CITY OF LANSING, MICHIGAN
RETIREE HEALTH PLAN ANALYSIS
PRELIMINARY REPORT

May 11, 2017

Segal Consulting

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City of Lansing, Michigan

Retiree Health Plan Analysis Preliminary Report

Segal Consulting

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May 11, 2017

Mayor Virg Bernero
City of Lansing
City Hall
124 W Michigan Avenue
Lansing, MI 48933

Re: Retiree Health Plan Analysis Draft Report

Dear Mayor Bernero:

We are pleased to present the preliminary report of Segal's analysis of the City of Lansing's retiree health plans. This analysis provides a detailed review of the City's retiree health plans, including the following:

- ***Assumption and method review*** – an analysis of the actuarial assumptions and a review of the actuarial methods utilized in determining the accrued liability for compliance with generally accepted actuarial principles
- ***Peer group benchmarking*** – a comparison of the City's plans with other similar city plans in the State of Michigan
- ***Program design alternatives*** – a discussion of alternative design strategies for retiree health benefits
- ***Create independent actuarial valuation model*** – in order to quantify the current situation and potential changes
- ***Estimated Impact of Select Design Alternatives*** – estimated financial impact of potential changes
- ***Funding and Financing*** – a discussion of funding and financing issues around the City's retiree health benefits
- ***Other Important Considerations*** **–** a discussion of other considerations involved in reviewing the City's retiree health programs

Important Note Regarding Preliminary Report

In an effort to meet the needs of the City's timeframe, this report is only a preliminary version and is marked as **DRAFT**. Please refer to the more detailed note in the Executive Summary on page 7.

This analysis was conducted under the supervision of Dan Levin, a Fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries, and a Certified Employee Benefits Specialist. The calculations were performed in accordance with the standards of practice prescribed by the Actuarial Standards Board.

The assistance of the City of Lansing's staff is gratefully acknowledged.

We appreciate the opportunity to serve as an independent actuarial advisor for the City of Lansing and we are available to answer any questions you may have on this report.

Sincerely,

Daniel Levin, FSA, FCA, MAAA, CEBS
Senior Vice President
Health Consulting Actuary

Sincerely,

Kimberly Wixon
Vice President
Health Consultant

Sincerely,

Barbara Zaveduk, MAAA, EA
Vice President and Actuary

Enclosure

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1 Background

Understanding the Situation

The City of Lansing sponsors health care benefits for its retirees. The benefit specifics vary by group, based on collective bargaining agreements for union groups and fringe benefit documents for non-union groups. Depending on the specific group, benefits might include a combination of the following:

- Medical and prescription drug coverage for those not eligible for Medicare
- Medical and prescription drug coverage for those eligible for Medicare
- Retiree dental coverage
- Retiree vision coverage
- Medicare Part B premium reimbursement
- Retiree life insurance (Police and Fire only)

Together, all of these non-pension retirement benefits are referred to as the City's "Other Post-Employment Benefits" or OPEB.

The exact benefits and eligibility for receiving them depend on one or more of these factors:

- Group affiliation (examples – Police, UAW, District Court Exempt, etc.)
- Date of retirement
- Date of hire

Eligibility of joint spouses, child dependents, and surviving spouses may also depend on these factors. A matrix listing current benefits by date of hire and/or retirement cohort is shown in Appendix A of this report, for each major group and cohort.

Providing retiree health benefits to these groups creates significant challenges for the City, in terms of both current cash costs and long-term liabilities. As of January 1, 2016, we have estimated closed group liabilities (assuming no new hires eligible) under the City's OPEB program to be over $425 million, using a full prefunding based discount rate of 7.25%. Current annual cash cost (net of retiree contributions) is estimated at over $20.5 million.

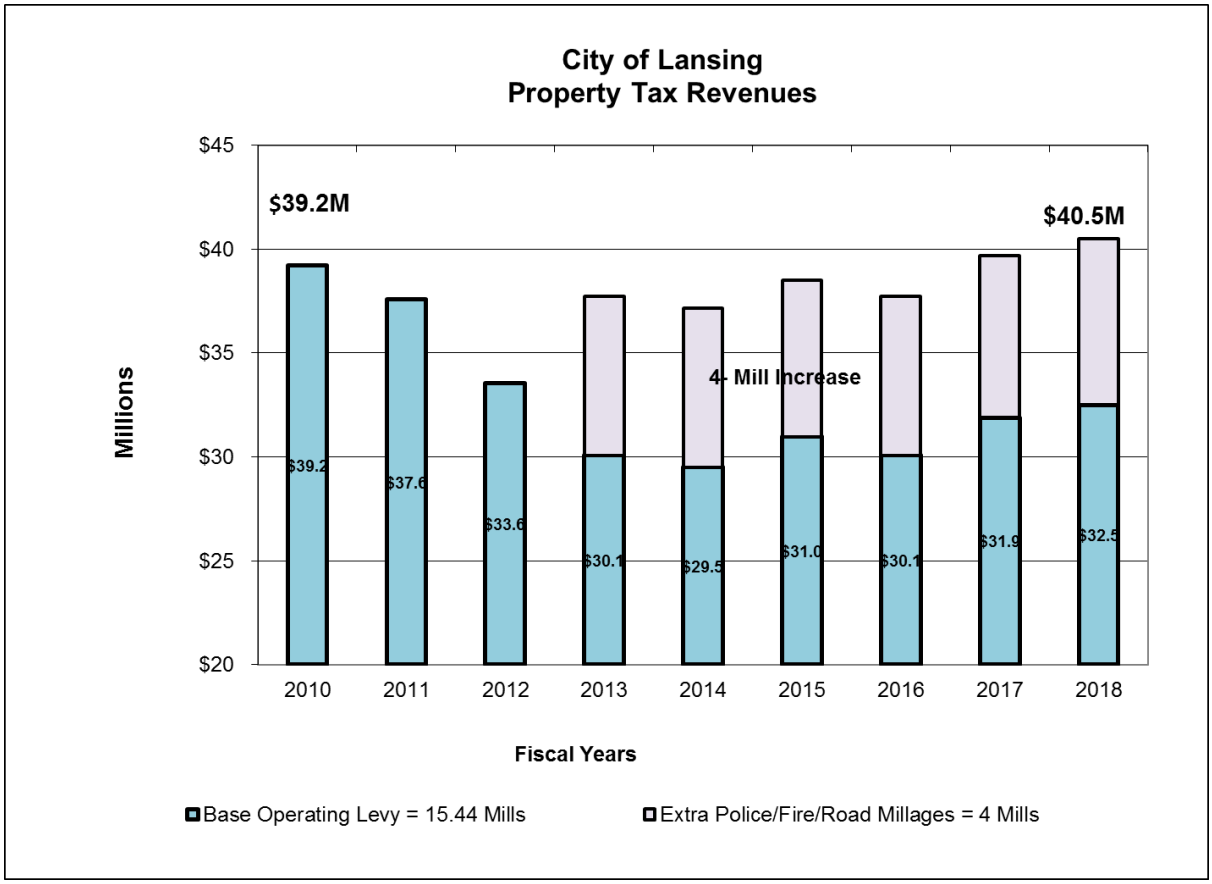
- Over 90% of the liability is attributable to collectively bargained groups
- Over 70% of the liability is attributable to participants who are already retired as of January 1, 2016
- City payroll of active employees covered by the defined benefit retiree health plan is approximately $46 million as of 1/1/2016, which means the City's annual cash cost for retiree health benefits is almost 45% of covered payroll.

Note that none of these numbers includes any of the City's pension plans or any of the new defined contribution retiree health care plans for newer hires.

City Revenue Challenges

Like other Michigan municipalities, the City of Lansing is challenged in its revenue structure. Michigan municipalities are severely restricted in their ability to diversify revenue sources, and the largest source permitted for municipalities, property tax, is limited in growth by the lesser of the rate of inflation or five percent. During the Great Recession, as property values declined, Lansing's property taxes decreased by 25%, or $9.7 million, over a four-year period, resulting in a four mill voted property tax increase for police, fire, and roads. While that four mill property tax levy substantially offset that loss, it brought the City's operating levy up to 19.44 mills, which within .56 mills of the 20-mill maximum allowed for home-rule cities in the State of Michigan. As a result, the City is unable to increase its operating property tax levy much further.

Chart 1 – Taxes

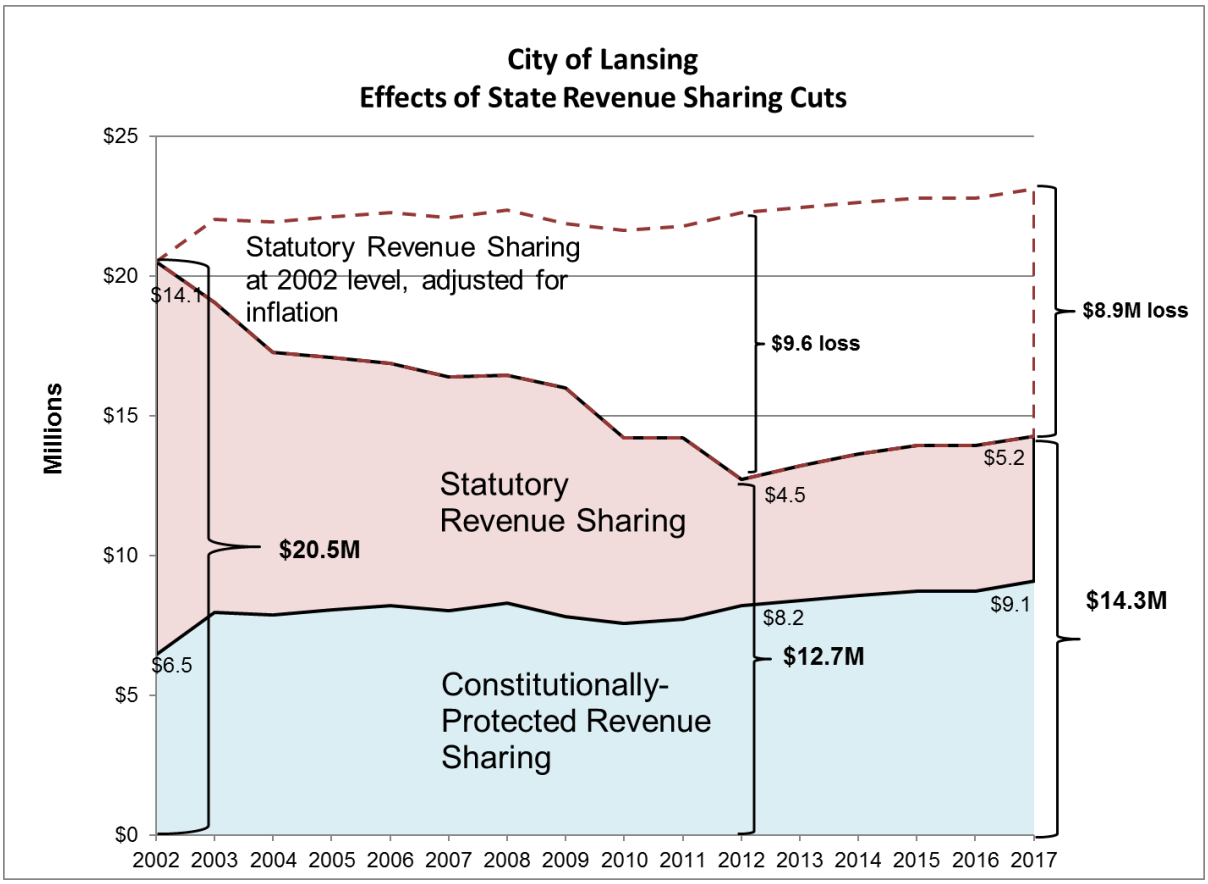


Source: City of Lansing Finance Department

Because of the above-stated state limitations on property tax revenue growth, from the state Headlee Amendment and Proposal A, the City anticipates its largest revenue source accounting for 31% of General Fund Revenues, to increase only 2%-3% over the next several years and that pre-recesssion property tax revenue levels, net of the extra four mills, will not be reached until 2025 to 2028.

Further challenging Lansing and Michigan municipalities, municipal revenue sharing by the State of Michigan has been reduced over the past 15 years by more than $6 million in real dollars annually for the City, and almost $9 million annually when adjusted for inflation.

Chart 2 – Revenue Sharing



Source: City of Lansing Finance Department

Previous Actions Taken by the City

In recognition of these challenges, the City has taken steps to modify benefits for its retiree groups, over the last several years.

Police Non-Supervisory and Supervisory

- Hires after 8/1/2014 do not receive retiree spouse/dependent medical, drug or Part B coverage in retirement
- Retirees after 10/12/2015 follow active medical and drug plan designs

Fire (IAFF)

- Hires after 8/1/2014 do not receive retiree spouse/dependent medical, drug, or Part B coverage in retirement
- Retirees after 7/1/2013 follow active medical and drug plan designs

UAW

- Hires after 10/21/2013 do not receive retiree spouse/dependent medical, drug, or Part B coverage in retirement
- Hires after 10/21/2013 do not receive medical/drug coverage, upon attainment of Medicare eligibility. They also do not receive reimbursement for Medicare Part B premiums.
- Retirees after 10/1/2014 follow active medical and drug plan designs

Teamsters 214

- Effective 1/1/2015, new hires do not receive defined benefit medical, drug, or Medicare Part B premium benefits

Teamsters 243 (Excludes T243 District Court)

- Effective 5/19/2014, new hires do not receive defined benefit medical, drug, or Medicare Part B premium benefits

Teamsters 243 District Court and District Court Exempt

- Hires after 4/1/2014 do not receive retiree spouse/dependent medical, drug, or Part B coverage in retirement
- Hires after 4/1/2014 do not receive medical/drug coverage, upon attainment of Medicare eligibility. They also do not receive reimbursement for Medicare Part B premiums.

In 2015, the Boomershine Consulting Group ("Boomershine") conducted an impact study of the above changes on the City's retiree health liability. The study estimated a cumulative cost savings of $172.4 million over the next 40 years, assuming full pre-funding of actuarially determined contribution amounts.

Since the 2015 study, the City has also implemented the following additional program changes:

Teamsters 243 District Court and District Court Exempt

- Effective 7/1/2016, new hires do not receive defined benefit medical, drug, or Medicare Part B premium benefits

Exempt Non-Bargaining

- Effective 7/1/2016, new hires do not receive defined benefit medical, drug, or Medicare Part B premium benefits

While these changes have helped to limit the City's liability on recent and future hires, the fact remains that the majority of the liability resides with current retirees.

As a result, unless changes can be made to existing retirees, 75% of the current retiree health liability cannot be affected at all.

2 Executive Summary

The City of Lansing (City) is seeking analysis and recommendations for potential ways to mitigate the cost and liability of its outstanding pension obligations and retiree healthcare and other post-employment benefits ("OPEB") obligations, both present and future.

Segal Consulting (Segal) was engaged by the City to perform this analysis. This report will concern itself with the OPEB plans currently sponsored by the City. The analysis of the pension plans will be provided in a separate report.

Important Note Regarding Preliminary Report

In an effort to meet the needs of the City's timeframe, this report is only a preliminary version and is marked as **PRELIMINARY DRAFT REPORT** in the page footers. In particular, please note:

- This report does show baseline current total liability in dollars by group, and it also makes certain points about relative percentages of liability. **Please note any numerical items shaded in yellow that are referenced in this report are subject to change in the final version.**

- The financial impact of changes for scenarios illustrated in Section 6 are only expressed in color coded bands, which are intended to illustrate high, medium, and, low impact on accrued liability. The actual dollar value of the liability changes are not quantified in the preliminary report. **Actual dollar values will be provided in the final report.**

While we believe that the impact band levels presented in this preliminary report are reasonable and appropriate, it is possible that one or more impact scenarios illustrated in Section 6 could change impact bands in between the preliminary and final reports.

Current State

The City of Lansing sponsors a defined benefit (DB) health care program for its retirees. The benefit specifics vary by group, based on collective bargaining agreements for union groups and fringe benefit documents for non-union groups. Key features of the program are:

- Most groups receive medical and prescription coverage for both Medicare eligible and non-Medicare participants, dental, vision, and full Medicare Part B reimbursement.

- No participant contributions are required for Medicare eligible medical/prescription coverage, dental, or vision. Older retiree cohorts have no participant contributions for non-Medicare benefits either.

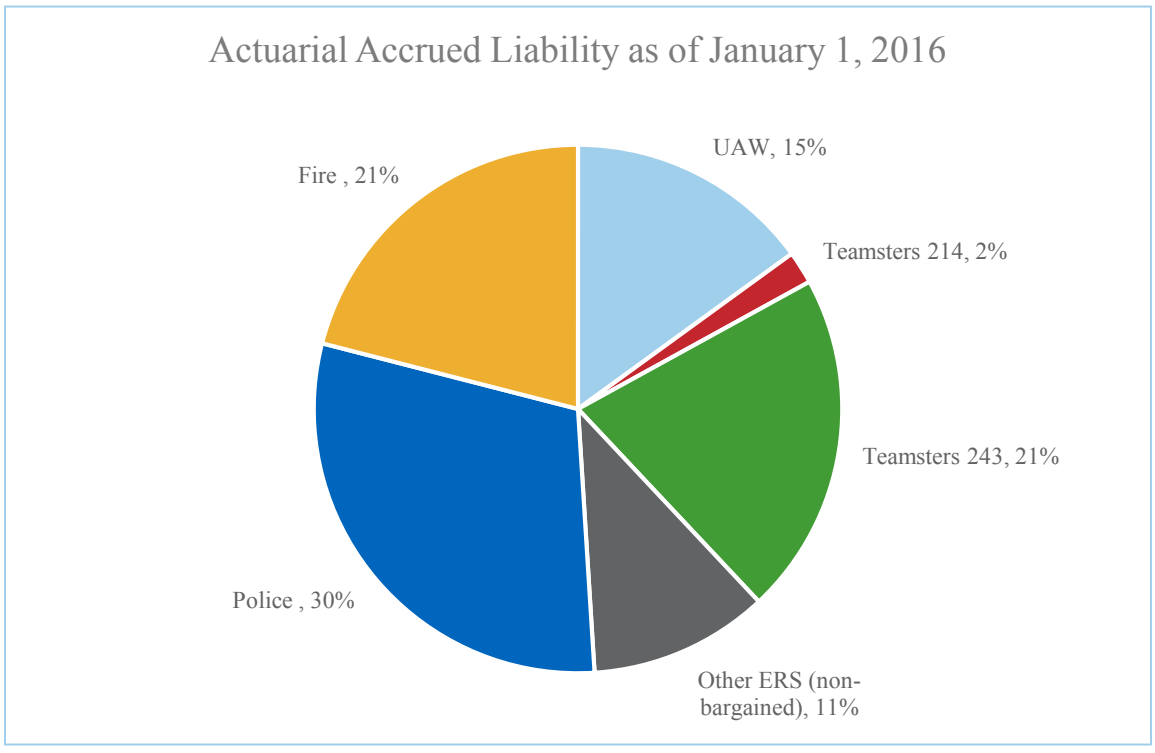
- Newer non-Medicare retiree cohorts are responsible for retiree contributions only to the extent the full premium cost exceeds the Michigan PA-152 "hard cap". However, some groups have pension percentage limits or dollar limits on retiree contributions, which override the hard cap.

- New hires after specific dates for Teamsters 214, Teamsters 243, District Court, and most other non-bargained groups are in a separate defined contribution (DC) program and can only qualify for dental and vision benefits through the DB program. New hires of Police, Fire, UAW, and a few specific non-bargained employees are still eligible for the full DB plan, including medical, prescriptions, and Medicare B reimbursement.

Complete details of all plan provisions used for our report valuation are in Appendix A. Please note that these provisions reflect the plan of benefits Segal valued in this report, but in no way imply a promise or legal obligation on behalf of the City of Lansing to provide the benefits illustrated.

As of January 1, 2016, there are 374 actives, 52 term vests, and 864 retirees participating the defined benefit retiree health plan. Police and Fire have 346 actives, 23 term vests, and 655 retirees participating the defined benefit retiree health plan.

The current actuarial accrued liability is estimated at about $425 million, using a 7.25% discount rate, based on a full prefunding investment return rate of 7.25%. Complete details of assumptions used can be found in Appendix B. This accrued liability is approximately split by group as follows:



From the above chart, it can be seen that almost 90% of the liability is attributable to collectively bargained groups. It is also important to note that about 75% of the current accrued liability is attributable to current retirees and their dependents.

Scenarios and their impact bands

In order to estimate the impact of various potential program changes, Segal created an independent actuarial valuation model as of January 1, 2016. We reviewed a number of different scenarios, in order to illustrate the impact on the accrued liability for a various possible program design changes. For this preliminary report, we did not quantify the changes to a specific dollar value, but represented them in three (3) bands:

High impact = 15% or more reduction in total accrued actuarial liability for each sub-group and and/or for the composite of all groups combined.

Medium impact = 5% to 15% reduction in total accrued actuarial liability for each sub-group and and/or for the composite of all groups combined.

Low impact = less than 5% reduction in total accrued actuarial liability for each sub-group and and/or for the composite of all groups combined.

The resulting band for each scenario is shown in Section 6 of this report. **Actual dollar values will be provided in the final report.**

In order to understand the impact not only on current liability, but also on future liability, we produced a second set of scenarios with bands that estimate the projected accrued liability impact as of 1/1/2046 – 30 years into the future. Since current liabilities are only based on a closed group (no new hires), the impact of certain changes to current actives or future hires would not be obvious without a long-term projection, which does incorporate assumed future hires.

Benefit Change Options for the City

In considering options for the City to pursue, one should consider:

- Reduction impact on liability (low, medium, or high)
- Difficulty of making the change (more difficult for current retirees, as an example)
- Prevalence of the benefits being reduced among the benchmark comparators in Section 4, as well as our experience with public sector retiree health programs
- Impact on affected groups

In reviewing those considerations, we believe it makes sense for the City to further investigate the following options:

- **Eliminating Medicare Part B reimbursement** – This is a medium impact item, since the Medicare Part B reimbursement represents more than 10% of the total liability. This benefit is not offered by any benchmark comparator and our experience is that plans that had a Part B benefit in the past eliminated it year ago. Additionally, Part B premiums are a very predictable expense to budget for retired participants.

- **Eliminating subsidized dental and vision coverage** – Although elimination of either dental or vision alone is a low impact item, eliminating both together is a medium impact item. Combined, they represent about 5% of total liability. It appears that no other comparator group provides subsidized dental or vision beyond age 65. Alternatively, these coverages could be offered with no subsidy, where retirees have access at the full premium cost.

- **Institute a percentage cost share for Medicare eligible coverage –** The impact of this obviously depends upon the level of contribution required, but our illustrative scenario of 25% has a medium impact. Monthly contributions for Medicare eligible medical and drug coverage are a typical plan feature, in our experience. The comparators were mixed, with one city not even offering any subsidy for Medicare coverage and another with very high (but less than 100%) subsidy. Monthly contributions are predictable and easy for retirees to budget as well. The reason we recommend a percentage of cost rather than a fixed dollar amount is have the contribution amount automatically keep pace with inflation.

- **Replace "Option2" design with "Option1" design for Medicare eligible medical and prescription coverage –** The impact would be a medium impact on liability. Increases in Medicare point-of-service cost sharing are relatively predictable expenses for retirees. While Medicare eligible plan designs of comparators were not available for benchmarking, our experience indicates that the current AMWINS designs are relatively rich.

- **Addition and enforcement of the Michigan Public Act 152 hard cap for all groups –** Currently, the cap does not apply to legacy retiree cohorts and many of the newer cohorts have contribution limits as a percentage of pension or a dollar amount, which override the hard cap. Adding/enforcing the cap on all groups (no contribution limits) is a medium to high impact change.

- **Replace group Medicare eligible medical and drug coverage with a "defined dollar" Health Reimbursement Account (HRA) arrangement –** This a medium or high impact change, depending on the increases provided annually by the City. This design can result in a short-term "win-win" scenario for the City and the participants. Since the liability savings is generated by the control of health care trend, health inflation will eventually reduce the value of the benefit compared to the current offering. However, it can be argued that as buying power is reduced, retirees can make necessary adjustments and budget for additional costs. More detail on this design and the participant impact can be found in Section 5 of this report.

- **Consider funding the DB OPEB annually with an actuarially determined contribution amount –** This will fund the plan and provide assets to lower future contributions. However, it is recognized that this may not be practical, given the City's resource constraints.

While the above are options that we believe make sense for the City to consider, an expanded list of options and impacts is presented is Section 6.

Note that some of these changes are mutually exclusive. For example, moving Medicare coverage to a defined dollar arrangement would make instituting a 25% participant contribution on Medicare costs irrelevant.

While no changes are "painless", a combination of one or more of these items may be a way for the City to help manage its retiree health liability both currently and into the future.

3 Assumption and Method Review

The assumptions and methods used to produce the City of Lansing's results used in this report are detailed in Appendix B. This section focuses on our review of assumptions utilized by the Boomershine Consulting Group ("Boomershine") in their January 1, 2016 retiree health valuations.

The actuarial valuation of a defined benefit (DB) retiree health plan is dependent upon assumptions of future experience. These assumptions are utilized in order to project the benefits that will be paid from the system.

It is important to note that the actuarial assumptions used in the valuation do not affect the benefits that are promised to participants. Ultimately, the "true cost" of a program will be the benefits that are paid to its participants. Assumptions are used to estimate the liability of the program and to review potential funding of the cost over time.

These assumptions are the actuary's best estimate of future events and are rarely perfectly accurate. It is important that the assumptions used in these calculations need to be monitored and modified as appropriate, so that the true cost of the benefits paid is being accurately measured.

For the purposes of reviewing assumptions for this study, we reviewed and evaluated the following documents:

- City of Lansing Employees' Retirement System Actuarial Valuation of Retiree Healthcare Benefits as of January 1, 2016 (prepared XXX 2017)
- City of Lansing Employees' Retirement System Actuarial Assumption Review and Experience Study Covering January 1, 2012 through December 31, 2015 (prepared December 2016)
- City of Lansing Police and Fire Retirement System Actuarial Valuation of Retiree Healthcare Benefits as of January 1, 2016 (prepared XXX 2017)
- City of Lansing Police and Fire Retirement System Actuarial Assumption Review and Experience Study Covering January 1, 2012 through December 31, 2015 (prepared December 2016)
- City of Lansing Employees' Retirement System Actuarial Valuation for Funding and Contributions as of December 31, 2015 (prepared October 2016)
- City of Lansing Police and Fire Retirement System Actuarial Valuation for Funding and Contributions as of December 31, 2015 (prepared October 2016)

The above reports were produced by the Boomershine Consulting Group ("Boomershine"), the plans' valuation actuaries.

Actuarial valuation assumptions are generally divided into two groups: demographic and economic. Demographic assumptions are used to model the expected individual behavior of plan participants and include assumptions for retirement, disability, withdrawal, and mortality. Economic assumptions are used to model financial behavior, such per capita benefit costs, healthcare trend, return on assets, and salary increases.

Demographic Assumptions

Retirement, Termination, and Disability

Segal is not in a position to independently evaluate retirement, termination, and disability rates. However, we did review the assumptions Boomershine recommends in the above experience reviews for general reasonableness and agree they appear to be reasonable.

The percentage of disabilities assumed as duty-related is 100% for both Boomershine OPEB valuations. Boomershine's pension valuation reports use more detailed disability assumptions, which assume 95% of Police and Fire and 50% of ERS disabilities are duty-related.

Segal recommends the City consider using duty versus non-duty disability actuarial valuation assumptions that are consistent with the Boomershine pension valuation reports.

Mortality

There have been significant improvements in mortality over the last several decades. It is now common for actuaries to use mortality tables that have a built-in projection scale, so that mortality is assumed to improve over time. In fact, Actuarial Standards of Practice now specify that plan actuaries explicitly reflect the effects of mortality improvement in valuations, unless there is a specific reason for not doing so.

The Boomershine experience reviews recommend using the sex-distinct RP-2000 Table projected to 2026 with improvement Scale BB. Blue-collar adjustments are used for Police & Fire and separate rates are used for disabled lives.

Projection of the tables to a specific year will allow for some projection of future mortality, but not the total amount of projection that is implied by the improvement scale. The Society of Actuaries has published the RP-2014 mortality table as well as a generational mortality improvement scale (MP-2015).

Segal recommends the City consider using updated mortality tables with a fully generational projection scale.

Election of Terminated Vested Participants

The Boomershine OPEB reports assume that all term vested participants elect to receive their retiree health benefits at a specific age.

This single age assumption works fine for pension valuations, due to the presence of early retirement reduction factors. However, a single age assumption does not generally work as well for retiree health, because not only do more years of benefit receipt mean higher liability, but also years received prior to attainment of Medicare age are significantly more expensive than those years after Medicare eligibility.

Segal recommends that the City consider developing a distribution of terminated vested health plan election assumption rates, which vary by age and group

Spouse/Dependent Assumptions

Segal is not in a position to independently evaluate independent spouse married rates, spouse/child election rates, or spouse/child age assumptions. We did review them for general reasonableness and agree they appear to be reasonable.

The Boomershine OPEB reports use actual spouse date of birth to determine marital status for both actives and retirees. While this is typical for current retirees, it is more common for valuations to assume a married percentage for active participants at the point retirement, since their status often changes between the valuation date and the time they retire.

Segal recommends that the City consider using a percentage married at retirement assumption for currently active employees, rather than actual married status at the valuation date.

Economic Assumptions

Investment Return Rate

Segal is not in a position to independently evaluate the investment return rate assumption. However, we did review the 7.25% assumption Boomershine recommends in the above experience reviews for general reasonableness and agree that it appears to be reasonable.

Healthcare Trend Rates

The Boomershine OPEB valuations use a non-Medicare combined medical and prescription initial trend rate of 6.5% and graded down to 4.5% at 0.5% annually. Segal agrees that an ultimate non-Medicare trend rate of 4.5% is reasonable.

In the current economic environment, it is typical for OPEB valuations to use a higher initial non-Medicare trend and a long-term period to grade down to the ultimate rate. For example, an initial non-Medicare combined trend rate of 8.5% and grading down to 4.5% at 0.25% annually.

The City may wish to consider using a higher initial non-Medicare combined medical/prescription trend rate, and may also wish to consider lengthening the grading period to the ultimate rate.

The Boomershine OPEB valuations use a Medicare combined medical and prescription trend rate of a flat 4.5%. Segal agrees that an ultimate Medicare eligible trend rate of 4.5% is reasonable.

In the current economic environment, it is typical for OPEB valuations to use a higher initial Medicare eligible trend and a long-term period to grade down to the ultimate rate. For example, an initial Medicare eligible combined trend rate of 6.5% and grading down to 4.5% at 0.25% annually.

The City may wish to consider using a higher Medicare eligible combined medical/prescription initial trend rate, along with a grade down period to the ultimate rate.

Segal agrees with the reasonableness of a flat 4.5% annual trend for Medicare Part B, dental, and vision.

Michigan Public Act 152 Increase Rate

Since the City's non-Medicare benefits are subject to the Michigan Public Act 152 hard cap for many of the newer retiree cohorts, an assumption about the rate of increase in the hard cap is required for the valuation. The Boomershine OPEB valuations use a trend rate of 3.5% on the hard cap amount.

Given both the historical increases in the cap and the current economic environment, the City may wish to consider using a lower trend rate on the hard cap. For example, 3.0% might be more in line with historical increases and the current inflation environment.

Per Capita Claim Cost

Segal reviewed the per capita claim cost development performed by Boomershine, which was used in their 1/1/2016 OPEB valuations, and we agree it is reasonable based on the information provided to Boomershine by the City.

Segal recommends that the City track and report on non-Medicare claim experience for both Blue Cross Blue Shield of Michigan (BCBSM) and Physicians Health Plan (PHP) separately for the ERS versus Police and Fire groups. Additionally, we recommend that the City have AMWINS track and report on claims for both the insured Medicare Supplement plans and the insured Express Scripts Prescription Drug Plans (PDPs) separately for the ERS versus Police & Fire groups. Ongoing tracking and reporting of these claims separately by group will allow the most accurate per capita cost assumptions going forward.

Segal reviewed per capita cost assumptions for the dental, vision, and Medicare Part B benefits and agree that they appear to be reasonable.

Wage Inflation and Salary Scale

The Boomershine experience studies above recommend a base wage inflation of 2.75%, which we found to be reasonable.

The Boomershine 1/1/2016 OPEB valuation reports use a flat 2.75% base wage inflation with no additional salary increase components. Since the actuarial cost method used is Entry Age Normal as a level percentage of salary, the salary increase assumptions have an impact on the accrued actuarial liability.

Boomershine's pension valuation reports use more detailed salary increase assumptions, which reflect additional increase components about the base wage inflation rate.

Segal recommends the City consider using actuarial valuation salary increase assumptions that are consistent with the Boomershine pension valuation reports.

Funding and Amortization Method

In order to determine the actuarial accrued liability, the actuary must apply a funding method to assign benefits to past and future service. There are several methods commonly used in this process. For the City's OPEB plans, the Entry Age Actuarial Cost Method is used as a level percentage of salary. This method is the most commonly used allocation method in the public sector and results in relatively stable contributions as a percent of payroll. In fact, this is the method required by new GASB OPEB Accounting Statements No. 74 and No. 75.

The amortization period of both the ERS and the Police and Fire OPEB plans is **partially** closed with 26 years remaining as of January 1, 2016. The partially closed amortization period means that the funding period will decrease each year, and according to the plans' funding policies, will decrease until the remaining period is 15 years at which point it will remain at 15 years. Closed periods have the feature that every dollar of unfunded liability will be fully amortized by a certain date, although required contributions can become very volatile in the final years of the amortization period. This volatility can be managed through a funding policy that tracks the source of change in unfunded liability by year and amortizes each year's change in unfunded liability over a closed period.

The plan's policy is to use an open 15-year amortization period when there are 15 years remaining in the funding period. The Boomershine experience reviews recommend changing the length of this period to 10 years for the ERS pension system. Open periods are often used in the public sector, but are not expected to fully amortize the unfunded liabilities by a specified date. An important concept in funding pension plans is "negative amortization".

When unfunded liability payments are made as a percent of payroll, the dollar amount of payments rise over time as the payroll base increases. Because smaller payments are made at the beginning of the payment period, the unfunded liability will increase for several years, and then rapidly decrease in the last few years of the period. This is a result of the payments in early years not being sufficient to pay the interest accruing on the unfunded liability. While this type of payment stream is commonly used to fund public sector plans, it is important that stakeholders understand this effect.

Payments on the unfunded liabilities are made using a projection of future payroll increases for the groups. This is done in order to reflect the growth of payroll over the payment period. In years where total payroll growth is less than the assumption, payments toward the unfunded liability will be less than assumed. This will have the effect of increasing required payments in the future.

An alternative to amortizing plan funding on a level percentage of pay basis would be to make payments on the unfunded liability on a level dollar basis. This method would amortize the unfunded with an unchanging payment over the period, similar to a home mortgage. Although the dollar amount would remain the same, the payments as a percent of payroll would decrease as the period goes on. This would have the effect of amortizing the unfunded liability more quickly, but it would also result in higher payments in early years.

Segal recommends that the OPEB plans evaluate the use of an open amortization period when the plans reach the 15-year (or 10-year) open funding period. We recommend that consideration be given to adopting a funding policy that targets 100% funding over a reasonable time-period.

Summary of Assumption and Method Review

- The City may wish to consider using actuarial valuation duty versus non-duty disability assumptions that are consistent with the Boomershine pension valuation reports.

- The City may wish consider using updated Society of Actuaries mortality tables with a fully generational projection scale.

- Segal recommends that the City consider developing a distribution of terminated vested health plan election assumption rates, which vary by age and group.

- Segal recommends that the City consider using a percentage married at retirement assumption for currently active employees, rather than actual married status at the valuation date.

- Segal recommends that the City consider reviewing their non-Medicare trend rate assumption, and possibly use a higher non-Medicare combined medical/prescription initial trend rate. The City may also consider lengthening the grading period to the ultimate rate.

- Segal recommends that the City consider reviewing their Medicare eligible combined medical/prescription trend rate assumption, and possibly use a higher combined initial trend rate, along with a reasonable grading period to the ultimate rate.

- Given both the historical increases in the cap and the current economic environment, the City may wish to consider lowering the trend rate of 3.5% on the hard cap.

- We recommend that the City track and report on non-Medicare claim experience for both Blue Cross Blue Shield of Michigan (BCBSM) and Physicians Health Plan (PHP) separately for the ERS versus Police and Fire groups. Additionally, we recommend that the City have AMWINS track and report on claims for both the insured Medicare Supplement plans and the insured Express Scripts Prescription Drug Plans (PDPs) separately for the ERS versus Police & Fire groups.

- The City may wish to consider using actuarial valuation salary increase assumptions that are consistent with the Boomershine pension valuation reports.

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- Segal recommends that the OPEB plans evaluate the use of an open amortization period when the plans reach the 15-year (or 10-year) open funding period. We recommend that consideration be given to adopting a funding policy that targets 100% funding over a reasonable time-period.

4 Peer Group Benchmarking

In order to compare the adequacy of plan design, funding methods, benefit provisions, and other features of the City of Lansing Retirement Systems, we have assembled information from other retirement programs, as directed. This peer group consists of eight groups from three cities in Michigan. The eight groups included are:

- City of Ann Arbor — General Employees
- City of Ann Arbor — Police
- City of Ann Arbor — Fire
- City of Grand Rapids — General Employees
- City of Grand Rapids — Police
- City of Grand Rapids — Fire
- City of Southfield — General Employees
- City of Southfield — Police and Fire

The City of Warren was also asked to participate, but we were not able to get enough detailed information to include them in the comparator group.

The information used in this report was obtained from the following sources:

- "City of Ann Arbor Retiree Health Care Benefits Plan Retiree Health Actuarial Valuation Under GASB 45 Valuation Date: June 30,2016" prepared by Buck Consultants, November 2016
- "City of Grand Rapids General Other Postemployment Benefits Actuarial Valuation Report June 30, 2015" prepared by Gabriel Roeder Smith, January 2016
- "City of Grand Rapids Police Other Postemployment Benefits Actuarial Valuation Report June 30, 2015" prepared by Gabriel Roeder Smith, January 2016
- "City of Grand Rapids Fire Other Postemployment Benefits Actuarial Valuation Report June 30, 2015" prepared by Gabriel Roeder Smith, January 2016
- "City of Grand Rapids 2015 Trend Report" prepared by Gabriel Roeder Smith, November 2014
- "City of Southfield Retiree Health Care Benefits Plan and Trust Actuarial Valuation Report as of June 30, 2015" prepared by Gabriel Roeder Smith, February 2016

We have grouped the results into the following tables shown below:

- Table 1 — Program Size (Defined Benefit Retiree Health Only)
- Table 2 — Key Financial Information (Defined Benefit Retiree Health Only)
- Table 3 — Other Financial Comparisons (Defined Benefit Retiree Health Only)
- Table 4 — Funding Policy and Amortization Methods
- Table 5 — Actuarial Assumptions Used in GASB Accounting Valuation Reports
- Table 6 — Retirement Eligibility
- Table 7 — Types of benefits provided (Defined Benefit Retiree Health Only)
- Table 8 — Other Plan Features (Defined Benefit Retiree Health Only))
- Table 9 — Approximate Employer Subsidy Percentage (Defined Benefit Retiree Health Only)

Note that these tables all focus on employees and retirees eligible for a defined benefit (DB) retiree health plan. Many of the groups have a defined contribution (DC) health plan, where the employee and/or employer make specific contributions each year to an individual account, during active service. Whatever amount is in the account at retirement defines the benefit – like a 401(k) or 403(b) plan versus a defined benefit pension plan. The groups with DC programs are:

- Lansing Teamsters 214, if hired 1/1/2015 or later
- Lansing Teamsters 243, if hired 5/19/2014 or later
- Lansing Teamsters 243 District Court and District Court non-bargained, if hired 7/1/2016 or later
- Lansing other non-bargained, if hired 7/1/2016 or later (excludes Council Staff. Executive Management, Mayoral Staff, City Mayor, City Clerk, and Judges)
- Grand Rapids, all employees, if hired after 2001
- Southfield Police, if hired 3/1/2014 or later
- Southfield Fire, AFSCME, TPOAM, ACS, Management, and Court, if hired 9/12/2011 or later
- Southfield PSS, if hired 5/31/2013 or later
- Southfield PST, if hired 4/10/2014 or later

Note that while Ann Arbor does not technically have a DC plan for its newer hires, it has a hybrid type defined dollar program for these groups. They get $2,500 per year of service allocated to a notional account, which can be drawn down upon retirement to pay for claims or premiums. This defined dollar hybrid plan was effective for dates of hire ranging from 7/1/2011 to 7/1/2012, depending on the specific group.

Table 1 – Program Size (Defined Benefit Retiree Health Only)					
Group	**Actives**	**Term Vests**	**Retirees**	**Retire to Active Ratio**	**Annual Pay-As-You-Go Net Cost**
Lansing UAW	136	1	227	1.7	$ 2,700,000
Lansing Teamsters 214	20	12	29	2.1	$ 300,000
Lansing Teamsters 243	173	2	355	2.1	$ 3,970,000
Lansing All Other ERS	45	37	253	6.4	$ 2,700,000
Lansing ERS – Total	**374**	**52**	**864**	**2.4**	**$ 9,670,000**
Ann Arbor General*	488	0	540	1.1	$ 8,710,000
Grand Rapids General**	817	0	335	0.9	$ 5,730,000
Southfield General	238	33	266	1.3	$ 3,920,000
Lansing Police	186	18	323	1.8	$ 5,580,000
Lansing Fire	160	5	332	2.1	$ 5,260,000
Lansing P&F – Total	**346**	**23**	**655**	**2.0**	**$ 10,840,000**
Ann Arbor Police*	120	0	174	1.5	$ 3,010,000
Ann Arbor Fire*	77	0	140	1.8	$ 2,310,000
Grand Rapids Police**	295	26	95	0.7	$ 2,100,000
Grand Rapids Fire**	201	4	95	0.6	$ 2,370,000
Southfield Police & Fire	197	1	283	1.4	$ 5,120,000

* Ann Arbor retiree counts exclude those with only retiree life insurance benefits
**Grand Rapids retiree counts exclude Medicare eligible retirees, since they receive no subsidized benefit

Observations

- The City of Lansing has the largest combined number of DB health participants of all cities compared
- Lansing's program also has the largest ratio of retirees per active. This is problematic, because employer funding is typically expressed as a percentage of active payroll. The City's high ratios exacerbate generational equity issues in funding the benefits.
- Grand Rapids counts are misleadingly low, because the DB retiree health arrangement closed in 2001 for all groups. Many of the Grand Rapids employees are in a DC arrangement. In addition, it appears that retirees on Medicare are excluded from the counts in the valuation reports, since Medicare coverage is access only (retiree-pay-all) for Grand Rapids retirees.
- Although the City of Lansing has the largest annual pay-as-you-go (cash) cost, it is attributable to their larger number of retirees. Table 3 shows that a per capita view of the cash cost is in line with other cities.

Table 2 – Key Financial Information (Defined Benefit Retiree Health Only)				
Group	**Discount Rate**	**Accrued Liability**	**Employer Normal Cost**	**Funded Ratio**
Lansing UAW	7.25%	$ 64,370,000	$ 810,000	21.8%
Lansing Teamsters 214	7.25%	$ 8,390,000	$ 80,000	21.8%
Lansing Teamsters 243	7.25%	$ 90,060,000	$ 530,000	21.8%
Lansing All Other ERS	7.25%	$ 45,870,000	$ 130,000	21.8%
Lansing ERS - Total	**7.25%**	**$ 208,690,000**	**$ 1,550,000**	**21.8%**
Ann Arbor General	7.00%	$ 174,580,000	$ 2,110,000	51.8%
Grand Rapids General	5.00%	$ 56,080,000	$ 1,010,000	16.1%
Southfield General	5.50%	$ 103,740,000	$ 1,690,000	14.7%
Lansing Police	7.25%	$ 126,800,000	$ 2,040,000	13.3%
Lansing Fire	7.25%	$ 90,360,000	$ 1,120,000	13.3%
Lansing P&F - Total	**7.25%**	**$ 217,160,000**	**$ 3,160,000**	**13.3%**
Ann Arbor Police	7.00%	$ 70,610,000	$ 710,000	51.8%
Ann Arbor Fire	7.00%	$ 46,500,000	$ 540,000	51.8%
Grand Rapids Police	5.00%	$ 57,140,000	$ 1,530,000	34.6%
Grand Rapids Fire	5.00%	$ 38,170,000	$ 1,230,000	32.2%
Southfield Police & Fire	5.50%	$ 142,320,000	$ 2,230,000	30.4%

Observations

- The discount rates of the other comparators are not so much a function of investment return assumptions, as they are of funding status over time
  - Plans with a contribution policy that indicate they are expected to remain solvent indefinitely can use a full long-term investment return assumption for GASB valuations. Only the City of Ann Arbor currently fits that description.
  - Plans not expected to remain solvent and/or approach 100% funding, must blend the full return assumption with a rate earned on general assets - typically around 4.0%, for GASB accounting purposes. That is why most of the plans show a blended rate of 4.5% to 5.5%.
  - Although the City of Lansing's plans do not meet the GASB standard for using the full investment return rate, all the numbers shown here assume that full funding of an actuarially determined contribution will be in effect going forward, for illustrative purposes
- Accrued liability and normal cost are a function of more than just benefit design, but also demographics and assumptions
- Other than Ann Arbor, no group is even 35% funded on its OPEB plans, which often do not have the legislative requirements that apply to defined benefit pension plans

Table 3 – Other Financial Comparisons (Defined Benefit Retiree Health Only)				
Group	**Actuarial Calculated Contribution**	**Pay-As-You-Go Per Retiree**	**Employer Normal Cost Per Active**	**Ratio of Actuarial Contribution to Pay-As-You-Go Cost**
Lansing UAW		$ 11,894	$ 5,956	
Lansing Teamsters 214		$ 10,345	$ 4,000	
Lansing Teamsters 243		$ 11,183	$ 3,064	
Lansing All Other ERS		$ 10,672	$ 2,889	
Lansing ERS – Total	**$ xx,xxx,000**	**$ 11,192**	**$ 4,144**	**x.xx**
Ann Arbor General	$ 6,470,000	$ 16,130	$ 4,324	0.74
Grand Rapids General*	$ 4,930,000	$ 17,104	$ 2,745	0.86
Southfield General	$ 8,340,000	$ 14,737	$ 7,101	2.13
Lansing Police		$ 17,276	$ 10,968	
Lansing Fire		$ 15,843	$ 7,000	
Lansing P&F – Total	**$ xx,xxx,000**	**$ 16,550**	**$ 9,133**	**x.xx**
Ann Arbor Police	$ 2,470,000	$ 17,299	$ 5,917	0.82
Ann Arbor Fire	$ 1,700,000	$ 16,500	$ 7,013	0.74
Grand Rapids Police*	$ 4,130,000	$ 22,105	$ 9,053	1.97
Grand Rapids Fire*	$ 2,970,000	$ 24,947	$ 7,640	1.25
Southfield Police & Fire	$ 9,680,000	$ 18,092	$ 11,320	1.89

*Grand Rapids per capita calculations exclude Medicare eligible retirees, since they receive no subsidized benefit

Observations

- The actuarial calculated contribution is often a function of amortization period and method, along with the same factors affecting liability and normal cost
- Showing results on a per capita basis, removes pure group size out of the comparison
- The City's ERS cash cost per retiree is favorable relative to other groups. This may reflect a higher blend of lower cost post-65 retirees relative to other groups.
- The City's Police and Fire cash cost per retiree was much higher than ERS, partly due to a higher non-Medicare mix, and partly due to more grandfathering of richer benefit designs
    - However, the P&F cost is on the low side of the other public safety comparators
- The Grand Rapids very high cash cost per retiree is biased from the fact that it appears retirees eligible for Medicare are excluded from the counts in the valuation report. This leaves only non-Medicare retirees, which always have a much higher per capita cost.

- Lansing's ERS normal cost per active is favorable relative to other groups. This reflects the efforts taken by the City to increase eligibility requirements to 55/25 for most recent hire groups and the elimination of post-Medicare benefits for recent hires of UAW and District Court.
- Lansing's P&F normal cost per active is the highest of any group. This reflects the rich benefit designs, lack of retiree contributions required for coverage, and the fact that Police retirees have a separate contribution limit as 1% of pension, which overrides the impact of the Michigan Public Act 152 hard cap for non-Medicare retirees.
- Groups like Ann Arbor that are making more actuarial based contributions (and are expected to fully fund the plan over time) are now at a point where their actuarial calculated contribution under GASB accounting is actually lower than their cash cost
- Lansing's ERS group is expected to have a low ratio of actuarial contribution to cash cost, due to the fact it has richer benefits that are front-loaded to legacy retiree groups
- Lansing's P&F group is expected to have an actuarial contribution much higher than cash cost, because the benefits are not particularly front-loaded, as newer retirees will get similarly rich benefits to current retirees

Table 4 –Funding Policy and Amortization Methods				
Group	**Employer Contribution Policy**	**Amortization Method**	**Payroll Growth Rate**	**Amortization Period**
Lansing ERS	2.5% of payroll for UAW and old plans; 4.0% of payroll for new plans	Level % of pay	3.1%	Partially closed – 26 years decreasing to 15 year open
Ann Arbor General	2%annual increases until plan is 100% funded	Level % of pay	3.5%	Open – 30 years for GASB
Grand Rapids General	Pay-as-you-go already > actuarial amount	Level dollar	N/A	Closed – 17 years
Southfield General	Partial funding of actuarially determined contribution	Level dollar	N/A	Closed – 26 years
Lansing Police & Fire	2.48% of payroll	Level % of pay	3.1%	Partially closed – 26 years decreasing to 15 years open
Ann Arbor Police	2%annual increases until plan is 100% funded	Level % of pay	3.5%	Open – 30 years for GASB
Ann Arbor Fire	2%annual increases until plan is 100% funded	Level % of pay	3.5%	Open – 30 years for GASB
Grand Rapids Police	Actuarially determined	Level dollar	N/A	Closed – 23 years
Grand Rapids Fire	Actuarially determined	Level dollar	N/A	Closed – 25 years
Southfield Police & Fire	Partial funding of actuarially determined contribution	Level dollar	N/A	Closed – 26 years

Observations

- Lansing's amortization period is only partially closed, which is expected to keep the plan from being on a path to 100% funding over the long-term
- On the other hand, Lansing's plans have legislative funding requirements as a percentage of payroll, while the other survey participants do not appear to have any such guarantees
- Although Ann Arbor uses an open period for GASB accounting, their actual contribution policy has been to increase contributions 2% each year, which results in full funding over time

Table 5 – Actuarial Assumptions in Most Recent GASB OPEB Valuations				
Group	**Investment Return**	**Medical/Rx Non-Medicare Health Trend**	**Medical/Rx Medicare Health Trend**	**Healthy Mortality Tables**
Lansing ERS	7.25%	6.5% to 4.5% over 4 years	4.5% flat	RP-2000 to 2008 with 100% scale BB and to 2023 with 50% scale BB
Ann Arbor General	7.00%	8.25% to 4.5% over 15 years	6.25% to 4.5% over 13 years	RP-2000 to 2007; +2 male; -3% female; fully generational scale AA
Grand Rapids General	5.00%	8.0% to 3.5% over 9 years	8.0% to 3.5% over 9 years	RP-2014 to 2019 with MP-2014
Southfield General	Unknown (5.9% blended for GASB)	9.0% to 4.0% over 10 years	9.0% to 4.0% over 10 years	RP-2000 to 2015; +1 year males
Lansing Police & Fire	7.25%	6.5% to 4.5% over 4 years	4.5% flat	RP-2000 to 2008 with 100% scale BB and to 2023 with 50% scale BB
Ann Arbor Police	7.00%	8.25% to 4.5% over 15 years	6.25% to 4.5% over 13 years	RP-2000 to 2007; +2 male; -3% female; fully generational scale AA
Ann Arbor Fire	7.00%	8.25% to 4.5% over 15 years	6.25% to 4.5% over 13 years	RP-2000 to 2007; +2 male; -3% female; fully generational scale AA
Grand Rapids Police	Unknown (5.0% blended for GASB)	8.0% to 3.5% over 9 years	8.0% to 3.5% over 9 years	RP-2014 to 2019 with MP-2014
Grand Rapids Fire	Unknown (5.0% blended for GASB)	8.0% to 3.5% over 9 years	8.0% to 3.5% over 9 years	RP-2014 to 2019 with MP-2014
Southfield Police & Fire	Unknown (5.5% blended for GASB)	9.0% to 4.0% over 10 years	9.0% to 4.0% over 10 years	RP-2000 to 2015

Observations

- Lansing and Ann Arbor have similar investment return assumptions. It is difficult to compare to Grand Rapids and Southfield, because their GASB OPEB reports do not provide an explicit assumption for investment return that goes into calculating the blended partial funding rate
- Lansing uses more aggressive short-term health trend rates than the comparators – both in terms of the initial rate and the period to grade to ultimate
- On the other hand, Lansing's ultimate trend is at the high end of the comparators
- Although Lansing's use of RP-2000 as the base mortality table is mirrored by two of the comparators, the new RP-2014 table used by Grand Rapids is becoming an industry standard
- Ann Arbor uses a fully generational improvement scale, which is becoming standard in actuarial valuations. However, other comparator groups are still projecting to a fixed year.

Table 6 – Retirement Eligibility				
Group	**New Hires**	**Hired 1/1/2011**	**Hired 1/1/2001**	**New Hire Term Vesting**
Lansing UAW	50/25	50/25	58/15 OR 50/25	25 years
Lansing Teamsters 214	50/25 (dent/vis only)	58/15 OR 50/25	55/15 OR 50/25	25 years (dent/vis only)
Lansing Teamsters 243	50/25 (dent/vis only)	50/25	58/15 OR 50/25	25 years (dent/vis only)
Lansing All Other ERS	most are 50/25 (dent/vis only)	most are 55/15	most are 55/15	most 25 years (dent/vis only)
Ann Arbor General	Notional $2,500 per year/svc only	60/5 OR 50/20	60/5 OR 50/20	Not eligible
Grand Rapids General	RHSA only	RHSA only	RHSA only	RHSA only
Southfield General	RHSA only	57/20 OR 60/15	57/20 OR 60/10	Not DB eligible
Lansing Police	50/25	any/25	55/15 OR any/25	25 years
Lansing Fire	50/25	any/25	55/15 OR any/25	25 years
Ann Arbor Police	Notional $2,500 per year/svc only	55/5 OR any/25 OR 50/20	55/5 OR any/25 OR 50/20	Not eligible
Ann Arbor Fire	Notional $2,500 per year/svc only	55/5 OR any/25 OR 50/20	55/5 OR any/25 OR 50/20	Not eligible
Grand Rapids Police	RHSA only	RHSA only	RHSA only	RHSA only
Grand Rapids Fire	RHSA only	RHSA only	RHSA only	RHSA only
Southfield Police & Fire	RHSA only	most are any/20	any/20	RHSA only

Observations

- All comparator groups have effectively eliminated their defined benefit retiree health plans for newer hires
  - Grand Rapids and Southfield new hires receive a retiree savings account (RHSA)
  - Ann Arbor new hires receive a notional allocation of $2,500 per year of service
- While Lansing has eliminated the DB program for most ERS groups (and UAW provides Medicare eligible benefits only for new hires), Police and Fire new hires still receive the current retiree health program, with no participant contributions for Medicare eligible retirees and rich Medicare Supplement plans
- Lansing has been aggressive about pushing service requirements to 25 years for most groups, including Police and Fire. Hires grandfathered into the comparator defined benefit plans generally required no more than 20 years of service, and less than that in many cases.
- Actives grandfathered into the comparator defined benefit plans of Southfield and Grand Rapids P&F allowed vesting of retiree health benefits
- However, Ann Arbor and Grand Rapids General did not allow any term vesting for retiree health

Table 7 – Types of Benefits Provided (Defined Benefit Retiree Health Only)					
Group	Non-Medicare Medical/Rx	Medicare Medical/Rx	Medicare Part B	Dental	Vision
Lansing UAW	Y	If DOH < 10/21/13	If DOH < 10/21/13	Y	Y
Lansing Teamsters 214	Y	Y	Y	Y	Y
Lansing Teamsters 243	Y	Y	Y	Y	Y
Lansing District Court	Y	If DOH < 4/1/14	If DOH < 4/1/14	Y	N
Lansing All Other ERS	Y	Y	Y	Y	Y
Ann Arbor General	Y	Y	N	N	N
Grand Rapids General	Y	Access Only	N	Y < 65; >65 access only	Y < 65; >65 access only
Southfield General	Y	Y	N	Not clear	Not clear
Lansing Police	Y	Y	Y	Y	Y
Lansing Fire	Y	Y	Y	Y	Y
Ann Arbor Police	Y	Y	N	N	N
Ann Arbor Fire	Y	Y	N	N	N
Grand Rapids Police	Y	Access only	N	Y < 65; >65 access only	Y < 65; >65 access only
Grand Rapids Fire	Y	Access Only	N	Y < 65; >65 access only	Y < 65; >65 access only
Southfield Police & Fire	Y	Y	N	Not clear	Not clear

Observations

- All comparator groups (for those in the DB health plan) provide non-Medicare medical/Rx.
- Grand Rapids only provides retiree-pay-all coverage to Medicare retirees, but the other comparators do subsidize medical/Rx coverage for Medicare eligible participants
- No other comparator provides reimbursement for Medicare Part B premiums, while Lansing does provide full reimbursement to almost everyone
- Ann Arbor does not provide any retiree dental or vision coverage and Grand Rapids only provides a dental/vision subsidy for non-Medicare retirees. It was not clear from the Southfield valuation report, if subsidized dental and/or vision coverage is provided.
- Lansing provides free dental and vision coverage to almost all participants (regardless of Medicare status). This includes newer hires not otherwise in the DB retiree health program and spouses/dependents who are not eligible receive medical or prescription coverage.

Table 8 – Other Plan Features (Defined Benefit Retiree Health Only)					
Group	Dependent Spouse Coverage	Surviving Spouse Coverage	Dependent Child Coverage	OPEB Life Insurance Benefit	In-Service Participant Contributions
Lansing UAW	DOH < 10/21/13	As spouse, if J&S	As spouse	None	None
Lansing Teamsters 214	Y	As spouse, if J&S	As spouse	None	None
Lansing Teamsters 243	Y	As spouse, if J&S	As spouse	None	None
Lansing District Court	DOH < 4/1/14	As spouse, if J&S	As spouse	None	None
Lansing All Other ERS	DOH < 7/1/07	As spouse, if J&S	As spouse	None	None
Ann Arbor General	Y	If payable pension	Y	$ 5,000	None
Grand Rapids General	Y	Until earlier of ret/sps age 65	N	N	None
Southfield General	Y	If J&S	N	N	2% of pay
Lansing Police	DOH < 8/1/14	As spouse, if J&S	As spouse	$ 3,000	None
Lansing Fire	DOH < 8/1//14	As spouse, if J&S	As spouse	$ 3,000	None
Ann Arbor Police	Y	If payable pension	Y	$ 10,000	None
Ann Arbor Fire	Y	If payable pension	Y	$ 10,000	None
Grand Rapids Police	Y	Until earlier of ret/sps age 65	N	N	None
Grand Rapids Fire	Y	Until earlier of ret/sps age 65	N	N	None
Southfield Police & Fire	Y	If J&S	Y	N	2% of pay

Observations

- Lansing has been aggressive about eliminating spouse/dependent coverage eligibility (or requiring them to pay the full cost) for newer hires. Other cities still cover spouses in the DB program.
- All groups other than Grand Rapids treat surviving spouses as a joint spouse, as long as a survivor pension is being received
- Grand Rapids only provides benefits to surviving spouses until the earlier of when the spouse reaches age 65 or when the retiree would have reached age 65. This provision reflects with the reality that Grand Rapids Medicare retiree benefit is participant-pay-all anyway.
- Southfield P&F and Ann Arbor provide dependent child coverage, while Grand Rapids and Southfield General do not
- Only Lansing and Ann Arbor provide an OPEB death benefit, and it is a small flat amount
- Requiring participants to make **in-service** contributions to their DB retiree health plan is not as common as it is for pension plans, but Southfield does require participants to contribute 2% of pay to the plan

Table 9 – Approximate Employer Subsidy Percentage (Defined Benefit Retiree Health Only)				
Group	**Non-Medicare Retiree Age 60**	**Non-Medicare Spouse Age 60**	**Medicare Retiree Age 70**	**Medicare Spouse Age 70**
Lansing UAW (DOR > 9/30/14)	100% of City paid plan to PA-152 cap; ret contrib. max 1% of pension for Opt1	Same, if eligible	100%, if eligible	100%, if eligible
Lansing Teamsters 214	100% of City paid plan to PA-152 cap	Same	100%	100%
Lansing Teamsters 243 (DOR > 2/19/04)	100% of City paid plan to PA-152 cap; ret contrib. max $ or 1% pension for Opt1	Same	100%	100%
Lansing District Court (T243 & Non-Bargained)	100% of City paid plan to PA-152 cap; ret contrib. max 1% of pension for Opt1*	Same, if eligible	100%, if eligible	100%, if eligible
Lansing All Other ERS (DOR > 6/30/07)	100% of City paid plan to PA-152 cap	Same, if eligible	100%	100%, if eligible
Ann Arbor General(1)	94% city paid	96% city paid	92% city paid	95% city paid
Grand Rapids General(2)	70% city paid	63% city paid	0% city paid – access only	0% city paid – access only
Southfield General(3)	99% city paid	99% city paid	98% city paid	98% city paid
Lansing Police (DOR > 10/12/15)	100% of City paid plan to PA-152 cap; ret contrib. max 1% of pension	Same, if eligible	100%	100%, if eligible
Lansing Fire (DOR > 6/30/13)	100% of City paid plan to PA-152 cap	Same, if eligible	100% for most	100%, if eligible
Ann Arbor Police(1)	94% city paid	96% city paid	92% city paid	95% city paid
Ann Arbor Fire(1)	94% city paid	96% city paid	92% city paid	95% city paid
Grand Rapids Police(4)	77% city paid	72% city paid	0% city paid – access only	0% city paid – access only
Grand Rapids Fire(5)	77% city paid	72% city paid	0% city paid – access only	0% city paid – access only
Southfield Police & Fire(6)	100% city paid	100% city paid	100% city paid	100% city paid

* 1% pension limit for District Court Non-Bargained not in the fringe document, but is currently administered for participants

(1) Assumes High Option Plan selected
(2) Assumes non-union retiree with 20 years of service
(3) Assumes union retiree hired before 1/1/2007
(4) Assumes GRPOA retiree with 20 years of service
(5) Assumes retiree with 20 years of service
(6) Assumes Police retiree

Observations

- Ann Arbor requires only a small dollar contribution to receive medical/prescription coverage
- Southfield's General Plan required contribution vary greatly by individual union/department, but P&F participants pay nothing, while many General Plan participants pay a very small amount
    - On the other hand, Southfield requires in-service participant contributions to the DB retiree health plan of 2% of payroll
- Grand Rapids non-Medicare contribution is calculated as a percentage of a blended retiree premium rate
    - The percentage is somewhat based on service and group, but it caps out at 80% City paid with either 25 or 30 years of service
- Grand Rapids Medicare contribution is the full separate premium rate determined for Medicare participants
- Lansing provides non-Medicare benefits at no cost to the retiree, but subject to the Michigan Public Act 152 hard cap amounts for newer retiree cohorts. However, many of the Lansing groups have 1% pension limits or dollar amount limits on the amount the participant is required to pay, overriding the cap for those groups.
    - For Lansing groups truly under the hard cap, participants will pay a larger portion of the total cost each year for non-Medicare coverage, if the cost is in excess of the Michigan Public Act 152 hard cap
- Lansing provides Medicare benefits at no cost to the retiree
- All groups treat spouses similarly to retirees in terms of required contributions, assuming the spouse is eligible at all

Overall Benchmarking Observations

- Lansing has the largest ratio of retirees per active. This is problematic, because employer funding is typically expressed as a percentage of active payroll. Lansing's high ratios exacerbate generational equity issues in funding the benefits.
- Lansing's Police and Fire cash cost per retiree is much higher than ERS, partly due to a higher non-Medicare mix, and partly due to more grandfathering of richer benefit designs
    - However, the P&F cost is on the low side of the other public safety comparators
- Lansing's ERS normal cost (cost of benefits accruing during year) per active is favorable relative to other groups. This reflects the efforts taken by the City to increase eligibility requirements to 55/25 for most groups and the elimination of post-Medicare benefits for UAW and District Court hires after 2014.
- Lansing's P&F normal cost per active is the highest of any group. This reflects the rich benefit designs, and the lack of required retiree contributions.
- Lansing's amortization period is only partially closed, which is expected to keep the plan from being on a path to 100% funding over the long-term
- Lansing may wish to consider reviewing the medical/prescription health trend assumptions and mortality assumptions used in its GASB accounting valuations
- Lansing's Police and Fire new hires still receive the current DB retiree health program, with no participant contributions for Medicare eligible retirees
    - All other comparator groups have effectively eliminated their defined benefit retiree health benefits for newer hires – even for public safety employees
- Lansing has been aggressive about pushing service requirements to 25 years for most groups, as well as eliminating spouse/dependent coverage for new hire cohorts
- Lansing provides some extra benefits beyond basic medical and prescription coverage that comparators are not providing
    - No comparator provides even partial Medicare B premium reimbursement
    - No comparator provides any subsidized dental or vision coverage for Medicare retirees
- Lansing appears to be the only comparator interacting with the Michigan Public Act 152 hard cap for its non-Medicare benefits
    - Careful attention must be paid as to how non-Medicare design and/or contribution decisions are impacted by the presence of the hard cap
- Lansing provides rich fully insured Medicare Supplement and prescription drug coverage, while requiring no participant contributions

5 Program Design Alternatives

Affected Groups and Cohorts

A principal part of any design change is to decide which cohorts will be affected by the change and which ones (if any) will be grandfathered into keeping their previous benefits. Cohorts are typically defined by date of hire and/or by date of retirement. It is also possible to use some formula, for example, age + service, to determine grandfathering rules.

Reducing/eliminating benefits or increasing contributions for current retirees provides the most immediate impact to current liability. However, this is often a difficult group to change as retirees often feel they have been "promised" their current benefits levels, whether or not there is any actual promise from a legal standpoint. Additionally, it may be argued that those already retired are in the least favorable position to adjust to any program changes, as they have no time to plan retirement under the new conditions. Any changes to current retirees directly affects the annual program cash cost (also called "pay-as-you-go" cost), whereas changes to other current or future participants affect the current and/or future liability, but do not significantly impact the immediate cash cost.

Another set of participants to consider is terminated (also called deferred) vested former employees. These participants represent X% of the currently liability. This group has not actually retired, which may impact legal standing as well as public perception. For those that have reached eligibility age, many of the same points discussed for retired participants above also apply. Those old enough to retire immediately may also change their retirement behavior to avoid being affected by any new design changes (choosing to retire immediately). This could, in turn, affect the City's cash cost in the short-term.

Some active employees have already reached benefit eligibility based on the applicable age/service requirements. In this way, they are similar to the terminated vested group. However, they may still have some opportunity to plan and adapt to benefit changes. Program changes could be defined, so that those already eligible are grandfathered, but any such grandfathering that obviously reduces the potential savings of the changes. The fact that they are currently active may very well affect options from a legal standpoint, particularly those under a collective bargaining agreement. Finally, this group could also elect to retire immediately, prior to the effective date of any design changes. As a result, all changes must be considered with care, since those changes can affect retirement behavior patterns, and potentially create skilled resource problems for the City.

Active employees not yet eligible for benefits represent the majority of the current City employees, although they do not represent a majority of the liability. These younger and/or lower service employees would have more time to adjust to program changes and plan accordingly for retirement. As such, it may be deemed more palatable to apply benefit changes to this group than to current retirees or those immediately able to retire. However, several factors limit the impact of changes to this group on the City's current OPEB liability:

- Liability for active participants is less than the full present value of their future benefits. Instead, a participant's current liability accrues from the date of hire to the date of decrement. The method used in the City's actuarial valuation is to allocate the liability over that period as a level percentage of salary. When an employee progresses in their career, their salary increases, so there is a steep increase in current liability from hire date (no liability) to decrement date (full present

value of future benefits). Although other actuarial allocation methods exist, this is the most common method for public sector entities and is also the method that is required by the latest GASB OPEB accounting standards.

- Actives employees may still terminate (withdraw) from service with no benefit eligibility, which reduces their present value of future benefits.

- Since active employees will not receive OPEB benefits immediately, they are further away from actually incurring any benefit cash flows, so the present value of benefits is further discounted.

- Due to prior plan design changes over time, active cohorts typically have less generous benefits already, so there is less liability to affect.

Finally, there are those future employees who have not yet been hired as of the valuation date, but are assumed to be hired in the future. Since current actuarial liability is calculated on a closed group basis, this group has no effect at all on current liability. However, this group becomes increasingly more impactful as time goes on and can have a significant effect on estimated future liability and cash cost. Therefore, it is important to look at a long-term open group projection, in order to understand the significance of changes to these future employees. As a result, we show liability impact of Section 6 scenarios as of the current valuation date, and also projected 30 years into the future.

Since the impact of many potential design changes varies greatly depending on which groups they apply to, we have provided the impact of some scenarios in Section 6 of this report under the approach of having the changes apply to all current and future retirees, as well as having them apply only to future retirees. Additionally, some scenarios only affect future hires (scenarios 33F-36F), which do not affect the results as of the valuation date, but do affect the 30-year projection results.

Eligibility Requirements

One key design feature to any retiree health program is the combination of age and/or service required to retire and receive benefits. Examples are:

- Age 55 and 20 years of service
- Age + service = "80 points"
- Age 60 and 10 years of service OR 25 years of service

While defined benefit pension plans usually accrue a benefit multiplier based on service, OPEB plan benefits do not lend themselves as easily to this kind of benefit multiplier approach. However, age and/or service can be used to determine the level of benefits received. For example, an employer could require age 55 and 5 years of service for eligibility, but pay 80% of costs for employees with 25 years of service and reduce the employer paid amount by 4% for each year of service less than 30. That kind of design rewards people with longer service time.

The City has increased service requirements over the years for most groups, so that they now require a minimum of 25 years of service and a minimum age of 50 or 55. Due to the amount of service now required of new hires, an age/service based benefit level is not practical for the newest cohorts of employees. However, one approach might be to have employees in older cohorts requiring (for example) 15 years of service, pay higher participant contributions, until maxing out benefits at 25 years of service. Such a design would require changing benefits for current active employees hired

some years ago. We did not model any specific scenarios around this idea, but we could discuss further with the City if that idea is of interest.

Another eligibility concept is whether an employee can separate from service and still claim a benefit in the future, when their age would have made a benefit payable. This is the concept of "vesting" and is a feature of all pension plans, but not all OPEB plans. Term vesting for retiree health is almost unheard of in the corporate world, but is not uncommon for the public sector. Although many of the City's new hires are not eligible for defined benefit health coverage (except dental/vision), older active cohorts are typically eligible with whatever years of service would have been required to be retirement eligible. We illustrated the impact of eliminating term vesting in Section 6 (scenario 19).

We also reviewed the impact of eliminating non-duty related disabilities from eligibility for retiree health. Since most Police and Fire disabilities are duty-related, the impact of this change is low and is shown in Section 6 (scenario 20).

Spouse and Dependent Coverage

Eligibility of the retiree may or may not mean spouses and/or dependents are eligible for benefits. The City's most recent hire cohorts are generally not eligible for spouse or dependent child coverage of medical and prescription drug benefits.

We reviewed the impact of eliminating coverage for spouses and children. The impact is quite large if spouses of current retirees are affected. Even if only spouses of future retirees are affected, there is still a moderate liability reduction. These are quantified in Section 6 (scenarios 10-15 and 9F-14F).

We also reviewed the impact of eliminating coverage only on dependent children. Eliminating children has a low impact on liability, because they can only be covered until age 26 and because the average cost of children is lower than adults. This can be seen in Section 6 (scenario 16).

Some plans allow spouses to elect coverage, but provide no subsidy, so that they spouse pays 100% of the cost. Our understanding is that Teamsters 214 and some other non-bargained ERS groups have this feature. From a liability standpoint, this arrangement is equivalent to elimination benefits for spouses. However, such an arrangement also requires careful underwriting, updating, and monitoring of full cost premium equivalent rates, in order to ensure the spouse is truly paying 100% of the cost. In particular, non-Medicare premiums must be calculated based on non-Medicare retiree claim experience alone. Blending in active experience creates an "implicit rate subsidy" and does not eliminate non-Medicare retiree liability. Another disadvantage of allowing this "access only" coverage is it creates anti-selection - meaning that the sicker spouses will tend to be the ones willing to pay the full cost. This raises the per capita premiums for all of the retiree health plan participants.

A separate question relates to the treatment of surviving spouses, after a retiree is deceased. For example, some plans limit survivor coverage to age 65 (Medicare eligibility) or even to the earlier of age 65 or when the retiree would have reached age 65. In the public sector, it is common to treat surviving spouses as retirees, as long as they are pension annuitants. This is the approach currently used by the City. We reviewed the impact of eliminating surviving spouse coverage in Section 6 (scenarios 17/18/15F/16F).

Benefits Offered

The City's OPEB benefits include medical and prescription drugs for both Medicare and non-Medicare, dental, vision, and Medicare Part B reimbursement.

It is common for employers provide retiree medical and prescription coverage only for non-Medicare retirees/dependents on the theory that once Medicare is available, participants have guaranteed issue supplement coverage available in the individual market, which is highly regulated. We examined the impact of eliminating Medicare eligible coverage and Part B premium reimbursement. This has a large impact on the liability, as can be seen in Section 6 (scenarios 2/7/2F/6F). If the City wishes to explore this option, it should make sure to note treatment of post-65 retirees not eligible for free Medicare Part A, as discussed in Section 8 of this report.

The converse idea of providing Medicare eligible coverage, but not providing non-Medicare coverage is not a common design, since it is those prior to Medicare age that need protection the most. In addition, removing non-Medicare retiree coverage is likely to have an impact on retirement patterns – with people tending to stay longer to keep their active health coverage under age 65. Although we would not recommend this option, we did review the impact of eliminating non-Medicare medical and prescription drug coverage in Section 6 (scenarios 1/6/1F/5F). It is important to note that non-Medicare benefits are a much larger portion of total liability for Police and Fire groups than they are for ERS groups. This is because the public safety employees retire at earlier ages and because the Police pension 1% participant contribution limit overrides the PA-152 cap.

The Medicare Part B reimbursement benefit is quite significant at about 10% of the grand total current liability. In addition, the benchmarking in Section 4 and our general experience is that this benefit is not common anymore. Even in plans that still have it, it is not usually 100% of the premium, as it is for the City. Based on the significance of this benefit coupled with the benchmarking results, this may be an area the City wishes to consider making a change. We illustrate the impact of eliminating the Part B reimbursement in Section 6 (scenarios 4/9/4F/8F).

The City currently provides free dental coverage to everyone and free vision coverage to everyone except District Court retirees. The Benchmarking in Section 4 (as well as our experience) shows that it is not typical to provide subsidized dental or vision coverage at all. Those groups that do provide coverage, often only subsidize it until age 65. Although much less costly than medical, dental and vision do constitute about 5% of the total current liability. Given this and the benchmark results, this is another area the City may wish to review. Our understanding is that the City intends to continue providing free dental and vision to participants not eligible for the defined benefit retiree health plan. This is basically the entire liability for most of the newest ERS hires. We illustrate the impact of eliminating subsidized dental and/or vision coverage in Section 6 (scenarios 3/8/3F/7F).

In addition, Police and Fire retirees receive a $3,000 life insurance benefit. We reviewed the impact of eliminating the life insurance benefit and it is almost zero, due to the relatively low and flat benefit amount (scenario 5 in Section 6). As a result, we would not recommend removing this benefit for public safety employees.

Addition and Enforcement of Michigan Public Act 152 Hard Cap

Newer retiree cohorts have a choice of Option 2/Option 1/Base plan designs for non-Medicare benefits. The choice is complicated by the Michigan Public Act 152 (PA-152) cap affecting groups differently. For example, Police have little incentive to choose the less rich Option 1 or Base designs,

because they have a 1% of pension contribution limit that overrides the PA-152 cap no matter which option they select. Other groups, such as UAW, also have a 1% pension limit, but the limit does not apply if the richer Option 2 is selected. As a result, we believe it is likely most retirees in this position will migrate to Option 1, in order to preserve their contribution limit. Groups like Fire and most non-bargaining are subject to the PA-152 hard cap with no contribution limits.

We reviewed the impact of implementing adding and/or "enforcing" the PA-152 cap for all non-Medicare retiree participants. By enforcing, we mean having the hard cap override any participant contribution limits. The impact would be significant, but it varies greatly by group, as shown in Section 6 (scenarios 29/30/25F/26F). See Section 8 of the report, for additional discussion of PA-152.

Point-of-Service Cost Sharing

Medical and prescription plans typically contain various payments made by participants at the point-of-service, as opposed to premiums periodically paid to the employer. This includes deductibles, copays, and coinsurances. Most of the City's older retiree cohorts have rich legacy plan designs with low amounts of cost sharing, making the cost of those plans relatively expensive.

Newer retiree cohorts have a choice of Option 2/Option 1/Base plan designs for non-Medicare benefits. However, as discussed above, this choice is greatly affected by each group's interaction with the PA-152 cap. We examined the impact of having retirees all receive the Option1 plan design (in a non-choice environment) or having all retirees receive the Base plan design (in a non-choice environment). As seen in Section 6 (scenarios 21/22/25/26/17F/18F/21F/22F), the impact varies by group, but it does have some impact on the overall liability – especially the Base plan.

For Medicare eligible benefits, the City made a decision to offer newer retiree cohorts the richer "Option 2 based" Medicare Supplement and prescription coverages through AMWINS, as opposed to requiring the less rich "Option 1 based" or "Base level" benefits. Section 6 (scenarios 23/24/27/28/19F/20F/23/F/24F) illustrates the impact of providing those Option 2 or Base level benefits. The impact is significant, because the higher deductibles have a large impact on the cost of the Medicare Supplement insurance. Also, there is no interaction with the Michigan PA-152 cap, so all participants are affected. A less rich design for medical and prescription drugs on Medicare eligible retirees may be something the City wishes to consider.

Participant Contributions

This section discusses monthly contribution made during retirement, and not in-service contributions to the retiree health plan. In service-contributions are not nearly as common for retiree health as they are for pension plans. However, participant contributions in retirement are very common.

The contribution can be expressed as a fixed dollar amount or as a percentage of full cost. The advantage to a percentage of cost is that the dollar amounts automatically inflate over time as the 100% cost inflates over time. Fixed dollar amounts need to be evaluated periodically to prevent their impact from declining over time.

Contributions may be age and/or service based. See the "Eligibility" discussion above for more about that kind of design. Contributions are often different for retirees versus spouses/dependents. It is also common for the percentage of cost to vary for non-Medicare versus Medicare coverage.

The City's non-Medicare contributions for medical/prescription drugs are defined by the PA-152 cap or by pension or dollar limits for some groups (see above discussion). However, no contributions are required at all for Medicare eligible medical/prescription drug coverage. This could be an area the City wishes to review. There are infinite amounts of potential contribution scenarios, but for illustrative purposes we showed the impact of requiring a 25% contribution for all Medicare eligible participants in Section 6 (scenarios 31/32/27F/28F).

Group Medicare Advantage Plans

For Medicare eligible participants, many employers that still wish to sponsor a defined benefit group plan are moving to group Medicare Advantage plans as a way to reduce costs.

In contrast with Medicare Supplement designs, Medicare Advantage (MA) and Medicare Advantage Prescription Drug (MAPDs) plans are offered by private insurers that contract with Medicare to provide benefits, **in lieu of Medicare,** to Medicare-eligible retirees. These MA and MAPD plans completely replace traditional Medicare Part A and B, and they replace Medicare Part D in the case of an MAPD plan.

Medicare Advantage plans generally cover the same services as Parts A and B, but often impose different cost-sharing strategies, such as office visit copayments and out-of-network coinsurance differentials. Annual deductibles and out-of-pocket maximums are common features. Many plans provide ancillary benefits such as hearing, dental, and exercise programs. Medicare Advantage plan enrollees must still pay the Medicare Part B premium, in addition to the premium for the Medicare Advantage plan selected.

Medicare Advantage plan funding from the federal government will vary depending on the health risk score of the covered participant group, as well as a star rating assigned to each plan. Star ratings are updated annually and are intended to measure plan quality and performance. Five stars is excellent and one star is poor. Plans with higher star ratings receive bonus funding from the federal government. Payments also vary by geographic area; with populated areas tending to get more funding.

Potential cost reduction through a group MA or MAPD plans is beyond the scope of the report, since it can only be evaluated via a vendor competitive bidding process. However, the City should be aware of this option for future consideration.

Other Group Plan Management Techniques

Group plans may use other price and utilization management techniques, in an attempt to reduce costs.

Examples of techniques intended to manage plan utilization and cost are:

- Disease management programs (non-Medicare or MA environment only), intended to reduce costly episodes over time, by managing and engaging chronic patients
- Mandatory generic drugs, requiring the filling prescriptions with generics whenever possible
- Tighter prescription drug formularies, requiring lower net cost drugs to be used

- Periodic competitive bidding of vendor fixed costs or insured plans

- Narrow medical provider networks, improving efficiency and/or price

These techniques are very difficult to quantify in terms of any change in actuarial liability, but they can generally be applied independently of other options discussed above. For example, retirees could receive the Option 1 plan design, but also get a more restricted drug formulary.

Defined Benefit versus Defined Contribution Plans

All of the discussion in this section up until now has focused on traditional defined benefit (DB) group health coverage, where the employer promises a plan design, providing the benefits received under the specified design regardless of how much it costs.

At the other end of the scale, there are true defined contribution (DC) designs. In those plans, employer contributions (or employer matches) into individual employee accounts are made during active service. The account typically has investment options and earns interest. This is similar to a 401(k) or 403(b) DC retirement design, except the benefits are tax advantaged, as long as they are only be used on qualified expenses, such as insurance premiums, deductibles, and copays.

Similar to the trend in pension plans, many organizations are moving to this pure DC approach, because it eliminates unknown employer financial risk in future years. Also, since accounts are often structured to be portable, many younger employees identify well with something tangible, as opposed to some undefined future retirement promise.

In fact, all of the other benchmark comparators in Section 4 have moved to true DC programs for new hires. The City has done so for all groups other than Police, Fire, UAW, and a few specific ERS non-bargained employees.

There is a hybrid design, which we will refer to here as a "defined dollar" (DD) approach. The idea is that employees are allocated a specific dollar amount that they can use to draw down for qualified medical expenses.

It is important to note that this DD approach has some key differences from the true DC approach discussed above:

- Accounts are only notional and no individual's allocation is actually funded, until the individual retires and actually submits qualified health expenses for reimbursement.

- However, the aggregate expected liability can be funded as with any other DB program. See Section 7 for more discussion of OPEB funding.

- Although defining the allocation eliminates health trend risk for the employer, there are still other risks present. For example, there may be more retirements than expected.

- DD programs as defined here still count as "defined benefit" plans for purposes of GASB accounting provisions. Therefore, the program still carries the same GASB OPEB accounting requirements as other DB retiree health programs.

- There is no employee contribution component. All allocations are employer based and there is no mechanism to "match" employee contributions made during active service.

- Participants take on the inflation risk of health care (see discussion of health trend impact later in this section).

- Participants do NOT take on investment risk, as they would in a true DC environment.

- The money can be delivered to retirees in a tax-advantaged way, through a stand-alone retiree Health Reimbursement Account (HRA).

This "hybrid" DD approach has several advantages to employers and employees:

- Since employers define the amounts allocated, there is no health care inflation risk to the employer, which is the key risk in a DB group health plan approach.

- The money is not actually funded, until a participant retires and begins submitting reimbursable health expenses.

- Budgeting of employer plan cost on a year-by-year basis is predictable.

- Retirees and their dependents are not locked into a single plan design offering, but can choose among various insurance carriers, designs, and network types, based upon their own needs and preferences.

- There are flexible design options around single versus family allocations, allocations varying with years of service, etc. In addition, the employer gets to determine whether the allocation increases each year and by how much.

- The employer no longer has to be in the business of maintaining and administering a retiree health plan for affected participants.

- Many retirees may actually be able to purchase a similar value of coverage for less money than the employer currently subsidizes.

- Unused allocations are not lost, but rather carried over indefinitely in the HRA account, until used by the retiree.

Although some organizations are considering this DD approach for non-Medicare retirees, we are not recommending that course at this time. The reason is that providing retiree health coverage depends on having a guaranteed issue environment for retirees and their dependents. Up until the recent public marketplaces created by the Affordable Care Act (ACA), non-Medicare retirees could be charged very high premiums or denied coverage completely. Although these public marketplaces are a guaranteed issue vehicle for non-Medicare retirees, the marketplaces are not mature and may not be financially stable. In addition, the recent change in political leadership at the federal level leaves the continued operation of the public marketplaces in doubt.

In contrast, the DD approach has worked well for many Medicare eligible retiree groups and it may be a viable consideration. The Medicare individual market is mature and it is stable. Retirees have a

broad choice of carriers, networks, and designs. Many retirees find they can actually get similar coverage for less money than the City currently spends on their behalf in the defined benefit plan.

We examined a couple of scenarios using this defined dollar approach for the City's Medicare eligible participants, and the impact can be seen in Section 6 (scenarios 33-36 and 29F-32F) as moderate to large, depending on grandfathering and annual allocation increases. Our scenarios assume that the City would contribute 100% of the current medical and prescription drug costs to each retiree and spouse. Many employers choose to fund less than 100%, in an effort to get a greater savings and knowing that many retirees can get the same overall values on less than 100% of the current net benefit.

Note that the reduction in liability in the illustrated scenarios does not come from a reduced City cash layout for medical and prescription drug coverage, but rather from elimination or reduction of annual inflation on the allocations being less than assumed medical and prescription drug trend rates. In addition, it was assumed that Medicare Part B reimbursement would be discontinued. No change was made to dental or vision benefits.

Impact on Retirees of Defined Dollar Benefit Design

There are several advantages of the DD design from the participant point of view, relative to a traditional defined benefit approach:

- Retirees and their dependents are not locked into a single plan design offering, but can choose among a broad array of designs, networks, and carriers.
- Participants can choose a Medicare Supplement design or a Medicare Advantage design based on their own preferences and needs.
- Retirees and spouses could choose different designs based on their separate needs.
- Many retirees find they are able to purchase similar coverage for the same or less than the amount of monetary value that they were receiving from the employer DB plan.
- Retirees spending less than their annual allocation can carry over unused amounts in their HRA account for use in future years.

However, there is also an impact to the retirees that the City should understand, and that impact is discussed below. Also, if the City wishes to pursue this defined dollar approach for Medicare eligible retirees, it should make sure to note treatment of post-65 retirees not eligible for free Medicare Part A, as discussed in Section 8 of this report.

Retiree Navigation of the Individual Medicare Market

Retirees moving from an employer sponsored plan (with little or no need to select options) to a defined dollar approach may be overwhelmed by the array of plan options and associated marketing materials.

Plan sponsors are increasingly looking to private Medicare exchanges to assist retirees with transition from traditional benefit plans to defined dollar type plans, and to administer the HRA accounts and annual open enrollment following transition. Private Medicare exchanges have been around since

about 2000, when advances in technology and availability of information made the ability for seniors to shop for health insurance a reality.

The greatest value derived from engaging an exchange vendor is the customized enrollment guidance provided to each retiree, based on each individual's travel, health status, drug utilization, provider preferences, etc. Licensed agents employed by the exchange vendor spend up to several hours on multiple phone calls, helping the retiree navigate the initial enrollment process. Re-enrollment in subsequent years involves less time, but includes the same one-on-one attention. Enrollment can be web-based, but can be completely handled by mail and phone for those without internet access or expertise. Additionally, very sick and/or elderly retirees can have an authorized representative enroll on the retiree's behalf. After coverage is purchased, retirees are directly billed by the carrier, but the exchange vendor remains available for assistance with claims and other issues that arise during the policy year.

Private exchange vendors can also provide HRA account administration services and may be able to collect plan sponsor contributions and coordinate premium payments to insurance carriers. Private exchanges earn commissions for enrolling the retirees, and those commissions are often sufficient to pay for the services rendered – at no additional cost to the employer or to the retiree. Such commissions are built directly into the individual plan premiums, so any commissions not paid to an agent or enrollment vendor are simply forfeited to the insurance carrier.

Impact of Health Trend on Retiree Costs

In order to illustrate the impact of health trend increasing at a higher rate than the HRA allocation increases, let us review an example, **which is for illustrative purposes only**:

- A retiree (no spouse) receives an HRA allocation of $5,000 annually
- The retiree finds similar value coverage on the individual market and the premium plus all deductibles, copays, and coinsurances is $4,500 in the first year
- Total of all premium and cost sharing increases at 4.5% annually
- The annual HRA allocation is designed to increase at 3.0% annually

Year	New HRA Allocation	HRA Balance at 1/1	Premium Plus All Cost sharing	HRA Balance at 12/31	**Retiree Net Total Cost**
1	$5,000	$5,000	$4,500	$500	**$0**
2	$5,150	$5,650	$4,703	$948	**$0**
3	$5,305	$6,252	$4,914	$1,338	**$0**
4	$5,464	$6,802	$5,135	$1,666	**$0**
5	$5,628	$7,294	$5,366	$1,927	**$0**
6	$5,796	$7,724	$5,608	$2,116	**$0**
7	$5,970	$8,086	$5,860	$2,226	**$0**
8	$6,149	$8,375	$6,124	$2,252	**$0**
9	$6,334	$8,585	$6,399	$2,186	**$0**
10	$6,524	$8,710	$6,687	$2,022	**$0**
11	$6,720	$8,742	$6,988	$1,754	**$0**
12	$6,921	$8,675	$7,303	$1,372	**$0**
13	$7,129	$8,501	$7,631	$869	**$0**

14	$7,343	$8,212	$7,975	$237	**$0**
15	$7,563	$7,800	$8,334	$0	**$534**

The annual HRA allocation is enough to cover the annual premium and cost sharing for the first 8 years, but in year 9 the higher trend on the costs makes the HRA allocation insufficient to cover the whole cost. However, the retiree has spent those first 8 years building up an HRA balance. By drawing from that balance, the retiree is able to avoid having any actual out-of-pocket costs for an additional 6 years. Finally, the HRA balance is drained in year 15, and the retiree begins having real out-of-pocket costs.

The amount of inflation in the HRA allocation is important. For example, let us assume the same facts as in the prior example, except that the HRA allocation does not increase at all each year.

Year	New HRA Allocation	HRA Balance at 1/1	Premium Plus All Cost sharing	HRA Balance at 12/31	**Retiree Net Total Cost**
1	$5,000	$5,000	$4,500	$500	**$0**
2	$5,000	$5,500	$4,703	$798	**$0**
3	$5,000	$5,798	$4,914	$883	**$0**
4	$5,000	$5,883	$5,135	$748	**$0**
5	$5,000	$5,748	$5,366	$382	**$0**
6	$5,000	$5,382	$5,608	$0	**$226**

This time the annual HRA allocation is only enough to cover the annual premium and cost sharing for the first 3 years, but in year 4 the higher trend on the costs makes the HRA allocation insufficient to cover the whole cost. Now, the retiree has spent only 3 years building up an HRA balance. By drawing from that balance, the retiree is able to avoid having any actual out-of-pocket costs for an additional 2 years. The HRA balance is drained in year 6, and the retiree begins having real out-of-pocket costs.

6 Estimated Impact of Select Design Alternatives

Impact of Selected Alternatives on Current Accrued Liability

low impact: **<**	5%
medium Impact:	5% to 15%
high impact: **>=**	15%

Effect on Accrued Liability in Year 1 (2016)

Plan Change Scenario	Total	Fire	Police	Police Superv	Other ERS	T214	T243	UAW
1 Eliminate non-Medicare medical/drug coverage for **current & future** retirees/dependents	high	high	high	high	med	high	high	high
2 Eliminate Medicare eligible medical/drug coverage for **current & future** retirees/dependents	high	high	high	high	high	high	high	high
3 Eliminate subsidized dental and vision coverage for **current & future** retirees/dependents	low	low	low	low	med	med	med	low
4 Eliminate Medicare Part B reimbursement for **current & future** retirees/dependents	med	med	med	med	med	med	med	med
5 Eliminate life insurance for **current & future** retirees	low	low	low	low	low	low	low	low
6 Eliminate non-Medicare medical/drug coverage for **future** retirees/dependents	med	med	high	high	low	med	med	med
7 Eliminate Medicare eligible medical/drug coverage for **future** retirees/dependents	med	med	med	med	med	high	med	high
8 Eliminate subsidized dental and vision coverage for **future** retirees/dependents	low	low	low	low	low	low	low	low
9 Eliminate Medicare Part B reimbursement for **future** retirees/dependents	low	low	low	low	low	low	low	low
10 Eliminate non-Medicare medical/drug coverage for **current & future** spouses/children of retirees	high	high	high	high	low	med	med	med
11 Eliminate Medicare eligible medical/drug coverage for **current & future** spouses/children of retirees	high	high	high	high	high	high	high	high
12 Eliminate subsidized dental and vision coverage for **current & future** spouses/children of retirees	low	low	low	low	low	low	low	low
13 Eliminate Medicare Part B reimbursement for **current & future** spouses of retirees	low	low	low	low	med	low	med	med
14 Eliminate non-Medicare medical/drug coverage for **future** spouses/children of retirees	med	low	med	med	low	low	low	med
15 Eliminate Medicare eligible medical/drug coverage for **future** spouses/children of retirees	low	low	low	low	low	med	med	med
16 Eliminate non-Medicare medical/drug coverage for **current & future** children of retirees	low	low	low	low	low	low	low	low
17 Eliminate Medicare eligible medical/drug for **current & future** surviving spouses/children of retirees	med	med	med	med	med	med	med	med
18 Eliminate Medicare eligible medical/drug for **future** surviving spouses/children of retirees	low	low	low	low	low	low	low	low
19 Eliminate deferred vesting for all **future** retirees/dependents	low	low	low	low	med	low	low	low
20 Eliminate non-duty disabled benefits for all **future** retirees/dependents	low	low	low	low	low	low	low	low
21 Move non-Medicare medical/drug **current & future** retirees to City's Base Plan design	med	med	med	med	low	low	low	low
22 Move non-Medicare medical/drug **current & future** retirees to City's Option1 Plan design	low	low	med	med	low	low	low	low
23 Move Medicare eligible medical/drug **current & future** retirees to "Base" AMWINS design	med	med	med	med	high	high	high	med
24 Move Medicare eligible medical/drug **current & future** retirees to "Option1" AMWINS design	med	med	med	med	med	med	med	med
25 Move non-Medicare medical/drug **future** retirees to City's Base Plan design	low	low	med	low	low	low	low	low
26 Move non-Medicare medical/drug **future** retirees to City's Option1 Plan design	low	low	low	low	low	low	low	low
27 Move Medicare eligible medical/drug **future** retirees to "Base" AMWINS design	low	low	low	low	low	med	low	low
28 Move Medicare eligible medical/drug **future** retirees to "Option1" AMWINS design	low	low	low	low	low	low	low	low
29 Add or enforce non-Medicare PA-152 hard cap for all **current & future** retirees (no contribution limits)	high	high	high	high	low	low	med	med
30 Add or enforce non-Medicare PA-152 hard cap for all **future** retirees (no contribution limits)	med	low	high	med	low	low	low	med
31 Medicare eligible medical/drug for **current & future** retirees/dependents requires 25% contribution	med	med	med	med	high	high	high	med
32 Medicare eligible medical/drug for **future** retirees/dependents requires 25% contribution	low	low	low	low	low	med	low	low
33 Medicare eligible medical/drug for **current & future** to HRA at current City cost; 0% inflation; elim. Med B	high	high	high	high	high	high	high	high
34 Medicare eligible medical/drug for **current & future** to HRA at current City cost; 3% inflation; elim. Med B	high	high	high	high	high	high	high	high
35 Medicare eligible medical/drug for **future** to HRA at current City cost; 0% inflation; elim. Med B	med	med	med	med	med	high	med	med
36 Medicare eligible medical/drug for **future** to HRA at current City cost; 3% inflation; elim. Med B	med	med	med	low	med	med	med	med

Actual dollar values will be provided in the final report.

Impact of Selected Alternatives on Long-Term Projected Accrued Liability

low impact: <	5%
medium Impact:	5% to 15%
high impact: >=	15%

Effect on Accrued Liability in Year 30 (2046)

	Plan Change Scenario	Total	Fire	Police	Police Superv	Other ERS	T214	T243	UAW
1F	Eliminate non-Medicare medical/drug coverage for **current & future** retirees/dependents	high	med	high	high	low	low	low	high
2F	Eliminate Medicare eligible medical/drug coverage for **current & future** retirees/dependents	high	high	high	high	high	high	high	high
3F	Eliminate subsidized dental and vision coverage for **current & future** retirees/dependents	med	med	med	med	med	med	med	med
4F	Eliminate Medicare Part B reimbursement for **current & future** retirees/dependents	med	med	med	med	high	med	high	med
5F	Eliminate non-Medicare medical/drug coverage for **future** retirees/dependents	high	med	high	high	low	low	low	high
6F	Eliminate Medicare eligible medical/drug coverage for **future** retirees/dependents	high	high	high	high	high	high	high	high
7F	Eliminate subsidized dental and vision coverage for **future** retirees/dependents	med	med	low	low	med	med	low	med
8F	Eliminate Medicare Part B reimbursement for **future** retirees/dependents	med	med	med	med	med	med	med	med
9F	Eliminate non-Medicare medical/drug coverage for **current & future** spouses/children of retirees	low	low	low	low	low	low	low	low
10F	Eliminate Medicare eligible medical/drug coverage for **current & future** spouses/children of retirees	high	high	high	high	high	high	high	high
11F	Eliminate subsidized dental and vision coverage for **current & future** spouses/children of retirees	low	low	low	low	low	low	low	low
12F	Eliminate Medicare Part B reimbursement for **current & future** spouses of retirees	low	low	low	low	low	low	med	med
13F	Eliminate non-Medicare medical/drug coverage for **future** spouses/children of retirees	low	low	low	low	low	low	low	low
14F	Eliminate Medicare eligible medical/drug coverage for **future** spouses/children of retirees	high	high	med	med	med	high	high	high
15F	Eliminate Medicare eligible medical/drug for **current & future** surviving spouses/children of retirees	med	high	med	med	med	high	high	high
16F	Eliminate Medicare eligible medical/drug for **future** surviving spouses/children of retirees	med	med	low	low	low	med	med	med
17F	Move non-Medicare medical/drug **current & future** retirees to City's Base Plan design	low	low	med	med	low	low	low	low
18F	Move non-Medicare medical/drug **current & future** retirees to City's Option1 Plan design	low	low	low	low	low	low	low	low
19F	Move Medicare eligible medical/drug **current & future** retirees to "Base" AMWINS design	high	high	med	med	high	high	high	high
20F	Move Medicare eligible medical/drug **current & future** retirees to "Option1" AMWINS design	med	med	med	med	med	med	med	med
21F	Move non-Medicare medical/drug **future** retirees to City's Base Plan design	low	low	med	med	low	low	low	low
22F	Move non-Medicare medical/drug **future** retirees to City's Option1 Plan design	low	low	low	low	low	low	low	low
23F	Move Medicare eligible medical/drug **future** retirees to "Base" AMWINS design	med	med	med	med	med	med	med	med
24F	Move Medicare eligible medical/drug **future** retirees to "Option1" AMWINS design	med	med	med	med	med	med	med	med
25F	Add or enforce non-Medicare PA-152 hard cap for all **current & future** retirees (no contribution limits)	med	low	high	high	low	low	low	low
26F	Add or enforce non-Medicare PA-152 hard cap for all **future** retirees (no contribution limits)	med	low	high	high	low	low	low	low
27F	Medicare eligible medical/drug for **current & future** retirees/dependents requires 25% contribution	med	high	med	med	high	high	high	high
28F	Medicare eligible medical/drug for **future** retirees/dependents requires 25% contribution	med	med	med	med	med	med	med	med
29F	Medicare eligible medical/drug for **current & future** to HRA at current City cost; 0% inflation; elim. Med B	high	high	high	high	high	high	high	high
30F	Medicare eligible medical/drug for **current & future** to HRA at current City cost; 3% inflation; elim. Med B	high	high	high	high	high	high	high	high
31F	Medicare eligible medical/drug for **future** to HRA at current City cost; 0% inflation; elim. Med B	high	high	high	high	high	high	high	high
32F	Medicare eligible medical/drug for **future** to HRA at current City cost; 3% inflation; elim. Med B	high	high	high	high	high	high	high	high
33F	Eliminate non-Medicare medical/drug coverage for **newly hired future** retirees/dependents	high	med	high	high	low	low	low	med
34F	Eliminate Medicare eligible medical/drug coverage for **newly hired** future retirees/dependents	med	high	med	med	med	low	low	low
35F	Eliminate subsidized dental and vision coverage for newly **hired future** retirees/dependents	low	low	low	low	low	low	low	med
36F	Eliminate Medicare Part B reimbursement for **newly hired future** retirees/dependents	low	low	low	low	low	low	low	low

Actual dollar values will be provided in the final report.

7 Funding OPEB Obligations

Funding Discussion

Funding the retiree obligation provides security for both the City and the participants that funds will be available to pay the retiree health benefits. Some type of legislated actuarial based contribution would give retirees more confidence that money will be available to pay for benefits. As a result, strong funding requirements could be used as a negotiation tool, in return for making any changes that lower the value of the overall benefit package. However, it is recognized that this may not be practical, given the City's resource constraints.

Prefunding is a proven management tool. The advantages of prefunding include longer-term savings, higher interest rate assumptions with correspondingly lower annual required contribution levels and lower total liability amounts.

A policy for funding retiree health benefits is a concise statement of how a plan sponsor intends to pay for its retiree health benefits, including both current year costs and prefunding of future retiree health liabilities. It can be a statute, ordinance or policy document. It is usually created by the jurisdiction's governing body.

Our understanding of the City of Lansing's current OPEB funding policy for ERS is a statutory employer contribution of 2.5% of payroll for UAW and all older plan participants and 4.0% of payroll for newer non-UAW plan participants. Our understanding of the City of Lansing's current OPEB funding policy for Police and Fire is a statutory employer contribution of 2.48% of payroll.

In deciding whether to modify the current prefunding approach, the City may want to project the short-term and long-term costs associated with multiple approaches, ideally reviewing a number of potential contribution scenarios, in order to determine a funding policy that would work for the City.

Another consideration is the likely reactions of stakeholders. While many employees may not think much about their retirement benefits until later in their careers, employees (and retirees) are likely to feel more secure they will receive future benefits in plans that are funded at increased levels. Because public sector financing takes place in open meetings, the issue of whether to prefund the liabilities for retiree benefits or to use money for other government services, infrastructure improvements or repair projects for the jurisdiction is at the forefront of taxpayers' attention. Elected officials may find it difficult to commit hard-won tax revenues toward prefunding liabilities for current and future retirees, where the value of those investments is not immediately apparent to taxpayers.

Amortization Methods

The goal of an appropriate funding policy is to fund the benefits payable from the plan over a reasonable period. For the purposes of generational equity, the amortization period should also be related to the working lifetime of the group being covered. An appropriate funding policy results in a contribution that funds the Normal Cost (*i.e.*, the cost of benefits accruing in the current year) and includes a payment towards the unfunded accrued liability, which is the amount for which assets are insufficient to cover the benefits that have been earned in the past. Amortization of unfunded accrued liability can be over a "closed" period or an "open" period.

A "closed' amortization period will reduce the unfunded accrued liability of the plan over a set timeframe, ending at a specific future date. A closed period has the advantage of effectively amortizing the liability in a specified period, but it can result in volatile contributions near the end of the amortization period.

An "open" amortization period re-amortizes the unfunded accrued liability of the plan each year over the same period as the previous year. The contributions under an open amortization period are less volatile than with a closed period, but the unfunded liability is not amortized as quickly as with a closed period and may never be amortized. Depending on the amortization period, the unfunded accrued liability may actually increase under an open amortization period.

Amortization can also be done as a "level percent of payroll" or as a "level dollar" amount. "Level percent of payroll" amortization expresses the amortization payments over the future payroll of the group. An assumption must be made about the increase in payroll that is expected to occur over the amortization period. While the payments are expected to be level as a percent of pay, the amount of the payments is smaller in the earlier years of the amortization period and larger in the later years. This can result in a "negative amortization", where the unfunded accrued liability grows during the first years of the amortization period. The level percent of payroll amortization method generally results in a stable contribution rate. However, if actual payroll increases are less than expected, the payments are lower and future contributions, as a percentage of payroll will need to increase. In addition, combining the level percent of payroll method with an open amortization period can result in the "negative amortization", where, unfunded accrued liability increases every year in the future.

A "level dollar" amortization expresses the amortization payments as a fixed dollar amount over the amortization period. A typical example is a home mortgage payment, where a fixed amount is paid each month. This results in greater payments at the beginning of the period than with the level percent of payroll method. While the payments reduce the unfunded accrued liability more quickly in the early years of the amortization period, the payments do not remain constant as a percent of payroll.

In some cases, retirement systems use a combination of the methods above in their funding policies. A common example is to use a short, closed period for a one-time benefit adjustment or window, while amortizing the remaining unfunded accrued liability over a longer open period. Another option is using fixed-length closed periods to amortize changes in the unfunded accrued liability each year.

The City of Lansing is currently using a "partially closed" hybrid amortization as a level percentage of payroll, for purposes of GASB OPEB reporting. A closed period of 26 years is amortized down to 15 years, and then the 15 years remain as an open period. This method is not expected to get the plans to 100% funding over time. The statutory contribution amounts required above are also not expected to be enough to prefund a policy that would get to 100% funded plans over time.

The City has options to accelerate payments toward the unfunded accrued liability of the plans. A statutory policy requiring the funding of an actuarially determined contribution would accelerate payments. An actuarially determined contribution would increase payments by requiring funding of the normal cost each year PLUS an amortization payment to the unfunded actuarial accrued liability. Payments toward the unfunded liabilities of the plans could be controlled by the following valuation assumptions and methods, among others:

- The initial amortization period of the plans – shorter initial period increases payments

- The payroll growth assumption – reducing the growth rate increases payments
- Investment return assumption – reducing the assumed investment return increases payments

The advantage of accelerating contribution amounts is increased assets earning investment returns, which will lower future contributions. Ultimately, the City must determine the method of funding the OPEB plans that provides for systematic payments to unfunded liability, while meeting the risk profile of the City and its stakeholders.

We recommend the City evaluate whether increasing OPEB funding contributions would be desirable as a mechanism for reducing future OPEB contributions. Such an increase may require a change in statutory requirements.

We further recommend the City consider a policy, which funds based on an actuarially determined contribution amount. The actuarially determined contribution would use assumptions and amortization methods that target 100% funding of the OPEB plans over time.

8 Other Considerations

GASB Accounting Standards

GASB 74 (plan accounting/reporting) is effective for the first fiscal year beginning after June 15, 2016 and replaces GASB No. 43. GASB 75 (employer accosting/reporting) is effective for the first fiscal year beginning after June 15, 2017 and replaces GASB No. 45. GASB No. 75 will require employers to place the entire unfunded OPEB liability directly onto their balance sheets immediately.

The new statements also mandate a common actuarial allocation method for all entities – the Entry Age Normal method, as a level percentage of salary. In anticipation of this impending change, the 12/31/2015 Boomershine Consulting OPEB valuation reports switched the City of Lansing plans from a level dollar actuarial cost method to the level percentage of pay actuarial cost method.

These new GASB changes could spur renewed interest in prefunding of OPEB benefits. Although GASB does not require prefunding of OPEB liabilities, given how large these values are likely to be, their inclusion on financial reports will have a measurable impact on the reported financial status of many municipalities.

In light of new GASB OPEB Statements No. 74 & 75, some entities will need to re-examine their existing OPEB contribution policies. An example of a policy requiring revision is one that uses a percentage of the Annual Required Contribution (ARC) for funding, since GASB No. 74 & 75 eliminate the concept of the ARC altogether. The new statements make it clear that clear that funding must be considered completely separate from accounting. Actuarial valuations will need to show two completely different sets of results for funding versus GASB accounting.

Although separate, the funding policy and funded status of the plans will affect the GASB accounting results, because GASB mandates that funded plans use a discount rate related to the rate of return the assets are expected to generate – in other words, the investment return assumption. Completely unfunded plans are required to use a discount rate tied to an index rate for 20-year tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher. Partially funded plans must use a blend of these two rates, so a better-funded plan will have a lower GASB OPEB obligation, not only due to having more assets, but also due to using a higher discount rate.

Michigan Public Act 152

In 2011, the State of Michigan passed Public Act 152 (PA-152), which requires that local units of government place a hard cap on their health care, institute an 80/20 cost sharing arrangement, or opt out with 2/3 vote of the governing body. The City of Lansing complies via the hard cap.

Although retired employees are exempt from the requirements of PA-152, the City's collective bargaining agreements and fringe benefit documents specify that some retiree cohorts are subject to all of the same cost sharing requirements of the active plans – including the PA-152 hard cap.

Compliance with the hard cap effectively reduces the impact of health care trend on non-Medicare medical and prescription drug benefits for those cohorts subject to the cap, since the expected inflation on the hard cap amounts is 2.5% to 3.5%, while the ultimate health care trend rate assumed

by the City is 4.5%. Most of the retiree rates for medical and prescription drug non-Medicare plans are already close to or above the current hard cap amounts.

Newer Fire retirees, all Teamsters 214 retirees, and most non-bargained newer retiree cohorts are directly subject to the hard cap, with no participant contribution limits.

The effect of the PA-152 cap is somewhat muted by the current collective bargaining agreements for UAW, Teamsters 243 City, Teamsters 243 District Court, Police (both supervisor and non-supervisor), and the fringe document for District Court non-bargained. These groups have retiree contribution limits that override the hard cap, based on a specified dollar amount and/or a specified percentage of pension benefit. However, some of these groups lose the protection of the limit, unless they choose one of the newer (and less rich) City plan designs, so the cap still has some effect on these groups, although the impact is lessened.

Note the Medicare premium rates are much lower than non-Medicare rates, and well below the hard cap amounts. As a result, there is no material impact expected for the near future on Medicare eligible benefits.

Overall, the presence of the PA-152 legislation reduces the accrued liability of City's non-Medicare retiree health benefits. If PA-152 were repealed or if the City elected to opt-out, the City's 1/1/2016 OPEB liability would increase by 6% in total. However, the liability for the Fire group would increase by 24%, as that group has no participant contribution limits that are overriding the hard cap.

Given the interaction of the PA-152 hard cap with the City's non-Medicare costs, it will be critical that any changes made by the City consider the presence of the hard cap.

Retirees Not Eligible for Free Medicare Part A

There are likely participants who are over age 65, but are not eligible for free Medicare Part A. These are typically state or local governmental employees hired prior to March 31, 1986 and may have never paid Social Security taxes for the required 10 years (and who do not have a spouse whose work qualified both of them for Medicare). There are two (2) options for handling these participants:

1. Treat them the same as any other participant not eligible for Medicare and enroll them in the non-Medicare retiree plans.

2. Require them to enroll in Medicare Parts A and B. This would require a monthly premium to buy Part A ($411.00 in 2016) as well as paying for Part B ($121.80 in 2016, unless making more than $85,000 single or $170,000 married filing jointly). The retiree would need to decide whether to purchase a Prescription Drug plan under Medicare Part D (average cost of $42.43 in Michigan for 2016).

The monthly Part B premium may be subject to a lifetime late enrollment penalty since the participant did not first sign up when age 65. The penalty is 10% for every 12-month period the individual could have enrolled in Part B. However, it is our understanding that the penalties would be waived if the retiree had uninterrupted medical and credible drug coverage through an employer until that date and that group coverage was cancelled.

The monthly Part D premium may also be subject to a lifetime late enrollment penalty since the participant did not first sign up when age 65. The penalty is 1% per month from the period the

individual could have enrolled in Part D. It is our understanding that the penalties would be waived if the retiree had uninterrupted creditable drug coverage through an employer, until that group coverage was cancelled.

Legal and Collective Bargaining Considerations

Most of the potential scenarios illustrated in Section 6 of this report would be considered changes to those retirees and/or active employees who are affected. Whenever there is a perceived change in benefits, the plan sponsor must consider the potential litigation that could arise.

The City should review all correspondence, contracts, letters, documents, etc., in order to determine what, if any, any legal promises have been made to current retirees and/or current employees (as future retirees).

Future employees are just that – employee who will be hired in the future. There is no litigation risk there. Future employees may consider the value of retiree health benefits as they make their decision to join, or to stay at, a future employer. However, this is the easiest place for the City to reduce retiree health benefits. These employees have not yet started to work and voters, many of whom do not receive retiree health benefits, may not consider this a significant issue. There may still be resistance from the national unions that represent public sector employees. Of course, the City has already eliminated defined benefit retiree health (other than dental and vision) for new retirees of most groups, but the Police, Fire, UAW, and some specific non-bargained employees are still entitled to them. Note that while changes to future hires reduce costs in the future, they will have NO impact on current OPEB liabilities, as those amounts only represent the projected costs for current active employees and current retirees.

Potential Impact on Employment and Retirement Patterns

Any change to retiree health (or pension) benefits can cause a change in retirement patterns. In the January 2014 periodical "Trends and Issues," by the TIAA-CREF Institute, the question of "How Does Coverage by Retiree Health Insurance Affect the Age of Retirement" was explored. The findings include that the existence of retiree health benefits has an impact on public sector retirement patterns. The second question applicable to this analysis is not examined – what happens if the level of retiree health benefits is reduced, but not eliminated?

Similar findings were seen in the "Does Retiree Health Insurance Encourage Early Retirement?" paper, published in the "Journal of Public Economics, Volume 104, August 2013." Again, there is the question of whether a lower level of benefit or modification of the benefit would lead to a similar result.

We believe it is likely that a reduction in **non-Medicare** benefits is likely to cause some effect on retirement patterns, but it is impossible to determine exactly how the retirement patterns would change.

However, such a change in retirement patterns has several implications, including:

1. Additional savings in retiree health benefits, since retirees will have coverage for less years of their lives. For example, they may choose to retire at age 65, rather than age 60, due to lack of health benefits for non-Medicare retirees. However, see the next point for the offsetting consequence of this choice.

2. Increase in active health benefits costs as the older active employees will work longer (not retire as quickly). While, on average, retiree health benefits costs more than active health benefits (assuming the benefit levels and required contributions are the same), this does not affect them at the individual person level. If hypothetical employee, Mary, were to work one additional year (from age 61 to age 62), her health care costs will be similar in that one year of work as compared to what they would have been if she retired at age 61.

3. Projected changes in the active workforce will not take place. If fewer employees retire, the ability to replace more expensive (payroll, benefits) older employees with less expensive (payroll, benefits) younger employees will not occur.

Because of these potential implications, changes in benefits for current active employees should consider the issue of retirement patterns.

Appendix A - Retiree Benefit Summaries

Group	**Police Non-Supervisory**					
Status	***Inactive***			***Active***		
Cohort	*Retired < 5/18/10*	*Retired 5/18/10 to 10/12/15*	*Retired > 10/12/15*	*Hired < 7/1/10*	*Hired 7/1/10 to 7/31/14*	*Hired > 7/31/14*
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Various legacy	Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	No	No	No	No	No	No
Retiree Contributions	None	None	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits
Limit on Retiree Contribution Amounts	N/A	N/A	1% of pension	1% of pension	1% of pension	1% of pension
Restriction on Retiree Contribution Limits	N/A	N/A	None	None	None	None
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	None	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Retiree Only
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	dental/vision only
Retiree Life Insurance Benefit	$3,000*	$3,000	$3,000	$3,000	$3,000	$3,000
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes
Retirement Eligibility						
Age/Service #1				55/15	any/25*	50/25*
Age/Service #2				any/25	N/A	N/A
Age/Service #3				N/A	N/A	N/A
OPEB Vesting Eligibility						
Service				15 years service	25 years service	25 years service
Payable				Age 55	Age 55	Age 55
Notes	*No life ins. If retired before 7/1/82				*Up to 2 years credit for military svc	*Up to 2 years credit for military svc

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a pormise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	**Police Supervisory**					
Status	***Inactive***			***Active***		
Cohort	Retired < 7/15/10	Retired 7/15/10 to 10/12/15	Retired > 10/12/15	Hired < 7/15/10	Hired 7/15/10 to 7/31/14	*Hired > 7/31/14*
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Various legacy	Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	No	No	No	No	No	No
Retiree Contributions	None	$250/$550/$650	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits
Limit on Retiree Contribution Amounts	N/A	Only contribute up to 5 yrs	1% of pension	1% of pension	1% of pension	1% of pension
Restriction on Retiree Contribution Limits	N/A	N/A	None	None	None	None
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	None	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Retiree Only
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	dental/vision only
Retiree Life Insurance Benefit	$3,000*	$3,000	$3,000	$3,000	$3,000	$3,000
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes
Retirement Eligibility						
Age/Service #1				55/15	any/25*	50/25*
Age/Service #2				any/25	N/A	N/A
Age/Service #3				N/A	N/A	N/A
OPEB Vesting Eligibility						
Service				15 years service	25 years service	25 years service
Payable				Age 55	Age 55	Age 55
Notes	*No life ins. If retired before 7/1/82				*Up to 2 years credit for military svc	*Up to 2 years credit for military svc

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a promise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	Fire						
Status	Inactive			Active			
Cohort	Retired < 7/1/11	Retired 7/1/11 to 6/30/13	Retired > 6/30/13	Hired < 7/1/06	Hired 7/1/06 to 6/30/10	Hired 7/1/10 to 7/31/14	Hired > 7/31/14
Pre-Medicare Medical/Rx Coverage							
Type of Plan Design(s)	Various legacy	Option2*	Base/Option1/Option2*	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	No	No	No	No	No	No	No
Retiree Contributions	None	15% premium fixed by DOR	> PA-152 cap	> PA-152 cap	> PA-152 cap	> PA-152 cap	> PA-152 cap
Limit on Retiree Contribution Amounts	N/A	N/A	No Limit	No Limit	No Limit	No Limit	No Limit
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage							
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	10% premium fixed by DOR	None	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Yes	Retiree Only
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	dental/vision only
Retiree Life Insurance Benefit	$3,000*	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retirement Eligibility							
Age/Service #1				55/10	55/15	any/25*	50/25*
Age/Service #2				any/25	any/25*	N/A	N/A
Age/Service #3				N/A	N/A	N/A	N/A
OPEB Vesting Eligibility							
Service				10 years service	15 years service	25 years service	25 years service
Payable				Age 55	Age 55	Age 55	Age 55
Notes	*No life ins. If retired before 7/1/83	* Legacy if ret < 9/1/11	* Option2 only if ret < 8/1/14		*Up to 2 years credit for military svc	*Up to 2 years credit for military svc	*Up to 2 years credit for military svc

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a pormise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	UAW						
Status	**Inactive**			**Active**			
Cohort	Retired < 7/1/10	Retired 7/1/10 to 9/30/14	Retired > 9/30/14	Hired < 12/1/89	Hired 12/1/89 to 3/7/10	Hired 3/8/10 to 10/20/13	Hired > 10/20/13
Pre-Medicare Medical/Rx Coverage							
Type of Plan Design(s)	Various legacy*	Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	No	No	Yes	Yes	Yes	Yes	Yes
Retiree Contributions	None	$125/$225/$325	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits
Limit on Retiree Contribution Amounts	N/A	1% of pension	1% of pension	1% of pension	1% of pension	1% of pension	1% of pension
Restriction on Retiree Contribution Limits	N/A	N/A	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected
Medicare Eligible Medical/Rx Coverage							
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	N/A
Retiree Contributions	None	None	None	None	None	None	No
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Yes	No
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	dental/vision only
Retiree Life Insurance Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes	Only pre-Medicare
Retirement Eligibility							
Age/Service #1				58/8	58/15	50/25	50/25
Age/Service #2				50/25	50/25	N/A	N/A
Age/Service #3				N/A	N/A	N/A	N/A
OPEB Vesting Eligibility							
Service				8 years service	15 years service	25 years service	25 years service
Payable				Normal retirement age	Normal retirement age	Age 50	Age 50
Notes	* Option2 if ret > 3/28/10						

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a pormise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	T214					
Status	**Inactive**	**Active**				
Cohort	All Retirees	Hired < 10/29/90	Hired 10/29/90 to 12/7/08	Hired 12/8/08 to 9/16/12	Hired 9/17/12 to 12/31/14	Hired > 12/31/14
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	N/A
Do Plan Designs Follow Active Plan Changes?	Yes	Yes	Yes	Yes	Yes	N/A
Retiree Contributions	> PA-152 cap	> PA-152 cap	> PA-152 cap	> PA-152 cap	> PA-152 cap	N/A
Limit on Retiree Contribution Amounts	No Limit	No Limit	No Limit	No Limit	No Limit	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	N/A
Retiree Contributions	None	None	None	None	None	N/A
Medicare B Premium Reimbursements	Yes	Yes	Yes	Retiree Only	Retiree Only	No
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Med/Rx not subsidized	Med/Rx not subsidized	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	Med/Rx not subsidized	Med/Rx not subsidized	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Med/Rx not subsidized	Med/Rx not subsidized	dental/vision only
Retiree Life Insurance Benefit	N/A	N/A	N/A	N/A	N/A	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	N/A
Retirement Eligibility						
Age/Service #1		65 points with 8 yos	55/15	58/15	50/25	50/25 for d/v only
Age/Service #2		N/A	50/25	50/25	N/A	N/A
Age/Service #3		N/A	N/A	N/A	N/A	N/A
OPEB Vesting Eligibility						
Service		8 years service	15 years service	15 years service	25 years service	25 yos for d/v only
Payable		65 points	Age 55	Age 55	Age 55	Age 55 for d/v only
Notes						No DB retiree health, except dental/vision

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a pormise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	T243 - Regular						
Status	Inactive		Active				
Cohort	Retired < 2/20/04	Retired > 2/19/04	Hired < 7/1/87	Hired 7/1/87 to 10/28/90	Hired 10/29/90 to 2/8/10	Hired 2/9/10 to 5/18/14	Hired >5/18/14
Pre-Medicare Medical/Rx Coverage							
Type of Plan Design(s)	Various legacy	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	N/A
Do Plan Designs Follow Active Plan Changes?	No	Yes	Yes	Yes	Yes	Yes	N/A
Retiree Contributions	None	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	N/A
Limit on Retiree Contribution Amounts	N/A	1% pension OR $125/$225/$325	1% pension OR $125/$225/$325	1% pension OR $125/$225/$325	1% pension OR $125/$225/$325	1% pension OR $125/$225/$325	N/A
Restriction on Retiree Contribution Limits	N/A	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	N/A
Medicare Eligible Medical/Rx Coverage							
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	N/A
Retiree Contributions	None	None	None	None	None	None	N/A
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Yes	No
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	dental/vision only
Retiree Life Insurance Benefit	No	No	No	No	No	No	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes	N/A
Retirement Eligibility							
Age/Service #1			65 points with 8 yos	65 points with 15 yos	58/15	50/25	50/25 for d/v only
Age/Service #2			N/A	N/A	50/25	N/A	N/A
Age/Service #3			N/A	N/A	N/A	N/A	N/A
OPEB Vesting Eligibility							
Service			8 years service	15 years of service	15 years of service	25 years of service	25 yos for d/v only
Payable			65 points	Age 55	Age 55	Age 55	Age 55 for d/v only
Notes							No DB retiree health, except dental/vision

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a pormise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	T243 - District Court					911 Operators
Status	**Inactive**	**Active**				**Inactive**
Cohort	All Retirees	Hired < 6/1/10	Hired 6/1/10 to 3/31/14	Hired 4/1/14 to 6/30/16	*Hired > 6/30/16*	Retired < 7/1/12*
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	N/A	Various legacy
Do Plan Designs Follow Active Plan Changes?	Yes	Yes	Yes	Yes	N/A	No
Retiree Contributions	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	> PA-152 cap with limits	N/A	None
Limit on Retiree Contribution Amounts	1% pension	1% pension	1% pension	1% pension	N/A	N/A
Restriction on Retiree Contribution Limits	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	N/A	N/A
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	N/A	N/A	AMWINS
Retiree Contributions	None	None	None	No	N/A	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	No	No	Yes
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Not subsidized	Not subsidized	Not subsidized	Not subsidized	Not subsidized	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	dental/vision only	dental/vision only	Yes
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	dental/vision only	dental/vision only	if J&S form
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	dental/vision only	dental/vision only	Yes
Retiree Life Insurance Benefit	No	No	No	N/A	N/A	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Only pre-Medicare	N/A	Yes
Retirement Eligibility						
Age/Service #1		58/15	50/25	50/25	50/25 for d/v only	
Age/Service #2		50/25	N/A	N/A	N/A	
Age/Service #3		N/A	N/A	N/A	N/A	
OPEB Vesting Eligibility						
Service		15 years of service	25 years of service	25 years of service	25 yos for d/v only	
Payable		Age 55	Age 55	Age 55	Age 55 for d/v only	
Notes					No DB retiree health, except dental/vision	* Retirees > 6/30/12 not Lansing's; TVs still possible

Important Note

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Appendix A - Retiree Benefit Summaries

Group	***District Court Non-Bargaining***				
Status	***Inactive***	***Active***			
Cohort	All Retirees	Hired < 6/1/10	Hired 6/1/10 to 3/31/14	Hired 4/1/14 to 6/30/16	*Hired > 6/30/16*
Pre-Medicare Medical/Rx Coverage					
Type of Plan Design(s)	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	N/A
Do Plan Designs Follow Active Plan Changes?	Yes	Yes	Yes	Yes	N/A
Retiree Contributions	> PA-152 cap with limits*	> PA-152 cap with limits*	> PA-152 cap with limits*	> PA-152 cap with limits*	N/A
Limit on Retiree Contribution Amounts	1% pension*	1% pension*	1% pension*	1% pension*	N/A
Restriction on Retiree Contribution Limits	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	No limit if Option2 elected	N/A
Medicare Eligible Medical/Rx Coverage					
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	N/A	N/A
Retiree Contributions	None	None	None	No	N/A
Medicare B Premium Reimbursements	Yes	Yes	Yes	No	No
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Not subsidized	Not subsidized	Not subsidized	Not subsidized	Not subsidized
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	dental/vision only	dental/vision only
Surviving Spouse Medical/Rx Coverage	Yes	Yes	Yes	dental/vision only	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	dental/vision only	dental/vision only
Retiree Life Insurance Benefit	No	No	No	N/A	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Only pre-Medicare	N/A
Retirement Eligibility					
Age/Service #1		65 points with 15 yos	25 years of service	25 years of service	50/25 for d/v only
Age/Service #2		N/A	N/A	N/A	N/A
Age/Service #3		N/A	N/A	N/A	N/A
OPEB Vesting Eligibility					
Service		15 years service	25 years of service	25 years of service	25 yos for d/v only
Payable		65 points	Age 55	Age 55	Age 55 for d/v only
Notes	*1% pension limit not in fringe document, but is currently administered	*1% pension limit not in fringe document, but is currently administered	*1% pension limit not in fringe document, but is currently administered	*1% pension limit not in fringe document, but is currently administered	No DB retiree health, except dental/vision

Important Note

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Appendix A - Retiree Benefit Summaries

Group	***Other Non-Bargaining***					
Status	***Inactive***		***Active***			
Cohort	Ret < 7/1/07	Retired > 6/30/07	Hired < 10/29/90	Hired 10/29/90 to 6/30/07	Hired 7/1/07 to 6/30/16	*Hired > 6/30/16*
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Legacy	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	N/A
Do Plan Designs Follow Active Plan Changes?	No	Yes	Yes	Yes	Yes	N/A
Retiree Contributions	None	> PA-152 cap	> PA-152 cap	> PA-152 cap	> PA-152 cap	N/A
Limit on Retiree Contribution Amounts	N/A	N/A	N/A	N/A	N/A	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	N/A
Retiree Contributions	None	None	None	None	None	N/A
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Retiree Only	No
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Med/Rx not subsidized	dental/vision only
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	Med/Rx not subsidized	dental/vision only
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Med/Rx not subsidized	dental/vision only
Retiree Life Insurance Benefit	No	No	No	No	No	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	N/A
Retirement Eligibility						
Age/Service #1			65 points with 15 yos	55/15	55/15	50/25 for d/v only
Age/Service #2			N/A	N/A	N/A	N/A
Age/Service #3			N/A	N/A	N/A	N/A
OPEB Vesting Eligibility						
Service			15 years service	15 years service	15 years service	25 yos for d/v only
Payable			65 points	Age 55	Age 55	Age 55 for d/v only
Notes						No DB retiree health, except dental/vision

Important Note

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Appendix A - Retiree Benefit Summaries

Group	Council Staff							
Status	**Inactive**		**Active**					
Cohort	Retired < 7/1/07	Retired > 6/30/07	Hired < 7/1/87	Hired 7/1/87 to 10/28/90	Hired 10/29/90 to 6/30/07	Hired 7/1/07 to 2/28/09	Hired 3/1/09 to 10/14/12	Hired > 10/14/12
Pre-Medicare Medical/Rx Coverage								
Type of Plan Design(s)	Legacy	Base/Option1/Option2	Base/Option1/Option2*	Base/Option1/Option2*	Base/Option1/Option2*	Base/Option1/Option2	Base/Option1/Option2	0095/0094//0056
Do Plan Designs Follow Active Plan Changes?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Contributions	City pays 55%/75%/100% prem svc based*	> PA-152 cap*	> PA-152 cap*	> PA-152 cap*	> PA-152 cap*	> PA-152 cap	> PA-152 cap	> PA-152 cap
Limit on Retiree Contribution Amounts	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage								
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	None	None	None	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Yes	Retiree Only	Retiree Only
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Med/Rx not subsidized	Med/Rx not subsidized
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	Med/Rx not subsidized	Med/Rx not subsidized
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Yes	Med/Rx not subsidized	Med/Rx not subsidized
Retiree Life Insurance Benefit	No	No	No	No	No	No	No	No
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Retirement Eligibility								
Age/Service #1			Any/8	55/15	55/8**	55/15	55/15	55/25
Age/Service #2			N/A	N/A	N/A	N/A	N/A	N/A
Age/Service #3			N/A	N/A	N/A	N/A	N/A	N/A
OPEB Vesting Eligibility								
Service			8 years of service	15 years of service	8 years of service**	15 years of service	15 years of service	25 years of service
Payable			At termination	Age 55	Age 55	Age 55	Age 55	Age 55
Notes	* If hired <10/29/90, premium share is $0	* If <15 yos, City pays 55%/75% of Base prem (8/12 yos)	* If retired < 7/1/07, $0 ret cnt and Legacy plan design	* If retired < 7/1/07, $0 ret cnt and Legacy plan design	* If retired < 7/1/07, City pays 100% of Base Plan (no cap); retiree can buy-up ** If <15 yos, City pays 55%/75% of Base prem (8/12 yos)			

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a promise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	***Executive Management & Mayoral Staff***				
Status	***Inactive***		***Active***		
Cohort	Retired < 7/1/07	Retired > 6/30/07	Hired < 10/29/90	Hired 10/29/90 to 6/30/07	Hired > 7/1/07
Pre-Medicare Medical/Rx Coverage					
Type of Plan Design(s)	Legacy	Base/Option1/Option2	Base/Option1/Option2*	Base/Option1/Option2*	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	No	Yes	Yes	Yes	Yes
Retiree Contributions	City pays 55%/75%/100% prem svc based*	> PA-152 cap*	> PA-152 cap*	> PA-152 cap*	> PA-152 cap
Limit on Retiree Contribution Amounts	N/A	N/A	N/A	N/A	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage					
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Retiree Only
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	Yes
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Med/Rx not subsidized
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	Med/Rx not subsidized
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Med/Rx not subsidized
Retiree Life Insurance Benefit	No	No	No	No	No
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes
Retirement Eligibility					
Age/Service #1			Fire 55/10 OR any/25	55/8**	55/15
Age/Service #2			Police 55/15 OR any/25	N/A	N/A
Age/Service #3			Non-P/F 65 points and 15 yos	N/A	N/A
OPEB Vesting Eligibility					
Service			15 years of service	8 years of service**	15 years of service
Payable			65 points	Age 55	Age 55
Notes	* If hired <10/29/90, premium share is $0	* If <15 yos, City pays 55%/75% of Base prem (8/12 yos)	* If retired < 7/1/07, $0 ret cnt and Legacy plan design	* If retired < 7/1/07, City pays 100% of Base Plan (no cap); retiree can buy-up ** If <15 yos, City pays 55%/75% of Base prem (8/12 yos)	

Important Note

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Appendix A - Retiree Benefit Summaries

Group	Mayor / City Clerk					
Status	Inactive		Active			
Cohort	Retired < 1/1/06	Retired > 12/31/05	Elected < 7/1/87	Elected 7/1/87 to 6/30/07	Elected 7/1/07 to 6/30/09	Elected > 6/30/09
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Legacy	Base/Option1/Option2	Base/Option1/Option2*	Base/Option1/Option2*	Base/Option1/Option2	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	No	Yes	Yes	Yes	Yes	Yes
Retiree Contributions	None	> PA-152 cap	> PA-152 cap*	> PA-152 cap*	> PA-152 cap	> PA-152 cap
Limit on Retiree Contribution Amounts	N/A	N/A	N/A	N/A	N/A	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	None	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	Retiree Only
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Yes	Yes	Yes	Yes	No	No
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Med/Rx not subsidized
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	Med/Rx not subsidized
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	Med/Rx not subsidized
Retiree Life Insurance Benefit	No	No	No	No	No	No
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	Yes
Retirement Eligibility						
Age/Service #1			Any/8	55/15	55/15	55/15
Age/Service #2			N/A	N/A	N/A	N/A
Age/Service #3			N/A	N/A	N/A	N/A
OPEB Vesting Eligibility						
Service			8 years of service	15 years of service	15 years of service	15 years of service
Payable			At termination	Age 55	Age 55	Age 55
Notes			* If retired < 1/1/06, $0 retiree contribution, and Legacy design	* If retired < 1/1/06, $0 retiree contribution, and Legacy design		

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a promise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	City Council					
Status	**Inactive**		**Active**			
Cohort	Retired < 1/1/06	Retired > 12/31/05	Elected < 7/1/87	Elected 7/1/87 to 6/30/07	Elected 7/1/07 to 12/31/09	Elected > 1/1/10
Pre-Medicare Medical/Rx Coverage						
Type of Plan Design(s)	Legacy	Base/Option1/Option2	Base/Option1/Option2*	Base/Option1/Option2*	Base/Option1/Option2	N/A
Do Plan Designs Follow Active Plan Changes?	No	Yes	Yes	Yes	Yes	N/A
Retiree Contributions	None	> PA-152 cap	> PA-152 cap*	> PA-152 cap*	> PA-152 cap	N/A
Limit on Retiree Contribution Amounts	N/A	N/A	N/A	N/A	N/A	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage						
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS	AMWINS	N/A
Retiree Contributions	None	None	None	None	None	N/A
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes	Yes	No
Retiree Dental Coverage	Yes	Yes	Yes	Yes	Yes	No
Retiree Vision Coverage	Yes	Yes	Yes	Yes	No	No
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	N/A
Surviving Spouse Medical/Rx Coverage	if J&S form	if J&S form	if J&S form	if J&S form	if J&S form	N/A
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes	Yes	N/A
Retiree Life Insurance Benefit	No	No	No	No	No	N/A
Opt-Out Credit Available	Yes	Yes	Yes	Yes	Yes	N/A
Retirement Eligibility						
Age/Service #1			Any/8	55/15	55/15	N/A
Age/Service #2			N/A	N/A	N/A	N/A
Age/Service #3			N/A	N/A	N/A	N/A
OPEB Vesting Eligibility						
Service			8 years of service	15 years of service	15 years of service	N/A
Payable			At termination	Age 55	Age 55	N/A
Notes			* If retired < 1/1/06, $0 retiree contribution, and Legacy design	* If retired < 1/1/06, $0 retiree contribution, and Legacy design		No DB retiree health, dental, or vision

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a promise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix A - Retiree Benefit Summaries

Group	***Judges***			
Status	***Inactive***	***Active***		
Cohort	All Retirees	Took Office < 7/1/88	Took Office 7/1/88 to 10/28/90	Took Office > 10/28/90
Pre-Medicare Medical/Rx Coverage				
Type of Plan Design(s)	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2	Base/Option1/Option2
Do Plan Designs Follow Active Plan Changes?	Yes	Yes	Yes	Yes
Retiree Contributions	> PA-152 cap	> PA-152 cap	> PA-152 cap	> PA-152 cap
Limit on Retiree Contribution Amounts	N/A	N/A	N/A	N/A
Restriction on Retiree Contribution Limits	N/A	N/A	N/A	N/A
Medicare Eligible Medical/Rx Coverage				
Type of Plan Design(s)	AMWINS	AMWINS	AMWINS	AMWINS
Retiree Contributions	None	None	None	None
Medicare B Premium Reimbursements	Yes	Yes	Yes	Yes
Retiree Dental Coverage	Yes	Yes	Yes	Yes
Retiree Vision Coverage	Not subsidized	Not subsidized	Not subsidized	Not subsidized
Joint Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes
Surviving Spouse Medical/Rx Coverage	Yes	Yes	Yes	Yes
Dependent Child Medical/Rx Coverage	Yes	Yes	Yes	Yes
Retiree Life Insurance Benefit	No	No	No	No
Opt-Out Credit Available	Yes	Yes	Yes	Yes
Retirement Eligibility				
Age/Service #1		Any/8	Any/15	55/15
Age/Service #2		N/A	N/A	N/A
Age/Service #3		N/A	N/A	N/A
OPEB Vesting Eligibility				
Service		8 years of service	15 years of service	15 years of service
Payable		At termination	Age 55	Age 55
Notes				

Important Note

These plan features are intended to illustrate the benefits valued by Segal for purposes of this report. In no way do they imply a promise or legal obligation on behalf of the City of Lansing to proivde the benefits shown here.

Appendix B – Assumptions & Methods

Data

Detailed census data as of 12/31/2015 for postretirement welfare benefits was provided by Boomershine Consulting Group.

For the 30-year projection scenarios, replacement new entrants were generated each year to maintain the number of budgeted employee positions in each group, as provided by the City. The age, gender, and salary profile for each new entrant was based on an average of the most recent hires of each plan group in a specified time period. Assumptions for each new hire group are shown in the table below:

Plan Group	Active Population as of 1/1/2016	Active Population from 1/1/2017 to 1/1/2046	Basis of New Entrant Age/Gender/Salary Profile
Fire	160	175	Recent hires in last 5 years
Police Non-Supervisory	145	159	Recent hires in last 5 years
Police Supervisory	41	42	Recent hires in last 15 years
UAW	136	161	Recent hires in last 5 years
Non-UAW	238	238	Recent hires in last 5 years

Actuarial Cost Method

Entry-Age Normal, level Percentage of Payroll

Measurement Date

January 1, 2016, using census data as of December 31, 2015

Source of Certain Demographic and Economic Assumptions

Some of the assumptions relied upon the results the "Actuarial Assumption Review and Experience Study Covering January 1, 2012 through December 31, 2015" of the Police & Fire and Employees' Retirement Systems, completed by Boomershine Consulting Group in December 2016. These include rates of termination, retirement, and disability as well the investment return rate, and base wage inflation rate. We modified the mortality assumption based on Segal's professional judgment. The others were reviewed for general reasonableness.

Discount Rate & Investment Return

7.25%

For illustrative purposes of this report, fully prefunding an actuarially contribution was assumed, so the discount rate was set equal to the investment return rate.

Wage Inflation Rate:

ERS and Police & Fire - 2.75% per year

Salary Increase Rate:

Employees' Retirement System

UAW – Additional increase of 2.00% per year with less than 10 years of service, and an additional 1.00% per year with 10 years of service or more.

Non-UAW - Additional increase of 1.50% per year with less than 9 years of service, and an additional 0.25% per year with 9 years of service or more.

Police and Fire Retirement System

Additional increase of 7.00% per year with less than 5 years of service, and an additional 0.75% per year with 5 years of service or more.

The salary increase rate assumptions were based on the "Actuarial Valuation for Funding and Contributions as of December 31, 2015" pension studies completed by Boomershine Consulting Group (December 2016).

Postretirement Mortality Rates

Employees' Retirement System

Healthy: Based on Headcount-Weighted RP-2014 Combined Healthy Mortality Table, projected generationally with the MP-2015 improvement scale from 2014

Disabled: Based on Headcount-Weighted RP-2014 Disabled Retiree Mortality Table, projected generationally with the MP-2015 improvement scale from 2014

Police and Fire Retirement System

Healthy: Based on Headcount-Weighted RP-2014 Blue Collar Healthy Mortality Table, projected generationally with the MP-2015 improvement scale from 2014

Disabled: Based on Headcount-Weighted RP-2014 Disabled Retiree Mortality Table, projected generationally with the MP-2015 improvement scale from 2014

The underlying tables reasonably reflect the mortality experience of the Plan as of the measurement date. These mortality tables were then adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

Termination Rates

ERS Assumed Rate (%)			
Years of Service	UAW	Non-UAW Male	Non-UAW Female
0	10.00	22.00	33.00
1	7.00	18.70	28.10
2	5.00	15.90	23.80
3	5.00	13.50	20.30
4	5.00	11.65	17.45
5	4.00	9.80	14.60
10	1.00	4.30	6.50
15	1.00	0.00	0.00
20+	0.00	0.00	0.00

Police & Fire Assumed Rate (%)			
Years of Service	Fire	Age	Police
0	4.00	20	15.00
1	3.20	25	7.50
2	2.73	30	3.70
3	2.25	35	1.90
4	1.78	40	0.90
5	1.30	45	0.50
10	0.40	50	0.08
15	0.10	51 & Over	0.00
20+	0.00		

Disability Rates

Age	Assumed Rate (%)	
	ERS[1]	Police & Fire[2]
20	0.04	0.12
30	0.04	0.60
40	0.13	0.94
50	0.41	1.13
60	0.90	0.00

[1] *50% of disabilities were assumed to be duty related*

[2] *95% of disabilities were assumed to be duty related*

Retirement Rates

After meeting eligibility requirements for Healthcare coverage, based on the participant's plan and date of hire, the following rates apply:

Police & Fire Assumed Rate (%)			
Years of Service	Fire	Years of Service	Police
10-25	5	10-25	5
25-26	90	25-26	90
26-30	60	26-30	25
30+	100	30+	100
ERS Assumed Rate (%)			
Age	UAW	Age	Non-UAW
50-54	50	50-57	55
55-64	30	58	15
65+	100	59	5
		60-64	15
		65	60
		66-69	25
		70+	100

Retirement Age for Inactive Vested Participants

Employees' Retirement System

UAW: 100% at age 65

Non-UAW: 100% at age 70

Police and Fire Retirement System

Police and Fire: 100% at age 65

Unknown Data for Participants

A missing census item for a given participant was assumed to equal the average value of that item over all other participants of the same status and group for whom the item is known. If not specified, participants are assumed to be male.

Participation and Coverage Election

100% of employees eligible to retire and receive subsidized postretirement welfare coverage were assumed to participate in the plan. 60% of surviving spouses of future retirees eligible to retire and receive subsidized postretirement welfare coverage were assumed to participate in the plan.

Dependents

Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives.

100% of active participants currently with a spouse were assumed to have a spouse also electing coverage at a retirement

0% of active participants currently without a spouse were assumed to have one electing coverage at retirement.

8% of all ERS retirees and 20% of all Police & Fire retirees are assumed to have covered children, up to age 26. Retirees are assumed to be 30 years older than their children, with two children on average.

Per Capita Cost Development

Per capita costs were developed by the Boomershine Consulting Group, based on data provided to them by the City. Segal reviewed the development of these for reasonableness.

Per Capita Health Cost

The annual per capita dental and vision claims costs for the plan year beginning January 1, 2016 were estimated to be $367 and $67, respectively. The annual per capita medical and prescription drug claims costs for the plan year beginning January 1, 2016 are shown in the table below for males and for females at selected ages. These costs are net of deductibles and other benefit plan cost sharing provisions. Dependent children were assumed to have a blended claim amount of 50% male and 50% female at each age.

	Medical & Prescription Drug			
	ERS		Police & Fire	
Age	Male	Female	Male	Female
50	50	$4,483	$5,577	$8,218
55	55	6,026	6,724	11,046
60	60	8,339	7,786	15,285
64	64	10,232	9,554	18,756
65	65	4,343	4,343	4,482
70	70	5,035	5,035	5,196
75	75	5,697	5,697	5,879
80	80	6,077	6,077	6,271

Medicare Part B Premium Reimbursement

$1,463 in calendar year 2016 for participants over the age of 65

90% of participants over the age of 65 were assumed to be receiving the reimbursement.

Michigan PA-152 Cap and Inflation Rate

Participants and dependents subject to the Michigan PA-152 hard cap amount, who do not have any limits on their participant contributions, had their medical and prescription per capita claim costs limited to the hard cap amounts in effect for the plan year beginning January 1, 2016.

Michigan PA-152 Cap Limits:	$6,142.11 Single / $12,845.04 Double / $16,751.23 Family

The Michigan PA-152 hard cap was assumed to increase at a rate of 3.00% per year, based on a historical review of the Cap limits over the previous five years.

Health Care Trend Rates

Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are "net" and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is applied to that cost to yield the next year's projected cost.

	Rate (%)			
Year Ending Error! Bookmark not defined.	**Pre-65 Medical & Prescription Drug**	**Post-65 Medical & Prescription Drug**	**Medicare Part B Reimbursement**	**Dental & Vision**
2016	8.50	6.50	4.50	4.50
2017	8.25	6.25	4.50	4.50
2018	8.00	6.00	4.50	4.50
2019	7.75	5.75	4.50	4.50
2020	7.50	5.50	4.50	4.50
2021	7.25	5.25	4.50	4.50
2022	7.00	5.00	4.50	4.50
2023	6.75	4.75	4.50	4.50
2024	6.50	4.50	4.50	4.50
2025	6.25	4.50	4.50	4.50
2026	6.00	4.50	4.50	4.50
2027	5.75	4.50	4.50	4.50
2028	5.50	4.50	4.50	4.50
2029	5.25	4.50	4.50	4.50
2030	5.00	4.50	4.50	4.50
2031	4.75	4.50	4.50	4.50
2032 & Later	4.50	4.50	4.50	4.50

The trend rate assumptions were developed using Segal's internal guidelines, which are established each year using data sources such as the 2016 Segal Health Trend Survey, internal client results,

trends from other published surveys prepared by the S&P Dow Jones Indices, consulting firms and brokers, and CPI statistics published by the Bureau of Labor Statistics.

Retiree Contribution Increase Rate

Retirees with contributions limited to 1% of their gross annual pension amount were assumed to increase at 3.0% per year. Retirees with contribution equal to a percentage of the cost of coverage were assumed to increase with medical trend. No annual increase on any other required retiree contributions was assumed.

Plan Design

Development of plan liabilities was based on the plan of benefits in effect as described in Appendix A