

# TEXAS PENSION REVIEW BOARD

# ACTUARIAL COMMITTEE MEETING AUGUST 6, 2020

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# TEXAS PENSION REVIEW BOARD ACTUARIAL COMMITTEE MEETING

### **AGENDA**

Thursday, August 6, 2020 – 10:00 AM

# By Teleconference

Public Participation Dial-in Number: (877) 853-5247 (Toll-free) Meeting ID: 878 9124 2645

The August 6, 2020 meeting of the Actuarial Committee of the PRB will be held by teleconference call as authorized under Sections 551.125 and 551.127 of the Texas Government Code. THIS MEETING WILL BE CONDUCTED BY TELECONFERENCE IN ACCORDANCE WITH THE GOVERNOR'S AUTHORIZATION OF MARCH 16, 2020, CONCERNING SUSPENSION OF CERTAIN OPEN MEETING LAW REQUIREMENTS IN RESPONSE TO THE DECLARATION OF STATE DISASTER OF MARCH 13, 2020 CONCERNING THE COVID-19 (CORONAVIRUS) PANDEMIC. A quorum of members of the committee will participate in the meeting and will be audible to the public. Members of the public may provide public comment by registering first with the Office Manager by submitting an email to Lindsay.Seymour@prb.texas.gov identifying the name of the speaker and topic, no later than 8:00 am on August 6, 2020. The presiding officer will call roll of committee members, followed by calling roll of members of the public who have registered. The presiding officer will then ask if other attendees wish to provide comment, at which time each such attendees shall identify themselves by name and topic of the comment. Members of the public who have registered during roll call will be called by name at the appropriate time in the agenda. Attendees are requested to mute their connections when not addressing the committee members.

Access to the agenda materials of the meeting is provided at <u>www.prb.texas.gov</u>. A recording of the meeting will be available at <u>www.prb.texas.gov</u>.

# The Committee may discuss or take action regarding any of the items on this agenda.

- 1. Meeting called to order
- 2. Roll call of Committee members
- 3. Roll call of members of the public
- 4. May 7, 2020 Committee meeting minutes

- 5. Systems subject to the Funding Soundness Restoration Plan (FSRP) requirement, including the following:
  - a. Update on second revised FSRP from City of Orange and Orange Firemen's Relief and Retirement Fund
  - Update on revised FSRP from City of Midland and Midland Firemen's Relief and Retirement Fund
- 6. Funding policies received as required by Government Code Section 802.2011 (SB 2224), including actuarially determined contribution benchmarks based on rolling amortization periods
- 7. Review of Funding Policy requirement under Section 802.2011 and Funding Soundness Restoration Plan (FSRP) requirements under Sections 802.2015 and 802.2016 of the Government Code
- 8. Date and location of next Actuarial Committee meeting September 29, 2020
- 9. Invitation for public comment
- 10. Adjournment

NOTE: The Committee may go into closed session concerning any item on this agenda if authorized under the Texas Open Meetings Act, Government Code, Code Ch. 551. Persons with disabilities who plan to attend this meeting and who may need special assistance are requested to contact Mr. Wes Allen at (800) 213-9425/ (512) 463-1736 three to five (3-5) working days prior to the meeting date so that appropriate arrangements can be made.

1. Meeting called to order

2. Roll call of Committee members

3. Roll call of members of the public

4. May 7, 2020 Committee meeting minutes



# Joint Meeting of the Investment and Actuarial Committees Minutes May 7, 2020

# 1. Meeting called to order (0:02)

The Pension Review Board (PRB) Joint Meeting of the Investment and Actuarial Committees was called to order by Chair Keith Brainard on Thursday, May 7, 2020 at 9:02 am via teleconference.

### 2. Roll call of Committee members (1:33)

**Board Members Present:** 

Chair Keith Brainard Chair Christopher Zook Marcia Dush Stephanie Leibe Shari Shivers

A quorum being present, the meeting was called to order by Chair Brainard.

# 3. Roll call of members of the public (2:40)

Pre-registered members of the public present:

David Stacy Kathleen McBride

# 4. Chairmen's remarks regarding the purpose of the meeting (3:37)

Chair Brainard noted that the meeting was the first meeting of the PRB's Investment Committee and introduced the members of both committees.

Chair Brainard recognized that it was a difficult time for public pension plans and their sponsors and noted that the current investment environment and economy were challenging, and both state and local governments were facing potential revenue declines that were likely to impact the ability of public employers to make their pension contributions. He emphasized that plans should continue to examine their actuarial assumptions and plan sponsors needed to be involved with their plans to ensure adequate funding.

Chair Zook echoed Chair Brainard's remarks and noted that many individuals covered by public pension plans worked in essential services and he thanked all frontline workers. He stated that there would be more challenges moving forward so it was critical to anticipate the worst while hoping for the best. He noted that if actuarial assumptions and payroll growth assumptions were not lowered, there would be future funding problems. He stated that he wanted to ensure everyone was focused on what long-term steps may be taken considering plans and their sponsoring entities would be experiencing lower revenue, returns, and payroll growth.

# 5. Key issues for Texas systems to consider regarding COVID-10 crisis and its potential impacts: (08:35)

# a. Market disruptions, including volatility, asset price declines, and possible effects on average returns for various asset classes (09:20)

Robert Munter provided a report on the potential Covid-19 market impacts. He noted fixed income securities of various qualities were impacted the most so far, noting that the first quarter of 2020 had record high returns which then led to the fastest declines into a bear market in history. He stated the extreme market volatility was giving pension plans an actual stress test.

Mr. Munter discussed unemployment claims, noting the United States overall experienced a spike in unemployment claims and that these disruptions to the economy would be severe and continue to have an impact. He added that given the market downturn, plans would ultimately need to exceed their rate of return by an excess of 110 basis points or more depending on how quickly they recover from a 10% drawdown.

Ms. Dush asked Mr. Munter to clarify whether the determined rate of return plans needed to adopt to get back on track considered the negative cash flow. Mr. Munter stated that the rate was determined by solely looking at investments and that plans with negative cash flow could have more of a difficult time recovering.

The Committee discussed whether recent events had fundamentally changed expected returns on major asset classes. Mr. Zook noted it was highly unlikely the economy would recover at a fast rate and also unlikely that Texas plans would be able to receive the returns they were used to receiving in the past.

# Short and long-term actuarial impact, including cash flows and funding shortfalls (30:12)

Kenny Herbold presented the short- and long-term actuarial impacts the Covid-19 crisis had on plans. Mr. Herbold stated that in the short-term, plans would need to consider cash flow and liquidity issues; long-term, plans would need to be mindful of legislative requirements that triggered plans to make changes if certain conditions were not met.

He acknowledged that many Texas plans were small, conducted actuarial valuations every other year and might lack the budget to conduct regular intensive studies, in which case they could use the PRB's data tables as indicators of whether they should reach out to their consultants.

Mr. Herbold introduced metrics that assessed the short-term health of a pension plan, such as non-investment cash flow and liquidity ratio. He noted that analyzing non-investment cash flow could help identify plans that might have liquidity concerns, which might indicate how easily those plans would be able to pay benefits. The liquidity ratio metric was nearly identical to non-investment cash flow, but also considered cash on hand, which would allow plans to pay benefits without selling assets. He noted that evaluating liquidity ratios allowed for comparison of all plans and it was a good metric to examine in conjunction with other factors and analyses to observe data trends.

Mr. Herbold discussed the lowest 25% of plans from each metric and explained if a plan fell on both lists, the plan was more likely to have potential liquidity issues.

Ms. Dush noted that when looking at the liquidity ratio, there was concern that the plans would need to sell assets at low values which would make it harder for them to achieve their rates of return. She noted that there were 14 plans that fell on both lists and stated they were plans that the PRB may need to contact. Ms. Kumar stated that PRB staff could reach out to systems on the list and that the PRB completed intensive reviews on some of the listed plans in the past. She noted that so far, no system had indicated they were unable to make benefit payments.

Mr. Herbold introduced metrics that staff used to evaluate long-term performance. He discussed two types of ratios that gave direct measures of the leverage of a plan's unfunded accrued liability (UAAL) as it related to payroll: asset leverage ratio, which was market value of assets divided by payroll, and liability leverage ratio, which was accrued liability divided by payroll.

Ms. Dush commented that since many Texas plans were mature, both assets and liabilities were large compared to the covered payroll. She noted this made it very difficult to recover from market downturns or increased interest rates like what was recently experienced.

Mr. Herbold described the unfunded liability (UL) percent tread water cost rate, which was a contribution rate that resulted in the total UAAL growing at the payroll growth rate and showed the line between having an infinite and a finite amortization period. He also introduced the UL dollar tread water cost rate, which was the line between negative amortization and a decreasing UAAL. He noted that for some Texas plans, the recommended contribution rate generally fell between the UL percent and the UL dollar tread water cost rate.

Ms. Dush raised a concern about the UL dollar tread water cost with plans that currently had both negative amortization and fixed contribution rates. She noted that of Texas' plans, 2/3rds of plans were not making a contribution that reduced their UAAL.

Mr. Herbold stated that the UL metrics were useful to calculate the expected changes in the UAAL. He noted that higher amortization periods had more volatility, and fixed rate plans were more susceptible to volatile amortization periods.

Chair Brainard commended staff for utilizing different ways to present data and stated that the data had predictive and comparative value. He stated that the PRB was available to provide technical assistance to plans, especially smaller plans who may not otherwise have access to the data.

Mr. Herbold stated that in addition to the previously described metrics, there were also statutory triggers that would impact plans, such as the requirement for a funding soundness restoration plan (FSRP) if a plan's amortization period was above 40 years. He explained that a 10% drop in assets could put plans with amortization periods between 20 and 40 years at risk of being required to complete an FSRP. He stated there were approximately 18 fixed rate plans with an amortization period above 20 years which were very likely to become subject to the FSRP requirement soon.

Mr. Herbold also discussed the statutory requirements for Houston plans, including the contribution corridor. He noted their statute had a trigger for plan design changes, such as establishing a cash balance plan if their funded ratio fell below statutory thresholds.

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Mr. Herbold noted that recent news articles that stated city councils were discussing potential furloughs for government employees would impact the contribution base for plans. He added that while amortization periods were generally calculated using asset smoothing, plan sponsors' balance sheets were required to recognize losses immediately. This would make more plans at risk of having depletion dates, causing discount rates to decrease and total liability to increase. Mr. Herbold noted that while credit rating agencies made their own adjustments to reported liabilities, increased totally liability would still impact potential credit ratings.

The Committee discussed pension obligation bonds (POBs), noting that they saw little recent discussion of POBs but as the current situation leveled out, they might be considered due to low interest rates. They noted that the prudence of issuing POBs depended on a plan sponsor's risk tolerance.

### 6. Possible delays in reporting by pensions systems (01:26:04)

Ms. Kumar stated that staff received questions from systems and stakeholders about potential delays in plan reports and extensions for reporting deadlines. She stated that unfortunately required reports had deadlines set in statute and the PRB did not have the authority to grant extensions. She encouraged systems that experienced disruptions to reach out to the PRB.

### 7. Initiation for public comment (01:27:35)

There were no public comments.

### 8. Adjournment (01:28:28)

Chair Brainard adjourned the meeting at 10:34 AM.

### **PRB Staff In Attendance:**

Anumeha Kumar Michelle Downie Kranes Ashley Rendon Benjamin Warden Bryan Burnham Kenny Herbold Lindsay Seymour Mariah Miller Robert Munter Wesley Allen

Chair Keith Brainard

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James King

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**Chair Christopher Zook** 

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# Actuarial Committee Meeting Minutes May 7, 2020

### 1. Meeting called to order (0:01)

The first meeting of 2020 of the Pension Review Board (PRB) Actuarial Committee began on Thursday, May 7, 2020, at 11:00 AM by teleconference.

### 2. Roll call of Board members (0:55)

# **Board members present:**

Chair Keith Brainard Marcia Dush Stephanie Leibe

A quorum being present, the meeting was called to order by Chair Brainard.

# 3. Roll call of members of the public (1:20)

Pre-registered members of the public present:

**David Stacy** 

# 4. September 19-20, 2019 Committee meeting minutes (1:46)

Chair Brainard entertained a motion to suspend the reading of the minutes of the September 19-20, 2019 meeting and approve them as circulated.

The motion was made by Ms. Leibe and seconded by Ms. Dush.

The motion passed unanimously.

# 5. Actuarial Standard of Practice 4 Second Exposure Draft Presentation (2:39)

Kenny Herbold discussed the ASOP 4 Second Exposure Draft, noting items within it were still likely to change. He noted that the ASOP defined reasonable actuarially determined contribution (ADC) as well as a reasonable amortization method. Each amortization base must have payments that fully amortize the amortization base within a reasonable time period or reduce the outstanding balance by a reasonable amount each year. He stated there was an additional requirement to identify whether negative amortization occurred and when it would be resolved.

Mr. Herbold stated that the updated ASOP 4 would require a gain/loss analysis, but most plans in Texas already perform this analysis. Further, actuaries will now be required to positively affirm that plan assumptions are reasonable for the purpose of the measurement. This places more responsibility on the actuaries and assumption selection. Additionally, the ASOP 4 Second Exposure Draft includes enhanced documentation requirements such that another actuary could easily take over the assignment if necessary. He added that the enhanced documentation

requirement would be helpful to the PRB because it meant additional information that previously may have been considered too costly to obtain may be more readily available.

Mr. Herbold stated, barring any major revisions, the ASOP 4 Second Exposure Draft was anticipated to be adopted early in 2021 with implementation occurring 12 months after the adoption date

# 6. Funding policies received as required by Government Code Section 802.2011 (SB 2224) (11:25)

Michelle Downie Kranes summarized the initial analysis of funding policies submitted under Senate Bill 2224. Ms. Downie Kranes acknowledged the plans receiving a contribution based on the ADC for their strong funding policies, many of which have been on a clear path to full funding for years. Ms. Downie Kranes also highlighted plans that had developed the funding policy in collaboration with the sponsor, such as Denton Fire, whose funding policy was adopted through a meet and confer agreement with the city and commits to contributing the ADC (or higher).

Chair Brainard mentioned he believed a funding policy to be a necessity for every plan, and that plan sponsors should be involved with the development and approval of funding policies. He stated his hope that, before the end of 2020, the PRB would recommend that the Legislature consider amending the statute to require plan sponsors to participate in the development of their pension plan's funding policies.

Ms. Downie Kranes explained that for plans not receiving an ADC-based contribution, a majority of funding policies utilized ADC benchmarking to compare actual contributions to an ADC on a regular basis, as well as specifying the conditions that would require action. She noted a small number of plans whose ADC benchmarks were based on rolling, or open, amortization periods.

Ms. Dush noted that rolling amortization periods were not designed to achieve 100% funding, and therefore she did not believe those plans met the statutory requirement of developing a funding policy that targeted 100% funding. Mr. Herbold agreed that rolling benchmarks were not designed to achieve 100% funding. He further discussed that while low rolling amortization periods would not have negative amortization, high rolling amortization periods would experience negative amortization. He added that if a plan's valuation showed an actual amortization period of 30-40 years on a rolling basis, staff would report an effective amortization period of infinite in the PRB actuarial valuation report based on the assumption that the plan would never be fully funded. Mr. Herbold reiterated that the revised ASOP 4 would likely indicate that rolling amortization periods were not reasonable.

Chair Brainard suggested that staff contact these plans to alert them that their rolling amortization period benchmarks may not comply with state law.

Anumeha Kumar stated staff could reach out to the systems to request additional clarification on their policies and how they plan to achieve the required target of 100% funding, as the staff would be reporting this information to the Legislature.

Ms. Dush noted that one of the actions in the funding policies was to develop a 20-year plan to achieve a 30-year amortization period. She stated that this was effectively the same as creating a 50-year plan, which she felt was not the intended purpose of the legislation and did not seem to comply with funding policy requirements.

Chair Brainard encouraged the members of the Committee to spend time reviewing the report and asked staff to provide suggestions for the Committee's consideration on how to improve and strengthen the funding policy statute.

Ms. Dush requested staff to ask for clarification from plans with rolling benchmarks or no ADC benchmarking on how they complied with the law which required them to target 100% funding.

Chair Brainard entertained a motion to direct staff to develop a legislative recommendation to include the plan sponsors in the funding policy requirement to present to the full Board for consideration.

The motion was made by Ms. Dush and seconded by Ms. Leibe.

The motion passed unanimously.

# 7. Review of Funding Soundness Restoration Plan (FSRP) requirements under Sections 802.2015 and 802.2016 of the Government Code (39:45)

Ms. Kumar provided a timeline of legislation relating to the funding soundness restoration plan (FSRP) and funding policy requirements and updates to the PRB *Pension Funding Guidelines*, pointing out the 40-year amortization period threshold in the FSRP statute and the 100% funding goal of funding policies. She mentioned last session, there were some bills filed which would have brought the threshold for an FSRP closer to the PRB Guidelines, but those bills did not pass.

Ms. Kumar stated the amortization period threshold in the current FSRP requirement was expected to become outdated and no longer recommended due to the ASOP Exposure Drafts.

Chair Brainard noted that statute required the FSRP to be formulated after two to three valuations, depending on the plan's valuation schedule. He further discussed whether the time period between the first valuation not meeting the 40-year threshold and when the FSRP is required was too lengthy. Mr. Brainard asked staff to recommend, either to the Actuarial Committee or the full Board, a shortened time period from when the first problematic valuation occurred to when a plan must submit a FSRP.

Chair Brainard asked the Committee to consider replacing the current 40-year amortization period trigger with a 25-year amortization period to match the upper end of the target range in the *PRB Funding Guidelines*. Ms. Dush noted that recommending a 25-year amortization period threshold could help plans avoid negative amortization but would also dramatically increase the number of plans that would be required to submit an FSRP. Ms. Kumar stated staff could examine the impact of a 25- or 30-year trigger, in addition to options for updating the FSRP requirements. Chair Brainard stated that the recommendation should focus on what is considered sound criteria for pension funding, not the number of systems that could become subject to the requirement. He encouraged the Committee and Board to request legislation establishing more stringent statutes.

Chair Brainard entertained a motion to direct staff to prepare a report on issues concerning the implementation of the FSRP, including the amortization period threshold, to present to the full Board for consideration at its June meeting.

The motion was made by Ms. Dush and seconded by Ms. Liebe.

The motion passed unanimously.

### 8. Date and location of next Actuarial Committee Meeting (59:30)

Chair Brainard stated the date and location of the next Actuarial Committee meeting was not yet determined.

# 9. Invitation for public comment (1:01:44)

David Stacy from Midland Firemen's Relief and Retirement Fund discussed the PRB's funding policy summary, noting that he had serious reservations about the PRB making recommendations to the legislature on overall funding policy appropriateness without discussing meaningful net benefits to the employees.

Kelly Gottschalk, Executive Director of the Dallas Police and Fire Pension System (DPFPS), discussed the PRB's funding policy summary and asked staff to consider complex pension systems when providing summaries to the Legislature.

# 10. Adjournment (1:07:40)

Chair Brainard adjourned the meeting at 12:08 PM.

# **PRB Staff in Attendance:**

Anumeha Kumar	
Michelle Downie	Kranes

Kenny Herbold Ashley Rendon Wes Allen

Robert Munter Bryan Burnham

Mariah Miller

**James King** 

Benjamin Warden Lindsay Seymour

**Chair Keith Brainard** 

5. Systems subject to the Funding Soundness Restoration Plan (FSRP) requirement, including the following:

					(	Current Actuarial Va	aluation			Prior Actuarial Valuation			
Plan Name	Plan Status (1)	Effective Date	Discount Rate	Effective Amort Period (2)	Funded Ratio %	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Unfunded Actuarial Accrued Liability (UAAL = AAL - AVA)	UAAL as % of Payroll	Effective Date	Prior Effective Amort Period (2)	Funded Ratio %	
Employees Retirement System of Texas	Active	8/31/2019	7.50%	Infinite	70.5	\$ 27,351,224,157	\$ 28,060,120,223	\$ 11,741,238,455	168.10%	8/31/2018	Infinite	70.2	
Law Enforcement & Custodial Off Sup. Ret. Fund	Active	8/31/2019	7.50%	Infinite	65.3	\$ 943,622,645	\$ 968,129,751	\$ 514,505,451	31.29%	8/31/2018	Infinite	65.6	
Austin Police Retirement System	Active	12/31/2018	7.25%	Infinite	58.1	\$ 718,519,641	\$ 807,978,988	\$ 581,681,628	342.08%	12/31/2017	35.0	65.8	
Judicial Retirement System of Texas Plan Two	Active	8/31/2019	7.50%	Infinite	87.5	\$ 456,192,249	\$ 467,787,034	\$ 66,776,712	73.36%	8/31/2018	69.0	91.7	
Irving Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	Infinite	71.6	\$ 213,960,011	\$ 207,493,775	\$ 82,260,569	252.13%	12/31/2015	46.5	74.9	
Beaumont Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	Infinite	55.8	\$ 105,769,426	\$ 111,769,628	\$ 88,543,261	457.43%	12/31/2016	104.0	67.5	
Midland Firemen's Relief & Retirement Fund	Active	12/31/2017	7.75%	Infinite	60.9	\$ 89,023,115	\$ 91,856,742	\$ 58,952,399	362.54%	12/31/2015	44.7	65.8	
McAllen Firemen's Relief & Retirement Fund (3)	Active	9/30/2018	7.50%	Infinite	68.2	\$ 52,675,409	\$ 51,901,271	\$ 24,240,176	196.53%	10/1/2016	33.4	69.1	
Wichita Falls Firemen's Relief & Retirement Fund	Active	1/1/2018	7.75%	Infinite	57.7	\$ 51,317,643	\$ 51,317,643	\$ 37,628,438	316.54%	1/1/2017	49.4	62.5	
Longview Firemen's Relief & Retirement Fund	Active	12/31/2018	7.75%	Infinite	39.9	\$ 41,560,527	\$ 41,560,527	\$ 62,740,191	469.68%	12/31/2017	40.2	46.1	
Conroe Fire Fighters' Retirement Fund	Active	12/31/2018	7.50%	Infinite	58.1	\$ 24,501,501	\$ 26,951,651	\$ 19,476,502	209.84%	12/31/2017	39.0	62.0	
Orange Firemen's Relief & Retirement Fund	Active	1/1/2019	7.75%	Infinite	46.3	\$ 7,961,733	\$ 7,961,733	\$ 9,241,746	360.64%	1/1/2017	69.3	49.9	
Atlanta Firemen's Relief & Retirement Fund	Active	12/31/2018	7.40%	Infinite	80.0	\$ 3,801,042	\$ 4,181,146	\$ 1,043,126	184.83%	12/31/2016	28.4	82.1	
Odessa Firemen's Relief & Retirement Fund	Active	1/1/2019	7.75%	77.5	39.3	\$ 39,242,821	\$ 43,886,792	\$ 67,827,042	569.08%	1/1/2018	47.1	43.1	
Marshall Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	59.0	36.7	\$ 7,278,840	\$ 7,278,840	\$ 12,576,960	429.30%	12/31/2016	56.4	42.0	
Lubbock Fire Pension Fund	Active	12/31/2018	7.75%	52.9	69.3	\$ 186,484,535	\$ 199,266,188	\$ 88,127,819	258.52%	12/31/2016	33.5	72.6	
Cleburne Firemen's Relief & Retirement Fund	Active	12/31/2018	7.35%	48.6	59.6	\$ 19,362,808	\$ 21,731,172	\$ 14,724,082	324.13%	12/31/2016	28.8	66.7	
Dallas Employees' Retirement Fund	Active	12/31/2018	7.75%	46.0	80.0	\$ 3,265,402,000	\$ 3,620,319,000	\$ 906,677,000	213.98%	12/31/2017	47.0	82.3	
Plainview Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	44.8	37.7	\$ 6,154,425	\$ 6,219,603	\$ 10,290,086	517.48%	12/31/2015	31.6	37.3	
Amarillo Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	43.5	81.5	\$ 171,845,402	\$ 165,443,481	\$ 37,625,269	185.69%	12/31/2015	34.5	81.8	
Fort Worth Employees' Retirement Fund	Active	12/31/2019	7.00%	43.0	52.3	\$ 2,396,727,586	\$ 2,400,393,264	\$ 2,186,491,299	433.49%	12/31/2018	44.0	52.4	
Laredo Firefighters Retirement System	Active	9/30/2018	7.50%	43.0	59.9	\$ 154,813,837	\$ 155,509,979	\$ 104,273,436	282.55%	9/30/2016	28.0	59.3	
Texas City Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	41.1	45.9	\$ 14,389,108	\$ 15,828,019	\$ 18,643,387	348.98%	12/31/2016	28.0	50.4	
Greenville Firemen's Relief & Retirement Fund	Active	12/31/2018	7.75%	40.7	46.6	\$ 12,254,104	\$ 13,479,514	\$ 15,438,433	368.76%	12/31/2016	55.0	47.7	
Killeen Firemen's Relief & Retirement Fund	Active	9/30/2018	7.50%	39.8	69.4	\$ 43,947,221	\$ 42,970,465	\$ 18,990,872	131.39%	9/30/2016	22.8	69.7	
Brownwood Firemen's Relief & Retirement Fund	Active	12/31/2017	7.25%	38.6	45.0	\$ 4,158,090	\$ 4,165,427	\$ 5,085,187	263.23%	12/31/2015	36.1	44.6	
Big Spring Firemen's Relief & Retirement Fund	Active	1/1/2019	7.75%	38.3	53.2	\$ 10,902,959	\$ 11,874,904	\$ 10,439,548	245.07%	1/1/2017	36.2	54.9	
Dallas Police & Fire Pension System-Combined Plan	Active	1/1/2019	7.25%	38.0	48.1	\$ 2,041,914,130	\$ 2,161,899,662	\$ 2,332,922,842	642.47%	1/1/2018	45.0	47.7	
Harlingen Firemen's Relief & Retirement Fund	Active	9/30/2019	7.75%	38.0	64.5	\$ 33,712,925	\$ 33,712,925	\$ 18,528,703	277.57%	9/30/2017	59.1	66.1	

This report is a compilation of pension data reported by retirement systems in their most recent AVs, sorted by amortization period.



					(	Current Actuarial	Valu	ation			Prior Actuarial Valuation			
Plan Name	Plan Status (1)	Effective Date	Discount Rate	Effective Amort Period (2)	Funded Ratio %	Market Value of Assets (MVA)		Actuarial Value of Assets (AVA)	Unfunded Actuarial Accrued Liability (UAAL = AAL - AVA)	UAAL as % of Payroll	Effective Date	Prior Effective Amort Period (2)	Funded Ratio %	
Paris Firefighters' Relief & Retirement Fund	Active	12/31/2018	7.25%	32.1	30.5	\$ 4,152,310	0 \$	4,663,640	\$ 10,625,400	382.48%	12/31/2016	41.9	35.6	
Austin Employees' Retirement System	Active	12/31/2018	7.50%	32.0	67.6	\$ 2,461,383,436	6 \$	2,695,388,390	\$ 1,294,171,747	194.81%	12/31/2017	30.0	68.3	
Abilene Firemen's Relief & Retirement Fund	Active	10/1/2017	8.00%	31.9	55.7	\$ 57,456,309	9 \$	59,425,441	\$ 47,286,729	341.79%	10/1/2015	31.5	56.6	
San Angelo Firemen's Relief & Retirement Fund	Active	12/31/2017	7.90%	31.3	64.9	\$ 66,618,73	7 \$	66,067,685	\$ 35,702,196	291.10%	12/31/2015	38.5	65.7	
Lufkin Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	30.7	48.8	\$ 15,659,03	5 \$	17,334,531	\$ 18,178,233	349.28%	12/31/2016	33.1	46.7	
El Paso Police Pension Fund	Active	1/1/2018	7.75%	30.5	78.3	\$ 870,658,50	7 \$	843,966,894	\$ 233,937,349	284.50%	1/1/2016	33.0	81.1	
Port of Houston Authority Retirement Plan	Closed	8/1/2019	6.50%	30.0	92.9	\$ 184,407,686	6 \$	184,407,686	\$ 14,001,387	46.05%	8/1/2018	30.0	98.4	
Galveston Employees' Retirement Plan for Police (4)	Active	1/1/2019	7.00%	30.0	34.0	\$ 17,856,39	7 \$	19,642,037	\$ 38,211,442	315.26%	1/1/2018	35.5	39.3	
Fort Worth Employees' Retirement Fund Staff Plan	Active	12/31/2018	7.00%	30.0	68.9	\$ 4,916,886	0 \$	5,189,502	\$ 2,341,994	156.69%	12/31/2017	32.0	77.2	
Corpus Christi Fire Fighters' Retirement System	Active	12/31/2018	7.50%	29.8	60.2	\$ 139,811,086	6 \$	151,136,552	\$ 99,896,125	305.70%	12/31/2016	23.1	62.1	
Teacher Retirement System of Texas	Active	8/31/2019	7.25%	29.0	76.4	\$ 157,978,199,07	5 \$	160,233,295,324	\$ 49,486,391,723	104.37%	8/31/2018	87.0	76.9	
Corsicana Firemen's Relief & Retirement Fund	Active	12/31/2018	7.00%	28.9	50.7	\$ 8,563,59	7 \$	9,310,272	\$ 9,065,130	218.76%	12/31/2016	28.9	53.1	
University Park Firemen's Relief & Retirement Fund	Closed	12/31/2018	7.50%	28.8	43.4	\$ 9,447,674	4 \$	10,460,367	\$ 13,664,013	441.37%	12/31/2016	Infinite	44.0	
Temple Firemen's Relief & Retirement Fund	Active	9/30/2018	7.75%	28.6	73.0	\$ 44,243,769	9 \$	44,233,922	\$ 16,392,673	181.02%	9/30/2016	28.4	75.1	
Houston Police Officers' Pension System	Active	7/1/2019	7.00%	28.0	81.7	\$ 5,674,647,000	0 \$	5,434,933,000	\$ 1,220,210,000	268.36%	7/1/2018	29.0	79.4	
Houston Firefighters' Relief & Retirement Fund	Active	7/1/2019	7.00%	28.0	82.9	\$ 4,237,692,000	0 \$	4,190,934,000	\$ 866,825,000	315.82%	7/1/2018	29.0	81.4	
Houston Municipal Employees Pension System	Active	7/1/2019	7.00%	28.0	59.3	\$ 3,100,999,000	0 \$	3,019,255,000	\$ 2,071,890,000	328.17%	7/1/2018	29.0	57.7	
El Paso Firemen's Pension Fund	Active	1/1/2018	7.75%	28.0	77.8	\$ 601,790,72	1 \$	581,448,450	\$ 166,117,632	265.17%	1/1/2016	26.0	79.2	
Sweetwater Firemen's Relief & Retirement Fund	Active	12/31/2016	8.00%	27.5	70.0	\$ 7,826,879	9 \$	8,437,694	\$ 3,617,210	229.12%	12/31/2014	58.8	69.0	
Galveston Firefighter's Relief & Retirement Fund	Active	12/31/2017	7.75%	26.8	69.2	\$ 44,651,640	0 \$	44,330,845	\$ 19,767,545	248.42%	12/31/2016	Infinite	68.0	
University Health System Pension Plan	Active	1/1/2018	7.00%	26.0	70.7	\$ 363,779,588	8 \$	347,115,543	\$ 143,589,317	39.14%	1/1/2017	27.0	67.5	
Tyler Firefighters' Relief & Retirement Fund	Active	12/31/2017	7.50%	25.5	76.2	\$ 70,141,88	1 \$	69,570,894	\$ 21,757,655	188.81%	12/31/2015	21.6	75.9	
Dallas Co. Hospital Dist. Retirement Income Plan	Active	1/1/2019	7.00%	25.0	71.5	\$ 948,034,16	1 \$	1,026,482,932	\$ 408,636,930	61.92%	1/1/2018	26.0	73.4	
Houston MTA Workers Union Pension Plan	Closed	1/1/2019	6.50%	24.0	62.5	\$ 254,400,189	9 \$	273,167,539	\$ 163,748,117	173.09%	1/1/2018	25.0	66.3	
Houston MTA Non-Union Pension Plan	Closed	1/1/2019	6.50%	24.0	61.8	\$ 162,565,04	1 \$	175,433,638	\$ 108,676,891	266.71%	1/1/2018	25.0	65.6	
Texas Emergency Services Retirement System	Active	8/31/2018	7.75%	24.0	83.4	\$ 115,863,894	4 \$	114,668,709	\$ 22,845,636	N/A	8/31/2016	30.0	80.2	
Port Arthur Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	23.7	74.2	\$ 49,890,603	3 \$	48,844,714	\$ 16,966,441	182.37%	12/31/2015	18.3	78.0	
San Antonio Metropolitan Transit Retirement Plan	Active	10/1/2018	7.25%	23.0	64.1	\$ 298,393,79	8 \$	282,899,551	\$ 158,753,455	139.47%	10/1/2017	24.0	62.4	
Irving Supplemental Benefit Plan	Active	1/1/2019	6.75%	23.0	73.5	\$ 58,112,359	9 \$	63,087,137	\$ 22,787,104	20.97%	1/1/2018	32.0	72.5	

						Current Actuarial Va	aluation			Prior A	ctuarial Val	uation
Plan Name	Plan Status (1)	Effective Date	Discount Rate	Effective Amort Period (2)	Funded Ratio %	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Unfunded Actuarial Accrued Liability (UAAL = AAL - AVA)	UAAL as % of Payroll	Effective Date	Prior Effective Amort Period (2)	Funded Ratio %
Galveston Wharves Pension Plan	Closed	1/1/2019	7.25%	22.0	76.1	\$ 12,411,631	\$ 12,411,631	\$ 3,906,450	255.74%	1/1/2018	23.0	83.8
San Benito Firemen Relief & Retirement Fund	Active	9/30/2017	7.50%	21.8	60.7	\$ 3,503,753	\$ 3,503,753	\$ 2,270,845	152.30%	12/31/2015	21.7	60.5
CPS Energy Pension Plan	Active	1/1/2019	7.25%	21.0	82.3	\$ 1,522,045,827	\$ 1,625,831,674	\$ 349,470,229	123.79%	1/1/2018	29.0	82.6
Capital MTA Bargaining	Frozen	1/1/2019	7.00%	20.0	50.6	\$ 29,894,535	\$ 32,489,724	\$ 31,669,611	N/A	1/1/2018	21.0	51.9
Capital MTA Admin Employees (5)	Active	1/1/2019	6.75%	20.0	76.9	\$ 29,770,966	\$ 31,697,978	\$ 9,500,815	41.75%	1/1/2018	20.0	79.2
Employees of Brownsville Navigation District	Active	1/1/2019	6.15%	19.0	57.6	\$ 4,890,148	\$ 5,254,517	\$ 3,873,642	89.19%	1/1/2018	20.0	54.3
Sweeny Community Hospital	Closed	1/1/2019	7.00%	19.0	86.4	\$ 3,023,456	\$ 3,191,805	\$ 504,209	57.17%	1/1/2018	20.0	85.8
Waxahachie Firemen's Relief & Retirement Fund	Active	10/1/2018	7.00%	18.9	73.1	\$ 17,428,039	\$ 17,428,039	\$ 6,419,351	131.82%	10/1/2016	25.4	66.9
Texas Municipal Retirement System (6)	Active	12/31/2018	6.75%	18.2	87.1	\$ 27,683,629,439	\$ 29,385,096,235	\$ 4,346,354,832	65.22%	12/31/2017	18.8	87.4
Lower Colorado River Authority Retirement Plan	Closed	1/1/2019	7.25%	18.0	70.3	\$ 388,300,639	\$ 432,019,765	\$ 182,885,080	171.78%	1/1/2018	19.0	74.0
Austin Fire Fighters Relief & Retirement Fund	Active	12/31/2018	7.70%	17.9	88.0	\$ 909,117,796	\$ 954,574,840	\$ 129,958,768	141.13%	12/31/2017	17.0	88.3
Galveston Employees' Retirement Fund	Active	12/31/2018	7.25%	16.8	76.6	\$ 48,514,328	\$ 52,374,631	\$ 15,972,792	61.29%	12/31/2017	11.6	79.6
Harris County Hospital District Pension Plan (7)	Closed	1/1/2019	7.00%	16.4	74.0	\$ 635,273,806	\$ 679,205,807	\$ 239,033,271	145.90%	1/1/2018	16.9	75.5
DFW Airport Board	Active	1/1/2019	7.25%	16.0	83.7	\$ 493,301,369	\$ 511,070,267	\$ 99,847,700	187.49%	1/1/2018	17.0	82.4
DFW Airport Board DPS	Active	1/1/2019	7.25%	16.0	78.5	\$ 188,058,481	\$ 194,887,387	\$ 53,283,221	167.45%	1/1/2018	17.0	77.7
Denison Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	15.8	77.3	\$ 17,725,070	\$ 17,524,049	\$ 5,159,287	155.45%	12/31/2015	27.1	74.4
Corpus Christi Regional Transportation Authority	Active	1/1/2019	7.40%	15.0	91.8	\$ 33,900,179	\$ 37,050,795	\$ 3,318,026	31.10%	1/1/2018	6.0	98.3
Texarkana Firemen's Relief & Retirement Fund	Active	12/31/2017	7.75%	15.0	86.3	\$ 34,819,005	\$ 35,250,649	\$ 5,584,452	123.72%	12/31/2015	16.3	87.4
Denton Firemen's Relief & Retirement Fund	Active	12/31/2017	6.75%	14.6	82.1	\$ 85,388,283	\$ 84,410,626	\$ 18,435,302	104.60%	12/31/2015	31.6	80.8
Weslaco Firemen's Relief & Retirement Fund	Active	9/30/2018	7.25%	14.1	72.0	\$ 11,577,179	\$ 11,412,283	\$ 4,440,304	101.90%	9/30/2016	14.1	68.5
City of El Paso Employees Retirement Trust	Active	9/1/2018	7.50%	14.0	80.3	\$ 820,416,288	\$ 822,926,030	\$ 201,453,137	120.47%	9/1/2016	17.0	79.2
San Antonio Fire & Police Pension Fund	Active	1/1/2019	7.25%	13.9	87.9	\$ 3,015,158,660	\$ 3,297,010,974	\$ 452,239,886	134.97%	1/1/2018	9.9	90.3
Brazos River Authority Retirement Plan	Frozen	3/1/2019	6.50%	13.0	61.7	\$ 19,851,827	\$ 20,372,827	\$ 12,641,846	N/A	3/1/2018	14.0	66.4
Texas County & District Retirement System (6)	Active	12/31/2018	8.00%	12.6	88.5	\$ 29,260,546,258	\$ 30,553,846,707	\$ 3,987,324,758	57.61%	12/31/2017	12.3	89.1
DART Employees	Closed	10/1/2019	6.75%	12.3	80.5	\$ 185,583,667	\$ 190,481,841	\$ 46,127,286	366.26%	10/1/2018	12.8	79.2
Guadalupe Regional Medical Center	Active	1/1/2019	7.00%	12.0	96.5	\$ 67,977,745	\$ 72,252,517	\$ 2,641,934	9.48%	1/1/2018	3.0	98.4
Nacogdoches County Hospital District	Active	7/1/2017	7.25%	11.9	82.0	\$ 46,841,434	\$ 46,180,125	\$ 10,166,263	31.73%	7/1/2015	9.8	84.3
Guadalupe-Blanco River Authority	Frozen	1/1/2019	6.75%	10.0	86.9	\$ 28,731,703	\$ 30,900,491	\$ 4,643,707	N/A	1/1/2018	7.6	85.6
Dallas Police & Fire Pension System-Supplemental (5)	Active	1/1/2019	7.25%	10.0	57.6	\$ 18,317,893	\$ 18,317,893	\$ 13,506,880	2050.36%	1/1/2018	10.0	51.5

					(	Current	Actuarial Va	aluation			Prior A	Prior Actuarial Valuation		
Plan Name	Plan Status (1)	Effective Date	Discount Rate	Effective Amort Period (2)	Funded Ratio %	of	ket Value Assets MVA)	Actuarial Value of Assets (AVA)	Unfunded Actuarial Accrued Liability (UAAL = AAL - AVA)	UAAL as % of Payroll	Effective Date	Prior Effective Amort Period (2)	Funded Ratio %	
Northeast Medical Center Hospital Retirement Plan (5)	Frozen	7/1/2019	7.25%	10.0	82.7	\$	9,405,456	\$ 9,405,456	\$ 1,963,048	N/A	7/1/2018	10.0	83.8	
Colorado River Municipal Water Dist. (7)	Active	1/1/2019	6.25%	8.5	83.3	\$	9,251,681	\$ 9,251,681	\$ 1,853,616	50.95%	1/1/2018	7.4	93.8	
Refugio County Memorial Hospital	Frozen	11/1/2019	6.00%	5.2	96.5	\$	1,861,692	\$ 1,861,692	\$ 68,240	N/A	11/1/2018	7.0	97.8	
JPS - Tarrant County Hospital District	Active	10/1/2017	7.25%	3.8	95.1	\$	257,037,806	\$ 246,203,390	\$ 12,785,570	4.99%	10/1/2016	4.8	93.6	
The Woodlands Firefighters' Retirement System	Active	1/1/2019	7.00%	3.6	97.8	\$	32,836,586	\$ 32,836,586	\$ 726,156	6.08%	1/1/2018	0.0	106.0	
Travis County ESD #6 FRRF	Active	12/31/2017	7.00%	3.3	87.2	\$	19,688,064	\$ 19,010,963	\$ 2,790,432	48.27%	12/31/2015	5.8	71.6	
Northwest Texas Healthcare System Retirement Plan	Frozen	10/1/2017	7.50%	3.0	83.9	\$	21,800,110	\$ 21,561,210	\$ 4,130,838	N/A	10/1/2016	5.0	73.0	
Plano Retirement Security Plan	Active	12/31/2017	7.00%	0.0	100.8	\$	148,516,307	\$ 144,040,464	\$ (1,131,618)	-0.77%	12/31/2015	19.0	99.2	
Citizens Medical Center	Active	3/1/2019	7.00%	0.0	110.4	\$	108,407,575	\$ 108,340,272	\$ (10,217,364)	-17.69%	3/1/2018	0.0	107.1	
Arlington Employees Deferred Income Plan	Active	6/30/2019	5.00%	0.0	107.2	\$	2,999,905	\$ 2,999,905	\$ (200,717)	-5.33%	6/30/2018	0.0	106.2	
Anson General Hospital	Frozen	7/1/2019	6.00%	0.0	110.1	\$	1,957,233	\$ 1,911,086	\$ (176,007)	-81.37%	7/1/2018	0.0	120.1	
El Paso Firemen & Policemen's Pension Staff Plan	Active	1/1/2018	7.75%	0.0	113.1	\$	419,843	\$ 397,086	\$ (46,068)	-6.31%	1/1/2016	0.0	282.9	
Grand Totals:					77.1%	\$ 282	,551,064,804	\$ 289,604,916,887	\$ 86,128,225,703				77.4%	

### Notes

- (1) Plan status indicates whether a plan is active (admitting new hires), closed to new hires (but still accruing benefits), or frozen (not accruing benefits).
- (2) The effective amortization period is the time it would take to theoretically eliminate the UAAL assuming no future gains or losses and taking into account both the plan's stated and historical contribution policy.
- (3) Prior amortization period reflects an employee contribution from 11% to 12% effective April 9, 2018.
- (4) Prior amortization period reflects an employer contribution increase to 14.86% of payroll as of February 17, 2018.
- (5) Reported amortization period is based on an open amortization funding policy.
- (6) Amortization period is calculated using system-wide aggregate UAAL and payroll amounts.
- (7) Amortization period is calculated by the PRB.



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# Summary of Funding Soundness Restoration Plans (FSRPs) Submitted Since the Prior PRB Meeting

Texas Government Code Section 802.2015(e) requires FSRPs to be developed by the public retirement system and the associated governmental entity in accordance with the system's governing statute; and be designed to achieve a contribution rate that will be sufficient to amortize the unfunded actuarial accrued liability within 40 years not later than the 10<sup>th</sup> anniversary of the date on which the final version of an FSRP is agreed to. The following table summarizes the FSRPs received by the PRB since the last board meeting.

	FSRP Trigger		Plan Changes							
Retirement System	Amortization Period	Employee Contributions	Employer Contributions	Other						
University Park Firemen's Relief & Retirement Fund	Infinite	N/A	Before: 21.52% After: Closed 30-year ADC beginning October 1, 2017	<ul> <li>Employer contributing a biennially recalculated ADC rate.</li> <li>Plan is closed and new hires are required to participate in TMRS.</li> </ul>						

# **Systems Immediately Subject to FSRP Formulation Requirement**

The FSRP requirement is triggered for retirement systems that have had amortization periods over 40 years for three consecutive annual actuarial valuations, or two consecutive actuarial valuations if the systems conduct the valuations every two or three years.

Systems Immediately Subject to an FSRP Formulation Requirement									
Retirement System	Am Period	Date of AV	Am Period	Date of AV	Am Period	Date of AV	FSRP Due Date		
Irving Firemen's Relief & Retirement Fund  — Revised FSRP¹	63.4	1/1/2014	46.5	12/31/2015	Infinite	12/31/2017	4/17/2019		
Midland Firemen's Relief & Retirement Fund  — Revised FSRP <sup>1</sup>	59.1	1/1/2014	44.7	12/31/2015	Infinite	12/31/2017	8/21/2019		
Longview Firemen's Relief & Retirement Fund	50.7	12/31/2016	40.2	12/31/2017	Infinite	12/31/2018	2/12/2020		
Orange Firemen's Relief & Retirement Fund – Second Revised FSRP <sup>1</sup>	58.2	1/1/2015	69.3	1/1/2017	Infinite	1/1/2019	4/18/2020		
Marshall Firemen's Relief & Retirement Fund – Revised FSRP <sup>1</sup>	43.2	12/31/2014	56.4	12/31/2016	59.0	12/31/2018	5/5/2020		
Beaumont Firemen's Relief & Retirement Fund	39.1	12/31/2014	104.0	12/31/2016	Infinite	12/31/2018	7/17/2020		

<sup>&</sup>lt;sup>1</sup>Texas Government Code Section 802.2015(d) requires systems to formulate a revised FSRP if the system conducts an actuarial valuation showing that the system's amortization period exceeds 40 years, and the previously formulated FSRP has not been adhered to.

# Systems at Risk of FSRP Formulation Requirement

These at-risk systems' most recent actuarial valuation shows an amortization period that exceeds 40 years but does not yet trigger the FSRP requirement.

Systems at Risk of an FSRP - Not Yet Subject to FSRP Requirement									
Retirement System	Am Period	Date of AV	Am Period	Date of AV	Am Period	Date of AV	FSRP Due Date		
Amarillo Firemen's Relief & Retirement Fund	28.8	1/1/2014	34.5	12/31/2015	43.5	12/31/2017	N/A		
Atlanta Firemen's Relief & Retirement Fund	36.2	12/31/2014	28.4	12/31/2016	Infinite	12/31/2018	N/A		
Austin Police Retirement System	27.3	12/31/2016	35.0	12/31/2017	Infinite	12/31/2018	N/A		
Cleburne Firemen's Relief & Retirement Fund	27.3	12/31/2014	28.8	12/31/2016	48.6	12/31/2018	N/A		
Conroe Fire Fighter's Retirement Fund	31.4	12/31/2015	39.0	12/31/2017	Infinite	12/31/2018	N/A		
Laredo Firefighters Retirement System	29.8	9/30/2014	28.0	9/30/2016	43.0	9/30/2018	N/A		
Lubbock Fire Pension Fund	27.6	1/1/2015	33.5	12/31/2016	52.8	12/31/2018	N/A		
McAllen Firemen's Relief & Retirement Fund	29.0	10/1/2014	33.4 <sup>1</sup>	10/1/2016	Infinite	10/1/2018	N/A		
Plainview Firemen's Relief & Retirement Fund	31.4	12/31/2013	31.6	12/31/2015	44.8	12/31/2017	N/A		
Texas City Firemen's Relief & Retirement Fund	31.6	12/31/2014	28.0	12/31/2018	41.1	12/31/2018	N/A		

<sup>&</sup>lt;sup>1</sup>Reflects an increase in employee contribution from 11% to 12% effective April 9, 2018.

# **Progress Report on Previously Submitted FSRPs**

The following systems have previously formulated an FSRP. The table below outlines their progress towards the FSRP requirement.

Systems Still Working Towards M	eeting the	40-Year Amort	ization Per	iod Requireme	ent				
	FSRI	P Trigger	Curren	t Progress <sup>1</sup>					
Retirement System	Am Period	Date	Am Period	Date	Goal Year²	Update Required			
Fort Worth Employees' Retirement Fund	Infinite	12/31/2016	43.0	12/31/2019	2026	5/2021			
Dallas Employees' Retirement Fund	Infinite	12/31/2015	46.0	12/31/2018	2026	7/2021			
Wichita Falls Firemen's Relief & Retirement Fund – Revised FSRP	Infinite	1/1/2018	< 47	1/1/2018	2026	8/2021			
Greenville Firemen's Relief & Retirement Fund – Revised FSRP	55.0	12/31/2016	40.7	12/31/2018	2026	9/2021			
Odessa Firefighters' Relief & Retirement Fund – Revised FSRP	77.5	1/1/2019	< 48	1/1/2019	2026	12/2022			
Systems that Have Submitted Post-FSRP Act	Systems that Have Submitted Post-FSRP Actuarial Valuations Showing Amortization Period Below 40 Years								
University Park Firemen's Relief & Retirement Fund – Revised FSRP	Infinite	12/31/2016	28.8	12/31/2018	2026	N/A			
Harlingen Firemen's Relief & Retirement Fund – Revised FSRP	59.1	9/30/2017	38.0	9/30/2019	2026	N/A			

 $<sup>^{\</sup>scriptsize 1}$  Based on the most recent actuarial valuation or FSRP.

<sup>&</sup>lt;sup>2</sup> The year in which a system must reach an amortization period of 40 years or less.

# **Previously Completed FSRP Requirement Systems**

The following table is a list of all systems that have submitted an FSRP that has lowered their amortization period below 40 years in a subsequent actuarial valuation.

Systems that Have Submitted Post-FSRP Actuarial Valuations Showing Amortization Period Below 40 Years										
	FSRP .	Trigger	Complet	ed Progress <sup>1</sup>						
Retirement System	Am Period	Date	Am Period	Date	Goal Year <sup>2</sup>					
Dallas Police & Fire Pension System (Combined Plan)	44.0	1/1/2017	38.0 <sup>3</sup>	1/1/2019	2027					
Galveston Employees' Retirement Plan for Police	55.1	1/1/2014	35.3	1/1/2018	2026					
Galveston Firefighter's Relief & Retirement Fund – REVISED FSRP	Infinite	12/31/2016	26.8	12/31/2017	2026					
Lufkin Firemen's Relief & Retirement Fund	40.6	12/31/2014	33.1	12/31/2016	2026					
Sweetwater Firemen's Relief & Retirement Fund	58.8	12/31/2014	27.5	12/31/2016	2026					

 $<sup>^{\</sup>rm 1}$  Based on the valuation in which the system completed its FSRP requirement.

<sup>&</sup>lt;sup>2</sup> The year in which a system was expected to reach an amortization period of 40 years or less.

<sup>&</sup>lt;sup>3</sup> The amortization period reflects a payroll projection based upon the City of Dallas' Hiring Plan which has yet to materialize, a concern that was noted by the system's actuary in its 1/1/2019 actuarial valuation.

5a. Update on second revised FSRP from City of Orange and Orange Firemen's Relief and Retirement Fund

Orange Firemen's Relief and Retirement Fund FSRP Update – March 23, 2020

March 23, 2020

### VIA EMAIL

Texas Pension Review Board P.O. Box 13498 Austin, TX 78711-3498

Re:

Orange Firemen's Relief and Retirement Fund Funding Soundness Restoration Plan (Updated)

To Whom It May Concern:

As required under Sections 802.2015 and 802.2016 of the Texas Government Code, a public retirement system is required to formulate a Funding Soundness Restoration Plan (FSRP) in accordance with the system's governing statute if:

- As of their most recent valuation, a system has had three (3) consecutive annual valuations which show that the system's amortization period exceeds 40 years, or
- As of their most recent valuation, a system has had two (2) consecutive valuations if the system conducts actuarial valuations every two or three years, which show that the system's amortization period exceeds 40 years

Based on these requirements, the Orange Firemen's Relief and Retirement Fund (Fund) was subject to the initial formulation of a Funding Soundness Restoration Plan. The FSRP should include Fund changes that are designed to achieve a contribution rate that will be sufficient to amortize the Unfunded Actuarial Accrued Liability (UAAL) within 40 years not later than the 10<sup>th</sup> anniversary of the date on which the final version of the initial FSRP is completed. The initial letter was dated October 17, 2016 and was submitted to the PRB which illustrated that the membership had increased their contribute rate from 11.00% to 12.00% of salary. Based on this change, it was determined that no further changes were needed to satisfy the requirements of Section 802.2015.

Following the formulation of the initial FSRP, the Board hired Foster & Foster to provide actuarial services. Foster & Foster performed an actuarial valuation, determined as of January 1, 2017, which indicated that the amortization period was 69.3 years. Due to this increase in the amortization period, it was determined that the prior FSRP was no longer in compliance and the PRB issued a letter to the Fund stating that a revised FSRP is required to be formulated. Upon receipt of this letter, many discussions took place regarding alternatives to the Fund that could be taken in order to improve the actuarial soundness of the Fund and reduce the amortization period.

Ultimately, the contribution rates were increased by 0.50% of salary for both the City and the membership, bringing the scheduled contribution rates, effective October 1, 2018, to 14.50% for the City and 12.50% for the membership. Based on these changes and the investment return performance for the year ending December 31, 2017, it was estimated that the plan's amortization period was in compliance with the revised FSRP requirements and a letter was submitted to the PRB in February 2018 providing such detail.

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In 2019, the Board of Trustees authorized Foster & Foster to perform an actuarial experience study of the Fund. Following the results of the actuarial experience study, the Board approved changes to several actuarial assumptions used in the valuation, including:

- Amending the mortality rates assumption to reflect the PubS-2010 tables
- Lowering the payroll growth assumption from 4.00% to 2.50% per year
- Amending the assumed rates of salary increases, retirement rates and withdrawal rates

Following approval of these changes, Foster & Foster completed the January 1, 2019 actuarial valuation which illustrated that the amortization period had increased to an infinite level. The valuation report also indicated that the Fund's scheduled contribution rates resulted in a contribution deficit of approximately 6.3% per year to achieve a 40-year amortization period. At this time, the Board understood that the Fund once again would be subject to an updated FSRP and initiated discussions with the actuary to perform a benefits analysis to determine the actuarial impact of potential benefit amendments to the plan.

On October 4, 2019, the Board received the completed actuarial analysis from Foster & Foster. The potential benefit design changes that were studied include the following:

- Implement a Tier 2 benefit structure for members hired on or after January 1, 2020
- Increase the Average Salary period used for calculating benefits from 60 months to 96 months for current members
- Increase the member contribution rate from 12.50% to 13.50% for all members
- Increase Normal Retirement eligibility to 55 years of age and 25 years of service for current members with less than 20 years of service as of January 1, 2020
- Amend the normal form of payment from a Life Annuity with two-thirds (2/3) continued to a Surviving Spouse to a Life Only annuity

Foster & Foster illustrated the estimated actuarial impact of the above changes in its October 4, 2019 analysis, including the impact on the amortization period, the 30-year funding deficit, and the 40-year funding deficit.

Please note the City and membership have had several discussions regarding potential benefit amendments, and those discussions are still ongoing. The Board understands the importance of continuing to evaluate the benefits provided and the impact changes may have to improve the long-term sustainability of the Fund.

While any benefit amendments are yet to be agreed upon, it is important to point out that the contribution rates were once again increased, effective January 28, 2020. The City's contribution rate was increased from 14.50% to 15.80% of salary and the member contribution rate was increased from 12.50% to 12.80% of salary, for a total increase of 1.6% of salary per year. As previously stated, the January 1, 2019 actuarial valuation showed that the total funding deficit was approximately 6.3% of salary per year to achieve a 40-year amortization.

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As you are probably aware, 2019 was a strong year in the markets. In fact, the Board received the December 31, 2019 GASB 67 statement from Foster & Foster which illustrated a 19.9% net investment return for 2019.

Foster & Foster has performed a projection to estimate the impact the increased contribution rates and 2019 investment performance would have on the plan's amortization period as of January 1, 2020, all other things remaining equal. Based on their analysis, they have estimated that the combination of the contribution rate increases and the 2019 investment performance would result in no change to the Fund's infinite amortization period. They also calculated the estimated funding deficit to achieve a 40-year amortization to be 3.00% of payroll per year, determined as of January 1, 2020.

The City and membership will use this updated information to continue discussions surrounding potential benefit amendments with the understanding that the FSRP requirements include achieving a 40-year amortization period no later than October 2026.

Please also note that the Board changed its structure surrounding investment services to include separate providers for investment consulting, investment managers, and custodial services. The Board believes this will help support the Fund long-term as it will provide for more control, accountability, and lower management fees.

As you can see, the Fund has gone through some measures to improve the actuarial soundness and overall transparency of the Fund. The Board authorized completion of an actuarial experience study and made several changes to the actuarial assumptions, which resulted in an increased amortization period. The Board engaged the actuary to provide a special actuarial analysis to determine the impact of potential benefit changes for purposes of ongoing discussions between the City and membership. The Board made changes to its investment and custodial service providers which will result in lower fees to the Fund.

The Board, City, and membership will continue to monitor the contribution levels and benefits provided under the plan to determine what changes, if any, are needed to improve the actuarial soundness of the Fund.

Please note the contents of this letter have been reviewed by the Fund's actuary.

If you have any questions, please do not hesitate to contact us.

Respectfully submitted.

On Behalf of the Board of Trustees

On Behalf of the City of Orange

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# Intensive Actuarial Review:

Orange Firemen's Relief and Retirement Fund

October 2018



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# **Executive Summary**

# Introduction

This intensive actuarial review of Orange Firemen's Relief and Retirement Fund ("Orange Fire" or "the Fund") is intended to assist the Fund's board of trustees and the City of Orange ("the City") in assessing the Fund's ability to meet its long-term pension obligation. Overall, the review shows the Fund is taking considerable risks in its approach to funding the system. The Pension Review Board (PRB) encourages the Fund and the City to review the findings and conclusions of this report carefully and jointly adopt a forward-looking plan to address these risks and guide the Fund towards a path of long-term sustainability. The PRB can provide technical assistance in formulating such a plan.

# **Overview**

Orange Fire's unfunded actuarially accrued liability (UAAL or "unfunded liability") increased from \$1.4 million in 2000 to \$8.2 million by the beginning of 2017, and the Fund has routinely maintained funded ratio less than 75%. This chronic underfunding can be primarily attributed to actual investment returns consistently being lower than the assumed investment return and regularly contributing less than the annual benefit accrual plus growth of existing unfunded benefits. The Fund's reported investment expenses are among the highest in Texas and at current contribution rates and benefit levels, the unfunded liability can be expected to continue to grow and the funded status to continue to languish.

Constantly underfunding a plan places the benefits of both retirees and active members at significant risk and/or places the burden of paying for services already rendered on future generations of taxpayers and employees through the reduction of future benefits or an increase in contributions. Orange Fire and the City have made recent contribution increases, but these changes have not been enough to put the Fund on a solid path to sustainability. Orange Fire and the City have yet to make difficult decisions on additional needed changes to benefit or contribution levels.

### Conclusion

Orange Fire should consider the following actions to help ensure financial stability and mitigate the risks that lead to underfunding: continually monitoring investment managers' performance against their benchmarks; evaluating asset allocation decisions and appropriate risk levels on a forward-looking basis; conducting a peer group study on investment expenses to get a more accurate picture of investment expenses paid and comparing those against their peers; reviewing actuarial assumptions against actual experience and making necessary changes; and ensuring contributions are adequate to fully fund Orange Fire over a reasonable period.

To address the funding and governance risks, the Fund and the City should develop written funding, benefit, and investment policies that are linked to provide a formal risk-/cost-sharing arrangement. A strong funding policy that requires payment of an actuarially determined contribution (ADC) is encouraged. In addition to helping maintain a sound plan funding level, putting such forward-looking policies into place can help reduce uncertainty for stakeholders who would know, in advance, how adverse experience will be managed.

# **Background**

Texas Government Code Section 801.202(2) requires the Pension Review Board (PRB) to conduct intensive studies of potential or existing problems that threaten the actuarial soundness of or inhibit an equitable distribution of benefits in one or more public retirement systems. The PRB identified the following key metrics, in addition to amortization period, to determine and prioritize retirement systems for intensive actuarial review. The PRB selected Orange Firemen's Relief and Retirement Fund ("Orange Fire" or "the Fund") for review based on the 2017 actuarial valuation data shown below. Unless otherwise noted, the following metrics were calculated as of January 1, 2017.

Amort. Period (Years)	Funded Ratio	UAAL as % of Payroll	Assumed Rate of Return	Payroll Growth Rate	Actual Cont. as % of ADC <sup>1</sup>	Non- Investment Cash Flow as % of FNP
69.3	49.86%	336.03%	7.75%	4.00%	70.49%	-7.91%

Contribution and cash flow data are from the Fund's 12/31/2016 financial audit.

#### **Plan Profile**

**Actuarial Accrued Liability**: \$16,353,849

Market Value of Assets: \$8,154,674

Normal Cost: 12.76% of payroll

Contributions: 12.50% employee

14.50% employer

Membership: 37 active

42 annuitants

Social Security Participation: No

At the time the Fund was selected for review:

- Its amortization period was the second highest finite period of all defined benefit pension plans in Texas.
- Its funded ratio was the 13<sup>th</sup> lowest of all defined benefit pension plans in Texas.
- Only 17 plans in Texas used an assumed rate of return above 7.75%, which is above both the Texas and national averages for public pension plans.
- Actual contribution as a percent of actuarially determined contribution (ADC) was the eighth lowest among Texas defined benefit plans and the lowest in its peer group (TLFFRA plans with assets of less than \$15 million).
- Investment expense as a percentage of plan net assets was one of the highest amongst all defined benefit plans in Texas.
- Its non-investment cash flow as a percent of assets (fiduciary net position (FNP)) was the eighth lowest among Texas defined benefit plans.

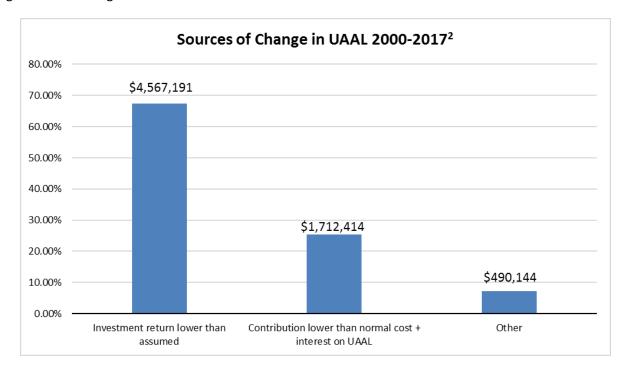
<sup>&</sup>lt;sup>1</sup> For plans whose contributions are a fixed rate, based on statutory or contractual requirements, the ADC for this purpose is the contribution needed to fund the benefits accrued in the current year and maintain an amortization period that does not exceed 30 years, as required to be reported under Texas Government Code §802.101(a).

# **Risk Analysis**

A pension fund faces multiple risks, which can be boiled down to one primary concern of whether there will be enough money to pay benefits when they are due. This section discusses potential funding and governance risks facing the fund. The risk being taken in each of these areas increases the probability of a continued period of severe financial stress for the Fund. This also raises the likelihood of deteriorating funding conditions in the coming years, further imperiling the Fund's ability to pay promised benefits.

# **Funding Risk**

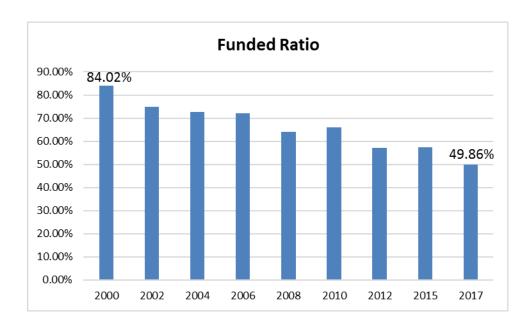
Orange Fire's significant growth in unfunded liability (UAAL), which increased from \$1.4 million in 2000 to \$8.2 million in 2017, can be attributed primarily to actual returns consistently lower than the assumed investment return and contributions consistently lower than the annual benefit accrual plus growth of existing unfunded benefits.



# Background

According to Orange Fire's January 1, 2017 actuarial valuation, the Fund was 50% funded on an actuarial basis, and according to reports filed with the PRB, it has not had a funded ratio above 70% since the 2006 valuation.

<sup>&</sup>lt;sup>2</sup> Other includes demographic experience, benefit changes, and changes to assumptions and methods.

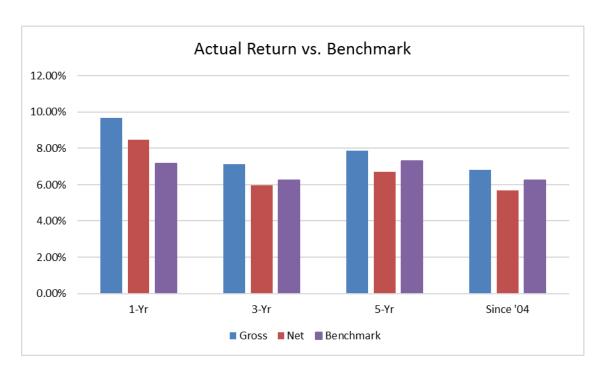


For a plan's funding level to improve, its assets must grow faster than the liabilities, which can be achieved by three key levers: contributions greater than the normal cost plus interest on the UAAL, benefit reductions to lower liabilities, and/or investment returns consistently higher than the assumed rate of return.

## **Investment Expenses and Performance**

The Fund is currently spending a larger percentage of assets on investment related expenses than any other plan in the state with total fees estimated at 1.15%. According to the information provided by the Fund, investment returns have underperformed the Fund's benchmark on a net of fees basis in all but the most recent year. As shown in the chart below, Orange Fire has had a 5.67% net return since 2004, which is 58 basis points lower than its benchmark of 6.25%.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Data is from 2<sup>nd</sup> Quarter Performance Report for the City of Orange Fireman's Retirement & Relief Fund, Graystone Consulting, July 19, 2018.



According to a study conducted by Morningstar in 2015, investment fees were a major predictor of future fund performance<sup>4</sup>. The study concluded that funds with the lowest fees during the 2010 - 2015 period outperformed funds with higher fees across all asset classes. Reducing total expenses alone is not likely to be sufficient for Orange Fire to consistently meet or exceed its assumed rate of return, but is an important area the board should focus on in its fiduciary duty to improve investment performance and efficiently manage the Fund's investment program. For example, based on current projections, a reduction in expenses of just 25 basis points could potentially save the Fund more than \$2.5 million in investment expenses over the next 30 years.

The chart below shows Orange Fire's investment expenses as a percent of total net assets compared to the TLFFRA plans closest to Orange Fire in asset size.

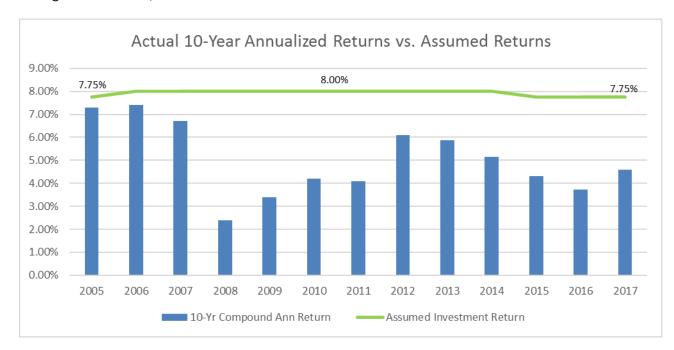
Peer Group Plans	Effective Date	Total Net Assets	Investment Expenses	Inv Exp as % of Assets	10-Year Net Return
Orange Fire	12/31/2016	\$8,154,674	\$93,636	1.15%	3.72%
Corsicana Fire	12/31/2016	\$8,344,317	\$92,459	1.11%	3.40%
Waxahachie Fire	9/30/2016	\$14,201,159	\$142,317	1.00%	4.90%
Plainview Fire	12/31/2016	\$5,427,943	\$49,439	0.91%	1.95%
Sweetwater Fire	12/31/2017	\$8,547,174	\$66,056	0.77%	4.91%
Greenville Fire	12/31/2016	\$12,728,162	\$90,884	0.71%	4.23%
Paris Fire	12/31/2016	\$4,764,272	\$32,730	0.69%	2.16%
Atlanta Fire	12/31/2016	\$3,744,867	\$25,495	0.68%	4.84%
Marshall Fire	12/31/2016	\$7,712,228	\$45,898	0.60%	4.67%
Weslaco Fire	9/30/2017	\$10,429,381	\$61,218	0.59%	2.59%

<sup>&</sup>lt;sup>4</sup> https://corporate1.morningstar.com/ResearchArticle.aspx?documentId=752589

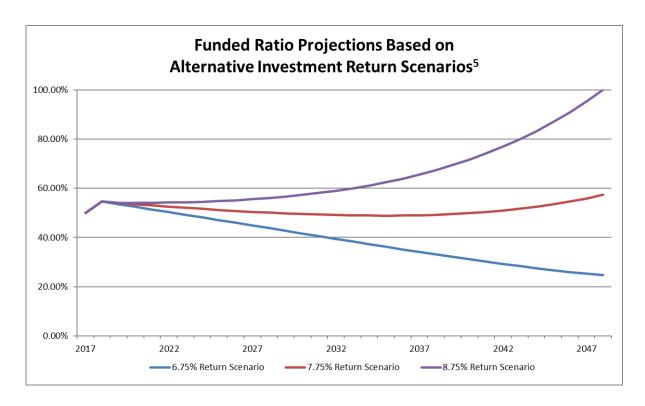
Based on the audited financial statements provided by the systems to the PRB, Orange Fire pays a larger percentage of their total net assets toward reported investment expenses than their peers. However, due to inconsistencies in reporting of investment expenses between various investment vehicles and investment managers and potential differences in expense classification between auditors, the PRB recognizes that this data may not be an entirely accurate depiction of true investment related expenses paid.

## Investment Experience Compared with Investment Return Assumption

Orange Fire's actual investment return has consistently been lower than the assumed investment return, increasing the unfunded liability by more than \$4.5 million between 2000 and 2017. As illustrated below, the Fund has not achieved a 7.75% (the Fund's current assumed rate of return) annualized return over a consecutive 10-year period in any of the 13 periods ending December 31, 2005 through December 31, 2017.



The graph below projects the funded ratio for the next 30 years, assuming the member and the City contribution rates remain at a fixed 12.50% and 14.50% respectively, and the investments return 6.75%, 7.75%, or 8.75%. The impact of consistently earning less than the expected return on assets (EROA) but even as high as 6.75% over the next 30 years, results in the funded status sinking to 29%.



# Fixed-Rate Funding Model and Payroll Growth Rate

Most Texas plans use a fixed percent of pay funding approach. This is especially true for plans governed by the TLFFRA statute. Under a fixed-rate funding structure, no formal amortization policy (i.e. the expected time to fully fund the plan) exists; therefore, the Fund's actuary estimates the amortization period at each valuation date based on the current financial condition of the plan and the current contribution rates.

The nature of a fixed-rate, percent-of-pay contribution policy may exacerbate the risk of underfunding a plan over the long-term because:

- Contributions to percent-of-pay plans are inherently back-loaded because the expected contributions to a percent-of-pay plan grow on a nominal basis at the assumed rate of total payroll growth.
- 2) Fixed-rate plans provide budgetary stability for the employer in the short term, but do not include any inherent mechanisms for reacting to changes in a plan's financial condition.

As noted above, the Fund's unfunded liability increased by more than \$6.7 million from 2000 through 2017. \$1.7 million, or approximately 25%, of this increase, can be attributed total contributions that were not sufficient to cover the cost of both the new benefits being accrued (normal cost) and the interest accumulated on the unfunded benefits already earned (amortization payment).

<sup>&</sup>lt;sup>5</sup> Liabilities reflect the actuarial accrued liabilities, plan provisions, and actuarial assumptions and methods as reported in the 1/1/2017 Actuarial Valuation prepared by Foster & Foster Actuaries and Consultants. Projected liabilities include a 2.5% expected benefit growth rate. Asset projections reflect actual 2017 experience as reported in the Fund's 12/31/2017 audited financial statements.

According to its actuarial valuations, Orange Fire has not received the reported ADC in any year since 2006. Even with contribution increases in 2008 and 2015, employer contributions have averaged less than 85% of the Fund's ADC over that period. Furthermore, the reported ADC is calculated using an open amortization period that results in perpetual negative amortization. If the fund were to use this ADC as a funding policy, the UAAL would grow indefinitely and the "pension debt" would never be paid off.

For the fiscal year beginning January 1, 2017, the expected contributions were about 73% of the reported ADC. This shortfall of \$128,102 is equal to 0.71% of the City's total General Fund expenditures for the fiscal year ending December 31, 2016 and is the second highest among TLFFRA plans of similar size.

Expected Contribution Levels vs. Actuarially Determined Contribution									
Date (1/1)	2000	2002	2004	2006	2008	2010	2012	2015	2017
Employee Contribution	9.00%	9.00%	9.00%	9.00%	11.00%	11.00%	11.00%	12.00%	12.00%
Employer Contribution	9.00%	11.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
Employer 30-Year ADC	8.86%	11.53%	13.25%	13.43%	14.01%	14.95%	19.61%	18.66%	19.25%
% of ADC funded	101.58%	95.40%	105.66%	104.24%	99.93%	93.65%	71.39%	75.03%	72.73%
Covered Payroll (in thousands)	\$1,587	\$1,647	\$1,673	\$1,717	\$2,000	\$1,907	\$1,996	\$2,292	\$2,440
Contribution Shortfall (in thousands)	-	\$8.72	-	-	\$0.2	\$18.12	\$111.98	\$106.81	\$128.1

Both active members and the City increased their contribution rate by 0.25% of payroll in November 2017 and will increase it another 0.25% effective October 1, 2018 to a total of 12.50% and 14.50%, respectively, which was agreed to as part of the latest Funding Soundness Restoration Plan (FSRP). This increase plus positive asset experience during 2017 was enough to satisfy the FSRP requirements, but it still falls 4.25% of pay short of meeting the 2017 recommended ADC.

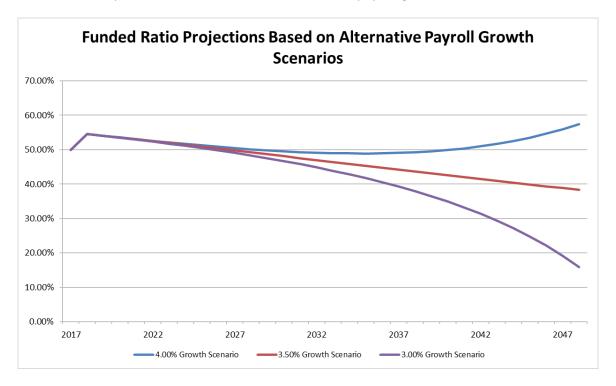
In addition, the FSRP relies on a payroll growth assumption of 4.00%, which is tied for the fifth highest rate in the state. This assumes future payroll growth will be 150% more than the 2.75% per year actual payroll growth rate the Fund experienced from 2000 to 2017. In addition, the population of Orange, Texas has been shrinking since the 1960s from a high around 35,000 to a current population of under 20,000 and is still recovering from the damage wrought by Hurricane Harvey.<sup>6,7</sup> In order to sustain a payroll growth rate well in excess of expected inflation and both national and Texas wage growth projections, a sustained population boom would be necessary.

As an example of the impact of this key economic assumption, if the assumed rate for the 2017 valuation was just 3.0%, the Fund would be at an infinite amortization period and would not be compliant with the recently submitted FSRP. Regardless of the impact on the Fund's FRSP, the risk associated with backloading the contributions but not achieving the assumed rate of payroll growth, and

<sup>&</sup>lt;sup>6</sup> http://www.orangetexas.net/about-orange/orange-history/

<sup>&</sup>lt;sup>7</sup> http://www.orangetexas.net/about-orange/city-of-orange-demographics/

therefore not receiving the expected contributions is significant, as can be seen in the following graph which shows the impact of various scenarios of lower actual payroll growth rates.



# Conclusions/Recommendations

Pre-funding a defined benefit plan, i.e. setting aside assets now for benefits that will be paid in the future, is necessary to help balance the three primary policy goals of benefit security, equity between generations of taxpayers and employees, and a stable contribution from year to year. Consistently underfunding a plan places the benefits of both retirees and active members at significant risk and/or places the burden of paying for services already rendered on future generations of taxpayers and employees through the reduction of future benefits or an increase in contributions.

In the absence of a formal, written funding and risk-sharing policy, the result is a de facto risk-sharing arrangement that is simply a reaction to events, often well after the plan finds itself with financial difficulties. Plans and their sponsors can take many actions to ensure financial stability and mitigate the risks that lead to underfunding. These steps include ensuring contributions are adequate to fully fund the plan over a reasonable period; developing formal policies to guide decision-makers under different economic conditions; reviewing actuarial assumptions against actual experience and making necessary changes; and monitoring investment performance and evaluating asset allocation decisions on a forward-looking basis.

<u>Investment Performance</u>. Whatever the investment return assumption used, investment returns should be closely monitored, and investment managers' performance should be assessed regularly and compared to appropriate asset class benchmarks. Orange Fire currently has one of the highest ratios of investment expenses to market value of assets of any defined benefit plan in Texas. The Fund should give serious consideration to its investment management strategy, specifically to the expenses it pays

and if it is receiving a reasonable benefit for these costs. Lowering these expenses should be an effective means to improve net investment performance. Given the limitations of the data reported to the PRB, conducting a peer group study of investment expenses could serve as a useful exercise to determine if actual expenses are in line with other institutional investors of similar size.

In addition, benchmarks should be reviewed to see if they have been met or exceeded and should be viewed considering the risk taken to achieve those returns. Best practices also include revisiting advisor selection periodically, with boards of trustees evaluating performance, fees, and whether their current advisors are providing the highest possible value at the lowest possible cost. The asset allocation should also be assessed from a risk perspective to provide insight into how the fund would weather a market correction.

<u>Actuarial Assumptions.</u> Neither the payroll growth assumption nor the investment return assumption is being consistently met when gauging actual plan experience. When pension funds are consistently overestimating their assumptions, they underestimate the funding issues they are facing. In the case of payroll growth, if Orange Fire had been assuming a growth rate or 2.75% (their average payroll growth since 2000) their amortization period would be infinite rather than the 69 years reported in the 2017 valuation. Public pension plans must monitor actuarial assumptions continually through their actuarial valuations and make appropriate adjustments to mitigate bias in the assumptions that result in consistent actuarial gains or losses.

Actuarial gains and losses occur when the plan's actual experience does not match expected experience. Over time, without required changes, pension funds such as Orange Fire whose assumptions consistently diverge from actual experience in the same direction (i.e. consistently seeing actuarial gains or consistently seeing actuarial losses) can exacerbate the issue of intergenerational inequity, causing one group of members and taxpayers to over- or under-pay. Boards of trustees should work with their actuaries and other consultants to ensure assumptions are neither too aggressive nor too conservative, while striving to maintain (or achieve) sound fiscal health to secure existing accrued benefits. PRB's Pension Funding Guidelines recommend systems to monitor, review, and report the impact of actual plan experience on actuarial assumptions at least once every five years.

Adequate Funding. The Fund has been increasing both the member and city contribution rates in recent years and it is the PRB's understanding that discussions to increase contributions even further is still being discussed. While we commend the actions taken by the Fund's board and members, the current contribution structure still has not been enough to meet the Fund's ADC rate. To address these concerns, a strong funding policy that requires payment of an ADC is encouraged. Numerous actuarial methods can be utilized to help mitigate contribution volatility, including directly smoothing contribution rates or adding "guardrails" that require the stakeholders to come back to the table if the contribution rate falls outside a specified range. If funding according to an ADC is not adopted, a funding policy that fully funds the Fund over a finite period, such as 30 years, is recommended.

#### **Governance Risk**

When public pension plans and their sponsors wait too long to address them, the funding challenges compounding over time can reach a point where small, incremental improvement, such as the contribution increases made for Orange Fire, are not sufficient to make consistent, long-term improvements to the overall health of the Fund. Orange Fire and the City have yet to make difficult decisions on additional needed changes to benefit or contribution levels. If necessary changes are ultimately made, they may right the ship, but they will potentially be made under less than ideal conditions.

# **Funding Decision-making**

Governance is essentially decision-making, and decision-making for public pension plans must balance the competing interests of plans and their sponsors and should feature collaboration between the two. The primary source of governance risk is the potential lack of involvement of key parties or stakeholders (members, the sponsor government, and taxpayers) in important areas of decision-making for a pension plan including plan design (benefits) and funding (contributions). When a key party is not engaged in important decisions, the risk increases that benefit levels and the contributions required to fund them will diverge, potentially putting the plan's funding stability at risk.

For example, TLFFRA allows boards of trustees to make prospective benefit modifications, both increases and reductions. These changes must be approved by an actuary and a majority of participating members and may not deprive an eligible participant of vested accrued benefits. Although jointly responsible for funding the retirement plan along with plan members, the sponsoring city may have limited involvement in benefit decision-making, a structure which generates the risk that benefit levels adopted could be unsustainable.

Benefit increases are not the only potential risk related to a potential lack of sponsor involvement under TLFFRA; unwillingness to reduce benefits prospectively when necessary to address funding challenges can be an obstacle to getting things back on track. It should be noted that even plans with very engaged boards and sponsors can be susceptible to increasing benefits to unsustainable levels in good times or failing to lower them when necessary in bad times. Governance risk related to an imbalance in decision-making can only exacerbate these risks. Given the Fund's historically poor funding levels of under 75% for the last 15 years, the absence of benefit modification by Orange Fire illustrates this point.

# Funding Soundness Restoration Plan

State law recognizes the potential risks of underfunding and a lack of engagement by some key stakeholders and imposes cooperation between the system and sponsoring governmental entity by requiring retirement systems having trouble meeting their long-term obligations work with their sponsors to develop a restoration plan for addressing those issues.<sup>8</sup> This framework helps ensure that

<sup>&</sup>lt;sup>8</sup> Texas Government Code 802.2015 and 802.2016 require public retirement systems whose amortization period exceeds 40 years for 2 or 3 consecutive actuarial valuations to develop, with their sponsor, a funding soundness restoration plan designed to bring their amortization period within 40 years over 10 or fewer years.

both the system and its sponsoring employer are involved in pension plan reform decisions, but it comes at a point when actuarial health is already threatened. Orange Fire submitted an FSRP for review on November 8, 2016. The FSRP stated after the 1/1/2015 valuation member contributions had increased from 11.00% to 12.00% The changes outlined in the FSRP recalculated an amortization period of 47.4 years for 2015; however, the 1/1/2017 valuation showed the amortization period had increased to 69.3 years.

Because of the increase in the amortization period, Orange Fire submitted a second FSRP on February 15, 2018. This FSRP instituted further contribution increases bringing the contribution rates for members and the city to 12.50% and 14.50% respectively, by October 2018. Additionally, the board proposed a benefit change to amend the normal form of annuity payment from a 66 2/3% joint annuitant form of payment for married members to a life annuity for all members regardless of marital status, which is expected to decrease the amortization period by approximately 7 years. Plan members ultimately voted down this proposal in July, however the Fund's board has moved to carry out a new vote with the following options: (A) amend the normal form of annuity payments at the time of retirement as recommended by the Fund's actuary; (B) increase the members' contribution rate by 2% over a four-year period beginning on 10/1/2019; or (C) opt out of both (A) and (B) (no action). It is possible the new vote could be completed before mid-September.

## **Investment Decision-making**

For Orange Fire, another area of governance risk relates to management and oversight of the Fund's investment program by the board. Orange Fire has adopted an investment policy statement (IPS) that clearly identifies the overall investment objectives of the Fund and the expectations of investment managers to meet these objectives, as outlined below.

- 1. Achieve a total return, net of fees, in excess of the assumed rate of return
- 2. Outperform the annualized return of the Fund's composite policy benchmark
- 3. Achieve a real return of 4.5% over the CPI

The policy also outlines steps the board can take if at least two of these three objectives are not being met. These include re-evaluating the goals, modifying the asset allocation, and/or revisiting investment manager selection. Given the many years of protracted underperformance of the Fund's assets and not meeting the stated IPS objectives, the following elements of the Fund's investment program should all be reviewed: the Fund's risk tolerance, asset allocation, and investment manager performance. Along with reviewing these factors, the board should re-examine whether the current goals are obtainable and take appropriate actions to improve the overall investment performance of the Fund.

#### Conclusions/Recommendations

Plans and their sponsors can develop policies that proactively manage risk in the future by laying out a formal risk-sharing plan. To proactively manage governance and funding risk, retirement plans and their sponsors should work together to adopt written policies far in advance, that can guide them through both good and bad years and shield against the risk of either party's exclusion or disengagement from decision-making. Funding and benefit policies can be adopted that provide a framework for how benefit

and contribution levels may be modified under different conditions. An advantage of such policies is that changes to plan benefits and costs are known and understood by all parties in advance, rather than negotiated under difficult circumstances.

For example, a benefit policy can outline the primary objectives the employer wishes to achieve, which can be as detailed as a specified replacement ratio, or as general as offering competitive benefits at a reasonable cost, as well as identifying policies and procedures designed to determine if the objectives are being met and how they can be reviewed at reasonable intervals. In addition, outlining potential benefit enhancements or reductions based on the funding goals outlined in the funding policy.

The funding policy might incorporate objectives associated with benefit security, contribution stability and intergenerational equity and outline how those objectives will be met through the use contribution changes, as well as referencing potential changes outlined in the benefit policy. For example, the coordinated policies might limit future benefit enhancements, cost of living adjustments, and/or contribution rate reductions such that they can only be considered or made if the Fund's funded ratio remains greater than a chosen threshold. In addition, if the funded ratio falls below a certain threshold, the stakeholders are required to come back to the table to make necessary contribution and benefit adjustments.

Orange Fire in conjunction with the City should utilize the funding soundness restoration plan requirement to develop such long-term policies. This will likely require some difficult decisions to get the Fund set on the proper path, but the longer these decisions are delayed, and a reasonable cost-sharing structure is not implemented, the more difficult the decisions become.

In the area of investment governance, the board should work closely with its advisors to manage the Fund's investment program and ensure that the IPS is being fully utilized. Manager performance should be continuously monitored, and appropriate action should be taken in accordance with the steps laid out in the IPS.

# **Appendix**

# **Key Metrics**

Metric	Amortization period (69.3 years)
What it measures	Approximately how long it would take to fully fund the unfunded actuarial accrued liability (UAAL) based on the current funding policy.
Why it is important	Given the Fund's current assumptions, an amortization period above 17 years indicates the contributions to the Fund in the coming year are less than the interest accumulated for that same period and therefore the total UAAL is expected to grow over the near term. In addition, for a plan that contributes on a fixed-rate basis such as Orange Fire, the higher the amortization period, the more sensitive it is to small changes in the UAAL.
Peer comparison	Orange Fire currently has one of the highest amortization periods of all defined benefit pension plans in Texas and ranks highest amongst its peer TLFFRA plans (TLFFRA plans with a market value of assets below \$15 million).

Metric	Funded ratio (49.86%)
What it measures	The percent of a fund's actuarially accrued liabilities covered by its actuarial value of assets.
Why it is important	The lower the funded ratio, the fewer assets a fund must pay its current and future benefit payments.
Peer comparison	Orange Fire's funded ratio is below the State's average of 72.53% and is one of the lowest in the state.

Metric	UAAL as a percent of payroll (336.03%)			
What it measures	The size of a plan's unfunded liability compared to the annual payroll of its active members.			
Why it is important	Provides a way to compare plans of various sizes and expresses the outstanding "pension debt" relative to current personnel costs.			
Peer comparison	The Fund's UAAL as a percent of payroll is one of the highest amongst TLFFRA funds.			

Metric	Assumed rate of return (7.75%)
What it measures	The estimated annual rate of return on the Fund's assets.
Why it is important	If actual future returns are lower than the assumed rate of return, future contributions will need to increase significantly, especially for a poorly funded plan. Orange Fire's assumed rate of return is 7.75%, while its actual ten-year investment rate of return for the period ending December 31, 2016 was only 3.72%.
Peer comparison	Orange Fire is tied for the fourth highest Assumed rate of return in its peer group.

Metric	Payroll growth rate (4.00%)
What it measures	The estimated annual growth in the total payroll of active members contributing into the Fund.
Why it is important	Contributions are calculated as a percent of active members' pay and are back-loaded based on the expected growth in total payroll. If payroll does not increase at this rate, actual contributions will not meet those expected in the Fund's actuarial valuations. Given the Fund's inactive and active liabilities are not fully funded; contributions below expected levels will have serious consequences on the Fund's long-term solvency.
Peer comparison	The Fund's payroll growth rate of 4.00% percent is tied for the second highest in its peer group.

Metric	Actual contributions as a percent of actuarially determined contributions (70.49%)	
What it measures	Whether the current employer contributions have met a theoretical minimum threshold. <sup>9</sup>	
Why it is important	The employer's portion of the contribution is less than 71% of the amount needed to fund the Fund on a rolling 30-year amortization period. The PRB's 2014 Study of the Financial Health of Texas Public Retirement Systems found that plans that have consistently received adequate funding are in a better position to meet their long-term obligations.	
Peer comparison	This is one of the largest shortfall percentages in the state and the largest in its peer group.	

<sup>&</sup>lt;sup>9</sup> The theoretical minimum threshold, or actuarially determined contribution (ADC), is a target or recommended contribution "to the Fund as determined by the actuary using a contribution allocation procedure," as defined in Actuarial Standards of Practice No 4. If contributions to the Fund are made as a fixed rate based on statutory or contractual requirements, the ADC for this purpose is the contribution needed to fund the benefits accrued in the current year and maintain an amortization period that does not exceed 30 years, as required to be reported under Texas Government Code §802.101(a).

Metric	Non-investment cash flow as a percent of fiduciary net position (-7.91%)	
What it measures	Non-investment cash flow shows how much the Fund is receiving through contributions in relation to its outflows: benefit payments, withdrawals and expenses.	
Why it is important	Viewing this metric as a percent of total net assets (or fiduciary net position (FNP)), in conjunction with the funded ratio and recognition of the relative maturity of a plan, provides information about the stability of a plan's funding arrangement.	
Peer comparison	Orange Fire's non-investment cash flow as a percent of FNP is the third lowest in its peer group. If this trend continues, the Fund could face the potential risk of needing to liquidate a portion of existing assets to pay current benefits and/or expenses.	

# **Plan Summary**

The Orange Firemen's Relief and Retirement Fund ("Orange Fire" or "the Fund") is established in the Texas Local Fire Fighter's Retirement Act (TLFFRA). TLFFRA provides general guidelines for fund management, but leaves administration, plan design, contributions, and specific investments to the discretion of the board of trustees. Orange Fire, as with all TLFFRA systems, is entirely locally-funded.

## Benefits

Retirement Eligibility	Age: 50 years; Years of Credited Service (YCS): 20 years	
Vesting	Fully vested after 20 YCS	
Benefit Formula	Years of Service (up to 20 years) x 2.6% x Final Average Salary	
	+\$91 per month for each year > 20 Years of Service	
Final Average Salary (FAS)	Highest 60-Month Average Salary	
COLA	None	
Retirement Benefit Options	Forward DROP: 3-year maximum. Employee contributions credited; no	
	interest. Eligible at 53 years of age and 23 years of service.	
Social Security	Yes – Social Security Leveling Option	

# Contributions

As of October 1, 2018, active members of Orange Fire contribute 12.50% of pay while the City of Orange contributes 14.50% of pay.

# Membership

Total Active Members	Retired Members	Terminated	Total Members	Active-to- Annuitant Ratio
37	42	1	80	0.88

#### **TLFFRA Board Structure**

Active Members	3 - Members of the retirement system; elected by fund members.
	Three-year terms.
Sponsor Government	1 - Mayor or designated representative, or the political subdivision's
	Chief Operating Officer or designated representative.
	1 - Chief Financial Officer of the political subdivision, or designated
	representative. Terms correspond to term of office.
Taxpayer, Not Affiliated	2 - Residents of the State of Texas, must not be officers/employees of
With Fund/Sponsor Govt.	the political subdivision; elected by other Board of Trustee members.
	Two-year terms.

## Contribution and Benefit Decision-Making

TLFFRA authorizes members of the retirement systems to determine their contribution rates by voting. The statute requires cities to make contributions at the same rate paid by employees or 12 percent, whichever is smaller. TLFFRA also allows a city to contribute at a higher rate than employees do through a change in city ordinance.

TLFFRA gives the board the power to make decisions to modify the benefits (increases and reductions). However, a proposed addition or change must be approved by the actuary and a majority of participating plan members. Benefit changes cannot deprive a member, retiree or beneficiary of the right to receive vested accrued benefits.

#### Expense Breakdown

Fiscal Year ending 12/31/2016								
Fiduciary Net Position (FNP)	\$8,154,598							
Investment Expenses	\$93,636							
Investment Expenses % of FNP	1.15%							
Administrative Expenses	\$18,742							
Administrative Expenses % of FNP	0.23%							

#### **Historical Trends**

To conduct an intensive review of risks associated with the long-term funding of a pension Fund, it is important to analyze trends in multiple metrics. A plan with an asset level lower than its accrued liability has insufficient funds to cover benefits. A plan can experience an increase in unfunded liability due to various factors, including insufficient investment returns, inadequate contributions and inaccurate or overly aggressive assumptions. Hence, a single metric cannot effectively capture the different drivers contributing to the increase of a plan's unfunded pension obligation. This section analyzes historical trends in various metrics identified by the PRB and makes comparisons to understand the sources of growth in unfunded liability for Orange Fire.

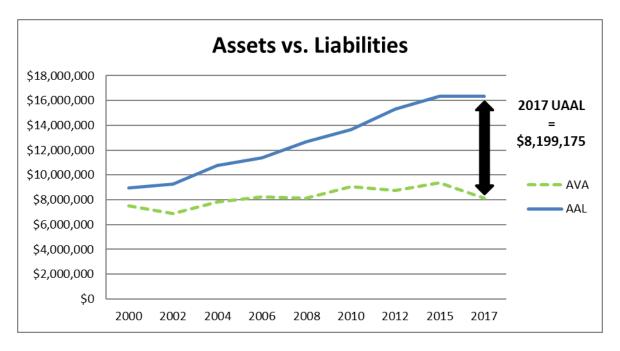
Orange Fire's funded status has been steadily declining since 2000. Numerous factors have contributed to this deterioration, including inadequate contributions, investment returns being lower than the

chosen assumption, increased benefit payments, and the inclusion and expansion of PROP accounts accruing interest. The following sections discuss these and other factors in detail.

## Assets and Liabilities

Orange Fire's actuarial accrued liability (AAL) increased by nearly 83% between 2000 and 2017. The Fund's actuarial value of assets (AVA) increased by only 8.50% over the same period. The Fund was 84% funded in 2000 but fell to below 50% in 2017.

	Funding Trends										
	Fun	ded Ratio,	Assets, Li	abilities ar	d Year ove	er Year Gro	wth				
Fiscal Year <sup>10</sup>	2000	2002	2004	2006	2008	2010	2012	2015	2017		
Funded Ratio	84.02%	74.76%	72.76%	72.09%	63.97%	66.05%	57.25%	57.41%	49.86%		
Am Period (years)	27	32	25	27.4	30.1	34.3	82.3	47.4	69.3		
UAAL (in millions)	\$1.43	\$2.33	\$2.93	\$3.18	\$4.57	\$4.64	\$6.54	\$6.96	\$8.20		
AVA (in millions)	\$7.52	\$6.91	\$7.83	\$8.21	\$8.12	\$9.04	\$8.77	\$9.38	\$8.15		
AVA Growth (YoY)	-	-4.12%	6.44%	2.42%	-0.59%	5.52%	-1.50%	3.46%	-6.78%		
AAL (in millions)	\$8.95	\$9.24	\$10.76	\$11.39	\$12.69	\$13.68	\$15.31	\$16.35	\$16.35		
AAL Growth (YoY)	-	1.65%	7.90%	2.89%	5.54%	3.84%	5.80%	3.32%	0.03%		



<sup>&</sup>lt;sup>10</sup> The report date for Fiscal Year 2000-2012 is December 31<sup>st</sup> and was changed to January 1<sup>st</sup> for 2015 and 2017.

#### **Investment Assumption and Returns**

The 10-year net return on investments in 2016 was 3.72%, which is more than 400 basis points below its assumed interest rate. PRB's AV Supplemental Report dated June 14, 2018 showed that out of 91 Texas Funds that reported a 10-year net investment return, Orange Fire stood at 71<sup>st</sup>.

Rates of Return (as of 12/31/2016)										
Time Period	1-year	3-year	10-year	Since 1995						
Gross Return	5.85%	2.67%	4.83%	7.18%						
Net Return	4.65%	1.54%	3.72%	6.25%						

#### **Asset Allocation**

As shown in the chart below, the Fund's actual asset allocation is close to its target allocation and within the ranges of the Fund's Investment Policy Statement.

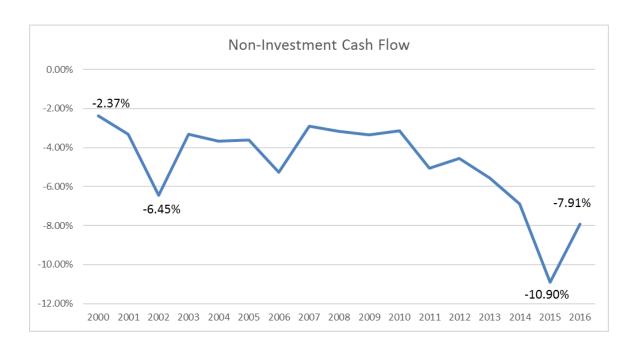
Asset Allocation (as of 12/31/2016)									
Asset Class	Equities	Fixed Income	Cash	Other <sup>11</sup>					
Current Allocation	55.25%	39.64%	5.03%	0.09%					
Target Allocation	65.00%	35.00%	-	-					

#### Cash flow

Orange Fire has the third lowest non-investment cash flow among its peers. In 2016 the Fund's non-investment cash flow was -7.91%. The large dips in 2002 and 2006 were due to large increases in total disbursements. Total contributions have grown on average by 2.29% annually since 2000 but are being outpaced by the average growth in yearly benefit disbursements of 3.38%. Total expenses are growing at an average rate of 4.44%

A negative non-investment cash flow is not abnormal for mature defined benefit pension plans. However, a cash flow percentage this low is likely to be a drag on potential investment returns because a plan must either invest in a higher proportion of income-producing investments, which traditionally provide lower returns, or must liquidate existing assets to pay out current benefits and/or expenses.

<sup>&</sup>lt;sup>11</sup> Other is "accrued Interest and dividends"



# **Peer Group Key Metric Comparison**

				Metrics		Fiscal Year End Metrics					
Peer Group Plans	MVA	Am Period Date	Am Period	Funded Ratio	UAAL as % of Payroll	Assumed Interest	Payroll Growth	FYE	Actual Cont. as % of ADC	DROP as % of FNP	Non- Investment Cash Flow as % of FNP
Waxahachie Firemen's Relief & Retirement Fund	\$ 14,201,159	10/1/2016	25.4	66.86%	164.84%	7.00%	4.00%	9/30/2016	102.75%	N/A	-3.16%
Greenville Firemen's Relief & Retirement Fund	\$ 12,728,162	12/31/2016	38.0	47.69%	387.00%	8.00%	4.00%	12/31/2016	73.99%	N/A	-5.86%
Big Spring Firemen's Relief & Retirement Fund	\$ 10,399,250	1/1/2017	36.2	54.86%	241.05%	8.00%	5.00%	12/31/2016	110.08%	0.00%	-9.54%
Weslaco Firemen's Relief & Retirement Fund	\$ 9,186,148	9/30/2016	14.1	68.53%	111.07%	7.25%	3.25%	9/30/2017	154.51%	N/A	2.92%
Corsicana Firemen's Relief & Retirement Fund	\$ 8,344,317	12/31/2016	28.9	53.14%	211.44%	7.00%	3.00%	12/31/2016	100.01%	N/A	-1.97%
Orange Firemen's Relief & Retirement Fund	\$ 8,154,674	1/1/2017	69.3	49.86%	336.03%	7.75%	4.00%	12/31/2016	70.49%	N/A	-7.91%
Sweetwater Firemen's Relief & Retirement Fund	\$ 7,826,879	12/31/2016	27.5	69.99%	229.12%	8.00%	4.00%	12/31/2017	154.44%	N/A	-4.07%
Marshall Firemen's Relief & Retirement Fund	\$ 7,712,228	12/31/2016	56.4	42.02%	398.51%	7.75%	4.00%	12/31/2016	84.67%	3.99%	-5.50%
Plainview Firemen's Relief & Retirement Fund	\$ 5,296,898	12/31/2015	31.6	37.33%	453.72%	7.75%	3.50%	12/31/2016	87.77%	N/A	-2.63%
Paris Firefighters' Relief & Retirement Fund	\$ 4,764,272	12/31/2016	41.9	35.64%	373.32%	7.50%	3.50%	12/31/2016	100.00%	N/A	-10.31%
Atlanta Firemen's Relief & Retirement Fund	\$ 3,744,867	12/31/2016	28.4	82.13%	136.63%	7.40%	3.00%	12/31/2016	107.62%	N/A	-1.55%

# Peer Group Sponsor Funding Comparison

Peer Group Plans	GF Expend	١	EOY GF Bal	UAAL	ted Employer ntributions	ADC	30	-yr Shortfall	30-Y SF % of ADC	30-Y SF % of GFE
Waxahachie Firemen's Relief & Retirement Fund	\$ 30,570,845	\$	14,660,133	\$ 7,039,421	\$ 663,197	\$ 621,346	١	Io Shortfall	N/A	N/A
Greenville Firemen's Relief & Retirement Fund	\$ 19,089,359	\$	6,271,335	\$ 15,021,872	\$ 652,120	\$ 836,499	\$	184,379	22.04%	0.97%
Big Spring Firemen's Relief & Retirement Fund	\$ 18,328,572	\$	6,549,205	\$ 9,078,736	\$ 489,614	\$ 538,952	\$	49,338	9.15%	0.27%
Weslaco Firemen's Relief & Retirement Fund	\$ 25,524,743	\$	7,529,804	\$ 4,334,628	\$ 468,327	\$ 310,657	١	Io Shortfall	N/A	N/A
Corsicana Firemen's Relief & Retirement Fund	\$ 16,163,690	\$	4,689,025	\$ 8,135,345	\$ 538,651	\$ 538,651	١	Io Shortfall	N/A	N/A
Orange Firemen's Relief & Retirement Fund	\$ 17,985,946	\$	8,272,029	\$ 8,199,175	\$ 341,606	\$ 469,709	\$	128,102	27.27%	0.71%
Sweetwater Firemen's Relief & Retirement Fund	\$ 8,733,810	\$	3,929,907	\$ 3,617,210	\$ 284,174	\$ 284,174	١	Io Shortfall	N/A	N/A
Marshall Firemen's Relief & Retirement Fund	\$ 20,353,433	\$	6,537,285	\$ 10,641,648	\$ 508,698	\$ 651,293	\$	142,595	21.89%	0.70%
Plainview Firemen's Relief & Retirement Fund	\$ 12,768,715	\$	15,844,471	\$ 9,781,866	\$ 532,083	\$ 606,247	\$	74,164	12.23%	0.58%
Paris Firefighters' Relief & Retirement Fund	\$ 25,422,079	\$	10,839,700	\$ 9,625,814	\$ 309,414	\$ 385,995	\$	76,581	19.84%	0.30%
Atlanta Firemen's Relief & Retirement Fund	\$ 3,568,284	\$	1,676,529	\$ 860,536	\$ 81,878	\$ 81,878	١	Io Shortfall	N/A	N/A

# **Peer Group Expense Comparison**

Peer Group Plans	10 yr. return (Net)	Active/ Annuitants	Average Benefit	NPL	Admin Expenses	Admin Exp as % of Assets	Investment Expenses	Inv Exp as % of Assets	Other Expenses	Total Expenses	Exp as % of Assets
Waxahachie Firemen's Relief & Retirement Fund	4.90%	1.77	\$ 43,297	\$ 7,039,421	\$ 21,760	0.15%	\$ 142,317	1.00%	-	\$ 164,077	1.16%
Greenville Firemen's Relief & Retirement Fund	4.23%	0.79	\$ 24,101	\$ 16,709,548	\$ 34,472	0.27%	\$ 90,884	0.71%	-	\$ 125,356	0.98%
Big Spring Firemen's Relief & Retirement Fund	4.26%	1.27	\$ 37,713	\$ 9,713,127	\$ 100,927	0.97%	-	0.00%	-	\$ 100,927	0.97%
Weslaco Firemen's Relief & Retirement Fund	2.59%	2.07	\$ 18,033	\$ 4,702,051	\$ 54,676	0.52%	\$ 61,218	0.59%	-	\$ 115,894	1.11%
Corsicana Firemen's Relief & Retirement Fund	3.40%	1.81	\$ 31,722	\$ 8,837,348	\$ 22,168	0.27%	\$ 92,459	1.11%	-	\$ 114,627	1.37%
Orange Firemen's Relief & Retirement Fund	3.72%	0.88	\$ 26,036	\$ 8,946,685	\$ 18,742	0.23%	\$ 93,636	1.15%	-	\$ 112,378	1.38%
Sweetwater Firemen's Relief & Retirement Fund	4.91%	1.04	\$ 33,311	\$ 4,041,873	\$ 35,021	0.41%	\$ 66,056	0.77%	-	\$ 101,077	1.18%
Marshall Firemen's Relief & Retirement Fund	4.67%	1.32	\$ 30,632	\$10,956,850	\$ 4,077	0.05%	\$ 45,898	0.60%	-	\$ 49,975	0.65%
Plainview Firemen's Relief & Retirement Fund	1.95%	1.03	\$ 24,050	\$ 10,746,840	\$ 12,557	0.23%	\$ 49,439	0.91%	\$ 811	\$ 62,807	1.16%
Paris Firefighters' Relief & Retirement Fund	2.16%	1.17	\$ 24,491	\$ 9,642,566	\$ 37,674	0.79%	\$ 32,730	0.69%	-	\$ 70,404	1.48%
Atlanta Firemen's Relief & Retirement Fund	4.84%	1.25	\$ 9,039	\$ 1,129,175	\$ 23,941	0.64%	\$ 25,495	0.68%	-	\$ 49,436	1.32%

Comments from Orange Firemen's Relief and Retirement Fund and City of Orange

# CITY OF ORANGE FIREMEN'S RELIEF AND RETIREMENT FUND

September 6, 2018

Texas Pension Review Board P.O. Box 13498 Austin, TX 78711-3498

Dear Sirs,

The Orange Firemen's Relief and Retirement Fund's Board of Trustees (Board) is in receipt of and has reviewed the draft of the Intensive Actuarial Review report. The following is the Board's response to this report prepared by the Texas Pension Review Board (PRB).

The Board is dedicated to the continuity and stability of the Orange Firemen's Relief and Retirement Fund pension plan (Plan). The Board meets once every month with special call meetings as deemed necessary. The Board is concerned with the Plan's amortization period and the unfunded liability. The Board agrees with the report in that steps must be taken to correct the Plan's path to ensure success and longevity.

An initial step towards the Plan's longevity recommended in the report is a written funding and risk-sharing policy. The Plan currently only has an investment policy. The Board agrees with this recommendation and acknowledges the need for and benefit of such a policy. Therefore, the Board will research and work towards developing a funding and risk-sharing policy that would be appropriate for the Plan.

The Board does acknowledge the recommendation by the PRB for increased contributions. The Board has communicated this need to the plan sponsor and the plan members. However, the Board does not have the authority to set or increase the contribution rates. The Plan was initially funded with a 9% member contribution rate and a 10% City contribution rate. Between 1995 and 2006, the City rate increased to 14%. In 2007, the member rate increased to 11% from the initial 9%. From 2015 to 2016, the member rate increased another 1% to 12%. During the last collective bargaining session, the City and the International Association of Firefighters, Local 1432 (Association) agreed to a .25% increase each for fiscal year 2018 and 2019. This brings the contribution rate for fiscal year 2019 for members to 12.5% and 14.5% for the City. The next collective bargaining negotiations will begin in the spring of 2019.

The Board realizes that the Orange Firemen's Relief and Retirement Fund has good benefits, of which the Plan members would prefer to keep. The Board requested that the actuary review the Plan document and benefits; and suggest any actions that would help better position the Plan for the future. The actuary, Foster and Foster, recommended an amendment to the normal form of annuity payments

at the time of retirement. This benefit change was initially voted down by the Plan members. However, a new ballot has been submitted by the Board to offer a choice of the benefit change, a contribution increase of 2% over 4 years or no action for the Plan members. The firefighter board members will also work more diligently to clarify the benefit change and explain the options. The new vote is set to begin on September 6, 2018.

The Board understands the concerns that the PRB has regarding the investment fee and expenses. The Board engages a financial advisor to assist the Board with managing the investments of the Plan. The financial advisor consults, educates and gives the Board their expert advice in relation to the Plan's investments, money managers and the economic outlook. The advisor presents quarterly reports on the Plan's investment portfolio performance. Each quarter, the managers are evaluated and the assets are reallocated as necessary to remain in compliance with the investment policy. The Board has agreed to have a review performed on the investment fees and expenses. Upon completion of the review, the Board will make a determination to best serve the Plan and the Plan members.

In regards to the high amortization period of 69.3 years, the Board acknowledges the severity of the situation, and will seek methods to reduce amortization period. The Board would like to point out that the increase from 58.2 to 69.3 years was partly due to changes agreed upon with the actuary. The Board agreed to change the method of asset valuation from asset smoothing to market value. The actuary explained that this would cause an initial increase in the amortization period, but that the effects will level off in the near future. The Board and the actuary also decided to change the (1) assumed rate of DROP election from 95% to 20% and the (2) assumed rate of salary increase for members with over 25 years of service from 2% to 3% per year. The Board will continue to monitor the amortization period and work with the actuary on the most accurate assumptions for the Plan as possible.

In conclusion, the Board is prepared to follow the actions and recommendations outlined above and to cooperate with the Plan sponsor and the Plan members to ensure the viability and the longevity of the Orange Firemen's Relief and Retirement Fund.

Sincerely,

Sody Cowart

Chairman, Board of Trustees

Orange Firemen's Relief and Retirement Fund



September 6, 2018

Texas Pension Review Board P.O. Box 13498 Austin, TX 78711-3498

Dear Sirs,

The City of Orange (City) has received a copy of the Orange Firemen's Relief and Retirement Fund's (Plan) Intensive Actuarial Review report. The City, as the Plan sponsor, works in partnership with the International Association of Firefighters, Local 1432 (Association), and the Plan members to ensure the viability of the Plan and the future pension benefits for the City's retired firefighters.

The contribution rates for funding the Plan are part of the collective bargaining process between the City and the Association. The City does not have unilateral control over the contribution rates or funding the Plan. Both the City and the Association work together to make decisions regarding the funding of the Plan. The current Collective Bargaining Agreement includes a .25% increase in the contribution rate for both the City and the Plan members each for 2 consecutive years. This current agreement will be in effect until September 30, 2019. At this time, there is not a clause to reopen negotiations once an agreement is signed. The City has already set the tax rate and the budget for the fiscal year ending September 30, 2019. Therefore, due to budgetary limitations, there cannot be an increase to the contribution rates until the expiration of this agreement. The City will be open to negotiations for the 2019-2020 fiscal year.

The City does not participate in the decision making process regarding the Plan benefits. That responsibility lies with the Association and the Plan members. The City would like to see the Plan realign the benefits along the lines of a pension plan such as Texas Municipal Retirement System (TMRS).

The City recognizes the severity of the Plan's current situation. The City is concerned as the increasing unfunded liability is reported on the City's financial statements, and could possibly affect the City's bond rating. The City agrees with the recommendations made by the PRB in the report and will cooperate with the Association and Plan members in so far as the Collective Bargaining Agreement, budget limitations and the laws allow.

Sincerely,

Dr. Shawn Oubre

City Manager

City of Orange, Texas

5b. Update on revised FSRP from City of Midland and Midland Firemen's Relief and Retirement Fund

Midland Firemen's Relief and Retirement Fund Letter from Actuary Re: Studies – January 29, 2020

# Rudd and Wisdom, Inc.

#### **CONSULTING ACTUARIES**

Mitchell L. Bilbe, F.S.A. Evan L. Dial, F.S.A. Philip S. Dial, F.S.A. Philip J. Ellis, A.S.A. Charles V. Faerber, F.S.A., A.C.A.S. Mark R. Fenlaw, F.S.A. Brandon L. Fuller, F.S.A.

Shannon R. Hatfield, A.S.A. Christopher S. Johnson, F.S.A. Oliver B. Kiel, F.S.A. Dustin J. Kim, A.S.A. Edward A. Mire, F.S.A. Rebecca B. Morris, A.S.A. Amanda L. Murphy, F.S.A. Michael J. Muth, F.S.A. Khiem Ngo, F.S.A., A.C.A.S. Timothy B. Seifert, A.S.A. Chelsea E. Stewart, A.S.A. Raymond W. Tilotta Ronald W. Tobleman, F.S.A. David G. Wilkes, F.S.A.

January 29, 2020

# Via E-Mail: sheracrow@midlandfrrf.com

Board of Trustees Midland Firemen's Relief and Retirement Fund c/o Ms. Shera Crow P.O. Box 4296 Midland, Texas 79704

Re: Requested Special Studies

## Dear Board Members:

At your request, we have studied the effect on the December 31, 2017 actuarial valuation of the Midland Firemen's Relief and Retirement Fund (the Fund) of benefit changes and additional contributions and with some changes in actuarial assumptions based on (1) an August 21, 2019 letter to you summarizing requested special studies and (2) a follow-up conversation at our office with board member Mr. David Stacey on September 18, 2019. We have studied the effect of two packages of changes. The first package (Plan A) includes the first seven items below. The second package (Plan B) includes all of the items below.

- 1. Assume the city will contribute \$15.0 million to compensate the Fund for the liability resulting from excess overtime due to under-staffing of the fire department.
- 2. Assume the changes in plan provisions to address pay practice issues that we recommended in the December 31, 2017 actuarial valuation report (pages 10 and 11) will be approved by the firefighters and the board of trustees.
- 3. Assume the flat \$500 per month benefit will be discontinued for those who retire after December 31, 2020.
- 4. Effective January 1, 2021, assume the benefit formula will be changed to a flat percentage per year of service for all years. The vested accrued benefit as of December 31, 2020 will be the minimum benefit a member would receive.
- 5. Reflect the new mortality assumption that will be used for the December 31, 2019 actuarial valuation, the PubS-2010 (public safety employees) total dataset mortality tables for employees and for retirees, projected for mortality improvement generationally using the projection scale MP-2018.
- 6. Reflect the set of economic assumptions we discussed with the board at your January 25, 2019 meeting that included a 7.5% investment return assumption and an underlying inflation

assumption of 3%. Since significant changes will be made to the Fund, the somewhat lower economic assumptions are more likely to be appropriate for the long-term future than the more optimistic 7.75% investment return assumption. The board would not want to make significant plan changes this year, and then have to do more in four or six years because of a change to 7.5% at that time.

- 7. Assume the firefighters will approve an increase in their contribution rate to 18% effective January 1, 2021.
- 8. The Reverse DROP will be made actuarially equivalent by changing the reduction factor from 90% to 80% for those retiring after December 31, 2020.
- 9. The DROP lump sum will be determined without any interest for those retiring after December 31, 2020.
- 10. The RETRO DROP eligibility and the Forward DROP earliest irrevocable election will be changed from age 50 with 20 years of service to age 52 with 22 years of service for those under age 51 as of December 31, 2020.
- 11. The \$10,000 death benefit for those who retire after December 31, 2020 will be discontinued.
- 12. The surviving spouse death benefit will be two-thirds of the retiree benefit, instead of 75%, for those retiring after December 31, 2020.

The attached Exhibit 1 compares the results of the December 31, 2017 actuarial valuation with the present plan provisions and current contribution policy for both the firefighters and the city to the results with the two packages of changes. These results are based on the Fund's December 31, 2017 actuarial valuation, including the actuarial assumptions and census data summarized in our report to the board of trustees dated January 22, 2019, except for the changes in the economic assumptions (item 6) and the mortality assumption (item 5). The Present Plan is shown on Exhibit 1 before and after these two assumption changes. A change in the assumed rates of retirement shown below is made for Plan B and only for those under age 51 as of December 31, 2020.

	Assumed Rate of Retirement per Year for Firefighters Eligible to Retire							
Age	Present Plan and Plan A	Plan B						
50	30%	30%						
51	10	10						
52	10	10						
53	40	10						
54	25	20						
55	25	40						
56	50	50						
57	50	50						
58	50	50						
59	50	50						
60	100	100						

**MFRRF** Page 3 January 29, 2020

We are available to discuss these results and answer questions you may have.

Sincerely,

Mark R. Fenlaw. Mark R. Fenlaw, F.S.A. Relicia B. Morris

Rebecca B. Morris, A.S.A.

MRF/RBM:nlg

Enclosure

 $i:\clients\fire\wd\2020\midland\ss-0129.docx$ 

Exhibit 1

Midland Firemen's Relief and Retirement Fund
Results of the December 31, 2017 Actuarial Valuation with Present Plan and Amended Plans

	Present Plan	Present Plan	Amended Plan A	Amended Plan B
Key Variables				
- investment return assumption	7.75%	7.5%	7.5%	7.5%
<ul><li>mortality assumption</li><li>base table</li><li>projection type</li></ul>	RP-2000 static	PubS-2010 generational	PubS-2010 generational	PubS-2010 generational
- firefighter contribution rate	14.2%1	14.2%1	18%²	18%²
- percent per year of service of final average salary	N/A	N/A	2.5%	2.8%
- RETRO DROP provisions	present	present	present	proposed
Actuarial present value of future benefits	\$ 186,837,016	\$ 195,288,812	\$ 182,700,171	\$ 182,269,551
2. Actuarial present value of future normal cost	\$ 36,027,875	\$ 37,834,597	\$ 28,578,386	\$ 29,858,574
3. Actuarial accrued liability	\$ 150,809,141	\$ 157,454,215	\$ 154,121,785	\$ 152,410,977
4. Actuarial value of assets	\$ 91,856,742	\$ 91,856,742	\$ 103,931,151 <sup>3</sup>	\$ 103,931,151 <sup>3</sup>
5. UAAL [(3) - (4)]	\$ 58,952,399	\$ 65,597,473	\$ 50,190,634	\$ 48,479,826
6. Percent of payroll a. Normal cost b. For UAAL c. Total	25.98% 10.42% 36.40%	27.03% <u>9.37%</u> 36.40%	21.04% 	21.39% 
7. Years to amortize the UAAL	never <sup>4</sup>	never <sup>4</sup>	26.2 <sup>4</sup> years	25.5 <sup>4</sup> years
8. Funded ratio [(4) ÷ (3)]	60.9%	58.3%	67.4%	68.2%

<sup>&</sup>lt;sup>1</sup> Increase of 1% effective November 4, 2018

This Exhibit 1 is part of a report to the Midland Firemen's Relief and Retirement Fund Board of Trustees dated January 29, 2020.

<sup>&</sup>lt;sup>2</sup> Increases of 1% effective November 4, 2018 and 3.8% effective January 1, 2020

Additional city contribution of \$15 million on January 1, 2020, discounted at 7.5% per year for three years to December 31, 2018 (\$12,074,409)

Calculated reflecting the timing of increases in the firefighter contribution rate as indicated in footnotes 1 and 2

6. Funding policies received as required by Government Code Section 802.2011 (SB 2224), including actuarially determined contribution benchmarks based on rolling amortization periods

# Summary of Funding Policies Received by Pension Review Board Non-ADC Plans

			Benchmark and Act	ions Resulting		Additional Compon	nents	
	Contribution	ADOD	Condition(s) that Trigger	Author Brooks C. T.	Piul Ci	Contribution Ch	Day (t) (t)	Additional Amortization
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing marks at/under 30 yrs	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions
Weslaco Firemen's	Fixed	15-yr closed	2 AVs showing funding period >		None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Relief & Retirement Fund			ADC benchmark am pd	Notify the City and member employee groups     Work with the City and the active members to     consider changes to benefit and contribution levels		-	ectent citating as as per 12 min statute	
San Antonio Fire & Police Pension Fund	Fixed	25-yr closed	Effective am pd not sufficient to reach a 100% FR by 12/31/2044	Board will:  - Work with the City to address contribution rate and/or plan modifications	None	Board may not recommend any changes that result in: - a FR < 90%; or - an effective am pd > 15 yrs	Board may not recommend any changes that result in: - a FR < 90%; or - an effective am pd > 15 yrs	30-yr amort of surpluses
Amarillo Firemen's Relief & Retirement Fund	Fixed	30-yr closed	- Am pd is not reasonably in line with ADC benchmark am pd, such as within 5 yrs; <b>or</b> - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 2% of payroll	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Atlanta Firemen's Relief & Retirement Fund	Fixed	30-yr closed	- Am pd is not reasonably in line with ADC benchmark am pd, such as within 5 yrs; or - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 2% of payroll	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Beaumont Firemen's Relief & Retirement Fund	Fixed	30-yr closed		Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Brownwood Firemen's Relief & Retirement Fund		30-yr closed	reasonably in line with ADC benchmark rate, such as within 2% of payroll	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Cleburne Firemen's Relief & Retirement Fund	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None

# Summary of Funding Policies Received by Pension Review Board Non-ADC Plans

			Benchmark and Act	ions Resulting		Additional Compor	nents	
	Contribution		Condition(s) that Trigger					Additional Amortization
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions
Corpus Christi Fire Fighters' Retirement System	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Corsicana Firemen's Relief & Retirement Fund	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Galveston Firefighter's Relief & Retirement Fund	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Killeen Firemen's Relief & Retirement Fund	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Laredo Firefighters Retirement System	Fixed	30-yr closed		Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Lufkin Firemen's Relief & Retirement Fund	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None

			Benchmark and Act	ions Resulting		Additional Compor	nents	
	Contribution		Condition(s) that Trigger					Additional Amortization
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions
McAllen Firemen's Relief & Retirement Fund	Fixed	30-yr closed	- Am pd is not reasonably in line with ADC benchmark am pd, such as within 5 yrs; or - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 2% of payroll	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Texarkana Firemen's	Fixed	30-yr closed	- Am pd is not reasonably in	formula reduction or combination  Positive Divergence:	None	Contribution to the state of th	Described to the second of the	None
Relief & Retirement Fund			line with ADC benchmark am pd, such as within 5 yrs; or - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 2% of payroll	- Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence:  - Board will notify the City and member employee group/assn  - Board may consider contrib rate increase, benefit formula reduction or combination		Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	
Texas City Firemen's Relief & Retirement Fund	Fixed	30-yr closed	- Am pd is not reasonably in line with ADC benchmark am pd, such as within 5 yrs; <b>or</b> - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 2% of payroll	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Travis County ESD #6 Firefighters' Relief and Retirement Fund	Fixed	30-yr closed	- Am pd is not reasonably in line with ADC benchmark am pd, such as within 5 yrs; or - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 2% of payroll	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Tyler Firefighters' Relief & Retirement Fund	Fixed	30-yr closed	reasonably in line with ADC	Positive Divergence: - Board may consider benefit increase, such as ad hoc COLA, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Galveston Employees' Retirement Fund	Fixed	30-yr closed	- Am pd is not reasonably in line with ADC benchmark am pd, such as within 5 yrs; or - Total contribution rate is not reasonably in line with ADC benchmark rate, such as within 1% of payroll	Positive Divergence: - Board may consider benefit increases, such as inc in dollar cap on benefits or ad hoc COLA, or lowering investment return assumptions, that results in am pd somewhat less than ADC benchmark am pd  Negative Divergence: - Board will notify the City and member employee group/assn - Board may consider contrib rate increase, benefit formula reduction or combination	None	None	None	None

			Benchmark and Act	ions Resulting		Additional Compor	nents	
	Contribution		Condition(s) that Trigger					Additional Amortization
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions
Lubbock Fire Pension Fund	TMRS Linked	30-yr closed	None	Board will:  - Take all appropriate measures to maintain a fiscally responsible fund such as make changes to benefits and eligibility requirements, inc/dec in member's contribution rate, changes to investment portfolio sector allocations, or changes to the assumed rate of return		Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
				Funding Policies with Lavered	l Closed Benchmarks at/under 30 yrs			
Irving Supplemental	Fixed	20-yr layered closed	2 AVs showing actual	Board will:	Contributions:	Employer rate decreases only considered if:	Enhancements may only occur when:	Negative Amortization:
Benefit Plan			contribution over/under ADC benchmark by more than 0.5%	- Notify the City - Consider and may recommend combined rate change  ADC Contribution - It is the intent of the Board that the ADC determined by a given AV will be contributed in the calendar yr beginning 1 yr after the AV date	- Increases capped for members/City at 0.5% of pay in one yr, or 1% total - If max contribution increase has been applied and contribution still insufficient, Board shall recommend corrective action, including benefit or contribution changes	- FR $\geq 105\%$ - Total contribution rate is not < normal cost	- FR ≥ 110% after incorporating enhancement - ADC rate ≤ actual contribution rate	- Board's goal is to eliminate negative amortization as quickly as possible and ultimately maintain a contribution rate above the threshold that results in negative amortization
City of El Paso	Fixed	25-yr layered closed	ADC benchmark > City	Board will:	None	None	Enhancements may only occur when:	None
Employees Retirement Trust			contribution rate in any yr	- Recommend additional City contribution			- FR ≥ 80% after the increase - Decrease in FR due to enhancement not > 1% - Max COLA not > CPI since last COLA	
San Benito Firemen Relief & Retirement Fund	Fixed	30-yr layered closed	2 AVs showing actual contributions > 2% over/under ADC benchmark	Board will:  - Notify City  - Recommend a contribution rate change	Jointy Developed with City: - Funding policy presented, approved and adopted by the City of San Benito City Commission. Signed by Mayor  Contributions: - Increases split 60% sponsor/40% employee, max 2% each (or 4% total) - If max contribution increase has been applied and contribution still insufficient, Board shall recommend corrective action, including benefit or contribution changes  Benefits: - COLAs tied to investment returns. Crediting rate the lesser of CPI or 100% of 5-yr smoothed return minus 5%, min 0%, max 4%	Employer contribution reductions considered if: $ - FR \ge 105\% \\ - Benefit reductions for current active members implemented within the last 10 yrs reinstated;  - Regular COLAs built into funding assumptions; \\ - Total contribution rate not < normal cost $	- Annual COLAs built into funding assumptions; - FR > 120% after incorporating benefit enhancement; - ADC ≤ actual contrib rate  Benefit changes as per TLFFRA statute <sup>2</sup>	Negative Amortization: - Board's goal is to eliminate negative amortization as quickly as possible and ultimately maintain a contribution rate above the threshold that results in negative amortization
Denison Firemen's Relief & Retirement Fund	Fixed	30-yr layered closed	2 AVs showing actual contributions < ADC benchmark by more than 2%	Board and City will:  - Develop a plan of action including contribution increases or benefit changes to bring the contribution rate to ≥ ADC benchmark	Contributions: - Increases either split evenly between City and members or different agreed- upon amounts - May be phased in over time	Contribution changes per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	Negative Amortization: - Board will periodically review whether contributions are sufficient to pay normal cost plus interest on UAAL
Sweetwater Firemen's Relief & Retirement Fund	Fixed	30-yr layered closed	2 AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board and City will:  - Develop a plan of action including contribution increases or benefit changes so that combined contribution rate will be ≥ ADC benchmark	Contributions: - Increases either split evenly between City and members or different agreed- upon amounts - May be phased in over time	Contribution changes per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	Negative Amortization: - Board will periodically review whether contributions are sufficient to pay normal cost plus interest on UAAL

	Benchmark and Actions Res		ions Resulting	Additional Components				
	Contribution		Condition(s) that Trigger					Additional Amortization
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions
Longview Firemen's	Fixed	30-yr layered closed	4 AVs showing actual contrib >	Board will:	Contributions:	Reductions should only be considered if:	Board supports enhancements only	Negative Amortization:
Relief & Retirement			2% over/under ADC benchmark	- Notify the City	- Increases split 50%/50% City and	- FR ≥105% and total contribution rate not <	when:	- Board's goal is to eliminate
Fund				- Recommend City and member contributions to	members	normal cost	- FR ≥ 105% after incorporating	negative amortization as
				increase by no more than 1% of pay in one yr or 2%		,	enhancement	quickly as possible and
				total		Contribution changes per TLFFRA statute <sup>1</sup>	- ADC rate ≤ actual contrib rate	ultimately maintain a
				- Employees will have option to increase				contribution rate above the threshold that results in
				contribution or make benefit changes			Benefit changes as per TLFFRA statute <sup>2</sup>	
Port Arthur Firemen's	TMADE Limbord	30-yr layered closed	2 AVs showing fixed contrib	Board and City will:	Contributions:		p. 6: 1 = ==== 2	negative amortization  Negative Amortization:
Relief & Retirement	TIVIKS LITKEU	50-yr layered closed	rates < ADC benchmark by more		- Increases either split evenly between	Contribution changes per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	- Board will periodically
Fund			than 2%	increases or benefit changes so that combined	City and members or different agreed-			review whether
lunu			11111 270	contribution rate will be ≥ ADC benchmark	upon amounts			contributions are sufficient
				contribution rate will be <u>-</u> 7.50 benefitially	- May be phased in over time			to pay normal cost plus
					,			interest on UAAL
				Classed Barrelon and Complete 20 complete Ultr		1		miceresc on or the
Wayahachie Firemon's	TMRS Linked	25-vr closed to ultimate 15	2 AVs showing funding period >	Closed Benchmarks at/under 30 yrs to Ulti Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Relief & Retirement	LIIINEU	yr layered closed	ADC benchmark am pd	- Notify City and member group/assn of difference		Contribution changes as per TEFFRA Statute	benefit changes as per TEFFRA Statute	
Fund		,a,crea ciosca	, to continuit and pu	- Work with City and active members to consider				
				benefit/contribution modifications to return funding				
				pd to ADC benchmark				
Dallas Police & Fire	Fixed	25-yr closed to ultimate 20	2 AVs showing actual	Negative Divergence:	Contributions/Benefits:	City contributions may be decreased if:	Granting COLA/Reduction of retirement	None
Pension System -	Tixeu	yr layered closed	contribution varies from the	- With 2/3rds vote, Board will recommend an	- Per statute, in 2024 an analysis will be		age/ Reduction am pd of DROP	None
Combined Plan		yr idyered ciosed	ADC benchmark by > 2%	increase in City rate	conducted to asses the adequacy of the	- Does not increase the am pd	annuities:	
combined rium			, the benefitting of 270	mercase in airy rate	funding of the plan and, if necessary,	Boes not mercase the am pa	- Per statutory criteria	
				Positive Divergence:	changes may be made at that time		,	
				- With 2/3rds vote, Board may recommend a			All other enhancements may only occur	
				reduction in City rate if the reduction does not			- If funding pd would not exceed 25 yrs	
				extend funding pd			after adoption	
Temple Firefighters'	Fixed		2 AVs showing funding period >	Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Relief & Retirement		yr layered closed	ADC benchmark am pd	- Notify City and member group/assn of difference				
Fund				- Work with City and active members to consider benefit/contribution modifications to return funding				
				pd to ADC benchmark				
C	et d	20	2 AVe about a few discounted to		N		2	N
Greenville Firemen's	Fixed			Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Relief & Retirement Fund		yr layered closed	ADC benchmark am pd	- Notify City and member group/assn of difference				
runa				- Work with City and active members to consider benefit/contribution modifications to return funding				
				pd to ADC benchmark				
		00 1 1 10 10 10					2	
Conroe Fire Fighters'	Fixed	30-yr closed to ultimate 20	2 AVs showing funding period >	Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
Retirement Fund		yr layered closed	ADC benchmark am pd	- Notify City and member group/assn of difference				
				- Work with City and active members to consider benefit/contribution modifications to return funding				
				pd to ADC benchmark				
Davia Finamania Ballint	Cive d	20 alacad totim - 2- 20	2 AV/a abassina fundina z!!-	•	Nana	1		Nese
Paris Firemen's Relief & Retirement Fund	Fixed	yr layered closed	2 AVs showing funding period > ADC benchmark am pd	Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None
a neurement runa		yı iayeren ciosed	ADC DETICITIALK ATTI PU	Notify City and member group/assn of difference     Work with City and active members to consider				
				benefit/contribution modifications to return funding				
				pd to ADC benchmark				
				Closed Benchmarks over 30 yrs to Ultima	ate Layered Closed Benchmark at Junda	r 20 vre		L
Plainview Firemen's	Fixed	35-vr closed to ultimate 20	2 AVs showing funding period >	Board will:	None		Ponofit changes as per TIFFDA statut-2	None
Relief & Retirement	incu	yr layered closed	ADC benchmark am pd	- Notify the City and member group/assn of	THORE .	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	THORE
Fund		,a,crea ciosca	, to continuit and pu	difference				
				- Work with City and active members to consider				
				benefit/contribution modifications to return funding				
	i		1	pd to ADC benchmark		1	I	
				po to ADC benchmark				

			Benchmark and Act	ions Resulting		Additional Compon	Additional Components		
	Contribution		Condition(s) that Trigger					Additional Amortization	
System Name	Type	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions	
Marshall Firemen's	Fixed	35-yr closed to ultimate 20	2 AVs showing funding period >	Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None	
Relief & Retirement		yr layered closed	ADC benchmark am pd	- Notify the City and member/group assn of					
Fund				difference					
ı				- Work with City and active members to consider					
ı				benefit/contribution modifications to return funding					
ı				pd to ADC benchmark					
Harlingen Firemen's	Fixed	35-yr closed to ultimate 30	2 AVs showing funding period >	Board will:	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	None	
Relief & Retirement		yr layered closed	ADC benchmark am pd	- Notify the City and member group/assn of			g		
Fund				difference					
ı				- Work with City and active members to consider					
ı				benefit/contribution modifications to return funding					
ı				pd to ADC benchmark					
				Layered Closed I	Benchmarks over 30 yrs				
Irving Firemen's Relief	Fixed	40-yr layered closed	2 AVs showing actual	Board will:	Contributions:	Reductions in employer rate should only be	Board supports enhancements only	Negative Amortization:	
and Retirement Fund			contribution over/under ADC	- Notify the City	- Increases capped at 0.5% of pay in one		when:	- Board's goal is to eliminate	
i l			benchmark by more than 0.5%	- Consider and may recommend combined rate	yr or 1% total	- FR ≥ 105%	- FR > 110% after incorporating	negative amortization as	
l l				change	- Increases split 60%/40% between City	- Benefit reductions for current active	enhancement	quickly as possible and	
l l					and employees	members implemented within the last 10 yrs	- ADC rate ≤ actual contribution rate	ultimately maintain a	
ı					- If max contribution increase has been	have been reinstated		contribution rate above the	
ı				ADC Contribution	applied and contribution still	- Total contribution rate is not < normal cost		threshold that results in	
ı				- It is the intent of the Board that the ADC	insufficient, Board shall recommend			negative amortization	
ı				determined by a given AV will be contributed in the	corrective action, including benefit or				
ı				calendar yr beginning 1 yr after the AV date	contribution changes				
				Alternat	I ive Benchmark				
Employees Retirement	Fixed	31-yr rolling. Once	Funding period > ADC	Board will:	None	Min 6% contribution for members and a range	Board recommends that enhancements	None	
System of Texas -		achieved, the system will	benchmark am pd	- Direct staff to request funding from the legislature		of 6-10% of aggregate compensation for State	should occur only if:		
including ERS, LECOS &		close the am pd.		to achieve a 31-year funding period		contributions as per Texas Constitution	- Before and after enhancement,		
JRS II		•		- After 31-yr period achieved, staff will request		·	funding period is < 25 yrs		
ı		ADC benchmark then reset	t	funding from the legislature to achieve the ADC			- Enhancement does not increase		
ı		to match the avg yrs/svc		benchmark			normal cost		
ı		at retirement for the plan					- FR > 90% before and after		
ı		as of the AV date when					enhancement		
ı		the 31-yr pd was							
ı		achieved.3					ERS statute requires the am period to be		
ı							< 31 yrs for the legislature to consider a		
ı							benefit enhancement		
Teacher Retirement	Fixed	Declining UAAL	If after the phase-in of	Board will:	Contributions:	A minimum of 6% contribution for members	TRS statute requires the am period to be	None	
System of Texas	. IACU	OCCURING OFFICE	scheduled contribution rate	- Request a contribution change in legislative	- All contributions (sponsor, member,	and a range of 6-10% of aggregate	under 31 years in order for the		
Jose III of Texas			increases, AV projects UAAL will		district) will increase per statutorily set	compensation for State contributions as per	legislature to consider a benefit		
ı				appropriations request	schedule (5-year phase-in)		enhancement.		
						Texas Constitution			
1			not begin to decline by the 5th yr following AV		scriedule (5-year phase-iii)	Texas Constitution			
				Rolling	Benchmarks	Texas Constitution			
El Paso Firemen's &	Fixed	10-yr rolling		Rolling Sponsor and Board shall adhere to FSRP policy set		Texas Constitution  Contributions may decrease if:	Benefit increases may only occur if:	None	
El Paso Firemen's & Policemen's Staff Plan	Fixed	10-yr rolling	yr following AV		g Benchmarks			None	
	Fixed	10-yr rolling	yr following AV  2 AVs showing am pd > ADC	Sponsor and Board shall adhere to FSRP policy set	Benchmarks Contributions:	Contributions may decrease if:	Benefit increases may only occur if:	None	
Policemen's Staff Plan	Fixed	10-yr rolling	yr following AV  2 AVs showing am pd > ADC	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:	Benchmarks Contributions: - Contribution changes (inc/dec) are	Contributions may decrease if: - 2 AVs showing an am pd of 0 yrs	Benefit increases may only occur if: - Board votes on and approves the	None	
Policemen's Staff Plan	Fixed	10-yr rolling	yr following AV  2 AVs showing am pd > ADC	Sponsor and Board shall adhere to FSRP policy set forth in the plan document: - Will increase employer and member contribution	Benchmarks Contributions: - Contribution changes (inc/dec) are	Contributions may decrease if: - 2 AVs showing an am pd of 0 yrs (overfunded)	Benefit increases may only occur if: - Board votes on and approves the change	None	
Policemen's Staff Plan	Fixed	10-yr rolling	yr following AV  2 AVs showing am pd > ADC	Sponsor and Board shall adhere to FSRP policy set forth in the plan document: - Will increase employer and member contribution	Benchmarks Contributions: - Contribution changes (inc/dec) are	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed	Benefit increases may only occur if:  - Board votes on and approves the change - Increase approved by an actuary	None	
Policemen's Staff Plan and Trust			yr following AV  2 AVs showing am pd > ADC benchmark am pd	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:  - Will increase employer and member contribution rates	Benchmarks Contributions: - Contribution changes (inc/dec) are proportional for employee and sponsor	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed what is necessary to amortize UAAL over 0 yrs	Benefit increases may only occur if:  - Board votes on and approves the change - Increase approved by an actuary - Approved by majority of members - Increase does not raise the am pd		
Policemen's Staff Plan and Trust  Abilene Firemen's	Fixed	10-yr rolling 30-yr rolling	yr following AV  2 AVs showing am pd > ADC benchmark am pd  2 (or 3 if annual) AVs showing	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:  - Will increase employer and member contribution rates  Board will:	Benchmarks Contributions: - Contribution changes (inc/dec) are	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed	Benefit increases may only occur if: - Board votes on and approves the change - Increase approved by an actuary - Approved by majority of members	Payroll Growth Assumption	
Policemen's Staff Plan and Trust  Abilene Firemen's Relief & Retirement			yr following AV  2 AVs showing am pd > ADC benchmark am pd  2 (or 3 if annual) AVs showing fixed contrib rates < ADC	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:  - Will increase employer and member contribution rates  Board will:  - Notify City, members and member assn	Benchmarks Contributions: - Contribution changes (inc/dec) are proportional for employee and sponsor	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed what is necessary to amortize UAAL over 0 yrs	Benefit increases may only occur if:  - Board votes on and approves the change - Increase approved by an actuary - Approved by majority of members - Increase does not raise the am pd	Payroll Growth Assumption for Benchmark:	
Policemen's Staff Plan and Trust  Abilene Firemen's			yr following AV  2 AVs showing am pd > ADC benchmark am pd  2 (or 3 if annual) AVs showing	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:  - Will increase employer and member contribution rates  Board will:  - Notify City, members and member assn  - Request meeting with City/members to develop a	Benchmarks Contributions: - Contribution changes (inc/dec) are proportional for employee and sponsor	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed what is necessary to amortize UAAL over 0 yrs	Benefit increases may only occur if:  - Board votes on and approves the change - Increase approved by an actuary - Approved by majority of members - Increase does not raise the am pd	Payroll Growth Assumption for Benchmark: - Lesser of 3% and avg	
Policemen's Staff Plan and Trust  Abilene Firemen's Relief & Retirement			yr following AV  2 AVs showing am pd > ADC benchmark am pd  2 (or 3 if annual) AVs showing fixed contrib rates < ADC	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:  - Will increase employer and member contribution rates  Board will:  - Notify City, members and member assn - Request meeting with City/members to develop a 20-yr (at the latest) plan that will establish fixed	Benchmarks Contributions: - Contribution changes (inc/dec) are proportional for employee and sponsor	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed what is necessary to amortize UAAL over 0 yrs	Benefit increases may only occur if:  - Board votes on and approves the change - Increase approved by an actuary - Approved by majority of members - Increase does not raise the am pd	Payroll Growth Assumption for Benchmark: - Lesser of 3% and avg payroll growth of fire dept	
Policemen's Staff Plan and Trust  Abilene Firemen's Relief & Retirement			yr following AV  2 AVs showing am pd > ADC benchmark am pd  2 (or 3 if annual) AVs showing fixed contrib rates < ADC	Sponsor and Board shall adhere to FSRP policy set forth in the plan document:  - Will increase employer and member contribution rates  Board will:  - Notify City, members and member assn  - Request meeting with City/members to develop a	Benchmarks Contributions: - Contribution changes (inc/dec) are proportional for employee and sponsor	Contributions may decrease if:  - 2 AVs showing an am pd of 0 yrs (overfunded)  - Sum of contribution decrease cannot exceed what is necessary to amortize UAAL over 0 yrs	Benefit increases may only occur if:  - Board votes on and approves the change - Increase approved by an actuary - Approved by majority of members - Increase does not raise the am pd	Payroll Growth Assumption for Benchmark: - Lesser of 3% and avg	

	Benchmark and Actions Resulting			Additional Components				
	Contribution		Condition(s) that Trigger					for Benchmark:  - Lesser of 4.5% and avg payroll growth of fire dept over the last 10 yrs  Payroll Growth Assumption for Benchmark:  - Lesser of 3% and avg payroll growth of fire dept over the last 10 yrs  Payroll Growth Assumption for Benchmark:  - Lesser of 3% and avg payroll growth of fire dept over the last 10 yrs  Payroll Growth Assumption for Benchmark:  - Lesser of 3% and avg payroll growth of fire dept over the last 10 yrs  Payroll Growth Assumption for Benchmark:  - Lesser of 3% and avg payroll growth of fire dept over the since Jan, 2016, or once 10 Avs have been performed, over the last 10 yrs
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	· · · · · · · · · · · · · · · · · · ·
Big Spring Firemen's Relief & Retirement Fund	Fixed	30-yr rolling	2 (or 3 if annual) AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board will:  - Notify City, members and member assn  - Request meeting with City/members to develop a 20-yr (at the latest) plan that will establish fixed contrib rates that will result in 100% funding over a 30-yr closed period  - Provide updates on progress after each AV	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	for Benchmark: - Lesser of 4.5% and avg payroll growth of fire dept
Odessa Firemen's Relief & Retirement Fund	Fixed	30-yr rolling	2 (or 3 if annual) AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board will:  Notify City and member assn  Request meeting with City/members to develop a 20-yr plan (at the latest) that will establish fixed contrib rates that will result in 100% funding over a 30-yr closed period  Provide updates on progress after each AV	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	for Benchmark: - Lesser of 3% and avg payroll growth of fire dept
Orange Firemen's Relief & Retirement Fund	Fixed	30-yr rolling	2 (or 3 if annual) AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board will:  - Notify City and member assn  - Request meeting with City/members to develop a 20-yr plan (at the latest) that will establish fixed contrib rates that will result in 100% funding over a 30-yr closed period  - Provide updates on progress after each AV	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	for Benchmark: - Lesser of 3% and avg
San Angelo Firemen's Relief & Retirement Fund	Fixed	30-yr rolling	2 (or 3 if annual) AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board will:  - Notify City and member assn  - Request meeting with City/members to develop a 20-yr plan (at the latest) that will establish fixed contrib rates that will result in 100% funding over a 30-yr closed period  - Provide updates on progress after each AV	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	for Benchmark: - Lesser of 3% and avg payroll growth of fire dept
The Woodlands Firefighters' Retirement System	Fixed	30-yr rolling	2 (or 3 if annual) AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board will:  - Work with system's actuary to develop proposals for changes to the system that in 20 yrs results in 100% funding over 30-yr closed pd  - Notify Township governing body and member assn  - Request work together with Township and member asto develop 20-yr plan that will establish fixed contrib rates that will result in 100% funding over a 30-yr closed pd  - Provide updates on progress after each AV	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	for Benchmark: - Lesser of 3% and avg payroll growth of fire dept over the since Jan, 2016, or once 10 Avs have been performed, over the last 10
Wichita Falls Firemen's Relief & Retirement Fund	TMRS Linked	30-yr rolling	2 AVs showing fixed contrib rates < ADC benchmark by more than 2%	Board will:  - Notify City and member assn  - Request meeting with City/members to develop a 20-yr plan (at the latest) that will establish fixed contrib rates that will result in 100% funding over 30- yr closed pd  - Provide updates on progress after each AV	None	Contribution changes as per TLFFRA statute <sup>1</sup>	Benefit changes as per TLFFRA statute <sup>2</sup>	for Benchmark: - Lesser of 3% and avg
Austin Police Retirement System	Fixed	30-yr rolling  System currently working with the City towards a goal to develop a schedule for contribution/plan changes to achieve 30-yr closed pd.	- 2 AVs showing effective funding period > ADC benchmark by 3+ yrs; OR - 2 AVs showing ADC benchmark > fixed contribution rates by 2% or more	Board will:  - Notify the City  - Engage in planning as needed to ensure continued progress toward policy goals	Board intends to maintain cost-sharing arrangement with City where:  - City contributes ≥ 60% of increases  - Members contribute ≤ 40%  - If the increase is insufficient, the Board will consider/recommend corrective action including possible benefit changes and/or additional contribution increases	Per APRS statute: - Any member contribution rate change must be approved by majority vote of contributory members - City council must approve City contribution changes	Per APRS statute, before any enhancements: - Must be approved by Fund's actuary and otherwise permitted under the System's statute and policies	None

Pension Review Board Actuarial Committee 8/6/2020

			Benchmark and Act	ions Resulting	Additional Components			
	Contribution		Condition(s) that Trigger					Additional Amortization
System Name	Туре	ADC Benchmark Am Pd	Actions	Actions Resulting from Trigger	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Policy Provisions
Austin Fire Fighters Relief & Retirement	Fixed	30-yr rolling	3 AVs showing fixed contrib rates < ADC benchmark by more	Board will: - Notify City and member assn	None	None	Enhancements: - Policy references that enhancements	None
Fund			than 2%	Request meeting with City/members to develop a 20-yr plan (at the latest) that will establish fixed contrib rates that will result in 100% funding over 30-yr closed pd     Provide updates on progress after each AV			must meet the requirements of the fund's Benefit Improvement Policy  COLAS: - Policy references COLA Adjustment Policy, which contains parameters to determine when COLAs may be provided	
El Paso Firemen's & Policemen's Pension Fund	Fixed	40-yr rolling	2 AVs showing funding period > 40 yrs	in El Paso F&PPF Statute: - City may increase contribution rate	Contributions: - Contribution changes (inc/dec) are proportional for employee and employer - If City rate inc/dec, member rate must change proportionately	City/member contribution decreases may be considered if: - 2 AVs showing funding pd < 25 yrs - Decrease cannot exceed what is necessary to amortize UAAL over a 25-yr period  City/member increases: - Sum of contribution increase cannot exceed what is necessary to amortize UAAL over 40 yrs	Enhancement may only occur if: - Am pd is not increased	None
Toyas Emorgansy	Fixed	None	None		None	Contributions:	Enhancements:	None
Texas Emergency Services Retirement System		None	None	None		Contributors:  - Members do not contribute  - If am pd > 30 yrs, state contributions required and limited to 1/3 of all contributions made by the governing bodies of participating departments  - Participating departments may contribute more if local and state contributions are inadequate to bring am pd below 30 yrs	- Prohibited if am period > 30 yrs	None
Austin Employees Retirement System	Fixed	None  Funding policy originally developed in 2014. System awaiting results of City retirement study. System expects that not later than the fall of 2020, COAERS's review of its Funding Policy will be complete and the updated version will be provided to both the City and PRB.	None	None	None	Reductions may only occur if:  - COLAs built into assumptions; and - FR will remain ≥ 105%.  Increases may occur after:  - Majority vote from regular full-time members	Enhancements may only occur after:  - COLA included in assumptions;  - FR ≥ 120% after incorp; and  - Employer ADC ≤ statutory rate  COLAs only considered when:  - Financially supported on a regular, periodic basis;  - FR ≥ 80% after incorporating COLA;  - Am pd ≤ 20 yrs after incorp COLA; and  - Actual employer contrib rate ≥ ADC rate but no more than 18% after incorp COLA	None

<sup>1</sup> Per TLFFRA statute, City may change its rate by formal action by governing body, provided it does not reduce City contribution rate below minimum required TLFFRA rate. Members may change rate by majority member vote as recommended by the Board, after actuary approval.

<sup>&</sup>lt;sup>2</sup> Per TLFFRA statute, any benefit changes must be approved by Fund's actuary and a majority of members.

<sup>3 31</sup> years is the "Actuarially Sound Contribution" (ASC) rate per Section 811.006 of the Texas Government Code. As an example, 22.1 years was the average years of service at retirement for a service retiree in the ERS plan as of 8/31/17.

			Components		
Combane Name	Amountinetters Dellers	Biolo Chamina	Contribution Charges Barrens	Bonefit Change Bonesites	Additional Development
System Name	Amortization Policy	Risk Sharing	Contribution Change Parameters Closed Amortization Periods at/under 30 yrs	Benefit Change Parameters	Additional Provisions
JPS Pension Plan - Tarrant County Hospital District (THA)	Preferred range of 10-25 yrs, never to exceed 30-yr am pd	Contribution changes may be: - Phased in over a period not to exceed 5 yrs	None	Benefit increases should not occur if: - Resulting am pd exceeds 25 yrs	Negative Amortization: - Contributions should always be sufficient to pay normal cost plus interest on UAAL. Negative amortization is not permitted.
Retirement Plan for Anson General Hospital (THA)	Preferred range of 10-25 yrs, never to exceed 30-yr am pd	Contribution changes may be: - Phased in over a period not to exceed 5 yrs	None	Benefit increases should not occur if: - Resulting am pd exceeds 25 yrs	Negative Amortization: - Contributions should always be sufficient to pay normal cost plus interest on UAAL. Negative amortization is not permitted.
Retirement Plan for Citizens Medical Center (THA)	Preferred range of 10-25 yrs, never to exceed 30-yr am pd	Contribution changes may be: - Phased in over a period not to exceed 5 yrs	None	Benefit increases should not occur if: - Resulting am pd exceeds 25 yrs	Negative Amortization: - Contributions should always be sufficient to pay normal cost plus interest on UAAL. Negative amortization is not permitted.
Retirement Plan for Guadalupe Regional Medical Center (THA)	Preferred range of 10-25 yrs, never to exceed 30-yr am pd	Contribution changes may be: - Phased in over a period not to exceed 5 yrs	None	Benefit increases should not occur if: - Resulting am pd exceeds 25 yrs	Negative Amortization: - Contributions should always be sufficient to pay normal cost plus interest on UAAL. Negative amortization is not permitted.
Retirement Plan for Sweeny Community Hospital (THA)	Preferred range of 10-25 yrs, never to exceed 30-yr am pd	Contribution changes may be: - Phased in over a period not to exceed 5 yrs	None	Benefit increases should not occur if: - Resulting am pd exceeds 25 yrs	Negative Amortization: - Contributions should always be sufficient to pay normal cost plus interest on UAAL. Negative amortization is not permitted.
Capital MTA Retirement Plan for Bargaining Unit Employees	Greater of: - 19-yr closed am pd as of 1/1/2020 with 3% annual increases or \$4M minus non-investment admin expenses incurred during the year	None	None	Plan is frozen and no benefit enhancements are being considered.	- Plan frozen as of 8/18/2020
Fort Worth Employees' Retirement Fund	- 30-yr closed beginning 12/31/2018 - Goal of eliminating UAAL and attaining 100% funding by 12/31/2048	Contributions: - Increases split 60%/40% by City/members, capped at 2% of pay and 4% aggregate annually - If ADC benchmark < combined contribs 2 consecutive yrs, City Council may reduce contribs to the ADC (but not less), split 60%/40%	City rate reduction considered only if: - FR ≥ 120% - Member contribution reduced by same proportionate percentage - All members elig. for periodic COLA - Regular COLAs built into assumptions - Total contribution not < normal cost  City rate changed/member rates increased after: - Actuary performs analysis of fiscal impact of proposed change - Majority of elig. members vote in favor; and - Approved by Board (if City called vote) or City Council (if Board called vote)	COLAs may be granted to certain groups if: - Am pd < 28 yrs  Benefit enhancements considered only if: - Annual COLAs incorporated into funding assumptions for all members - FR > 120% after enhancement - ADC benchmark < City contribution	Negative Amortization: - Board's goal is to eliminate negative amortization as quickly as possible and ultimately maintain a contribution rate that expected to result in the reduction of the UAAL each year
	T		ered Closed Amortization Periods at/under 30 yrs	1 -	
& Relief Fund	30-yr layered closed as of 7/1/2017	A "target contribution rate," along with an associated min/max corridor, is established via a risk sharing valuation	Contributions:  - Contributions set by initial risk sharing valuation study unless rate falls outside of corridor.	Benefits: - Statutory corridor mechanism which allows for benefit changes if the plan's funded ratio and contribution rates reach certain thresholds.	- Per statute, if plan's FR falls below 65% any time after 6/30/2021, plan must establish separate cash balance plan for new hires
Houston Municipal Employees Pension System	, ,	Contributions: A "target contribution rate," along with an associated min/max corridor, is established via a risk sharing valuation	Contributions:  - Contributions set by initial risk sharing valuation study unless rate falls outside of corridor.	Benefits: - Statutory corridor mechanism which allows for benefit changes if the plan's funded ratio and contribution rates reach certain thresholds.	- Per statute, if plan's FR falls below 60% any time after 6/30/2027, plan must establish separate cash balance plan for new hires
Houston Police Officers' Pension System	30-yr layered closed as of 7/1/2017	Contributions:  A "target contribution rate," along with an associated min/max corridor, is established via a risk sharing valuation study (RSVS).	Contributions:  - Contributions set by initial risk sharing valuation study unless rate falls outside of corridor.	Benefits: - Statutory corridor mechanism which allows for benefit changes if the plan's funded ratio and contribution rates reach certain thresholds.	- Per statute, if plan's FR falls below 65% any time after 6/30/2021, plan must establish separate cash balance plan for new hires

			Components			
System Name	Amortization Policy	Risk Sharing	Contribution Change Parameters	Benefit Change Parameters	Additional Provisions	
Galveston Employee's Retirement Plan for Police	30-yr layered closed beginning 1/1/2019	Contributions: - Per Galveston Ret Plan for Police statute, beginning 1/1/2025, any increases will be split equally between members and City	Reductions may only occur if: - Am pd would not exceed 25 yrs	Enhancements may only occur if: - Am pd would not exceed 25 yrs	Negative Amortization: - Board's goal is to eliminate negative amortization as quickly as possible and ultimately maintain a contribution rate above the threshold that results in negative amortization	
			Rolling Amortization Periods			
Northwest Texas Healthcare System Retirement Plan	5-yr rolling	The UAAL measured in each annual actuarial valuation will be re-amortized over a 5-year period.	Contribution Changes Contributions may be reduced to provide a reasonable margin for adverse experience. A Partial ADC is permitted when the year-over-year ADC increase is greater than 25% and the funded ratio is over 105% after reduction. The shortfall will be amortized over a 10-year closed period.	None	None	
Dallas Employees' Retirement Fund	- 30-yr rolling for valuations prior to retirement of POBs - After retirement of POBs, determined by DERF board in place at the time	None	Contribution adjustments: - Automatically occur for both members and City under Chapter 40A - City contributions capped at 36% of payroll	Board supports enhancements only when: - FR >= 100% after enhancements	None	

		Со	mponents	
System Name	Amortization Policy	Contribution Change Parameters	Benefit Change Parameters	Additional Provisions
	T	Fully Funded		
Arlington Employees Deferred Income Plan	Plan is over 100% funded and continues to pay ADC     Uses layers to amortize the cost of benefits over the expected remaining service of active employees	None	None	None
		Closed Amortization Periods at/under 30	) yrs	<del>-</del>
Guadalupe-Blanco River Authority	10-yr closed period beginning 1/1/2019	Plan participants do not make contributions Supplemental contributions recommended when funds are available and deemed appropriate	Benefit enhancements evaluated on a case-by- case basis taking into consideration: - actuarial soundness, - its relationship to targeted funding ratio, - stress testing of performance in down market conditions	- Targets 110% funding of TPL - Frozen plan as of 12/31/2018  Adverse experience: - Could work with actuary to test effects of extending the closed am pd to mitigate contribution volatility
Lower Neches Valley Authority Employee Benefits Plan	10-yr closed	Plan trustees will notify LNVA and consider reductions only when: - 2 AVs showing actual contribution more than 2% over/under ADC - FR >= 105% and total contribution rate is not < normal cost. In such case, may consider reduction in employer contribution	None	None
Brazos River Authority Retirement Plan	- 20-yr closed period beginning 3/1/2012 - As of 3/1/2019, there are 13 years remaining	Partial contribution reductions (i.e. deferral from the ADC) are permitted when: - Year-over-year ADC contribution increase exceeds 25%. Shortfall amortized over 5-yr pd and added to the ADC beginning with next AV	None	- Plan closed to new members and frozen as of 9/30/2007
Dallas/Fort Worth Airport Board	- 30-yr closed effective 1/1/2004	None	None	None
Retirement Plan Corpus Christi Regional Transportation Authority	- Will be fully funded by 12/31/2034 15-yr closed effective 1/1/2019	None	None	None
Lower Colorado River Authority Retirement Plan	- 20-yr closed beginning 2020	None	None	- Closed plan to new hires effective 5/1/2012  Adverse experience:  - Could work with actuary to test effects of extending the closed am pd to mitigate contribution volatility
Houston MTA Non-Union Pension Plan	- 30-yr closed effective 2013 - As of 2019, 24-yr period remaining	None	Enhancements only considered if: - Contributions meet or exceed the ADC	- Closed to new hires effective 9/30/2007
Houston MTA Workers Union Pension Plan	- 30-yr closed effective 2013 - As of 2019, 24-yr period remaining	None	Enhancements only considered if: - Contributions meet or exceed the ADC	- Closed to new hires effective 10/1/2012
Dallas County Hospital District Retirement Income Plan	- 25-yr closed period beginning 1/1/2019 - Intent that the FR will be 100% on/before 1/1/2044	None	None	None

		Со	mponents	
System Name	Amortization Policy	Contribution Change Parameters	Benefit Change Parameters	Additional Provisions
Denton Firemen's Relief & Retirement Fund	- 25-yr closed - City will maintain current contribution level of 18.5%. - Each yr, City's contribution level based on actuarial study which calculates rated needed to amortize UAAL over 25 yr closed pd	City contributions:  - Not lowered based on actuarial experience unless am pd <= 20 yrs  - Not < City's contribution to TMRS	Benefit enhancements: - May not be made during the term of the agreement	Funding Policy adopted through Meet and Confer Agreement with City: - 4 yr agreement as of 9/2019  Contributions: - Actuarial gains will be used to pay down UAAL rather than reducing contribution rate during the first 5 yrs
		Layered Closed Amortization Periods at/Und	er 30 yrs	
Refugio County Memorial Hospital	- 7-yr layered closed	None	None	- Plan frozen as of 12/31/2011
Dallas/Fort Worth Airport Board DPS Retirement Plan	- 15-yr layered closed effective 1/1/2020 - Each subsequent AV a new closed 15-yr amortization base will be established for any unanticipated changes in the UAAL from prior yr	None	None	None
Plano Retirement Security Plan	separately maintained for each AV	Contributions:  - If net amortization cost is negative, then City's contribution will not be less than normal cost - expected earnings on surplus assets (determined as % payroll) to preserve assets to offset adverse experience that may occur in a future year	None	None
Harris County Hospital District Pension Plan	20-yr layered closed	None	None	- Closed plan to new hires effective 1/1/2007
Dallas Police & Fire Pension System- Supplemental	- 20-yr closed as of 1/1/2020 - 10-yr amortization bases beginning 1/1/2021	Contribution reductions may only occur if: - Reduction does not increase am pd	Granting COLA/Reduction of retirement age/ Reduction am pd of DROP annuities: - Per statute criteria  Enhancements may only occur: - If funding pd would not exceed 25 yrs after adoption	Contributions/Benefits: - Per statute, in 2024 an analysis will be conducted to asses the adequacy of the funding of the plan and, if necessary, changes may be made at that time
Retirement Plan for Employees of Brownsville Navigation District	- 20-yr layered closed - 15-yr amortization base for UAAL as of 1/1/2020 - 20-yr am pd base for actuarial gains/losses and assumption method	Employee contribution increases may be considered if: - ADC becomes unsustainable	Benefit reductions may occur if: - ADC becomes unsustainable	If the ADC becomes unsustainable, District may consider adjusting the funding policy by potentially extending the amortization periods
Nacogdoches County Hospital District Retirement Plan	- 20-yr layered closed - All other changes in UAAL amortized over 20-yr closed pd - Level dollar amortization method will not result in an am pd of > 25 yrs	None	Benefit enhancements and COLAs:  - Are not anticipated to occur  - Would only be granted if there would not be a substantial increase to the timeframe to full funding  - Would result in a resetting of the am pd to 20 yrs	- Plan frozen as of 9/4/2017

		Со	mponents	
System Name	Amortization Policy	Contribution Change Parameters	Benefit Change Parameters	Additional Provisions
Texas County & District Retirement System	- 20-yr layered closed	None	None	Investment Surpluses:
	- Benefit enhancements amortized over			- May be set aside to help offset future negative
	15-yr closed pd			economic cycles and are not considered part of
	- All other changes in UAAL amortized			the plan's assets
	over 20-yr closed pd			
Galveston Wharves Pension Plan	- 21-yr layered closed effective 1/1/2020	None	COLAs only considered when:	- Closed plan to new hires effective 1/1/2010
	until ultimate 10-yr pd		- Plan is at least 80% funded	
	- Am pd base of lesser of avg expected			
	remaining lifetime and 10 yrs for benefit			
	inc for existing retirees			
Texas Municipal Retirement System	- 25-yr layered closed beginning in 2015	Contributions based on plan options selected	Benefits based on plan options selected within	None
	- Amortization base for actuarial gains and	within statutory guidelines	statutory guidelines	
	losses ranging from 1 to 25 yrs			
	- All new losses occurring after 1/1/2020			
	and benefit increases effective on/after			
	1/1/2021 amortized over max 20-yr pd			
CPS Energy Pension Plan	- 30-yr layered closed effective 2017	Contributions:	Enhancements:	None
er o Energy rension rich	- Will be fully funded by 2046	- Any change requires approval of Employee	- Factored into ADC calculation	None
	77 20 ra, raaca 2, 20 ro	Benefits Oversight Committee	- Must be approved by Employee Benefits	
		Demonts oversight committee	Oversight Committee	
Fort Worth Employees' Retirement Fund	- 30-yr layered closed effective	If FR < 80 and am pd > 28 for 2 calendar years,	If FR < 80 and am pd > 28 for 2 calendar years,	If FR < 80 and am pd > 28 for 2 calendar years,
Staff Plan	12/31/2018	Board may consider:	Board may consider:	Board may consider:
	- Additional 30-yr closed period layers	- Increase in contribution rate (requires	- Adoption of benefit reductions, after annual	- Non-recurring lump sum cash infusion to attain
	with level-dollar amortization payments	participant election with majority agreement)	COLA is incorporated in funding assumptions	80% or higher funded status
	for actuarial gains/losses for future years			
	,	If FR is > 120% and am pd < 5 yr for 2 calendar	If FR is > 120% and am pd < 5 yr for 2 calendar	If FR is ≥ 120% and am pd ≤ 5 yr for 2 calendar
		years, Board may consider (provided that the FR	years, Board may consider (provided that the FR	years, Board may consider (provided that the FR
		does not fall below 100% and am pd does not	does not fall below 100% and am pd does not	does not fall below 100% and am pd does not
		exceed 25 yrs after changes):	exceed 25 yrs after changes):	exceed 25 yrs after changes):
		- reduction in contrib rate, after annual COLA	- adoption of benefit enhancements, after	- Examination & possible action of de-risking
		incorporated in funding assumptions	annual COLA incorporated in funding	plan
		- adoption of temporary contribution holiday	assumptions	
			- adoption of 13th check	
Port of Houston Authority Retirement Plan	- 30-yr layered closed	None	None	Plan closed to new hires offective 9/1/2012
Port of Houston Authority Retirement Plan	' '		INONE	- Plan closed to new hires effective 8/1/2012
	- Amortization bases ranging from 5 to 30			
DART Employee's Defined Benefit	- 30-yr layered closed pd, level dollar	None	None	- Plan closed to new entrants
Retirement Plan	- Actuarial gains/losses amortized over 15		inone in the second sec	- Funding Policy is reviewed at least once every 5
Retirement Flan	yr base			years (in connection with actuarial experience
	- Assumption/method changes amortized			study)
	over 30 yrs			January,
	- Benefit changes amortized over 30 yrs			
	20.1011 Gridinges diffortized over 30 yrs	Rolling Amortization Periods		
Capital MTA Retirement Plan for	- 20-yr rolling	Contribution changes may be recommended	None	None
Administrative Employees	, , ,	when:		
		- 2 AVS showing actual contribution > 2%		
		over/under ADC		
University Health System Pension Plan	- 24-yr closed (1/1/2020) to ultimate 20-	None	None	None
Oniversity Health System Felision Flan	yr open (1/1/2024)	inone in the second sec	TYONG TO THE TOTAL THE TANK TH	INOTIC
	yi opeii (1/1/2024)			

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July 28, 2020

Texas Pension Review Board (PRB) P.O. Box 13498 Austin, TX 78711-3498

Re: Funding Policy – Rolling ADC Benchmark

Dear PRB:

We were forwarded a copy of your letter to the Abilene Firemen's Relief & Retirement Fund regarding their adopted funding policy. As the actuary for the Board, we discussed this matter at their most recent Board meeting, and they have asked us to provide a response to your request.

After consulting with its attorney, the Board determined that their Funding Policy/ADC Benchmark complies with the Texas Government Code and believes that their current approach is the most appropriate benchmark for their Plan. The body of this letter will further explain the Board's position and answer the questions that you raised in your letter.

In your letter, you reference Texas Government Code Section 802.2011 which requires public retirement systems to adopt a written policy which "details the governing body's plan for achieving a funded ratio of the system that is equal to or greater than 100 percent." As you are aware, this Fund, like many other firefighter pension plans in the State of Texas, employs a fixed contribution rate. The Board's funding policy benchmark creates the fixed contribution rate that would be necessary to achieve 100% funding over a 30-year period. In other words, if all assumptions are met and the fixed contribution rate is at or above what is described by the ADC benchmark, the plan WILL achieve 100% funding in a 30-year period. The Board expects for the assumptions to be met in the future, so if this benchmark equals the sponsor's fixed contribution rate, the plan will be 100% fully funded in 30 years. This precisely complies with the Texas Government Code, and it's also similar (although more restrictive) relative to the criteria used to determine if a Funding Soundness Restoration Plan is necessary. It should also be noted that the Board's policy details the criteria that needs to be met surrounding the ADC benchmark and action steps that will be taken should the scheduled contribution rates fall out of compliance with the 30-year benchmark.

While the chosen benchmark amortization period apparently is not your preferred choice, it does comply with the Texas Government Code and has advantages compared to the approaches chosen by other Boards. In reviewing the letter from the PRB to the Actuarial Committee dated May 7, 2020, you stated that there were 51 plans who submitted funding policies. You state that twenty (20) of the plans have adopted a closed (non-layered) benchmark. We feel that this approach is unsustainable! What will happen when the period remaining is under five or ten years? Any actuarial loss would require a substantial increase in the benchmark contribution rate. Wouldn't it be impractical to be forced to increase contributions or reduce benefits due to a benchmark amortization period that is three (3) years? At some point, the number of years will need to be extended and reset or the validity/credibility of the benchmark will be impaired.

Fifteen (15) of the plans chose a layered/closed amortization period. We feel that this approach is sustainable and appropriate, but you must consider that any future actuarial gain/loss will be amortized over an (oftentimes) extended 30-year period. So, it's not as if this benchmark approach achieves full funding by a certain time period. Similar to the Board's funding policy, this benchmark "resets annually" which seems to be a concern raised in your letter. This benchmark is a guide to achieve full funding in 30 years, just as the Board's benchmark is a guide. This approach, however, will also likely create additional administrative expenses for the Fund, since ultimately the actuary will have to keep track of up to 30 different amortization layers in order to develop the benchmark contribution rate.

Sixteen (16) of the plans created an open/rolling benchmark, similar to the Board's policy. The Board's benchmark approach uses a reasonable payroll growth rate in the benchmark calculation and alerts the sponsor/Board as to the adequacy of the sponsor's fixed contribution rate on its road to full funding. The Board's approach will not need future revisions like the 20 plans who used a closed amortization method. The Board's approach will also not incur any additional actuarial expenses associated with creating a benchmark that still may not achieve 100% full funding in 30 years or less. The Board's approach simply, and without need for future revision, develops an appropriate benchmark to gauge the adequacy of the sponsor's fixed contribution rate.

In conclusion, we feel that if the Fund employed a variable contribution rate then a 30-year open amortization approach would not be our recommendation. In a fixed contribution rate environment, however, an open amortization benchmark that complies with the law, needs no future revision and doesn't create unnecessary administrative expenses is the most appropriate choice for the Board.

If you have any questions or would like to discuss further, please do not hesitate to contact me.

Singerely,

Bradley/R. Heinrichs, FSA, EA, MAAA

President/ČEO

Foster & Foster Consulting Actuaries, Inc.

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July 28, 2020

Texas Pension Review Board (PRB) P.O. Box 13498 Austin, TX 78711-3498

Re: Funding Policy – Rolling ADC Benchmark

Dear PRB:

We were forwarded a copy of your letter dated June 30, 2020 to the Austin Firefighters' Relief & Retirement Fund regarding their adopted funding policy. As the actuary for the Board, we discussed this matter at their most recent Board meeting, and they have asked us to provide a response to your request.

After consulting with its attorney, the Board determined that their Funding Policy/ADC Benchmark complies with the Texas Government Code and believes that their current approach is the most appropriate benchmark for their Plan. The body of this letter will further explain the Board's position and answer the questions that you raised in your letter.

In your letter, you reference Texas Government Code Section 802.2011 which requires public retirement systems to adopt a written policy which "details the governing body's plan for achieving a funded ratio of the system that is equal to or greater than 100 percent." As you are aware, this Fund, like many other firefighter pension plans in the State of Texas, employs a fixed contribution rate. The Board's funding policy benchmark creates the fixed contribution rate that would be necessary to achieve 100% funding over a 30-year period. In other words, if all assumptions are met and the fixed contribution rate is at or above what is described by the ADC benchmark, the plan WILL achieve 100% funding in a 30-year period. The Board expects for the assumptions to be met in the future, so if this benchmark equals the sponsor's fixed contribution rate, the plan will be 100% fully funded in 30 years. This precisely complies with the Texas Government Code, and it's also similar (although more restrictive) relative to the criteria used to determine if a Funding Soundness Restoration Plan is necessary. It should also be noted that the Board's policy details the criteria that needs to be met surrounding the ADC benchmark and action steps that will be taken should the scheduled contribution rates fall out of compliance with the 30-year benchmark.

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In conclusion, we feel that if the Fund employed a variable contribution rate then a 30-year open amortization approach would not be our recommendation. In a fixed contribution rate environment, however, an open amortization benchmark that complies with the law, needs no future revision and doesn't create unnecessary administrative expenses is the most appropriate choice for the Board.

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Singerely,

Bradley/R. Heinrichs, FSA, EA, MAAA

President/CEO

Foster & Foster Consulting Actuaries, Inc.

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July 28, 2020

Texas Pension Review Board (PRB) P.O. Box 13498 Austin, TX 78711-3498

Re: Funding Policy – Rolling ADC Benchmark

Dear PRB:

We were forwarded a copy of your letter to the Odessa Firefighters' Relief & Retirement Fund regarding their adopted funding policy. As the actuary for the Board, we discussed this matter at their most recent Board meeting, and they have asked us to provide a response to your request.

After consulting with its attorney, the Board determined that their Funding Policy/ADC Benchmark complies with the Texas Government Code and believes that their current approach is the most appropriate benchmark for their Plan. The body of this letter will further explain the Board's position and answer the questions that you raised in your letter.

In your letter, you reference Texas Government Code Section 802.2011 which requires public retirement systems to adopt a written policy which "details the governing body's plan for achieving a funded ratio of the system that is equal to or greater than 100 percent." As you are aware, this Fund, like many other firefighter pension plans in the State of Texas, employs a fixed contribution rate. The Board's funding policy benchmark creates the fixed contribution rate that would be necessary to achieve 100% funding over a 30-year period. In other words, if all assumptions are met and the fixed contribution rate is at or above what is described by the ADC benchmark, the plan WILL achieve 100% funding in a 30-year period. The Board expects for the assumptions to be met in the future, so if this benchmark equals the sponsor's fixed contribution rate, the plan will be 100% fully funded in 30 years. This precisely complies with the Texas Government Code, and it's also similar (although more restrictive) relative to the criteria used to determine if a Funding Soundness Restoration Plan is necessary. It should also be noted that the Board's policy details the criteria that needs to be met surrounding the ADC benchmark and action steps that will be taken should the scheduled contribution rates fall out of compliance with the 30-year benchmark.

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Singerely,

Bradley/R. Heinrichs, FSA, EA, MAAA

President/CEO

Foster & Foster Consulting Actuaries, Inc.

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July 28, 2020

Texas Pension Review Board (PRB) P.O. Box 13498 Austin, TX 78711-3498

Re: Funding Policy – Rolling ADC Benchmark

Dear PRB:

We were forwarded a copy of your letter dated June 5, 2020 to the Orange Firemen's Relief & Retirement Fund regarding their adopted funding policy. As the actuary for the Board, we discussed this matter at their most recent Board meeting, and they have asked us to provide a response to your request.

After consulting with its attorney, the Board determined that their Funding Policy/ADC Benchmark complies with the Texas Government Code and believes that their current approach is the most appropriate benchmark for their Plan. The body of this letter will further explain the Board's position and answer the questions that you raised in your letter.

In your letter, you reference Texas Government Code Section 802.2011 which requires public retirement systems to adopt a written policy which "details the governing body's plan for achieving a funded ratio of the system that is equal to or greater than 100 percent." As you are aware, this Fund, like many other firefighter pension plans in the State of Texas, employs a fixed contribution rate. The Board's funding policy benchmark creates the fixed contribution rate that would be necessary to achieve 100% funding over a 30-year period. In other words, if all assumptions are met and the fixed contribution rate is at or above what is described by the ADC benchmark, the plan WILL achieve 100% funding in a 30-year period. The Board expects for the assumptions to be met in the future, so if this benchmark equals the sponsor's fixed contribution rate, the plan will be 100% fully funded in 30 years. This precisely complies with the Texas Government Code, and it's also similar (although more restrictive) relative to the criteria used to determine if a Funding Soundness Restoration Plan is necessary. It should also be noted that the Board's policy details the criteria that needs to be met surrounding the ADC benchmark and action steps that will be taken should the scheduled contribution rates fall out of compliance with the 30-year benchmark.

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Singerely,

Bradley/R. Heinrichs, FSA, EA, MAAA

President/CEO

Foster & Foster Consulting Actuaries, Inc.

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July 28, 2020

Texas Pension Review Board (PRB) P.O. Box 13498 Austin, TX 78711-3498

Re: Funding Policy – Rolling ADC Benchmark

Dear PRB:

We were forwarded a copy of your letter to the San Angelo Firemen's Relief & Retirement Fund regarding their adopted funding policy. As the actuary for the Board, we discussed this matter at their most recent Board meeting, and they have asked us to provide a response to your request.

After consulting with its attorney, the Board determined that their Funding Policy/ADC Benchmark complies with the Texas Government Code and believes that their current approach is the most appropriate benchmark for their Plan. The body of this letter will further explain the Board's position and answer the questions that you raised in your letter.

In your letter, you reference Texas Government Code Section 802.2011 which requires public retirement systems to adopt a written policy which "details the governing body's plan for achieving a funded ratio of the system that is equal to or greater than 100 percent." As you are aware, this Fund, like many other firefighter pension plans in the State of Texas, employs a fixed contribution rate. The Board's funding policy benchmark creates the fixed contribution rate that would be necessary to achieve 100% funding over a 30-year period. In other words, if all assumptions are met and the fixed contribution rate is at or above what is described by the ADC benchmark, the plan WILL achieve 100% funding in a 30-year period. The Board expects for the assumptions to be met in the future, so if this benchmark equals the sponsor's fixed contribution rate, the plan will be 100% fully funded in 30 years. This precisely complies with the Texas Government Code, and it's also similar (although more restrictive) relative to the criteria used to determine if a Funding Soundness Restoration Plan is necessary. It should also be noted that the Board's policy details the criteria that needs to be met surrounding the ADC benchmark and action steps that will be taken should the scheduled contribution rates fall out of compliance with the 30-year benchmark.

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In conclusion, we feel that if the Fund employed a variable contribution rate then a 30-year open amortization approach would not be our recommendation. In a fixed contribution rate environment, however, an open amortization benchmark that complies with the law, needs no future revision and doesn't create unnecessary administrative expenses is the most appropriate choice for the Board.

If you have any questions or would like to discuss further, please do not hesitate to contact me.

Singerely,

Bradley/R. Heinrichs, FSA, EA, MAAA

President/CEO

Foster & Foster Consulting Actuaries, Inc.

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July 28, 2020

Texas Pension Review Board (PRB) P.O. Box 13498 Austin, TX 78711-3498

Re: Funding Policy – Rolling ADC Benchmark

Dear PRB:

We were forwarded a copy of your letter to the Wichita Falls Firemen's Relief & Retirement Fund regarding their adopted funding policy. As the actuary for the Board, we discussed this matter at their most recent Board meeting, and they have asked us to provide a response to your request.

After consulting with its attorney, the Board determined that their Funding Policy/ADC Benchmark complies with the Texas Government Code and believes that their current approach is the most appropriate benchmark for their Plan. The body of this letter will further explain the Board's position and answer the questions that you raised in your letter.

In your letter, you reference Texas Government Code Section 802.2011 which requires public retirement systems to adopt a written policy which "details the governing body's plan for achieving a funded ratio of the system that is equal to or greater than 100 percent." As you are aware, this Fund, like many other firefighter pension plans in the State of Texas, employs a fixed contribution rate. The Board's funding policy benchmark creates the fixed contribution rate that would be necessary to achieve 100% funding over a 30-year period. In other words, if all assumptions are met and the fixed contribution rate is at or above what is described by the ADC benchmark, the plan WILL achieve 100% funding in a 30-year period. The Board expects for the assumptions to be met in the future, so if this benchmark equals the sponsor's fixed contribution rate, the plan will be 100% fully funded in 30 years. This precisely complies with the Texas Government Code, and it's also similar (although more restrictive) relative to the criteria used to determine if a Funding Soundness Restoration Plan is necessary. It should also be noted that the Board's policy details the criteria that needs to be met surrounding the ADC benchmark and action steps that will be taken should the scheduled contribution rates fall out of compliance with the 30-year benchmark.

While the chosen benchmark amortization period apparently is not your preferred choice, it does comply with the Texas Government Code and has advantages compared to the approaches chosen by other Boards. In reviewing the letter from the PRB to the Actuarial Committee dated May 7, 2020, you stated that there were 51 plans who submitted funding policies. You state that twenty (20) of the plans have adopted a closed (non-layered) benchmark. We feel that this approach is unsustainable! What will happen when the period remaining is under five or ten years? Any actuarial loss would require a substantial increase in the benchmark contribution rate. Wouldn't it be impractical to be forced to increase contributions or reduce benefits due to a benchmark amortization period that is three (3) years? At some point, the number of years will need to be extended and reset or the validity/credibility of the benchmark will be impaired.

Fifteen (15) of the plans chose a layered/closed amortization period. We feel that this approach is sustainable and appropriate, but you must consider that any future actuarial gain/loss will be amortized over an (oftentimes) extended 30-year period. So, it's not as if this benchmark approach achieves full funding by a certain time period. Similar to the Board's funding policy, this benchmark "resets annually" which seems to be a concern raised in your letter. This benchmark is a guide to achieve full funding in 30 years, just as the Board's benchmark is a guide. This approach, however, will also likely create additional administrative expenses for the Fund, since ultimately the actuary will have to keep track of up to 30 different amortization layers in order to develop the benchmark contribution rate.

Sixteen (16) of the plans created an open/rolling benchmark, similar to the Board's policy. The Board's benchmark approach uses a reasonable payroll growth rate in the benchmark calculation and alerts the sponsor/Board as to the adequacy of the sponsor's fixed contribution rate on its road to full funding. The Board's approach will not need future revisions like the 20 plans who used a closed amortization method. The Board's approach will also not incur any additional actuarial expenses associated with creating a benchmark that still may not achieve 100% full funding in 30 years or less. The Board's approach simply, and without need for future revision, develops an appropriate benchmark to gauge the adequacy of the sponsor's fixed contribution rate.

In conclusion, we feel that if the Fund employed a variable contribution rate then a 30-year open amortization approach would not be our recommendation. In a fixed contribution rate environment, however, an open amortization benchmark that complies with the law, needs no future revision and doesn't create unnecessary administrative expenses is the most appropriate choice for the Board.

If you have any questions or would like to discuss further, please do not hesitate to contact me.

Singerely,

Bradley/R. Heinrichs, FSA, EA, MAAA

President/ČEO

Foster & Foster Consulting Actuaries, Inc.

7. Review of Funding Policy requirement under Section 802.2011 and Funding Soundness Restoration Plan (FSRP) requirements under Sections 802.2015 and 802.2016 of the Government Code

# Funding Policy and Funding Soundness Restoration Plan Requirements Policy Objectives and Considerations

### INTRODUCTION

At the June 30, 2020 PRB meeting, staff provided a list of potential policy issues relating to the funding policy and funding soundness restoration plan statutory requirements. The Board discussed the issues and asked staff to work with the Actuarial Committee to develop recommendations to address the issues. This document is intended to provide policy improvement objectives, relevant examples from other states, and preliminary considerations for potential statutory changes.

#### **OBJECTIVES**

### 1. Funding policy and funding soundness restoration plan requirements should be in sync.

Funding policy and FSRP requirements are currently separate and do not tie together to form a continuum of funding support to plans and sponsors. The funding policy requirement, enacted in 2019, requires plans to adopt a funding policy targeting full funding. The FSRP statute, enacted in 2015, requires plans and their sponsors to adopt a remediation plan if the unfunded liability cannot be amortized over 40 or fewer years.

Now that plans have funding policies, they have long-term plans to achieve full funding. However, the remediation plan requirement for plans that face serious funding shortfalls operates independently of the newer funding policy mandate and does not require plans to target full funding over a reasonable closed period.

To provide an effective continuum of funding support for Texas pension plans, the FSRP, which is designed to quickly shore up dramatic funding problems, should tie back to the funding policy, which is designed to prevent funding deficiencies.

Tennessee. Plans of corrective action must demonstrate how future actions will be achieved and must specifically contain:

- a) a detailed plan to increase contributions to the full ADC by a date certain or over a period of time;
- b) reports necessary to determine how the political subdivision will comply with the plan of corrective action; and
- c) any amendment to the funding policy to comply with the plan of corrective action.

### 2. Plan sponsors should share in plan ownership and needed changes.

Plan sponsors are not required to be involved in the funding policy development process. The PRB has continually recommended that funding policies should be established in conjunction with the plan sponsor. Funding policies received from plans that did collaborate with their sponsors included risk-sharing components, such as splitting needed contribution increases and considering benefit changes, ensuring the sponsor shared in the ownership of the plan. Through intensive actuarial reviews, the PRB has also worked with sponsors and plan representatives to assist plans with addressing funding deficiencies, recommending in all 11 intensive reviews that the plan and sponsor collaborate on an appropriate funding policy to prevent further problems.

**Tennessee**. In 2015, Tennessee required sponsors to adopt a funding policy that commits to paying the ADC, either immediately, or through a 5-yr phase-in ending June 30, 2020. PRB staff review found that in practice, most funding policies were jointly developed by the sponsor and the plan's board of trustees. During the 5-yr phase-in period, sponsors that did not make the required increased contributions had to develop and submit a plan of correction stating what prevented their progress and how they would correct it.

**Pennsylvania**. In Pennsylvania, the sponsor is required to pay the ADC (based on a closed, level-dollar 40-year period). If the funded ratio falls below 90%, the sponsor is deemed "financially distressed" and a recovery program is triggered which includes voluntary actions unless the funded ratio is below 70%, at which point mandatory recovery actions apply. These include submitting an improvement plan and aggregating a municipality's several pension plans.

*Michigan*. In 2017, Michigan required the State Treasurer to set uniform actuarial assumptions for local plans and then assesses funding levels based on funded ratio and fiscal stress to cities, using those assumptions (ex: max 7% return assumption). Sponsors of plans deemed underfunded are required to submit a corrective action plan (CAP) to improve funding levels.

### Potential Change to Funding Policy Requirement

<u>2a)</u> Add the sponsor to the funding policy requirement so that both the pension board and plan sponsor have ownership in the plan to achieve full funding rather than only in the remediation plan once funding problems require immediate action. Specifically, require the plan and sponsor to jointly develop the funding policy.

### Potential Changes to FSRP Requirement (addresses Objectives 1 and 2)

<u>2b)</u> Since the sponsor is already part of the FSRP process in Texas, one way to link the two laws and enhance sponsor ownership could be to incorporate the funding policy into the FSRP. For example, if an FSRP were triggered, the plan and sponsor could be required to do two things: adopt a remediation plan (FSRP) and revise the funding policy, together, to ensure both parties are involved in long-term improvement. For FSRP plans, the revised funding policy could have to include certain elements such as a detailed plan to share the cost of unexpected actuarial losses that could derail progress toward the FSRP goal.

<u>2c/</u> Require the sponsor's governing body to adopt the FSRP through resolution to ensure full sponsor involvement and ownership. Both Michigan and Tennessee require plans of corrective action to be adopted by the sponsor's governing body (city council).

### 3. Clarify that funding policies must include actuarial methods that achieve 100% funding.

The PRB Actuarial Committee at its May 7, 2020 meeting discussed how rolling amortization periods were not designed to achieve full funding. Most states and standards-setting bodies listed below under Objective 4 utilize closed amortization approaches.

### 4. Reduce the 40-year amortization period.

A rolling 40-year amortization period threshold is no longer reasonable. The following states and sources require or recommend shorter amortization periods.

**Tennessee.** Statute requires that plans use a closed amortization period  $\leq$  30 years, beginning in 2015 (currently a 25-year amortization period). A level-dollar amortization method must be used beginning on June 15, 2020.

*Michigan.* Requires that plans use a closed < 20-year amortization period, beginning in 2019.

**Pennsylvania.** Requires that plans use a closed ≤ 40-year level-dollar amortization period, beginning in 1998 (currently 18-year amortization period). As of 2011, the following schedule creates amortization layers for all future unfunded actuarially accrued liabilities:

Actuarial Gains/Losses	20 yrs
Change in Assumptions	15 yrs
Local Benefit Changes for Active Employees	10 yrs
Local Benefit Changes for Retired Employees	1 yr

<u>CCA White Paper</u> - recommends a layered, fixed period amortization depending on the source of the UAAL, with a 25-yr max.

<u>SOA Blue Ribbon Panel</u> - recommends gains/losses to be amortized over a period of no more than 15-20 years.

GFOA - recommends using a closed period never to exceed 25 years, but to fall between 15-20 years.

PRB <u>Pension Funding Guidelines</u> - utilize a 30-year threshold, with a preferred period of 10-25 years.

ASOP 4 Second Exposure Draft - states that each amortization base must either have payments that fully pay off the balance within a reasonable timeframe; or reduce the unfunded balance by a reasonable amount each year.

### <u>Potential Change to Funding Policy Requirement</u>

<u>4a)</u> Require funding policies to utilize actuarial methods (amortization policies for ADC plans or ADC benchmarks for fixed-rate plans) that are based on a closed amortization period, and thus, move toward, and ultimately achieve, 100% funding.

### <u>Potential Change to FSRP Requirement</u>

4b) Bring the FSRP trigger in line with PRB Guidelines, other standard-setting bodies, and other states by changing 40 years (11 plans currently subject to FSRP) to:

- 30 years (PRB Guidelines upper bound) 19 additional plans would become subject to FSRP, for a total of 30 plans;
- 25 years (PRB Guidelines target range upper bound) 34 additional plans would become subject to FSRP, for a total of 45 plans; or

• 20 years (within *PRB Guidelines* and GFOA target range, SOA Blue Ribbon Panel and Michigan upper bound) – 51 additional plans would become subject to FSRP, for a total of 62 plans

### 5. Reduce the period between identification of an amortization period beyond the threshold and trigger of an FSRP.

The time period between the first actuarial valuation over the threshold and when the FSRP is triggered can be lengthy. The FSRP requirement is triggered after three consecutive annual AVs, or two consecutive AVs if the systems conduct the valuations every two or three years, which could allow funding problems to grow considerably worse between valuations. The other states with funding remediation processes have immediate triggers.

**Tennessee.** Beginning July 1, 2015, a plan of correction is required as soon as the system is unable to pay its annual funding progress percentage (AFPP), the statutory phase-in mechanism to help sponsors adjust to budgeting for payment of the full ADC.

*Michigan.* A corrective action plan (CAP) is triggered immediately when financial information is submitted to the oversight body showing that the plan is underfunded according to the stated criteria and uniform assumptions.

**Pennsylvania.** Distress levels are determined biennially based on current actuarial information provided to the Auditor General. If the aggregate funded ratio for a municipality's pension plans < 90% for the biennium, it is immediately assigned an appropriate distress level and must take voluntary or required actions.

### <u>Potential Changes to FSRP Requirement</u>

<u>5a)</u> The FSRP requirement is triggered immediately the first time a plan receives an AV that reaches the FSRP threshold, in line with other states and the need for the sponsor and plan to work together quickly to shore up funding levels.

- 40 years: 10 additional plans would become subject to FSRP, for a total of 21 plans;
- 30 years: 23 additional plans would become subject to FSRP, for a total of 34 plans;
- 25 years: 41additional plans would become subject to FSRP, for a total of 52 plans; or
- 20 years: 52 additional plans would become subject to FSRP, for a total of 63 plans

OR

<u>5b)</u> The FSRP requirement is triggered immediately for plans that receive an AV with the amortization period over a higher threshold only; existing law applies to amortization periods over a lower threshold.

For example, if an AV showing an amortization period over 40 is received, the FSRP would be immediately required, given that at higher amortization periods, funding problems can quickly accelerate, as higher amortization periods are much more volatile (i.e., can jump from 40 to infinite over one valuation cycle). For

amortization periods above 25 but not above 40, existing law would continue to apply (the FSRP is triggered after three consecutive annual AVs, or two consecutive AVs if the systems conduct the valuations every two or three years). See plans affected in Appendix A.

OR

<u>5c)</u> The FSRP requirement is triggered immediately for plans that receive an AV with the amortization period over a higher threshold only; for plans reporting amortization periods over a lower threshold, an additional metric would apply to determine FSRP status.

For example, if an AV showing an amortization period over 40 is received, the FSRP would be immediately required. For amortization periods above 25 but not above 40, only plans that also had funded ratios of less than 65% would become subject to the FSRP, as the two factors considered together provide a clearer picture of the severity of funding problems. See plans affected in Appendix A.

Both MI and PA utilize funded ratio as a metric for determining the need for a remediation plan (PA uses funded ratio alone; MI uses funded ratio combined with ADC as a % of sponsor's revenues). Some Texas statutes include triggers for plan modifications based on funded ratio, such as 65% for Houston Firemen's Relief and Retirement Fund and Houston Police Officers Pension System and 60% for Houston Municipal Employees Pension System.

### Additional Considerations

Plans that have made recent funding improvements: Plans that have recently made significant reforms including implementing an ADC or modified-ADC approach based on a closed amortization period in line with PRB Guidelines could still have amortization periods in the FSRP threshold range over a few valuations. As such, consideration should be given to plans with several valuations showing amortization period over the lowered FSRP threshold if their AVs indicate a path towards full funding (i.e. funding according to a closed amortization period that decreases each year).

Threshold vs target: FSRP threshold does not have to be the same period as the target. Plans and their sponsors could be required to formulate an FSRP that targets a lower amortization period than the trigger. For example, the threshold to trigger an FSRP could be the upper bound of the *PRB Guidelines* (30 years), but the FSRP could be required to achieve an amortization period with the preferred target range of 10-25 years.

### 6. Clarify the role of future actions in FSRPs.

Some FSRPs rely on future actions that may or may not happen. Staff seeks clarification as to what extent future actions may be incorporated in FSRPs. For example, can an FSRP include a benefit change that has not yet been voted on by members; feature contribution increases not yet approved by the sponsor; or rely on future increases in active plan population for the existing amortization period calculations?

**Michigan.** The prospective actions listed in a CAP should have a start date assigned, which will indicate when implementation will begin for that action. After approval by the state, the local government has up to 180 days to begin to implement the corrective actions, which is defined as taking measurable action on the steps outlined in the approved corrective action plan. Plans and sponsors are encouraged to begin the process of compiling detailed supporting documentation

to show that they are implementing the corrective action plan and making progress towards the required funding status. If the CAP includes *future funding* to address underfunded status, a resolution or motion approving the additional funding by the governing body should be included.

#### **Potential Changes**

<u>6a)</u> When changes must be made that require significant time to implement or are contingent on a voting process or other approval, require the FSRP to include evidence of intent, such as the following:

- a) a resolution or motion from the sponsor approving additional funding or contribution schedules for contribution increases phased in over time;
- b) draft ballot language and a date the vote will take place.

<u>6b)</u> Clarify that any assumptions used in conjunction with future actions, such as hiring, must be made in accordance with ASOPs.

6c) The plan and sponsor must provide an update to the Board if the future action outlined in the FSRP is not implemented within 6 months.

#### 7. Clarify documentation required to demonstrate that FSRP will achieve the amortization period requirement.

Supporting documentation requirements are unclear. Staff seeks clarification regarding what evidence must be provided to show that the FSRP meets the amortization period requirement. For example, does an analysis of individual pieces of the changes and assurance from the system and/or plan actuary that the combined impact will achieve the necessary amortization period suffice, or must the FSRP contain an analysis of the combined impact of all changes? The other states have clearer, more transparent requirements for remediation plan documentation.

**Tennessee.** Plans of corrective action must demonstrate how future actions will be achieved and must specifically contain:

- a) a detailed plan to increase contributions to the full ADC by a date certain or over a period of time;
- b) reports necessary to determine how the political subdivision will comply with the plan of corrective action; and
- c) any amendment to the funding policy to comply with the plan of corrective action.

In addition to the information provided in the plan of corrective action, the sponsor is statutorily required to promptly provide any additional documentation the State Treasurer may request, including, but not limited to, financial data and actuarial reports.

**Michigan.** The corrective action plan (CAP) should include documentation that details how the plan would be implemented to adequately address the underfunded status. When submitting the CAP, the sponsor must provide proof that the city council approved the CAP. In addition, the documentation should include:

- a) An actuarial projection, an actuarial valuation, or an internally developed analysis (in accordance with GASB/ASOPs) which illustrates how and when the required funded ratio will be reached. The projection should include, but is not limited to, for the duration of the CAP: the assets, liabilities, funded ratios, normal cost payments, actuarial assumptions, and retiree benefit payments, using reasonable calculations.
- b) Documentation of commitment to additional payments in future years (resolution or ordinance)
- c) Other documentation as deemed necessary to support the CAP

#### Potential Change

<u>7a)</u> FSRPs must provide an aggregate analysis of multiple changes specifically showing how the combined impact of the changes in the FSRP would result in meeting the statutory requirements. The analysis must include an actuarial projection that shows the unfunded liability decreasing to zero within the required time period. See Sample Massachusetts Funding Schedule in Appendix C.

#### 8. Identify consequences that should apply when an FSRP does not result in statutory compliance. Perpetual revised FSRPs should be discouraged.

Preparing a revised FSRP does not ensure a plan is back on track towards the original FSRP goal. Statute calls for a revised FSRP if the original is not adhered to. To date, several systems have been required to formulate revised FSRPs, and some are on their second revised FSRP. There are no consequences in place to prevent perpetual revised FSRPs, which means a plan may never achieve the minimum amortization period threshold and may have no incentive to make meaningful changes in the original FSRP.

#### Potential Change

<u>8a)</u> If the original FSRP will no longer achieve the statutory amortization period requirement, the plan and sponsor should become subject to stricter requirements for funding restoration.

#### 9. Clarify effective dates and required documentation for FSRP triggers and progress.

Progress updates and criteria for determining adherence to the FSRP require clarification. Statute requires systems and sponsors that formulate an FSRP to report "any updates of progress made by the entities toward improved actuarial soundness" to the PRB every two years. A revised FSRP must be formulated if the "system's amortization period exceeds 40 years and the previously formulated FSRP has not been adhered to." Staff seeks clarification as to what the 2-year progress updates should include and what indicates the prior FSRP has been "adhered to." What evidence should the system provide to illustrate that the required 40-year amortization period is still expected to be achieved by the original deadline? Does a plan's actuarial valuation provide enough evidence?

The other states have more robust, transparent monitoring processes and requirements for documentation of remediation plan updates.

*Michigan.* To ensure that the local governments are reaching the goals outlined in their CAPs, the CAP monitoring process is intended to provide greater scrutiny and validation of the components and details. This process will ensure that local governments are taking the necessary steps to address their underfunded status.

**Timeline**: Local governments must begin implementation within 180 days of CAP approval and will be monitored for substantial compliance with the Act every two years.

**CAP Changes**: If at any time after a CAP has been approved, a local government determines its previous submission is no longer substantially in effect, the local government may file an updated CAP for review by the Board.

**CAP Monitoring Criteria:** (see Monitoring Criteria in Appendix D)

**Compliance Certification Process:** (see Application for Certification of Compliance Appendix E)

#### **Potential Change**

<u>9a)</u> Updates should be provided on a PRB form and signed by the sponsor and/or adopted by city council. Updates should include an actuarial projection that shows the unfunded liability decreasing to zero within the required time period. Statute should clarify that a regular, annual actuarial valuation does not qualify as an FSRP update.

#### 10. Clarify deadline for submittal of FSRPs.

FSRP deadlines do not prevent substantial delays or speak to the time period over which a revised FSRP must achieve results. Although the bill author clarified the deadline to formulate an FSRP is 6 months from the adoption of the AV that triggers the formulation requirement, this deadline is not currently in statute. Plans and sponsors subject to the FSRP have missed the 6-month FSRP formulation deadline, sometimes by several years. Statute does not address how to handle late FSRPs, which requires striking a balance between allowing time for the development of a thorough joint plan but also preventing extremely delayed FSRPs. Also, when does the 10-year period for achieving results begin in instances when an FSRP is not adopted within 6 months of the triggering AV? Staff seeks clarification on whether the 10-year deadline resets if a system and its sponsor must formulate a revised FSRP.

Understandably, sometimes the plan and sponsor need more time to finalize their FSRP. Michigan can provide a model for how situations requiring more time can be handled.

*Michigan.* The CAP must be submitted for approval 180 days after being determined underfunded. The sponsor may receive a 45-day extension if it submits a reasonable draft and requests an extension.

After approval, the sponsor has 180 days to implement the plan and is subject to ongoing monitoring by the oversight body, who determines whether they are compliant with the Act or not. The sponsor will be sent a CAP monitoring form 1.5 years after the approval of the CAP. Thereafter, that form will be sent to them every 2 years to certify their compliance. If they are non-compliant, they have 60 days to address the situation.

A determination of noncompliance may have impacts on a local government that include, but are not limited to:

- The local government will be listed on the Michigan Department of Treasury website as noncompliant;
- Pursuant to Section 518 (5)(i) of Public Act 34 of 2001, the local government is not eligible to issue a municipal security for the purpose of funding defined benefit pension retirement plans or postemployment health care plans;
- Potential legislative changes could have additional impacts;
- Other impacts due to local press or constituent pressure.

#### Potential Change

<u>10a</u>) Statute should be updated to include the 6 month deadline and to provide for an extension process that the PRB may grant if a reasonable draft is submitted with an extension request, so that the PRB, Legislature, and other stakeholders could be made aware of the plan and sponsor's intended plan of action. If the allowed number of extensions is met and the FSRP is still not submitted or accepted by the PRB, the plan and sponsor will be noncompliant with statute.

Appendix

Appendix A: (Objective 5)
5b – Plans subject to FSRP immediately with 40 year am period, or after 2 or 3 valuations with amortization period between 25 and 40 years

Plan Name	Contribution Type	Valuation Date	Current Val Date Am Period	1-yr Prior Val Date Am Period	2-yrs Prior Val Date Am Period	FSRP Required
Atlanta Firemen's Relief & Retirement Fund	Fixed	12/31/2018	Infinite	N/A	N/A	Yes
Austin Police Retirement System	Fixed	12/31/2018	Infinite	N/A	N/A	Yes
Conroe Fire Fighters' Retirement Fund	Fixed	12/31/2018	Infinite	N/A	N/A	Yes
McAllen Firemen's Relief & Retirement Fund	Fixed	9/30/2018	Infinite	N/A	N/A	Yes
Lubbock Fire Pension Fund	Other	12/31/2018	52.9	N/A	N/A	Yes
Cleburne Firemen's Relief & Retirement Fund	Other	12/31/2018	48.6	N/A	N/A	Yes
Plainview Firemen's Relief & Retirement Fund	Fixed	12/31/2017	44.8	N/A	N/A	Yes
Amarillo Firemen's Relief & Retirement Fund	Fixed	12/31/2017	43.5	N/A	N/A	Yes
Laredo Firefighters Retirement System	Fixed	9/30/2018	43.0	N/A	N/A	Yes
Texas City Firemen's Relief & Retirement Fund	Fixed	12/31/2018	41.1	N/A	N/A	Yes
Killeen Firemen's Relief & Retirement Fund	Fixed	9/30/2018	39.8	N/A	22.8	No
Brownwood Firemen's Relief & Retirement Fund	Fixed	12/31/2017	38.6	N/A	36.1	Yes
Big Spring Firemen's Relief & Retirement Fund	Fixed	1/1/2019	38.3	N/A	36.2	Yes
Dallas Police & Fire Pension System-Combined Plan	Other	1/1/2019	38.0	45.0	44.0	Yes
Harlingen Firemen's Relief & Retirement Fund	Fixed	9/30/2019	38.0	N/A	59.1	Yes
Paris Firefighters' Relief & Retirement Fund	Fixed	12/31/2018	32.1	N/A	41.9	Yes
Austin Employees' Retirement System	Fixed	12/31/2018	32.0	30	31.0	Yes
Abilene Firemen's Relief & Retirement Fund	Fixed	10/1/2017	31.9	N/A	31.5	Yes
San Angelo Firemen's Relief & Retirement Fund	Fixed	12/31/2017	31.3	N/A	38.5	Yes
Lufkin Firemen's Relief & Retirement Fund	Fixed	12/31/2018	30.7	N/A	33.1	Yes
El Paso Police Pension Fund	Fixed	1/1/2018	30.5	N/A	33.0	Yes
Port of Houston Authority Retirement Plan	Actuarial	8/1/2019	30.0	30.0	30.0	Yes
Galveston Employees' Retirement Plan for Police	Actuarial	1/1/2019	30.0	35.5	48.7	Yes
Fort Worth Employees' Retirement Fund Staff Plan	Fixed	12/31/2018	30.0	32.0	27.0	Yes
Corpus Christi Fire Fighters' Retirement System	Fixed	12/31/2018	29.8	N/A	23.1	No

Plan Name	Contribution Type	Valuation Date	Current Val Date Am Period	1-yr Prior Val Date Am Period	2-yrs Prior Val Date Am Period	FSRP Required
Corsicana Firemen's Relief & Retirement Fund	Fixed	12/31/2018	28.9	N/A	28.9	Yes
University Park Firemen's Relief & Retirement Fund	Actuarial	12/31/2018	28.8	N/A	100.0	Yes
Temple Firemen's Relief & Retirement Fund	Fixed	9/30/2018	28.6	N/A	28.4	Yes
Houston Firefighters' Relief & Retirement Fund	Actuarial	7/1/2019	28.0	29.0	30.0	Yes
El Paso Firemen's Pension Fund	Fixed	1/1/2018	28.0	N/A	26.0	Yes
Houston Municipal Employees Pension System	Actuarial	7/1/2019	28.0	29.0	30.0	Yes
Houston Police Officers' Pension System	Actuarial	7/1/2019	28.0	29.0	30.0	Yes
Sweetwater Firemen's Relief & Retirement Fund	Fixed	12/31/2016	27.5	N/A	58.8	Yes
Galveston Firefighter's Relief & Retirement Fund	Fixed	12/31/2017	26.8	100.0	47.0	Yes
University Health System Pension Plan	Actuarial	1/1/2018	26.0	27.0	28.0	Yes
Tyler Firefighters' Relief & Retirement Fund	Fixed	12/31/2017	25.5	N/A	21.6	No
Dallas Co. Hospital Dist. Retirement Income Plan	Actuarial	1/1/2019	25.0	26.0	27.0	Yes

Appendix A: (Objective 5)
5c - Plans subject to FSRP immediately with 40 year am period, or with amortization period between 25 and 40 years and funded ratio < 65%

Plan Name	Contribution Type	Valuation Date	Am Period	Funded Ratio %	FSRP Required
Atlanta Firemen's Relief & Retirement Fund	Fixed	12/31/2018	Infinite	N/A	Yes
Austin Police Retirement System	Fixed	12/31/2018	Infinite	N/A	Yes
Conroe Fire Fighters' Retirement Fund	Fixed	12/31/2018	Infinite	N/A	Yes
McAllen Firemen's Relief & Retirement Fund	Fixed	9/30/2018	Infinite	N/A	Yes
Lubbock Fire Pension Fund	Other	12/31/2018	52.9	N/A	Yes
Cleburne Firemen's Relief & Retirement Fund	Other	12/31/2018	48.6	N/A	Yes
Plainview Firemen's Relief & Retirement Fund	Fixed	12/31/2017	44.8	N/A	Yes
Amarillo Firemen's Relief & Retirement Fund	Fixed	12/31/2017	43.5	N/A	Yes
Laredo Firefighters Retirement System	Fixed	9/30/2018	43.0	N/A	Yes
Texas City Firemen's Relief & Retirement Fund	Fixed	12/31/2018	41.1	N/A	Yes
Killeen Firemen's Relief & Retirement Fund	Fixed	9/30/2018	39.8	69.4	No
Brownwood Firemen's Relief & Retirement Fund	Fixed	12/31/2017	38.6	45.0	Yes
Big Spring Firemen's Relief & Retirement Fund	Fixed	1/1/2019	38.3	53.2	Yes
Dallas Police & Fire Pension System-Combined Plan	Other	1/1/2019	38.0	48.1	Yes
Harlingen Firemen's Relief & Retirement Fund	Fixed	9/30/2019	38.0	64.5	Yes
Paris Firefighters' Relief & Retirement Fund	Fixed	12/31/2018	32.1	30.5	Yes
Austin Employees' Retirement System	Fixed	12/31/2018	32.0	67.6	No
Abilene Firemen's Relief & Retirement Fund	Fixed	10/1/2017	31.9	55.7	Yes
San Angelo Firemen's Relief & Retirement Fund	Fixed	12/31/2017	31.3	64.9	Yes
Lufkin Firemen's Relief & Retirement Fund	Fixed	12/31/2018	30.7	48.8	Yes
El Paso Police Pension Fund	Fixed	1/1/2018	30.5	78.3	No
Port of Houston Authority Retirement Plan	Actuarial	8/1/2019	30.0	92.9	No
Galveston Employees' Retirement Plan for Police	Actuarial	1/1/2019	30.0	34.0	Yes
Fort Worth Employees' Retirement Fund Staff Plan	Fixed	12/31/2018	30.0	68.9	No
Corpus Christi Fire Fighters' Retirement System	Fixed	12/31/2018	29.8	60.2	Yes

Plan Name	Contribution Type	Valuation Date	Am Period	Funded Ratio %	FSRP Required
Corsicana Firemen's Relief & Retirement Fund	Fixed	12/31/2018	28.9	50.7	Yes
University Park Firemen's Relief & Retirement Fund	Actuarial	12/31/2018	28.8	43.4	Yes
Temple Firemen's Relief & Retirement Fund	Fixed	9/30/2018	28.6	73.0	No
Houston Firefighters' Relief & Retirement Fund	Actuarial	7/1/2019	28.0	82.9	No
El Paso Firemen's Pension Fund	Fixed	1/1/2018	28.0	77.8	No
Houston Municipal Employees Pension System	Actuarial	7/1/2019	28.0	59.3	Yes
Houston Police Officers' Pension System	Actuarial	7/1/2019	28.0	81.7	No
Sweetwater Firemen's Relief & Retirement Fund	Fixed	12/31/2016	27.5	70.0	No
Galveston Firefighter's Relief & Retirement Fund	Fixed	12/31/2017	26.8	69.2	No
University Health System Pension Plan	Actuarial	1/1/2018	26.0	70.7	No
Tyler Firefighters' Relief & Retirement Fund	Fixed	12/31/2017	25.5	76.2	No
Dallas Co. Hospital Dist. Retirement Income Plan	Actuarial	1/1/2019	25.0	71.5	No

#### Appendix B. (Objective 6) Michigan Corrective Action Plan Components

A corrective action plan may include, but is not limited to, any of the following:

#### 1. Plan Funding

Funding options to sustain legacy costs and future retirement benefits:

- Fund the actuarially determined contribution (ADC), which pays the expected cost of all promised benefits for both pension and retirement health care systems (i.e. fund the annual service cost of active employee benefits plus any unfunded actuarial accrued liabilities (UAAL))
- Add funding to the annual budget in addition to the ADC, e.g. placing additional contributions into a surplus fund. This practice will reduce the unfunded liabilities and allow for potential increased investment income
- Transfer funds from reserves to increase retirement assets, which will reduce the unfunded liabilities and allow for potential increased investment income
- Dedicate additional revenue sources to pay for retirement benefits (e.g. Public Act 345 of 1937 millage, increased operating millage, other special millage)
- Add or increase employee contributions
- Implement a closed amortization period of no more than twenty years
- Calculate amortization payments based on a "level-dollar" amortization schedule

#### 2. Modern Plan Design

- The goal of a retirement system is its ability to attract and retain a talented workforce while providing a secure retirement for beneficiaries. To accomplish this goal, local governments can develop modern plan solutions that can adapt alongside a changing work environment.
- Modern plan design options for defined benefit pension systems:
  - Implement a "bridged multiplier" for active employees
  - Implement a bridged cost of living adjustment (COLA)
  - Implement final average compensation (FAC) standards
  - Evaluate the affordability of the plan and the need to reduce or eliminate future defined benefit accruals by changing to a defined contribution plan or hybrid plan for:
    - Active employees
    - New hires
  - Limit defined benefit options for newly hired employees, including multipliers, cost of living increases, retirement age, and benefit vesting periods

- Evaluate the financial implications of any early retirement incentive buyouts
- Limit the dual payment of both a pension and a salary to any employee who is rehired after retirement by the same employer, in accordance with IRS regulations

#### 3. Effective Plan Administration

- Local governments should use a variety of options to ensure that their retirement benefits are being administered as effectively as possible
- Administration options to maintain fiscally stable retirement systems:
  - Work with system providers to determine appropriate solutions
  - Require all retirement systems to be 100 percent funded before any benefit increases can take effect
  - Obtain an annual actuarial valuation for both pension and retirement health care systems with greater than 50 members
  - Ensure proper assumptions are utilized according to Actuarial Standards of Practice
  - Require an experience study by the plan's actuary at least every five years
  - Require a peer actuarial audit to be conducted by an actuary that is not the plan actuary or change actuaries at least every eight years
  - Provide projections within the annual valuations for ADCs, retirement benefit payments, assets, and liabilities until the system is at least 100% funded
  - Calculate ADCs in accordance with Treasury's Numbered Letter 2018-3, the sum of the normal cost payment and the annual amortization payment for past service costs to fund the unfunded actuarial accrued liability
  - Apply a blended discount rate that reflects a 20-year, tax-exempt general obligation municipal bond index rate, to the extent that system assets are not sufficient to make projected benefit payments
  - Use asset smoothing in the valuation to reduce the impact of significant investment losses on ADC amounts
  - Consult with the system provider about diversifying the investment portfolio
  - Ensure management and oversight boards have proper experience, skills, and training to administer retirement systems
- Create a retirement benefits committee consisting of all stakeholders (employees, retirees, and employer representation) to evaluate benefit options
- If sustainable, and a compelling reason is provided as determined by the Board, enterprise funds may be utilized to support applicable retirement costs to offset pressure on the governmental fund

Source: https://www.michigan.gov/documents/treasury/MSB Best Practices and Strategies 661181 7.pdf

#### Appendix C. (Objective 7) Sample Massachusetts Funding Schedule

## Plymouth Retirement System January 1, 2019 Actuarial Valuation

8.14% Total Increasing until FY34 with a final amortization payment in FY35

Fiscal	Normal	Net	Amort. of	Amort. of	Amort. of	Total	Unfunded	% Increase in
Year	Cost	3(8)(c)	<u>UAL</u>	<b>2002 ERIP</b>	<b>2003 ERIP</b>	Cost	Act. Liab.	Total Cost
2020	5,170,751	75,000	8,810,700	6,344	560,251	14,623,047	183,003,862	
2021	5,403,435	75,000	10,328,314	6,614		15,813,363	185,780,426	8.14%
2022	5,646,590	75,000	11,372,086	6,895		17,100,571	187,726,683	8.14%
2023	5,900,686	75,000	12,509,683	7,188		18,492,557	188,692,042	8.14%
2024	6,166,217	75,000	13,749,141	7,494		19,997,851	188,507,432	8.14%
2025	6,443,697	75,000	15,099,167	7,812	•	21,625,677	186,983,354	8.14%
2026	6,733,663	75,000	16,569,199	8,144		23,386,007	183,907,721	8.14%
2027	7,036,678	75,000	18,169,459	8,490 -		25,289,628	179,043,504	8.14%
2028	7,353,329	75,000	19,911,023	8,851		27,348,203	172,126,143	8.14%
2029	7,684,228	75,000	21,815,119			29,574,347	162,860,707	8.14%
2030	8,030,019	75,000	23,876,680			31,981,699	150,918,780	8.14%
2031	8,391,370	75,000	26,118,640			34,585,009	. 135,935,047	8.14%
2032	. 8,768,981	75,000	28,556,248			37,400,229	117,503,556	8.14%
2033	9,163,585	75,000 -	31,206,022			40,444,607	95,173,620	8.14%
2034	9,575,947	75,000	34,085,852			43,736,798	68,445,330	8.14%
2035	10,006,864	75,000	36,764,642			46,846,506	36,764,642	7.11%
2036	10,457,173	75,000				10,532,173	0	-77.52% ·

Appropriation payments assumed to be made July 1 of each fiscal year. Normal cost includes expenses of \$1,100,000 and is assumed to increase 4.5% per year. FY20 appropriation maintained from the current schedule.

#### Appendix D. (Objective 8) Michigan Corrective Action Plan Monitoring Criteria

#### **Proposed Municipal Stability Board Corrective Action Plan Monitoring Criteria**

To assist local governments in preparing for the statutorily required monitoring process for their approved CAP(s), the Board is publishing CAP monitoring approval criteria. The Board will consider this criteria when monitoring corrective action plan implementation and will determine if the local government has made funding progress as outlined in the CAP. Local governments are encouraged to continue to use a balanced approach to address their underfunded status by using one or more of the best practice principles published by the Board. Additionally, local governments may use CAP monitoring approval criteria to ensure their approved corrective actions are compliant with the Act and the Board's requirements.

#### **CAP Monitoring Criteria:**

#### 1. Underfunded Status

• Using detailed supporting documentation, is the local government addressing their underfunded status in the same timeframe or less, as the approved CAP?

#### Supporting documentation

- The Board recommends that supporting documentation show a projection for the duration of the CAP that includes, but is not limited to, assets, liabilities, funded ratios, normal cost payments (if applicable), actuarial assumptions, and retiree benefit payments, using reasonable calculations
- If underfunded status is not being addressed in a timeframe less than or equal to the approved CAP timeframe:
  - If a corrective action plan by a local government is not addressing its underfunded status within the original approval criteria timeframe (20 years for pension or 30 years for OPEB, for severely underfunded systems), the local government may be found noncompliant with the Board's CAP monitoring criteria
  - As general guidance, a local government with a severely underfunded pension system is 45% funded or less. A local government with a severely underfunded retirement health care system (OPEB) is 25% or less

#### 2. Substantial Changes

- A local government must certify that the corrective action plan remains substantially the same as the original approved submission.
  - If a local government cannot certify that its plan is substantially the same as the approved submission, the local government must provide the following with its CAP Monitoring Form:
    - All proposed actions the local government was able to implement
    - All proposed actions the local government was unable to implement.
    - Any actions in addition to the original CAP
      - •Governing body approval is required for additional actions
- The Board will use the CAP criteria from the initial CAP approval to approve or disapprove CAP changes, thereby certifying compliance with the Act or finding the local government in noncompliance.

#### 3. Sustainability

- Local governments must certify sustainability
  - The local government must certify the plan is still affordable, through detailed supporting documentation. This includes
    documentation that the local government's retirement costs are not increasing at a rate greater than what can be afforded through
    reasonable revenue growth. Retirement costs also must not have substantially increased above the original projection in their
    approved CAP.
    - Local governments with a combined payment that increases by greater than 5% annually as a percentage of governmental fund revenues may be determined to be unsustainable by the Board.
      - The Board recommends that supporting documentation include a projection of all annual retirement payments (Pension ADC(s) +OPEB Benefit Payments(s)+all additional contributions) as a percentage of projected governmental fund revenues for the ensuing 5 years. A local government should project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation. This analysis may include projected enterprise funds allocated specifically to pay retirement costs.
  - The local government must confirm that corrective actions listed in the CAP allow for the local government to make, at a minimum, the actuarially determined contribution (ADC) payment for pension plans and/or the retiree health care premium payment, as well as the normal cost payment for new hi res for retirement health benefits (Sec. 4(1) of the Act,MCL 38.2804). This confirms that local governments have linked long-term future payment expectations with revenue expectations and have concluded that those payments are sustainable now and into the future, without additional changes to their CAP.
- If the local government cannot document that the CAP will continue to be sustainable or the Board determines that the plan may no longer be sustainable:
  - The Board may certify compliance; however, the Board will note that the local government is not on track, as its annual payments have significantly increased. Prior to the next monitoring period, the local government must address the change in affordability, or it may be determined noncompliant.

Source: https://www.michigan.gov/documents/treasury/Corrective Action Plan Monitoring Policies and Procedures vf 666838 7.pdf

Appendix E. (Objective 8) Michigan
Corrective Action Plan Monitoring: Application for Certification of Compliance

#### Protecting Local Government Retirement and Benefits Act Corrective Action Plan Monitoring: Application for Certification of Compliance

Issued under the authority of Public Act 202 of 2017

LOCAL GOVERNMENT INFORMATION							
Local Government Name:	Six-Digit Muni Code:						
Defined Benefit Retirement System Name:							
System Type: Pension Retirement Health Care (OPEB)							
Contact Name (Administrative Officer):							
Title (if not Administrative Officer):	Telephone:						
Email (Communication will be sent here):							
Fiscal Year System was Determined to be Underfunded:							
System Type: Pension Retirement Health Care (OPEB)  Contact Name (Administrative Officer):  Title (if not Administrative Officer):	Telephone:						

#### I. GENERAL INFORMATION

**Corrective Action Plan Monitoring:** The Municipal Stability Board (the Board) shall monitor each underfunded local government's compliance with Public Act 202 of 2017 (the Act) and any approved corrective action plan (CAP). The Board shall adopt a schedule, not less than every 2 years, to certify that the underfunded local government is in substantial compliance with the Act.

**Due Date**: The local government has **90 days from the date the CAP Monitoring Form is sent** to return the form to the Board.

**Filing:** The submitted monitoring form must demonstrate through distinct supporting documentation that the local government is addressing its underfunded status in accordance with its CAP and the Act. Consistent with the Board's best practices document, supporting documentation utilized should include a projection within their annual valuation that includes, but is not limited to, actuarially determined contributions (ADC), retirement benefit payments, assets, liabilities, and discount rates.

The completed monitoring form must be submitted via email to Treasury at LocalRetirementReporting@michigan.gov for review by the Board. If you have CAPs for multiple systems, you are required to complete separate monitoring forms and send a separate email for each CAP. Please attach each plan as a separate PDF document in addition to all applicable supporting documentation.

The subject line of each email should be in the following format: Corrective Action Plan Monitoring, Local Government Name, Retirement System Name, System Type (e.g. Corrective Action Plan Monitoring, City of Lansing, Employee Retirement System, Pension). Treasury will send an automatic reply acknowledging receipt of the email. Your individual email settings must allow for receipt of Treasury's automatic reply. This will be the only notification confirming receipt of the form.

**Municipal Stability Board:** The Board shall certify and vote whether each local government is compliant with their CAP and the Act. If a CAP is certified as compliant, the Board will continue to monitor the CAP and review the local government's compliance with the Act not less than every two years.

**Review Process:** After receiving your submitted CAP monitoring form, Treasury will provide it to the Board to review and certify the local government for compliance with the Act.

**CAP Monitoring Approval Criteria**: A CAP may be certified as compliant by meeting the Board approved <u>CAP monitoring criteria</u>. In general, certification of compliance by the Board will occur if a local government is able to demonstrate through distinct supporting documentation that the CAP addresses:

- 1) Underfunded Status: The local government continues to address underfunded status in a reasonable timeframe (60% funded for pension systems or 40% funded for OPEB systems OR; if the local government is a city, village, township, or county, the ADC as a percentage of governmental fund revenues is less than 10% for pensions or 12% for OPEB);
- 2) **Substantial Changes:** The actions documented in the CAP remain substantially the same, OR alternative actions have been implemented to address underfunded status;
- 3) **Sustainability:** The local government and the Board certify that the projected payments remain sustainable and affordable both now and into the future.

**Certification of Compliance:** Following a review of the monitoring process for each CAP, the Board will certify a local government as one of the following:

- Compliant: A local government certified as compliant has met all published criteria from the Board.
- Complaint with Conditions: A local government certified as compliant with conditions has met the published criteria, but the Board has determined that the local government's plan(s) may not be sustainable or the Board is unable to reasonably confirm future sustainability. With this certification, the local government will have until the next monitoring period to address the stated concerns regarding the plan(s).
- Noncompliant: A local government certified as noncompliant failed to meet one or more of the Board's published criteria for monitoring certification of compliance or failed to file the monitoring form. If voted noncompliant, the Board shall notify the local government within 15 days, detailing the reasons for the determination for noncompliance. The local government has 60 days to address the determination of noncompliance.

#### 2. UNDERFUNDED STATUS CERTIFICATION

Previously, local governments demonstrated that they would be addressing their underfunded status within a reasonable timeframe in accordance with the Board's <u>Corrective Action Plan Development: Best Practices and Strategies</u> guide. The purpose of this section is for the local government to certify that their plan is still addressing its underfunded status within this approved timeframe.

#### Please check the applicable answer:

۱.	Referencing supporting documentation, is the local government addressing its underfunded status in the same timeframe or less than the CAP?					
	0	Yes, we are addressing underfunded status by fiscal year	as originally approved.			
	0	No, underfunded status will be now be addressed by fiscal year	, which is within			
		the Board's required timeframe.				
		Required timeframe: As general guidance, a local government with a sever	ely underfunded pension			
		system (45% funded or less) should reach a funded ratio of 60% within 20 ye	ears of the original			
		determination of underfunded status. A local government with a severely u	nderfunded retirement			
		health care system (25% funded or less) should reach a funded ratio of 40%	within 30 years of the			

If no, provide additional explanation:

original determination of underfunded status.

#### 3. SUBSTANTIAL CHANGES CERTIFICATION

The Board recognizes that as a local government implements the prospective actions in their CAP, specific solutions may need to be adjusted to continue to address its underfunded status. This section asks the local government to certify that the corrective actions documented in the plan to address underfunded status remain substantially the same.

#### Please check the applicable answer:

Does the CAP remain substantially th	same as the originall	y approved submission?
--------------------------------------	-----------------------	------------------------

O Yes

O **No** (If no, please complete a revised <u>Form 5597</u> for OPEB or <u>Form 5598</u> for pension and attach to this form)

#### Please check all that apply:

Actions Implemented from CAP – What actions included in the CAP has the local government implemented?

**Sample Statement**: In **June 2019**, our local government began making additional payments of \$100,000 per year above its ADC to the **General Employees' Retirement System**, as stated in our CAP. Page **8** of our actuarial valuation (attachment 2a) shows our pension will be **62%** funded by **fiscal year 2028**.

**Actions Not Implemented from CAP** – What corrective actions has the local government failed to implement since the plan was approved?

**Sample Statement**: In the **June 2019** contract negotiations, our local government sought to lower the system's multiplier for current employees from 2.5X to 2X for the **General Employees' Retirement System**. We were able to negotiate to a 2.25X multiplier. On page **8** of our actuarial valuation (attachment 2a), it shows we will be **62%** funded by **fiscal year 2028 instead of 2024**, as outlined in our CAP. The revised fiscal year remains within the Board's required timeline.

#### <Insert User Entry Box>

Additional Actions Approved – What additional actions has the local government implemented or planned to implement to supplement the CAP since the plan was originally approved? (Provide proof of governing body approval for all additional actions)

**Sample Statement:** Since our local government was unable to lower the multiplier to 2X as outlined in our CAP, we implemented additional actions to address our underfunded status within the Board's required timeframe. Beginning in **fiscal year 2020**, we will begin amortizing the unfunded portion of the pension liability using a **level-dollar amortization method over a closed period of 10 years**. This will allow the retirement system to reach a funded status of **62**% by fiscal year **2028** as shown on page 8 of the actuarial analysis (attachment 2a).

#### <Insert User Entry Box>

	Т	MI	ATIC			OITA	1OIT	AOITA	AOITA	AOITA	AOITA	AOITA	MOITA	MOITA	MOITA
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The local government must certify the plan is still affordable through detailed supporting documentation. This includes documentation that the local government's retirement costs are not increasing at a rate greater than what can be afforded through reasonable revenue growth. Retirement costs also must not have substantially increased above the original projection in the CAP.

The Board recommends that supporting documentation include a projection of all annual retirement payments (Pension ADC(s) + OPEB Benefit Payment(s) + all additional contributions) as a percentage of projected governmental

fund revenues over the next five years. A local government should project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation. This analysis may include projected enterprise funds specifically allocated to pay retirement costs.
What is the highest combined annual retirement payment as a percentage of your projected governmental revenues over the next five fiscal years? ( <a href="Examples">Examples</a> )  Fiscal year:
I. Total pension ADC(s):
2. Total OPEB benefit payment(s):
3. Total additional contributions for pension:
4. Total additional contributions for OPEB:
5. Total governmental fund revenues:
6. Enterprise funds used to pay retirement costs (if applicable):
<b>Total percentage</b> [(Payments #I-4)/(Revenues #5-6)]:
Do the projected annual payments increase by an amount greater than an average of 5% per year over the next five fiscal years?
<ul><li>Yes (Explain and list actions implemented or planned to implement to address increased payments)</li><li>No</li></ul>
<insert box="" entry="" user=""></insert>
Utilizing a projection of all annual retirement payments, do the approved corrective actions listed in this plan allow for the local government to continue to make, at a minimum, the ADC payment for the defined benefit pension system(s) and/or any applicable statutorily required payments for retirement health benefit system(s), according to your long-term budget forecast? Note: For retirement health benefit systems, local governments are required to make all retiree premium payments, as well as any applicable normal cost payments for employees first hired after June 30, 2018 in accordance with Section 4(1) of Public Act 202 of 2017.
<ul> <li>Yes</li> <li>No (Explain and list actions implemented or planned to implement to address increased payments)</li> </ul>

#### 5. REQUIRED DOCUMENTATION

Documentation should be attached as a PDF with this monitoring form. The documentation should detail and confirm the claims made in this document regarding the CAP that is being implemented to adequately address the local government's underfunded status. Please check all documents that are included as part of this form and attach in successive order as provided below. When attaching documents, please use the naming convention below:

Na	ming Convention	Type of Document				
	Attachment – I	(Required) This CAP monitoring form;				
	Attachment – 2a	(Required) An actuarial projection, an actuarial valuation, or an internally developed analysis (in accordance with GASB and/or actuarial standards of practice), which illustrates how and when the local government will reach the Act's required funded ratio. Or, if the local government is a city, village, township, or county, how and when the ADC as a percentage of governmental revenues will be less than the Act's requirements. The Board recommends that supporting documentation show a projection for the duration of the CAP that includes, but is not limited to, assets, liabilities, funded ratios, normal cost payments (if applicable), actuarial assumptions, and retiree benefit payments, using reasonable calculations;				
	Attachment – 2b	(Required) An actuarial projection, an actuarial valuation, or an internally developed analysis (in accordance with GASB and/or actuarial standards of practice), which projects all annual retirement payments (Pension ADC(s) + OPEB Benefit Payments(s) + all additional contributions) as a percentage of projected governmental fund revenues over the next five fiscal years. A local government should project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation. This analysis may include projected enterprise funds specifically allocated to pay retirement costs;				
	Attachment – 3	(Required if applicable) Documentation from the governing body approving additional corrective actions including documentation of commitment to additional payments or actions not previously included in the CAP (e.g. resolution, ordinance);				
	Attachment – 4	(Required if applicable) In the event that the previous plan is no longer substantially in effect, a separate CAP to address its underfunded status which includes documentation of prior actions, prospective actions, governing body approval, and the positive impact on the system's funded ratio;				
	Attachment – 5	Other documentation not categorized above.				

do		criteria listed below have been satisfied when submitting this found in the Corrective Action Plan Monitoring: Policy and
C	AP Monitoring Criteria	Description
	Underfunded Status	The local government certifies that there is adequate supporting documentation showing that the CAP will continue to address the local government's underfunded status in a reasonable timeframe;
	Substantial Changes	The local government certifies that the corrective actions documented in the CAP remain substantially the same OR; the local government has implemented or planned to implement additional actions to continue to address their underfunded status;
	Sustainability	The CAP continues to allow the local government to make all required annual retirement payments, without increasing to a level that is unsustainable.
7.	LOCAL GOVERNMENT'S ADMINISTI PLAN MONITORING FORM	RATIVE OFFICER APPROVAL OF CORRECTIVE ACTION
		administrative officer (Ex. City/Township Manager, Executive Director, approve this Corrective Action Plan Monitoring: ontinue to implement the actions of the CAP.
	onfirm to the best of my knowledge that becau tements will occur:	use of the actions referenced within this form, one of the following
	The	(insert retirement system name) will achieve a funded status
	(60% for pension or 40% for OPEB) by fiscal documentation listed in Section 5.	year as demonstrated by required supporting
OF	R, if the local government is a city, village	e, township, or county:
	governmental fund revenues will be less than	etirement health benefit (OPEB) systems as a percentage of the Act's underfunded status threshold (10% for pension or demonstrated by required supporting documentation listed in Section 5
Sig	nature: <b><insert signature=""></insert></b>	Date: <insert date=""></insert>

6. CORRECTIVE ACTION PLAN CRITERIA



# Funding Policy and Funding Restoration Plan Requirements in Other States

August 6, 2020



## Tennessee, Michigan, Pennsylvania Summary of Funding Provisions

Tennessee	Michigan	Pennsylvania
In 2015, TN required sponsors to adopt a funding policy that commits to paying the ADC, either immediately, or through a 5-yr phase-in ending June 30, 2020.  The ADC must be amortized on a level-dollar basis, over a closed period of no more than 30 years.  During the 5-yr phase-in period, any sponsor not making the required increased contributions had to prepare a plan of correction.  Beginning July 1, 2020, if sponsor cannot pay full ADC in any year, it must pay the difference between actual contribution and ADC in the subsequent fiscal year.	In 2017, MI required the State Treasurer to set uniform actuarial assumptions for local plans and then assesses funding levels based on funded ratio and fiscal stress to cities, using those assumptions (ex: max 7% return assumption).  Sponsors of plans deemed underfunded are required to submit a corrective action plan (CAP) to improve funding levels.  Underfunded is defined as:  • funded ratio is < 60%;  • and ADC (based on 19-yr closed am pd beginning in 2020) is > 10% of general fund operating revenues (GFR) based on most recent FY.	In 1984, PA implemented funding standards for local plans and created a financially distressed municipal pension system recovery program.  The program established 3 tiers of funding distress and both voluntary and mandatory actions for funding improvement.  Level I: Minimal Distress Funded ratio of 70% to 89% Level II: Moderate Distress Funded ratio of 50% to 69% Level III: Severe Distress Funded ratio of 0% to 49%  In 1998, enacted legislation to require ADC on a closed, level-dollar 40-year period, achieving full funding in 2038. Beginning in 2011, sponsors are required to layer future unfunded actuarial liabilities.



## Tennessee – Funding Policy Requirement

#### **Entities Subject To Requirements**

Sponsoring entities of ~40 local plans that do not participate in the Tennessee Consolidated Retirement System (TCRS)

2015 Legislation: TN required <u>sponsors</u> to adopt a funding policy that commits to paying the ADC, either immediately, or through a 5-yr phase-in.

#### **Funding Policy Requirement**

Funding policies must be adopted by City Council and submitted to the State Comptroller.

#### **Funding policy must include:**

- · ADC;
- max. amortization period over which UAAL will be paid;
- a statement that the sponsor will contribute at least 100% of ADC or min. Annual Funding Progress Percentage (AFPP).

AFPP is a 5-year gradual increase towards paying full ADC from June 30, 2015 – June 30, 2020. Determined by subtracting percentage of ADC paid in previous year from 100% of ADC, divided by 5. Based on annually recalculated ADC.

#### Statutorily required actuarial methods:

- · max 10-yr asset smoothing;
- level dollar amortization method;
- entry age normal;
- investment return assumption (no more than > 50 bp above TCRS assumption);
- ADC must be calculated in accordance with ASOPs;
- closed amortization period not to exceed 30 yrs.



## Tennessee – Plan of Correction Requirement

#### **Plan of Correction Trigger**

<u>If a sponsor fails to meet their required annual contribution (AFPP)</u> in any year between June 30, 2015 and June 30, 2020, the sponsor must prepare a plan of correction.

#### Plan of Correction must include:

Reason why unable to meet the AFPP; detailed plan to pay 100% of ADC by 6/30/20; amounts to be paid over time; any amendment to the funding policy to comply with the correction plan.

#### **Correction Plan Review and Approval**

Plan sent to the State Treasurer for review and approval. Sponsor must furnish additional documentation requested by Treasurer, including financial data and actuarial reports.

#### If Sponsor Fails to Pay ADC

State can withhold funds from any state-shared taxes regardless of source or original intended use of the funds and pay the amount directly to the local pension plan.

#### **Statutory Benefit Enhancement Approval**

For any pension plan that is funded below 60%, the sponsor shall not enact benefit enhancements unless approved by Treasurer.

#### **Asset Pooling Provision**

Regardless of funding level, a sponsor may, with Treasurer approval, continue administration of its plan but have plan funds co-invested with TCRS or continue the plan but have the plan administered by TCRS and the assets co-invested with TCRS.

#### 2020 Enacted Legislation: SB 1727

Beginning July 1, 2020, if sponsor cannot pay full ADC in any year, it must pay the difference between actual contribution and ADC in the subsequent fiscal year.

**Source:** TN Code § 8-37-3 and §9-3-506 & 507



## Michigan – Corrective Action Plan Requirement

#### **Entities Subject To Requirement**

Sponsoring entities of 895 local government pension funds

2017 Legislation: Stemming from task force recommendations, the MI Legislature required the State Treasurer to set uniform actuarial assumptions for local plans and then assesses funding levels based on funded ratio and fiscal stress to cities, using those assumptions. Sponsors deemed underfunded are required to submit a corrective action plan (CAP) to a new oversight body.

#### **Uniform Actuarial Assumptions**

Treasurer is required by law to annually set uniform actuarial assumptions that sponsors must use to calculate assets, liabilities, funded ratio and ADC.

#### **2020 Uniform Actuarial Assumptions:**

- investment return: 7% max;
- salary increase: min of 3.5% or based on actuarial experience study within last 5 yrs;
- mortality tables: Pub-2010;
- · amortization period: max 19-yr closed

#### **Annual Reporting Requirement**

Sponsor must submit the following information annually to the newly created Municipal Stability Board (MSB):

- assets;
- liabilities;
- · ADC; and
- · governmental fund revenues.



## Michigan – Corrective Action Plan Requirement

#### **Corrective Action Plan Trigger**

Sponsor is considered underfunded and must prepare a Corrective Action Plan (CAP) if, for a pension plan:

- Funded ratio is < 60%; and
- ADC (based on 19-yr closed am pd beginning in 2020) is > 10% of general fund operating revenues (GFR) based on most recent FY.

#### **Corrective Action Plan Options:**

MSB-issued best practices build upon statutory corrective options to be included in CAPs. Options include:

- Changes in plan funding. *Examples*: add or increase employee contributions, implement a closed amortization period of no more than 20 years.
- Instituting a modern plan design. Examples: implement a "bridged multiplier" for active employees, implement a bridged COLA.
- Changes in plan administration. *Examples*: ensure proper assumptions are utilized according to ASOPs, ensure management and oversight boards have proper experience, skills and training to administer retirement systems.

#### **CAP Approval Criteria:**

MSB considers approval criteria in its review of each CAP, such as: sponsors must submit supporting documentation, including an actuarial projection, an AV or an internally developed analysis which illustrates how/when sponsor will reach min FR percentages; city council must approve the CAP and proof must be attached to CAP submission.

#### **CAP Review and Approval:**

Sponsor has 180 days to submit CAP. MSB reviews within 45 days and certifies compliance. If not approved, sponsor has 60 days to resubmit the plan.

#### **MSB CAP Monitoring Criteria:**

Every 2 years, the MSB sends sponsors a form where they must report their adherence to their submitted CAP.

**Source:** MCL Sec 38.2801



## Pennsylvania – Funding Standards

#### **Entities Subject To Requirement**

The sponsoring municipalities of Pennsylvania's 2,255 defined benefit plans have statutory funding standards, including the 900+ plans participating in the Pennsylvania Municipal Retirement System (PMRS), an agent multiple-employer plan.

#### Act 205 of 1984

- Determines the funding standards for municipal pension systems, (including PMRS).
- Establishes a recovery program for under funded municipal pension.

#### **Funding Standards**

- In 1998, enacted legislation to require ADC on a closed, level-dollar 40-year period, achieving full funding in 2038.
- Beginning in 2011, sponsors are required to contribute based on a layered amortization schedule for future unfunded
  actuarial liabilities:

Actuarial Gains/Losses	20 yrs
Change in Assumptions	15 yrs
Local Benefit Changes for Active Employees	10 yrs
Local Benefit Changes for Retired Employees	1 yr

• If the sponsor fails to pay the required contribution, statute allows for an interested party, including members and beneficiaries, to request the courts to issue a mandamus to hold the sponsor accountable to contribute any unpaid amount.

#### **Reporting Requirement**

- Sponsor must submit biennial actuarial valuations to the Auditor General.
- Sponsor who have more than 1,000 members must submit an experience study to the Auditor General every 4 yrs.



## Pennsylvania – Financially Distressed Municipal Pension System Recovery Program

#### **Financially Distressed Municipal Pension System Recovery Program**

- The Auditor General will biennially determine the distress level of the sponsor based on the funded ratio of each plan within the municipality and releases a report.
- Sponsors that have a funded ratio of < 90% are subject to the recovery program. When a previously distressed system reaches 90% they may remove remedies previously taken.

Financial Distress Levels			
	Voluntary Actions	Mandatory Actions	
<b>Level I: Minimal Distress</b> Funded ratio of 70% to 89% 2018: 31% of municipalities	<ul> <li>A sponsor with multiple funds can combine them and establish a board of trustees to govern the new fund</li> <li>Establish member contributions</li> <li>Contribute in excess of sponsor contribution limits</li> <li>Pay ≥ 75% of the amortization requirement for 2 yrs</li> </ul>	No mandatory actions	
<b>Level II: Moderate Distress</b> Funded ratio of 50% to 69% 2018: 5.7% of municipalities	<ul> <li>Level I voluntary actions</li> <li>New benefit tier</li> <li>Municipal taxes on property and income may be increased, with additional revenue applied to the trust</li> </ul>	<ul> <li>Aggregation of trust funds</li> <li>Submission of plan for administrative improvement</li> </ul>	
Level III: Severe Distress Funded ratio of 0% to 49% 2018: .5% of municipalities	Level II voluntary actions	<ul><li>Level II mandatory actions</li><li>New benefit tier</li></ul>	



## Massachusetts – Statutory Funding Goal and Schedules

#### **Entities Subject To Requirement**

104 local pension systems that are overseen by the Public Employees Retirement Administration Commission (PERAC)

#### **Funding Schedule**

In 1988, MA created a funding goal for all systems to be fully funded in 40 years. In 2010, the state extended the **goal date to 2040**. Every two years, systems must submit a funding schedule to PERAC which outlines how they are going to become fully funded by 2040, including:

- system's normal cost
- · amortization payment of the UAAL

#### **Submission Process**

- 1.) The system conducts an AV and updates their funding schedule and submits to PERAC.
- 2.) PERAC approves the schedule and sends a letter back to the system stating that the sponsor will pay the amount in the funding schedule.

#### **Revised Funding Schedules**

A system may revise its funding schedule, however, in doing so it is subject to different requirements:

- contributions must not increase greater than 4% each year;
- contributions may not decrease from the prior year;
- if an updated AV allows for a revised schedule with reduced payments, the date shall be moved to an earlier date to the extent that the payment does not reduce;
- if a revised schedule causes the payment to increase more than 8% in the first year, PERAC may approve for the 4% limit to be adjusted.

#### **Funding Schedule Approval**

To be compliant with the requirement, systems must submit the funding schedule. It, along with the plan's AV, must be approved by PERAC's actuarial unit.



8. Date and location of next Actuarial Committee meeting – September 29, 2020

9. Invitation for public comment

10. Adjournment