribution schedule that assets in the trust could deplete before the City is able to afford paying benefits directly. In other words, there is a risk that promised benefits will not be paid under this approach.*** The City indicated that from its perspective a fixed contribution schedule is more important than the risk that plan assets will deplete or that benefits may not be paid. We are not in favor of a policy that increases the risks of depletion of trust assets.

Our specific comments on the mechanics of this method are:

- *A fixed contribution schedule does not reflect gains and losses that will occur*. Presumably, the 1% annual increase in contributions is intended to mitigate the risk that the fixed contributions will fall below the minimum required by Michigan law. There was some discussion related to potential future adjustments if Plan experience results in an insolvency before the City believes it can afford the annual pay-as-you-go benefits. However, exactly how and when the initial contribution is determined and how and when future contribution adjustments are made are not detailed in the presentation. We would suggest that these details are critical and should be completely known before any decision is made regarding the viability of the proposed funding policy.
- *The initial period being used is too long*. In order to reduce the risk of Plan insolvency or the need to make future adjustments to any fixed contribution schedule, we recommend a higher initial contribution such as one determined with a shorter initial amortization period. In mature plans like the Legacy plans, the risk of plan insolvency is increased when amortization periods are longer than 10 or 15 years.
- *The City's proposal is a non-traditional funding method*. There may be standard methods that could be used to meet the same objectives and we would suggest they should be used instead. Again, we recommend use of a traditional funding method that funds 100% of the liabilities in the plan and that pays all plan benefits from the system trust.

It seems to be implicit in the City's proposal that the fixed contributions will be compared with a 30-year rolling amortization of the unfunded actuarial accrued liability with each valuation, arguably the minimum required by Michigan Law. In our opinion, a 30-year rolling amortization is an inappropriate actuarially determined contribution for the annual valuations for closed plans of this maturity and is a significant departure from all of our previous discussions about funding policy with the Boards and Investment Committees. As the actuary for the Retirement Systems, we reiterate the need for a funding policy that stipulates an appropriate actuarially determined contribution – even if its sole purpose is to be used in comparison to a fixed contribution schedule. Again, we reiterate our recommendation for closed amortization periods (dropping one year each year) of 20 years or less.

We expect that our projection tool can easily model a fixed contribution schedule as described in the City's presentation. However, the full technical details of the City's exact proposal for funding have not yet been provided to us. Once they are, we can then perform scenario/sensitivity tests of the proposal using our projection tool. We suggest that this should be done before any decisions are made regarding the viability of the policy. Please see one of our several supplemental reports for a more complete discussion of funding policies in general (for example, the Police and Fire report, dated January 11, 2019 or the General Employees report, dated September 18, 2019).

Other Comments

The presentation referred to the use of "outdated" mortality assumptions. In an effort to clear up any confusion, we would remind everyone of the following:

- The actuarial assumptions to be used in bankruptcy modeling were agreed upon by all parties (as required by the Court) and were different than those used in the actuarial valuations preceding the Bankruptcy;
- The City, the Retirement System and the Retiree Group, and their representative actuaries were the parties involved in the selection; and
- The mortality tables currently used in the subsequent actuarial valuations of the Retirement Systems were based on a study of mortality experience performed after the bankruptcy discussions had ended.

The City compared unfunded liabilities from the POA projections with unfunded liabilities from the June 30, 2014 actuarial valuations and attributed all of the difference in those numbers to the change in mortality which they verbally referred to as "the mortality mistake". Please note that POA unfunded liability amounts were:

- Developed by the City's actuaries (not the Retirement System's actuaries);
- Based on different census data (the June 30, 2014 census data was not available during the bankruptcy mediation – there has been significant data auditing/cleanup by the Retirement Systems and the City since Bankruptcy); and

- Possibly based on different assets. While we did not perform the POA projections and cannot definitively state what was used, we can state that we did not have final asset information available to use until after we had completed our participation in the mediation – final asset information was used for the June 30, 2014 valuation which was published in 2015.

We would appreciate the opportunity to meet with you to go over these comments in detail.

Sincerely,

Kenneth G. Alberts

Judith A. Kermans, EA, FCA, MAAA

David T. Kausch, FSA, EA, FCA, MAAA, PhD

KGA/JAK/DTK:dj

cc: Gail Oxendine, City of Detroit Retirement Systems
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EXHIBIT K

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Duggan vows to go back to bankruptcy court or Legislature over cuts to pension payment timeline

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Detroit Mayor Mike Duggan (center) presents his administration's budget proposal to Detroit City Council on Monday at the Coleman A. Young Municipal Center. The city wants to put $90 million in its Retiree Protection Fund that was created to prepare for the year 2023 when Detroit will need to start paying down its pension debt.

Detroit Mayor Mike Duggan plans to go to court over what he called an irresponsible decision by a pension board to shorten the time the city has to pay off legacy pension debt.

The city will take action in bankruptcy court to attempt to get a judge to reverse the Police & Fire Retirement System board's adoption of a 20-year amortization period, or payment schedule, Duggan said Monday during a budget presentation before City Council.

The city has been planning for a 30-year period when those post-bankruptcy payments resume in 2023 — a time that's nearing quickly and has been dubbed the "pension cliff" because it's a massive financial lift for the city. The city got a nine-year break from paying on that debt as part of renegotiated debts during its historic 2013-14 bankruptcy.

The Police & Fire Retirement System says it's obligated to make choices that are best for the funds' health, and thus its retirees. But Detroit officials disagree, seeing the shorter timeline as less tenable because it will make the city's costs even higher on the front end.

"We definitely will go back to bankruptcy court, and I think I may go to the state Legislature (if that doesn't work)," Duggan said, adding later that he's "pretty angry about this."

The mayor said that if the city can't get the payment schedule changed, "we're going to be looking at budget cuts here for no reason."

Duggan said his overall frustration lies in the fact that his administration lacks control over the decision. The payment schedule is determined by the boards and investment committees of Detroit's Police & Fire and General retirement systems.

"My bigger question is, why does the city of Detroit have no role in picking the investment committee that's making the decision on our retirees' pensions? And they're clearly not behaving in a responsible manner, and so if we don't get help in the bankruptcy court we may go to the Legislature and say, 'This just isn't right.'"

The disagreement between the city and retirement system board is complex, but important because of the major impacts it could have on the city's bottom line, its ability to spend on services for businesses and residents in the future and the pension systems that serve retirees.

Many of those retirees, who are watching this process with interest, are worried about more cuts — they already saw their benefits slashed as the city renegotiated debts during its bankruptcy.

20-year vs. 30-year schedule

The Police & Fire pension board moved to adopt a 20-year payment schedule because it found it was the best move to ensure the solvency of the pension funds — stated simply, to assure retired civil servants' benefits are safe. They approved it over objections from city-aligned members including city Finance Director John Naglick and Deputy Mayor Conrad Mallett.

A rolling 30-year amortization is like "having a huge credit card bill and making the minimum payment every month," Joe Bogdahn, chair of the investment committee for the Police & Fire Retirement System, or PFRS, told Crain's last year.

"The (Police & Fire Retirement System) has a fiduciary obligation is to ensure that benefits are paid to retired police, firefighters and their beneficiaries," Chairman Ron Thomas said in a Tuesday news release. "Further it is our job as a Board to ensure the system's funds are properly invested and managed to provide for future funding. Trustees have heard from our actuarial and other financial advisors that have run numerous what-if scenarios based on multiple funding models including 30-year, 20-year and others with respect to paying down the unfunded portion of future pension obligations. The 20-year model is clearly in the best interest of retirees."

But much like shaving 10 years off a 30-year mortgage, the chosen plan will drastically increase the city's costs on the front end.

The city agreed during its bankruptcy to a 30-year amortization with the pension systems "in the room," Duggan said Monday.

"They agreed to that," he said. "Now we've got an investment committee that was essentially appointed by (former Gov. Rick Snyder) that doesn't report to anybody, that has voted to shorten the amortization to 20 years."

Detroit financial officials estimate pension contributions will total $130 million-$200 million a year, depending on the schedule, equivalent to up to 20 percent of the annual budget.

While the police and fire pension board has decided on a 20-year amortization, the General Retirement System for other city employees, separate from police and fire, is still assumed at 30 years in the city's documents.

A request for comment from the general retirement system was not returned Tuesday.

In a June 2020 report, actuaries at Gabriel Roeder Smith & Co. warned that a 30-year level dollar amortization would cause the General Retirement System's funding level to drop dramatically to just 12 percent by 2045 as benefits paid to retirees outpace deposits from the city and investment gains. That's not good because if asset levels get low enough in later years, to the point of insolvency, benefits get paid out of the already stressed city budget year to year, David Draine, a principal public sector retirement system investigator for The Pew Charitable Trusts, told Crain's last year.

Saving up

Duggan also on Monday praised his administration and City Council for preparing for the pension cliff. They created a Retiree Protection Fund starting in 2018 where the city is socking away cash to help cushion the blow those payments will present to the budget.

There's about $370 million in the fund now and on Monday Duggan proposed putting an additional $90 million in it this coming fiscal year, an increase from the previously proposed annual infusion of $60 million.

"We have planned from the beginning to fund that 2024 cliff, so our retirees are not back in bankruptcy court and having their pension benefits cut again," Duggan said. "... To have somebody say to us, 'We're going to shorten the amortization for 20 years,' after we behaved in such a responsible manner, I think is flat-out wrong. So as you can probably tell, I'm pretty angry about this and we're working on strategies to deal with it."

The Police & Fire Retirement System's Tuesday news release also applauded the $90 million addition.

"We appreciate the Mayor and City Administration's stewardship of the City and ability to manage its budget amid the pandemic," Thomas said in the release. "While we may not agree with all aspects of future proposed city funding, there is a good spirit of cooperation with the administration of Mayor Duggan and we are encouraged by the city's funding of the Retiree Protection Fund to help bolster payments to the pension system in 2024 and beyond."

Inline Play

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