

**ACTUARIAL VALUATION OF
TOWN OF DAVIE POLICE
PENSION PLAN
AS OF OCTOBER 1, 2019**

February, 2020

Determination of Contribution for the
Plan Year ending September 30, 2020
Contribution to be
Paid in Fiscal Year October 1, 2019
through September 30, 2020

**DuLaney and Company, Inc.
Actuarial Services**

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February 7, 2020

Board of Trustees
Town of Davie Police Pension Plan
c/o Mr. Greg Brilliant
Precision Pension Administration, Inc.
13790 NW 4th Street, Suite 105
Sunrise, FL 33325

Dear Board Members:

We are pleased to present the October 1, 2019 Actuarial Valuation for the Town of Davie Police Pension Plan. The purpose of this report is to indicate appropriate contribution levels and to satisfy State requirements. The report is prepared for and at the request of the Board of Trustees.

This report consists of this commentary, detail Tables I through XV and State Required Exhibit - Table XVI. The Tables contain basic Retirement Plan cost figures plus significant detail on the benefits, liabilities and experience of your Plan.

Costs for Fiscal Year Beginning October 1, 2019

This Actuarial Valuation develops the required minimum Retirement Plan payment for the fiscal year beginning October 1, 2019 and ending September 30, 2020 under the Florida Protection of Public Employee Retirement Benefits Act and Chapter 185. The minimum payment consists of payment of annual normal cost plus amortization of the unfunded actuarial accrued liability over various periods, and interest, as prescribed by law. We anticipated that member pension contributions will be \$1,400,807 (9.0% of covered payroll).

The required funding amount for the plan/fiscal year ending September 30, 2020, to be met by the Town and State contributions under Chapter 185, is **\$7,114,836** or **45.7%** of the covered payroll. Please note that Chapter 185 states that employer contributions must be made at least quarterly, and these quarterly amounts must be at least **\$1,515,832**.

The anticipated State (Chapter 185) contribution is **\$1,051,508**. The resulting Town required contribution is **\$6,063,328**, or 39.0% of the covered payroll. If the actual Chapter 185 contribution is below the anticipated \$1,051,508, the difference must be made up by additional Town contribution.

The Town contributed its entire contribution for the 10/1/18 - 9/30/19 plan year in a single payment of \$6,625,000 on 10/31/2018, rather than making contributions throughout the plan year. From the 10/1/18 valuation report, the Town's Minimum Funding Requirement (MFR) was \$6,236,216, but the MFR as of 10/31/2018 was only \$5,998,562, resulting in a prepaid contribution of \$626,438 (\$6,625,000 - \$5,998,562). Also, the actual State contribution received by the Plan during Plan Year 2019 of \$1,051,508 exceeded the assumed amount of \$938,653, resulting in a prepaid contribution of \$112,855 (\$1,051,508 - \$938,653).

Changes in Plan Provisions, Actuarial Methods or Assumptions Recognized in this Valuation

The plan provisions remained the same as those recognized in our October 1, 2018 valuation. The plan provisions are outlined in Table X.

There were no changes in actuarial assumptions and methods from those utilized in the last actuarial valuation, except for the mortality tables, as described in Table XI item 1. Such tables were used in the most recent FRS annual valuation report. Table XI contains an outline of the assumptions and methods used.

Comparison of October 1, 2018 and October 1, 2019 Valuation Results

Table II of the report provides information of a comparative nature. Column I shows the results of the October 1, 2018 Actuarial Valuation while Column II shows the results as of October 1, 2019 prior to the change in actuarial assumptions. A comparison of the two columns shows the effect of plan experience during the year. Covered payroll increased by approximately 2.2% while the number of active participants stayed the same. The unfunded liability increased from \$34,441,445 to \$41,127,861. The actuarial loss experienced during the plan year was \$8,398,257. The Town's minimum funding requirement increased as a dollar amount and as a percentage of covered payroll.

Column III of the Table displays the results after the assumption changes. A comparison of Columns II and III indicates that the changes decreased the unfunded actuarial accrued liability by \$6,550,764, from \$41,127,861 to \$34,577,097. The Town minimum funding requirement decreased from 43.6% to 39.0% of the covered payroll of \$15,564,522, assuming a Chapter 185 contribution of at least \$1,051,508 for 2019/2020, as a combined result of plan experience and assumption changes. The Town's funding requirement decreased as a dollar amount from \$6,784,584 to \$6,063,328.

Plan Experience

Table XV provides a summary of certain plan experience during the plan year. The actuarial value of assets return was 3.7% for the 2018/2019 plan year, which was less than the assumed 7.5%. The market value rate of return was 2.3%. The actuarial value of assets return was a source of actuarial loss. Employee turnover was 9% higher than the expected turnover during the last plan year, and the most recent three (3) and five (5) year averages were 100% and 86% of the expected amounts, respectively. Average salary increase was 7.7%, as compared to the assumed 5.5%. Employee turnover contributed slightly to the actuarial gain and salary increase was a source of actuarial loss during the plan year.

Participant Census and Financial Data

Census data for the fiscal year October 1, 2018 through September 30, 2019 was provided by the Town. Supplemental information was also received on retirees and terminations from the

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plan custodian and the plan administrator. The data was reviewed for consistency and is believed to be reliable.

Information on Plan assets was received from the Plan's auditors. We did not audit this information; however, we believe it to be reliable.

Identification and Assessment of Risk

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an estimate of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table XI. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, there is always a risk that, should these assumptions not be realized, the liabilities of the plan, the contributions required to fund the plan, and the funded status of the plan may be significantly different than the amounts shown in this report.

Although a thorough analysis of the risk of not meeting the assumptions is beyond the scope of this report, this discussion is intended to identify the significant risks faced by the plan. In some cases, a more detailed review of the risks, including numerical analysis, may be appropriate to help the plan sponsor and other interested parties assess the specific impact of not realizing certain assumptions. Note that this report is not intended to provide advice on the management or reduction of the identified risks nor is this report intended to provide investment advice.

The most significant risk faced by most defined benefit pension plans is investment risk, i.e. the risk that long-term investment returns will be less than assumed. Other related risks include a risk that, if the investments of the plan decline dramatically over a short period of time (such as occurred with many pension plans in 2008), the plan's assets may not have sufficient time to recover before benefits become due. Even if the assets of the plan grow in accordance with the assumed investment return over time, if benefit payments are expected to be large in the short-term, the plan's assets may not be sufficient to support such a high level of benefit payments.

Another source of risk is demographic experience. This is the risk that participants will retire, become disabled, or terminate their employment at a rate that is different than assumed, and that participants will live longer than assumed, just to cite a few examples of the demographic risk faced by the plan. Although for most pension plans, the demographic risk is not as significant as the investment risk, particularly in light of the fact that the mortality assumption includes a component for future life expectancy increases; the demographic risk can nevertheless be a significant contributing factor to liabilities and contribution rates that become higher than anticipated.

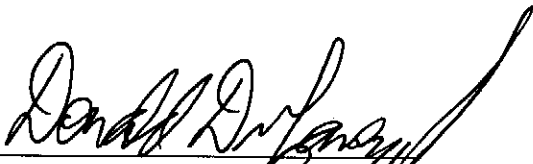
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Finally, an actuarial funding method has been used to allocate the gap between projected liabilities and assets to each year in the future. The contribution rate under some funding methods is higher during the early years of the plan and then is lower during the later years of the plan. Other funding methods provide for lower contribution rates initially, with increasing contribution rate over time. The Trustees have adopted the entry age normal cost, level percent of pay funding method for this plan. Under this method, the contribution requirement is expected remain relatively constant as a percentage of covered payroll over the next 10 to 20 years absent investment or demographic experience.

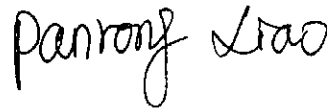
Certification

To the best of our knowledge, this report fairly and accurately represents the liabilities of the fund as of October 1, 2019, based on the participant data and asset information provided by the plan administrator and the plan provisions and actuarial assumptions set forth herein. We believe that these assumptions are reasonable both individually and in the aggregate and represent our best estimate of anticipated experience. All calculations set forth herein conform to generally accepted actuarial principles and practices and comply with our understanding of the current requirements of the IRC.

DuLaney and Company



Donald A. DuLaney, Jr. A.S.A., E.A.
Senior Consulting Actuary



Panrong Xiao, E.A., M.A.A.A.
Enrolled Actuary

DAD/PX
Attachments

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Table I

TOWN OF DAVIE POLICE PENSION PLAN

Summary of Retirement Plan Costs as of October 1, 2019

	<u>Cost Data</u>	<u>% of Payroll</u>
A. <u>Participant Data Summary</u>		
1. Active employees	159	N/A
2. Terminated vested	3	N/A
3. Receiving benefits	124	N/A
4. DROP participants	21	N/A
5. Annual payroll of active employees	\$ 15,564,522	100.0%
B. <u>Total Normal Costs</u>		
1. Age retirement benefits	\$ 4,003,538	25.7%
2. Termination benefits	215,984	1.4%
3. Death benefits	45,373	0.3%
4. Disability benefits	97,468	0.6%
5. Estimated expenses	<u>206,958</u>	<u>1.3%</u>
6. Total annual normal costs	\$ 4,569,321	29.4%
C. <u>Total Actuarial Accrued Liability</u>		
1. Age retirement benefits active employees	\$ 74,005,919	475.5%
2. Termination benefits active employees	1,603,551	10.3%
3. Death benefits active employees	126,709	0.8%
4. Disability benefits active employees	515,248	3.3%
5. Retired or terminated vested participants	83,962,314	539.4%
6. DROP participants benefits	26,105,640	167.7%
7. Terminated vested participants entitled to future benefits	565,621	3.6%
8. Deceased participants whose beneficiaries are receiving benefits	5,443,891	35.0%
9. Disabled participants receiving benefits	<u>2,072,428</u>	<u>13.3%</u>
10. Total actuarial accrued liability	\$ 194,401,321	1,249.0%
D. <u>Actuarial Value of Assets (Table VI)</u>	\$ 159,824,224	1,026.8%
E. <u>Unfunded Actuarial Accrued Liability (C. – D.)</u>	\$ 34,577,097	222.2%

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Table I
(continued two)

F.	<u>Minimum Funding Requirements</u>		
1.	Total normal cost	\$ 4,569,321	29.4%
2.	Amortization of unfunded actuarial accrued liability	3,559,704	22.9%
3.	Interest adjustment	<u>386,618</u>	<u>2.5%</u>
4.	Total payment	\$ 8,515,643	54.7%
G.	<u>Contribution Sources</u>		
1.	a) Town	\$ 6,063,328	39.0%
	b) State	<u>1,051,508</u>	<u>6.8%</u>
	c) Total Town and State	\$ 7,114,836	45.7%
2.	Employees	\$ 1,400,807	9.0%
H.	<u>Actuarial Present Value of Vested Accrued Benefits</u>		
1.	Retired, terminated vested, beneficiaries and disabled receiving benefits	\$ 91,478,633	587.7%
2.	DROP participants	26,105,640	167.7%
3.	Terminated vested participants entitled to future benefits	565,621	3.6%
4.	Active participants entitled to future benefits	<u>55,656,350</u>	<u>357.6%</u>
5.	Total actuarial present value of vested accrued benefits	\$ 173,806,244	1,116.7%
I.	<u>Market Value of Assets (Table V)</u>	\$ 159,333,621	1,023.7%
J.	<u>Unfunded Actuarial Present Value of Vested Accrued Benefits (H. - I., not less than \$0)</u>	\$ 14,472,623	93.0%
K.	<u>Vested Benefit Security Ratio (I. ÷ H.)</u>	91.7%	N/A

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Table II

TOWN OF DAVIE POLICE PENSION PLAN

Comparison of Cost Data of October 1, 2018 and October 1, 2019 Actuarial Valuations

	October 1, 2018		October 1, 2019 Prior Assumptions		October 1, 2019 Current Assumptions	
	Cost Data	% of Annual Compensation	Cost Data	% of Annual Compensation	Cost Data	% of Annual Compensation
A. Participants						
1. Active employees						
Tier One + Tier Two = Total	95 + 64 = 159	N/A	84 + 75 = 159	N/A	84 + 75 = 159	N/A
2. Terminated vested	4	N/A	3	N/A	3	N/A
3. Receiving benefits	107	N/A	124	N/A	124	N/A
4. DROP participants	27	N/A	21	N/A	21	N/A
5. Annual payroll of active Employees ¹	\$ 15,236,338	100.0%	\$ 15,564,522	100.0%	\$ 15,564,522	100.0%
B. Total Normal Costs	\$ 4,624,766	30.4%	\$ 4,661,380	29.9%	\$ 4,569,321	29.4%
C. Total Actuarial Accrued Liability	\$ 188,610,712	1,237.9%	\$ 200,952,085	1,291.1%	\$ 194,401,321	1,249.0%
D. Actuarial Value of Assets	\$ 154,169,267	1,011.9%	\$ 159,824,224	1,026.8%	\$ 159,824,224	1,026.8%
E. Unfunded Actuarial Accrued Liability	\$ 34,441,445	226.0%	\$ 41,127,861	264.2%	\$ 34,577,097	222.2%
F. Town Minimum Funding Requirement	\$ 6,236,216	40.9%	\$ 6,784,584	43.6%	\$ 6,063,328	39.0%
G. Unfunded Actuarial Present Value of Vested Accrued Benefits ²	\$ 1,170,527	73.3%	\$ 20,478,269	131.6%	\$ 14,472,623	93.0%
H. Vested Benefit Security Ratio ²	93.4%	N/A	88.6%	N/A	91.7%	N/A

¹ Covered payroll includes up to 150 hours of overtime pay per year.

² Calculated based on market value of assets.



Table III

TOWN OF DAVIE POLICE PENSION PLAN

Characteristics of Participants in
Actuarial Valuation as of October 1, 2019

A. Characteristic of Active Participants

1.	Active participants as of beginning of prior year	159
2.	New entrants during prior year	14
3.	Exits during prior year	(14)
4.	Active participants as of beginning of year	159
5.	Active participants fully vested	83
6.	Active participants partially vested	0
7.	Active participants non-vested	76
8.	Annual payroll of active participants	\$ 15,564,522
9.	Average pay	\$ 97,890
10.	Average attained age	37.95 years
11.	Percent female	17.61%

B. Characteristics of Inactive Participants

1.	Inactives as of beginning of prior year	138
2.	Newly inactive during prior year	13
3.	Exits during prior year	(3)
4.	Inactives as of beginning of year	148
5.	Age retirees	104
6.	Annual benefit for age retirees	\$ 7,502,072
7.	DROP participants	21
8.	Annual benefit for DROP participants	\$ 1,903,619
9.	Beneficiaries receiving benefits	15
10.	Annual benefits for beneficiaries receiving benefits	\$ 541,197
11.	Beneficiaries due deferred benefits	0
12.	Annual benefits for beneficiaries due deferred benefits	\$ 0
13.	Disabled participants receiving benefits	5
14.	Annual benefits for disabled participants	\$ 192,086
15.	Terminated vested due deferred benefits	3
16.	Annual benefits for terminated vested participants	\$ 88,414

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Table IV

TOWN OF DAVIE POLICE PENSION PLAN

Statement of Assets as of October 1, 2019¹

		<u>Market Value</u>
A.	<u>Assets</u>	
	1. Cash and Cash Equivalents	\$ 234,579
	2. Corporate Bonds	22,460,123
	3. U. S. Government Securities	12,888,011
	4. Domestic Stocks	59,585,326
	5. Mortgages	1,398,646
	6. Receivables	320,275
	7. Domestic Equity Fund	32,905,265
	8. International Equity Fund	19,295,270
	9. Real Estate Fund	21,831,579
	10. Prepaid Expenses	629,728
	11. Temporary Investments	<u>1,686,500</u>
	12. Total Assets	\$ 173,235,302
B.	<u>Liabilities</u>	
	1. Prepaid Town Contributions	4,171,373
	2. Securities Purchased Payable	0
	3. DROP Benefits Payable	9,478,326
	4. Unused Chapter 185 Funds	0
	5. Accounts Payable	<u>251,982</u>
	6. Total Liabilities	\$ 13,901,681
C.	<u>Grand Total (Item A.12. – Item B.6.)</u>	\$ 159,333,621

¹ As reported by Plan's Auditors.

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Table V

TOWN OF DAVIE POLICE PENSION PLAN

Reconciliation of Plan Assets

A.	<u>Market Value of Assets as of October 1, 2018</u>		\$ 157,321,380
B.	<u>Receipts During Period</u>		
1.	Contributions		
a.	Town	\$ 6,625,000	
b.	Employee	1,455,642	
c.	State (not limited by 99-1)	<u>1,051,508</u>	
d.	Total		\$ 9,132,150
2.	Investment income		
a.	Interest, dividends and Miscellaneous income	\$ 3,166,101	
b.	Investment expenses	<u>(772,468)</u>	
c.	Net		\$ 2,393,633
3.	Net gains (losses)		
a.	Realized gains (losses)	\$ 0	
b.	Unrealized gains (losses)	<u>(330,303)</u>	
c.	Total gains (losses)		<u>(330,303)</u>
4.	Total receipts during period (1.d. + 2.c. + 3.c.)		\$ 11,195,480
C.	<u>Disbursements During Period</u>		
1.	Pension payments		\$ 6,653,743
2.	DROP payments		2,233,460
3.	Contribution refunds		89,078
4.	Administrative expenses		206,958
5.	Increase / (decrease) in COLA reserve		0
6.	Increase / (decrease) in State contribution reserve		<u>0</u>
7.	Total disbursements during period		\$ 9,183,239
D.	<u>Market Value of Assets as of October 1, 2019 (A. + B.4. - C.7.)</u>		<u>\$ 159,333,621</u>
E.	<u>Reconciliation of DROP Accounts Balance</u>		
1.	DROP accounts balance as of October 1, 2018		\$ 9,788,004
2.	Benefit payments into DROP accounts during year		2,233,460
3.	Unused Leave Pay Transfer during year		557,598
4.	Disbursements from DROP accounts during year		(3,270,453)
5.	Expenses deducted from DROP accounts		(5,050)
6.	Investment gains/(losses) during year		<u>174,767</u>
7.	DROP accounts balance as of September 30, 2019		\$ 9,478,326

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Table VI

TOWN OF DAVIE POLICE PENSION PLAN

Development of Actuarial Value of Assets

	<u>10/1/2018 – 9/30/2019</u>	<u>10/1/2017 – 9/30/2018</u>	<u>10/1/2016 – 9/30/2017</u>
A. Market value of assets as of beginning of year	\$ 157,321,380	\$ 142,750,360	\$ 125,302,200
B. Contributions	9,132,150	9,188,089	9,482,101
C. Benefit payments and expenses	9,183,239	8,169,053	7,101,911
D. Expected investment income (A. x .075 + (B.-C.) x .0375)	11,797,188	10,744,491	9,613,414
E. Expected assets at end of year (A. + B. – C. + D.)	169,067,479	154,513,887	137,295,804
F. Actual market value at end of year	159,333,621	157,321,380	142,750,360
G. Excess/(shortfall) of actual over expected assets (F. – E.)			
1. From previous plan year	(9,733,858)	2,807,493	5,454,556
2. From two plan years ago	2,807,493	5,454,556	1,194,291
3. From three plan years ago	5,454,556	1,194,291	(7,834,453)
H. Deferred recognized amounts of excess/(shortfall)			
1. 33-1/3% from previous plan year	(3,244,619)	935,831	1,818,185
2. 33-1/3% from two plan years ago	935,831	1,818,185	398,097
3. 33-1/3% from three plan years ago	<u>1,818,185</u>	<u>398,097</u>	<u>(2,611,484)</u>
4. Total	(490,603)	3,152,113	(395,202)
I. Preliminary actuarial value of assets at end of year (F. – H.4.)	\$ 159,824,224	\$ 154,169,267	\$ 143,145,562
J. 80% of end of year market value of assets	127,466,897	125,857,104	114,200,288
K. 120% of end of year market value of assets	191,200,345	188,785,656	171,300,432
L. Actuarial value of assets (I., but not less than J. and not more than K.)	\$ 159,824,224	\$ 154,169,267	\$ 143,145,562

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Table VII

TOWN OF DAVIE POLICE PENSION PLAN

Actuarial Gains (Losses) for Plan Year Ended September 30, 2019

A. Derivation of Actuarial Gain (Loss)

1. Town and State normal cost previous valuation	\$	3,253,496
2. Unfunded actuarial accrued liability previous valuation		34,441,445
3. Town and State contributions previous year (limited by 99-1)		7,330,416
4. Interest on:		
(a) Town normal costs	\$	244,012
(b) Unfunded actuarial accrued liability		2,583,108
(c) Town and State contributions		<u>462,041</u>
(d) Net total: (a) + (b) - (c)	\$	2,365,079
5. Increase (decrease) in unfunded actuarial accrued liability from plan amendment		0
6. Increase (decrease) in unfunded actuarial accrued liability from assumptions changes		(6,550,764)
7. Expected unfunded actuarial accrued liability current year: 1. + 2. - 3. + 4. + 5. + 6.		26,178,840
8. Actual unfunded actuarial accrued liability current year		<u>34,577,097</u>
9. Actuarial gain (loss): 7. - 8.	\$	(8,398,257)

B. Approximate Portion of Gain (Loss) Due to Investments

1. Actuarial value of assets previous year	\$	154,169,267
2. Contributions during year		9,132,150
3. Disbursements during year (expenses & benefits)		9,183,239
4. Expected appreciation for period		<u>11,734,952</u>
5. Expected actuarial value of assets current year 1. + 2. - 3. + 4.		165,853,130
6. Actual actuarial value of assets current year		159,824,224
7. Approximate gain (loss): 6. - 5.	\$	(6,028,906)

C. Approximation Portion of Gain (Loss) Due to Liabilities: A. - B. (2,369,351)

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Table VIII

TOWN OF DAVIE POLICE PENSION PLAN

Amortization of Unfunded Liability

<u>Date</u>	<u>Total Unfunded Liability</u>	<u>Amortization Payment</u>
10/1/2019	\$ 34,577,097	\$ 3,559,704
10/1/2020	\$ 33,343,697	\$ 3,559,704
10/1/2021	\$ 32,017,793	\$ 3,559,704
10/1/2022	\$ 30,592,446	\$ 3,559,704
10/1/2049	\$ 0	\$ 0

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Table IX

TOWN OF DAVIE POLICE PENSION PLAN

Accounting Disclosure Exhibit

I.	<u>Number of Plan Participants</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
1.	Retirees, disabled and beneficiaries receiving benefits	107	124
2.	Terminated plan participants entitled to but not yet receiving benefits	4	3
3.	DROP participants	27	21
4.	Active plan participants	<u>159</u>	<u>159</u>
5.	Total	297	307
II. <u>Accumulated Plan Benefits as of October 1, 2019</u>			
A. <u>Statement of Accumulated Plan Benefits</u>			
1.	Actuarial present value of accumulated vested plan benefits		
a.	Participants currently receiving benefits	\$ 74,717,397	\$ 91,478,633
b.	Beneficiaries due deferred benefits	0	0
c.	DROP participants	32,124,256	26,105,640
d.	Others	<u>61,650,254</u>	<u>56,221,971</u>
e.	Total	\$ 168,491,907	\$ 173,806,244
2.	Actuarial present value of accumulated non-vested plan benefits	4,810,908	4,332,780
3.	Total actuarial present value of accumulated plan benefits	\$ 173,302,815	\$ 178,139,024

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Table IX
(continued two)

B. Statement of Change in Accumulated Plan Benefits

	<u>10/1/2019</u>
1. Actuarial present value of accumulated plan benefits as of October 1, 2018	\$ 173,302,815
2. Increase (decrease) during year attributable to:	
a. Plan amendment	0
b. Actuarial assumptions and method changes	(6,227,092)
c. Benefits paid and contribution refunds	(6,742,821)
d. DROP benefits credited	(2,233,460)
e. Other, including benefits accumulated and increase for interest due to decrease in the discount period	<u>20,039,582</u>
f. Net increase	\$ 4,836,209
3. Actuarial present value of accumulated plan benefits as of October 1, 2019	\$ 178,139,024

C. Significant Matters Affecting Calculations

1. Assumed rate of return used in determining actuarial present values	7.50%
2. Plan amendments	None
3. Change in actuarial assumptions	See Table XI

D. Required Disclosure of Accumulated Plan Benefits at Assumed Rate of Return Applied by the Florida Retirement System, Currently 7.50%

	<u>10/1/2019</u>
1. Actuarial present value of accumulated vested plan benefits	
a. Participants currently receiving benefits	\$ 91,478,633
b. DROP participants	26,105,640
c. Others	<u>56,221,971</u>
d. Total	173,806,244
2. Actuarial present value of accumulated non-vested plan benefits	<u>4,332,780</u>
3. Total actuarial present value of accumulated plan benefits	\$ 178,139,024

D

Table IX
(continued three)
Schedule of Funding Progress (As required by GASB #25)

(1) Valuation Date	(2) Actuarial Value of Assets (AVA)	(3) Actuarial Accrued Liability (AAL) – FIL / EAN AAL	(4) Unfunded Actuarial Accrued Liability (UAAL)	(5) Funded Ratio (2) / (3)	(6) Annual Covered Payroll	(7) UAAL as % of Payroll (4) / (6)
October 1, 1992	\$ 8,697	\$ 10,008	\$ 1,311	86.9%	\$ 4,146	31.6%
October 1, 1993	\$ 9,931	\$ 11,163	\$ 1,232	89.0%	\$ 4,467	27.6%
October 1, 1994	\$ 10,866	\$ 14,146	\$ 3,280	76.8%	\$ 4,195	78.2%
October 1, 1995	\$ 13,918	\$ 17,163	\$ 3,245	81.1%	\$ 5,307	61.1%
October 1, 1996	\$ 17,055	\$ 20,093	\$ 3,038	84.9%	\$ 5,637	53.9%
October 1, 1997	\$ 21,590	\$ 23,994	\$ 2,404	90.0%	\$ 5,339	45.0%
October 1, 1998	\$ 24,945	\$ 27,303	\$ 2,358	91.4%	\$ 6,360	37.1%
October 1, 1999	\$ 29,881	\$ 28,994	\$ (887)	103.1%	\$ 6,070	(14.6%)
October 1, 2000	\$ 32,886	\$ 35,159	\$ 2,273	93.5%	\$ 6,309	36.0%
October 1, 2001	\$ 32,325	\$ 34,530	\$ 2,205	93.6%	\$ 7,254	30.4%
October 1, 2002	\$ 31,302	\$ 33,558	\$ 2,256	93.3%	\$ 7,975	28.3%
(all figures above are based on Frozen Initial Liability – all figures below are based on Entry Age Normal Actuarial Accrued Liability)						
October 1, 2002	\$ 31,302	\$ 38,067	\$ 6,765	82.2%	\$ 7,975	84.8%
October 1, 2003	\$ 34,845	\$ 44,993	\$ 10,148	77.4%	\$ 8,994	112.8%
October 1, 2004	\$ 39,267	\$ 49,742	\$ 10,475	78.9%	\$ 9,105	115.0%
October 1, 2005	\$ 45,283	\$ 58,779	\$ 13,496	77.0%	\$ 10,976	123.0%
October 1, 2006	\$ 50,714	\$ 69,881	\$ 19,167	72.6%	\$ 11,999	159.7%
October 1, 2007	\$ 61,125	\$ 77,471	\$ 16,346	78.9%	\$ 10,591	154.3%
October 1, 2008	\$ 59,817	\$ 85,831	\$ 26,014	69.7%	\$ 11,177	232.7%
October 1, 2009	\$ 64,425	\$ 95,058	\$ 30,633	67.8%	\$ 12,106	253.0%
October 1, 2010	\$ 73,793	\$ 100,684	\$ 26,891	73.2%	\$ 11,618	231.5%
October 1, 2011	\$ 74,252	\$ 109,037	\$ 34,785	68.1%	\$ 13,006	267.5%
October 1, 2012	\$ 86,546	\$ 114,813	\$ 28,267	75.4%	\$ 13,014	217.2%
October 1, 2013	\$ 97,981	\$ 123,723	\$ 25,742	79.2%	\$ 13,917	185.0%
October 1, 2014	\$ 106,975	\$ 136,072	\$ 29,097	78.6%	\$ 13,412	216.9%
October 1, 2015	\$ 114,496	\$ 144,947	\$ 30,451	79.0%	\$ 14,068	216.5%
October 1, 2016	\$ 127,106	\$ 163,696	\$ 36,590	77.6%	\$ 15,279	239.5%
October 1, 2017	\$ 143,146	\$ 177,190	\$ 34,044	80.8%	\$ 15,388	221.2%
October 1, 2018	\$ 154,169	\$ 188,611	\$ 34,441	81.7%	\$ 15,236	226.0%
October 1, 2019	\$ 159,824	\$ 194,401	\$ 34,577	82.2%	\$ 15,565	222.1%



**Table IX
(continued four)**

IV. Schedule of Employer Contributions (As required by GASB #25)

Plan Year	Annual Required Contribution ¹	Percentage Contributed
(1)	(2)	(3)
1999	\$1,526,299	105%
2000	\$1,382,000	100%
2001	\$1,952,361	100%
2002	\$2,365,267	100%
2003	\$3,040,575	100%
2004	\$3,090,663	100%
2005	\$3,827,510	100%
2006	\$4,542,018	100%
2007	\$4,644,822	100%
2008	\$5,594,422	100%
2009	\$5,594,422	100%
2010	\$6,109,706	100%
2011	\$6,183,134	100%
2012	\$6,847,346	100%
2013	\$6,347,310	100%
2014	\$6,430,027 ²	100%
2015	\$6,361,217 ³	100%
2016	\$6,418,604 ⁴	100%
2017	\$7,272,120 ⁵	100%
2018	\$7,170,624 ⁶	100%
2019	\$7,174,869 ⁷	100%

V. Notes to Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation:

Valuation Date	October 1, 2019
Actuarial cost method	Entry Age Normal Level Percent
Amortization method	Layered amortization
Remaining amortization period	30 years
Asset valuation method	See Table XI., Item 9.
Actuarial assumptions:	
Investment rate of return*	7.50%
Projected salary increases*	5.50%
Cost-of-living adjustments	2.0% per year with 130% cap and 5-year delay

* Includes inflation at 3.0%

¹ Determined by the prior year's actuarial valuation

² Because the Town made the entire contribution for 2013/14 in one payment on 10/21/13, the Town's funding requirement was \$ 5,503,045, not \$ 5,742,964 as shown in prior year's report.

³ Because the Town made the entire contribution for 2014/15 in one payment on 10/22/14, the Town's funding requirement was \$ 5,389,887, not \$ 5,613,748 as shown in prior year's report.

⁴ Because the Town made the entire contribution for 2015/16 in one payment on 10/20/15, the Town's funding requirement was \$ 5,480,624, not \$ 5,713,188 as shown in prior year's report.

⁵ Because the Town made the entire contribution for 2016/17 in one payment on 11/3/16, the Town's funding requirement was \$ 6,317,120, not \$ 6,566,704 as shown in prior year's report.

⁶ Because the Town made the entire contribution for 2017/18 in one payment on 10/27/17, the Town's funding requirement was \$ 6,213, not \$ 6,465,208 as shown in prior year's report.

⁷ Because the Town made the entire contribution for 2018/19 in one payment on 10/31/18, the Town's funding requirement was \$ 5,998.5, not \$ 6,236,216 as shown in prior year's report.



Table IX
(continued five)

Accounting Disclosure Exhibit

VI. Revenues by Source and Expenses by Type

<u>Plan Year</u>	<u>Revenues by Source</u>				<u>Total</u>
	<u>Employee Contributions</u>	<u>Town Contributions</u>	<u>State Contributions</u>	<u>Investment Income</u>	
2019	\$ 1,455,642	\$ 6,625,000	\$ 1,051,508	\$ 2,835,798	\$11,967,948
2018	\$ 2,026,436	\$ 6,223,000	\$ 938,653	\$ 13,921,851	\$23,109,940
2017	\$ 2,104,437	\$ 6,472,000	\$ 905,664	\$ 16,082,657	\$25,564,758
2016	\$ 1,724,745	\$ 5,672,500	\$ 858,749	\$ 10,535,050	\$18,791,044
2015	\$ 1,385,542	\$ 5,797,600	\$ 784,261	\$ 844,588	\$ 8,811,991
2014	\$ 1,670,986	\$ 5,503,045	\$ 747,469	\$ 9,263,596	\$17,185,096
2013	\$ 1,008,385	\$ 5,750,247	\$ 687,063	\$ 10,729,490	\$18,175,185
2012	\$ 1,000,501	\$ 6,203,084	\$ 644,262	\$ 13,527,481	\$21,375,328
2011	\$ 1,294,997	\$ 5,571,296	\$ 611,838	\$ 712,793	\$ 8,190,924
2010	\$ 903,077	\$ 5,502,320	\$ 637,164	\$ 6,414,572	\$13,457,133

<u>Plan Year</u>	<u>Expenses by Type</u>			
	<u>Benefits & DROP Payments</u>	<u>Expenses</u>	<u>Refunds</u>	<u>Total</u>
2019	\$ 8,887,203	\$ 979,426	\$ 89,078	\$ 9,955,707
2018	\$ 7,862,170	\$ 916,489	\$ 106,404	\$ 8,885,063
2017	\$ 6,867,328	\$ 866,276	\$ 36,851	\$ 7,770,455
2016	\$ 6,637,331	\$ 653,395	\$ 43,243	\$ 6,680,574
2015	\$ 5,883,266	\$ 628,403	\$ 13,122	\$ 6,524,791
2014	\$ 5,400,475	\$ 746,285	\$ 31,616	\$ 6,178,376
2013	\$ 4,850,525	\$ 697,282	\$ 9,457	\$ 5,557,264
2012	\$ 4,817,431	\$ 646,042	\$ 45,866	\$ 5,509,339
2011	\$ 4,591,782	\$ 638,094	\$ 0	\$ 5,229,876
2010	\$ 4,113,866	\$ 538,422	\$ 39,152	\$ 4,691,440

Contributions were made in accordance with actuarially determined contribution requirements.

Table X

TOWN OF DAVIE POLICE PENSION PLAN

Outline of Principal Provisions of the Plan

1. Effective Date:

May 1, 1976. The most recent plan amendments recognized was Ordinances 2011- 18 and 2011-19. The ordinances were adopted on April 20, 2011.

2. Eligibility Requirements:

Effective August 6, 1981, all Police employees in the regular full-time service of the Town are eligible upon the attainment of age 18. Part-time employees who work less than 20 hours per week or five (5) months per year are excluded from participation in the plan.

3. Tier One and Tier Two Participants:

Police Officers hired prior to the creation of the Tier Two plan structure (April 20, 2011) are classified as Tier One Participants, otherwise, they are classified as Tier Two Participants.

4. Benefit Service:

Service of a member from employment date as a certified police officer through termination date measured in years and completed months. A member may buy back up to a total of four (4) years of prior military and sworn police service by paying the true actuarial cost of the increase service.

5. Basic Compensation:

Basic rate of salary paid to an employee including longevity pay and assignment pay but excluding overtime, bonuses and commissions. Payments for unused leave time (vacation, sick leave, etc.) are excluded. Effective October 1, 2001, basic compensation includes up to 70 hours of overtime pay per year. Effective October 1, 2003, basic compensation includes up to 120 hours of overtime pay per year. The limit on overtime hours increased to 150 hours effective October 1, 2006 and to 300 hours effective May 1, 2011.

6. Final Average Earnings (FAE):

Final Average Earnings is defined as the higher of (i) average monthly rate of basic compensation during the final thirty-six (36) successive calendar months of Benefit Service, or (ii) average monthly rate of basic compensation of the best five (5) of the last ten (10) years of Benefit Service, preceding actual retirement or termination.

7. Employee Contributions:

9.0% of basic compensation.

Table X
(continued two)

8. Accrued Benefit

For Tier One Participants:

The monthly accrued benefit is equal to 3.0% times FAE multiplied by the years and months of Benefit Service for the first 10 years, plus 4.0% times FAE for the next five (5) years of Benefit Service, plus 5.0% times FAE for the next five (5) years of Benefit Service, plus 2.0% of FAE times the next 10 years of Benefit Service. The maximum benefit is limited to 95% of FAE. However, after 47½ years of Benefit Service, benefits shall recommence at a rate of 2.0% of FAE per year.

For Tier Two Participants:

The monthly accrued benefit is equal to 3.0% times FAE multiplied by the years and months of Benefit Service for the first 20 years, plus 2.0% times FAE for each subsequent year of Benefit Service, subject to a maximum benefit of 80% of FAE. However, after 40 years of Benefit Service, benefits shall recommence at a rate of 2.0% of FAE per year.

9. Normal Retirement Date:

The first of the month coincident with or next following the earlier of (i) completion of 20 years of Benefit Service or (ii) the attainment of age 55. For a vested terminated member with at least 15 years of Benefit Service, full deferred accrued benefit would be payable on the first of the month coincident with or next following the anniversary of the date that the member would have completed 20 years of Benefit Service.

10. Amount of Normal Retirement Income:

The monthly amount of Accrued Benefit, payable in the normal form of payment to a participant on his or her Normal Retirement Date.

11. Early Retirement Date:

Attainment of age 50 and completion of 10 years of Benefit Service.

12. Amount of Early Retirement Income:

The monthly amount of Accrued Benefit, payable in the normal form of payment to a participant on his Early Retirement Date.

The benefit will be reduced for early payment so that it is actuarially equivalent to the normal retirement benefit. Effective May 1, 2011, the early retirement reduction will be 3.0% per year for each year prior to Normal Retirement Date.

The participant also has the option of deferring the commencement of his monthly benefit to his Normal Retirement Date, the earlier of the date he would have attained 20 years of Benefit Service (provided he has completed 15 years of actual Benefit Service) or age 55. In such case, there would be no actuarial reduction to his monthly benefit.

D

Table X
(continued three)

13. Delayed Retirement Date:

A member may continue to work beyond his Normal Retirement Date and retire on any subsequent first day of the month.

14. Amount of Delayed Retirement Income:

The monthly amount of Accrued Benefit, payable in the normal form of payment to a participant who retires on his Delayed Retirement Date.

15. Benefits on Termination of Service:

In the event of termination of service prior to Normal Retirement Date, for reasons other than death, early retirement or disability, a monthly benefit equal to Accrued Benefit times the vested percentage below will be payable commencing on Normal Retirement Date.

In lieu of this deferred benefit, a participant may elect to receive the return of his employee contributions.

<u>Years of Benefit Service With the Town</u>	<u>Vested Percentage</u>
Less than 10	0%
10 or more	100%

16. Permissive Service Credit Purchases:

- a. A vested active participant shall be permitted to purchase permissive service credit in the form of an increased benefit accrual factor, which may be purchased in one percent (1.0%) increments above the participant's accrued benefit percentage, in an amount not to exceed twenty percent (20%) of FAE. The maximum amount of benefit accrual will remain at ninety-five percent (95%) of FAE for Tier One participants and eighty percent (80%) for Tier Two participants. The purchase cost would be the full actuarial cost of the increased benefit accrual multiplier and must be paid in full prior to the granting of the increased benefits.
- b. A vested active participant shall be permitted to purchase permissive service credit expressed as an earlier normal retirement date. Under such proposal, a participant would be able to receive an unreduced normal retirement benefit as early as upon the completion of 15 years of Benefit Service (instead of 20), if a purchase of the maximum of five (5) years of permissive service credit were made. However, the participant would not accrue a higher multiplier, but would be permitted to begin receiving an unreduced retirement benefit with fewer years of actual service. The purchase cost would be the full actuarial cost of the earlier commencement of retirement benefits and must be paid in full prior to the granting of the increased benefits.

**Table X
(continued four)**

- c. The cost of either purchase may be made either in one lump sum or made in payroll deductions installments for a period not to exceed five (5) years, with 7.0% per annum interest added, and must be completed prior to commencement of any enhanced benefit.

17. Disability Retirement Benefits:

For a member totally and permanently disabled where the disability is service-connected, the monthly benefit shall be equal to the greater of (i) 66-2/3% of such member's base pay at time of disability, less any benefits payable by Federal Old Age, Survivors and Disability Insurance, Worker's Compensation benefits or other disability benefits payable from Broward County or the Town because of disability, age or unemployment. Effective May 1, 2011, the benefit after offset shall in no case be less than the member's Accrued Benefit at date of disability or (ii) forty-two percent (42%) of FAE payable as a ten year certain and life annuity. The monthly non-service connected benefit is the greater of \$100 or 1.5% times FAE multiplied by the number of years of Benefit Service, less any of the offset amounts described above. Effective May 1, 2011, the minimum non-service connected disability benefit shall be the greater of the Accrued Benefit or twenty-five percent (25%) of FAE, payable as a ten year certain and life annuity. In no event will the service-connected benefit be less than the non-service connected benefit. Benefits shall be payable starting six (6) months after termination of service for disability, and will be payable for life or until recovery.

18. Death Benefits:

a. Prior to retirement: If death is non-service connected or member had no spouse to whom he had been married to for at least one (1) year prior to death, the death benefit shall be the return of accumulated employee contributions plus prior plan benefits, if any. However, if a member had at least 10 years of Benefit Service at the time of death, then his or her beneficiary will be entitled to the benefits otherwise payable to the member at Early or Normal Retirement Date.

If death is service-connected and member has an eligible spouse to whom he had been married for at least one (1) year prior to death, such spouse shall be entitled to a monthly annuity equal to the greater of (i) 50% of base pay at his date of death, or (ii) Accrued Benefit payable to the eligible spouse on the date of what would have been the member's Normal Retirement Date. Such pension shall continue to the spouse until the spouse's death, with a guarantee that such benefits will at least equal the accumulated contributions at his date of death. If a member had no eligible spouse but had at least 10 years of Benefit Service at the time of death, then his or her beneficiary will be entitled to the benefits otherwise payable to the member at Early or Normal Retirement Date.

b. After retirement: If a member had elected a joint and survivor or a 10 year certain and life optional form of payment, the adjusted monthly benefit will be continued to the beneficiary until the appropriate annuity ending date. Total benefits payable the member and his beneficiary will not be less than the amount of accumulated contributions at date of retirement.

D

Table X
(continued five)

19. Normal Form of Retirement Income:

For a married participant, the normal form of retirement income will be monthly payments for life of the member, with benefit continuing to spouse after member's death for one (1) year and 60% of benefit payable to spouse thereafter. The benefit amount is not reduced due to this form of payment. The participant may also elect to receive the benefit as an unreduced ten year certain and life annuity.

For an unmarried participant, the normal form of payment will be an unreduced ten year certain and life annuity.

20. Optional Forms of Retirement Income:

The following optional forms of retirement income may be elected by a member without presenting evidence of good health, if elected at least one year prior to his date of retirement:

Option 1 A single life annuity payable during the lifetime of the participant only.

Option 2 A retirement annuity payable to the member during the joint lifetime of the member and a joint pensioner designated by the member, and following the death of either of them, 50%, 66-2/3%, 75%, or 100% depending on the retiree's election, of such smaller monthly amount payable to the survivor for the lifetime of the survivor.

Option 3 A monthly annuity payable to the member for ten years certain and life thereafter.

21. Deferred Retirement Option Plan (DROP):

The DROP is available only if the member makes an irrevocable election to participate after meeting the eligibility for Normal Retirement Benefit. The DROP has a five (5) year maximum participation period, after which the employee is deemed separated from the Town. In no event can a member who enters the DROP exceed 30 years of total Benefit Service plus years of DROP participation. If the member dies or becomes disabled during the DROP period, the member will have presumed to have retired on a normal retirement on the day prior to disability or death.

22. Cost of Living Adjustments (COLA):

An annual COLA will be provided to retirees and beneficiaries. The amount of the COLA will be 2.0% per year. For recipients who retired prior to October 1, 1997, the monthly benefit after the yearly COLA will not exceed 115% of the original monthly benefit prior to any COLA. For post October 1, 1997 retirees, the limit for future monthly benefits after COLA will be 130% of the original benefit amounts prior to any COLA. The first annual COLA will commence on the fifth anniversary of retirement, but no earlier than November 1, 2004.

23. Changes from October 1, 2018 Valuation:

None.

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Table XI

TOWN OF DAVIE POLICE PENSION PLAN

Actuarial Assumptions and Actuarial Cost Methods

1. Mortality:

Pre-Retirement:

Female Non-Disabled: Headcount Weighted Safety Employee Female Table, set forward 1 year, Scale MP-2018

Male Non-Disabled: Headcount Weighted Safety Below Median Employee Male Table, set forward 1 year, scale MP-2018

Post-Retirement:

Female Non-Disabled: Headcount Weighted Safety Healthy Retiree Female Table, set forward 1 year, Scale MP-2018

Male Non-Disabled: Headcount Weighted Safety Below Median Healthy Retiree Male Table, set forward 1 year, Scale MP-2018

Pre-Retirement & Post-Retirement:

Female Disabled: 80% Headcount Weighted General Disabled Retiree Female Table; 20% Headcount Weighted Safety Disabled Retiree Female Table, Scale MP-2018

Male Disabled: 80% Headcount Weighted General Disabled Retiree Male Table; 20% Headcount Weighted Safety Disabled Retiree Male Table, Scale MP-2018

2. Interest to be Earned by Fund:

7.50%, compounded annually, net of investment expenses.

3. Allowances for Expenses or Contingencies:

Estimated by net of investment fees paid during previous year.

4. Employee Withdrawal Rates:

Withdrawal rates were used in accordance with tables per the following illustrative example:

<u>Age</u>	<u>Withdrawal Rates Per 100 Employees</u>	
	<u>Male</u>	<u>Female</u>
20	8.4	14.0
25	5.6	8.4
30	3.9	5.6
35	2.8	3.9
40	1.7	2.8
45	1.1	1.7
50	0.2	1.1
55 & over	0.0	0.0

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Table XI
(continued two)

5. Assumptions on Pensionable Overtime Hours

Each member is assumed to continue to work the same number of overtime hours as in the most recent plan year, subject to the 300 hours maximum, for each future year.

6. Disability Rates:

The 1985 Disability Study - Class 1 with separate male and female rates were used. 75% of disabilities assumed to be service incurred, 25% assumed to be non-service incurred.

7. Salary Increase Factors:

Current salaries were assumed to increase at a rate of 5.5% per year until retirement.

8. Rates of Retirement:

The following are the retirement rates assumed for the participants eligible for retirement:

<u>Participants with 20 or more years of Benefit Service</u>		<u>Participants with less than 20 years of Benefit Service</u>	
<u>Years of Service</u>	<u>Percentage Retiring</u>	<u>Age</u>	<u>Percentage Retirement</u>
20	65%	50-54	25%
21 - 24	50%	55-59	50%
25 and over	100%	60 and over	100%

However, active participants eligible for retirement that have less than 20 years of Benefit Service as of the valuation date are assumed to have a minimum of one year future service.

9. Asset Valuation Method:

The actuarial value of assets is determined by smoothing the differences between actual investment earnings and assumed investment return over three (3) years. This method was adopted effective October 1, 2007 with no phase-in. The resulting value would then be limited to between 80% and 120% of market value.

10. Actuarial Cost Method:

Normal Retirement, Termination, Disability and Pre-Retirement Death Benefits: Entry-Age-Actuarial Cost Method.

Table XI
(continued three)

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his date of hire to his retirement age to fund his estimated benefits, assuming the plan had always been in effect. The normal cost for the plan is the sum of the individual normal costs for all active participants. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the plan is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the actuarial value of assets of the plan.

11. Marriage Assumptions:

100% of active participants were assumed married, with husbands three (3) years older than wives.

12. Valuation of Normal Form of Payment:

The normal form of payment is valued as an unreduced joint and 60% survivor annuity benefit for married members. For unmarried members, the normal form of payment is valued as a ten year certain and life annuity.

13. Changes from October 1, 2018 Actuarial Valuation

Mortality Tables changed as described in Table XI, item 1.

Table XII

TOWN OF DAVIE POLICE PENSION PLAN

Distribution of Active Participants by Age and Service Groups
as of October 1, 2019

Years of Credited Service

<u>Age</u>	<u>0 - 4</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 & Over</u>	<u>Total</u>
Under 25	4	.	.	.	.	.	.	4
25 - 29	27	7	.	.	.	.	.	34
30 - 34	10	12	7	.	.	.	.	29
35 - 39	7	2	13	2	.	.	.	24
40 - 44	1	2	8	21	2	.	.	34
45 - 49	.	.	5	7	4	.	.	16
50 - 54	1	3	3	6	1	.	.	14
55 - 59	.	.	.	2	2	.	.	4
60 - 64	.	.	.	.	.	.	.	0
65 & Over	.	.	.	.	.	.	.	0
TOTAL	50	26	36	38	9	.	.	159

10/01/2018 10/01/2019

Average Attained Age 38.65 years 37.95 years
 Average Pay \$95,826 \$97,890
 Percent Female 16.98% 17.61%



Table XIII

TOWN OF DAVIE POLICE PENSION PLAN

Reconciliation of Participant Data

A. Active Participants

1. Active participants previous year	159
2. Retired during year	(2)
3. Entered DROP during year	(8)
4. Died during year	0
5. Disabled during year	0
6. Terminated vested during year	(0)
7. Terminated non-vested during period	(4)
8. New active participants	14
9. Rehired	0
10. Active participants current year	<u>159</u>

B. Participants Receiving Benefits

1. Participants receiving benefits previous year	107
2. New retired participants	2
3. New terminated vested receiving benefits	1
4. New disabled receiving benefits	0
5. New beneficiaries receiving benefits	3
6. DROP participants exited and retired	14
7. Died or ceased payment during year	(3)
8. Retired or terminated vested receiving benefits current year	<u>124</u>

C. Terminated Participants Entitled to Future Benefits

1. Terminated participants entitled to future benefits previous year	4
2. Died during year	0
3. Rehired	0
4. Commenced receiving benefits during year	(1)
5. New terminated participants	0
6. Terminated participants entitled to future benefits current year	<u>3</u>

D. DROP Participants

1. DROP participants previous year	27
2. New entrants during year	8
3. Died during year	0
4. Exited and retired during year	(14)
5. DROP participants current year	<u>21</u>

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Table XIV

TOWN OF DAVIE POLICE PENSION PLAN

Statistics for Participants Entitled to Deferred Vested Benefits
and Participants Receiving Payments

A. Entitled to Deferred Benefits

<u>Current Age Group</u>	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 40	0	\$ 0	\$ 0
40 - 44	3	88,414	29,471
45 - 49	0	0	0
50 - 54	0	0	0
55 - 59	0	0	0
60 - 64	0	0	0
65 & over	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	3	\$ 88,414	\$ 29,471

B. Receiving Benefits (includes DROP participants)

<u>Current Age Group</u>	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 40	4	\$ 54,409	\$ 13,602
40 - 44	5	436,456	87,291
45 - 49	16	1,343,416	83,963
50 - 54	33	2,632,917	79,785
55 - 59	31	1,991,661	64,247
60 - 64	21	1,159,182	55,199
65 & over	<u>35</u>	<u>1,756,642</u>	<u>50,190</u>
TOTAL	145	\$ 9,374,683	\$ 64,653

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Table XV

TOWN OF DAVIE POLICE PENSION PLAN

Recent Investment, Salary Increase, and Turnover Experience

A. Investment Return

Comparison of actual to assumed investment return for the last five years:

Year Ended	Rate of Return		
	Market Value	Actuarial Value	Assumed
09/30/2019	2.3%	3.7%	7.50%
09/30/2018	8.9%	7.4%	7.50%
09/30/2017	11.8%	10.6%	7.60%
09/30/2016	8.4%	9.7%	7.60%
09/30/2015	0.5%	5.6%	7.60%
Last 3 Yrs.	7.6%	7.2%	7.53%
Last 5 Yrs.	6.3%	7.4%	7.56%

B. Recent Salary Increase and Turnover Experience

Year Ended	Salary Increase		Ratio of Actual Turnover to Expected
	Actual	Assumed	
09/30/2019	7.7%	5.50%	1.09
09/30/2018	3.9%	5.50%	0.97
09/30/2017	3.7%	5.50%	0.94
09/30/2016	10.8%	5.50%	0.79
09/30/2015	2.6%	5.50%	0.52
Last 3 Yrs.	5.1%	5.50%	1.00
Last 5 Yrs.	5.7%	5.50%	0.86

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Table XVI

TOWN OF DAVIE POLICE PENSION PLAN

State Required Exhibit

	<u>10/1/2018</u>	<u>10/1/2019</u>
A. <u>Participant Data</u>		
1. Active participants	159	159
2. Retired participants and beneficiaries receiving benefits	101	119
3. Beneficiaries due deferred benefits	0	0
4. DROP participants	27	21
5. Disabled participants receiving benefits	6	5
6. Terminated vested participants	4	3
7. Total participants	297	307
8. Annual payroll of active participants	\$ 15,236,338	\$ 15,564,522
9. Annual benefits payable to those currently receiving benefits	5,365,881	7,502,072
10. Annual benefits payable to beneficiaries due deferred benefits	0	0
11. Annual benefits payable to terminated deferred benefits	169,480	88,414
12. Annual benefits payable to DROP participants	\$ 2,212,292	\$ 1,903,619
B. <u>Value of Assets</u>		
1. Actuarial value	\$ 154,169,267	\$ 159,824,224
2. Market value	\$ 157,321,380	\$ 159,333,621
C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 106,068,028	\$ 103,282,808
b. Vesting benefits	2,873,115	2,928,338
c. Death benefits	633,018	475,128
d. Disability benefits	1,201,322	1,203,303
e. Total	<u>\$ 110,775,483</u>	<u>\$ 107,889,577</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 1,737,482	\$ 565,621
3. Actuarial present value of future expected benefit payments for beneficiaries due deferred benefits	0	0
4. Actuarial present value of future expected benefit payments for those receiving benefits		
a. Service retired	\$ 68,334,659	\$ 83,962,314
b. DROP participants	32,124,256	26,105,640
c. Disability retired	2,426,513	2,072,428
d. Beneficiaries	<u>3,956,225</u>	<u>5,443,891</u>
e. Total	\$ 106,841,653	\$ 117,584,273

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**Table XVI
(continued two)**

	<u>10/1/2018</u>	<u>10/1/2019</u>
5. Miscellaneous (refund unpaid)	\$ 0	\$ 0
6. Total actuarial present value of future expected benefit payments	\$ 219,354,618	\$ 226,039,471
7. Actuarial accrued liabilities	\$ 188,610,712	\$ 194,401,321
8. Unfunded actuarial accrued liabilities	\$ 34,441,445	\$ 34,577,097
D. <u>Statement of Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated vested plan benefits		
a. Participants currently receiving benefits	\$ 74,717,397	\$ 91,478,633
b. Beneficiaries due deferred benefits	0	0
b. DROP participants	32,124,256	26,105,640
c. Other participants	<u>61,650,254</u>	<u>56,221,971</u>
d. Total	\$ 168,491,907	\$ 173,806,244
2. Actuarial present value of accumulated non-vested plan benefits	<u>4,810,908</u>	<u>4,332,780</u>
3. Total actuarial present value of accumulated plan benefits	\$ 173,302,815	\$ 178,139,024
E. <u>Statement of Change in Accumulated Plan Benefits</u>		
1. Actuarial present value of accumulated plan benefits as of October 1, 2018	\$ 173,302,815	
2. Increase (decrease) during year attributable to:		
a. Plan amendment	0	
b. Actuarial assumptions and methods changes	(6,227,092)	
c. Benefits paid and contribution refunds	(6,742,821)	
d. DROP benefits credited	(2,233,460)	
e. Other, including benefits accumulated and increase for interest due to decrease in the discount period	<u>20,039,582</u>	
f. Net increase (decrease)	4,836,209	
3. Actuarial present value of accumulated plan benefits as of October 1, 2019	\$ 178,139,024	

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Table XVI
(continued three)

	<u>10/1/2018</u>	<u>10/1/2019</u>
F. <u>Pension Cost</u>		
1. Total normal cost including expenses	\$ 4,624,766	\$ 4,569,321
2. Expected member contribution	1,371,270	1,400,807
3. Item 2. as percentage of payroll	<u>9.0%</u>	<u>9.0%</u>
4. Net employer normal cost	\$ 3,253,496	\$ 3,168,514
5. Payment required to amortize unfunded liability	<u>3,536,119</u>	<u>3,559,704</u>
6. Total employer required contribution (including interest)	\$ 7,174,869	\$ 7,114,836
7. Item 6. as a percentage of payroll	47.1%	45.7%
8. State contributions	\$ 938,653	\$ 1,051,508
9. Item 8. as a percentage of payroll	6.2%	6.8%
10. Net amount payable by Town	\$ 6,236,216	\$ 6,063,328
11. Item 10. as a percentage of payroll	40.9%	39.0%
G. <u>Past Contributions</u>		
1. Total contribution required	\$ 8,546,139	\$ 8,515,643
2. Actual contributions made:		
a. Employees	\$ 1,455,642	N/A
b. Town	6,625,000*	N/A
c. State	<u>1,051,508</u>	<u>N/A</u>
d. Total	\$ 9,132,150	N/A
H. <u>Net Actuarial Gain (Loss)</u>	\$ (1,368,450)	\$ (8,398,257)
I. <u>Disclosure of Following Items:</u>		
1. Actuarial present value of future salaries - attained age	\$ 104,953,565	\$ 113,543,499
2. Actuarial present value of future employee contributions - attained age	\$ 9,445,821	\$ 10,218,915
3. Actuarial present value of future contributions from other sources	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 10,497,176	\$ 10,283,255
5. Actuarial present value of future salaries and future benefits at entry age	Not provided by software	
6. Actuarial present value of future employee contributions at entry age	Not provided by software	

* Because the Town made the entire contribution for 2018/19 in one payment on 10/31/18, the Town's funding requirement was \$5,998,562, not \$ 6,236,216 as shown in prior year's report.



Table XVI
(continued four)

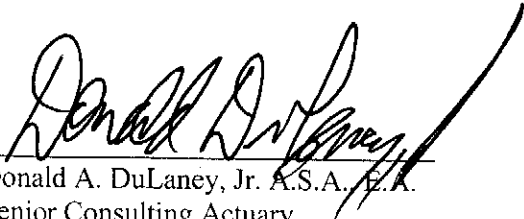
J. Unfunded Actuarial Accrued Liabilities

Description and Amount of Original Liability	Remaining Amortization Period	Unamortized Amount as of Valuation Date	Amortization Payment
10/01/1994 Plan Amendment	5 years	1,672,898	384,634
10/01/1996 Assumption Change	7 years	(18,929)	(3,324)
10/01/1997 Plan Amendment	8 years	(356,397)	(56,601)
10/01/1999 Assumption Change	10 years	(2,137,702)	(289,705)
10/01/2000 Plan Amendment	11 years	2,125,102	270,229
10/01/2002 Method Change	13 years	3,029,066	346,762
10/01/2003 Actuarial Loss	14 years	993,322	108,847
10/01/2003 Plan Amendment	14 years	1,403,487	153,793
10/01/2004 Actuarial Loss	15 years	330,316	34,810
10/01/2005 Actuarial Loss	16 years	1,479,063	150,508
10/01/2005 Plan Amendment	14 years	808,612	88,607
10/01/2006 Actuarial Loss	17 years	2,371,498	233,841
10/01/2006 Plan Amendment	17 years	1,957,008	192,970
10/01/2006 Ch. 185 Plan Amendment	17 years	210,865	20,792
10/01/2007 Actuarial (Gain)	18 years	(189,163)	(18,130)
10/01/2007 Asset Method Change	18 years	(1,918,535)	(183,874)
10/01/2008 Actuarial Loss	19 years	7,590,859	709,028
10/01/2009 Actuarial Loss	20 years	3,296,668	300,816
10/01/2009 Assumption Change	20 years	580,708	52,989
10/01/2010 Actuarial (Gain)	21 years	(2,585,822)	(230,991)
10/01/2010 Plan Amendment	21 years	295,758	26,420
10/01/2011 Actuarial Loss	22 years	6,791,093	595,006
10/01/2012 Actuarial (Gain)	23 years	(4,903,962)	(422,130)
10/01/2013 Actuarial (Gain)	24 years	(1,552,145)	(131,463)
10/01/2014 Actuarial (Gain)	25 years	(1,019,728)	(85,098)
10/01/2014 Assumption Change	15 years	4,205,948	443,237
10/01/2015 Actuarial (Gain)	26 years	2,061,954	169,751
10/01/2016 Actuarial (Gain)	27 years	1,483,526	120,617
10/01/2016 Assumption Change	17 years	4,888,173	481,997
10/01/2017 Actuarial (Gain)	28 years	(4,449,752)	(357,657)
10/01/2017 Assumption Change	18 years	2,969,544	284,604
10/01/2018 Actuarial Loss	29 years	1,316,271	104,687
10/01/2019 Actuarial Loss	30 years	8,398,257	661,480
10/01/2019 Assumption Change	20 years	(6,550,764)	(597,748)
TOTAL:		<u>\$ 34,577,097</u>	<u>\$ 3,559,704</u>

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Table XVI
(continued five)

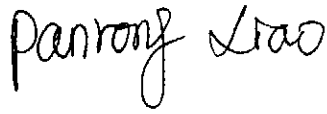
This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



Donald A. DuLaney, Jr. A.S.A., E.A.
Senior Consulting Actuary

2/7/2020
Date

17-04191
Enrollment Number



Panrong Xiao, E.A., M.A.A.A.
Enrolled Actuary

2/7/2020
Date

17-07551
Enrollment Number

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