

1255 Imperial Avenue, #1000 San Diego, CA 92101-7490 619.231.1466 FAX 619.234.3407

Agenda

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM EXECUTIVE COMMITTEE

January 12, 2017

Executive Conference Room 9:00 a.m.

ACTION RECOMMENDED

- A. ROLL CALL
- B. APPROVAL OF MINUTES December 1, 2016

Approve

- C. COMMITTEE DISCUSSION ITEMS
 - 1. Appointment of San Diego Association of Governments Transportation
 Committee Representative and Alternate (Sharon Cooney)
 Action would take nominations from the floor and elect and appoint a representative and an alternate from the MTS Board to serve on the San Diego Association of Governments (SANDAG) Transportation Committee for the 2017 calendar year.

Appoint

 San Diego Transit Corporation (SDTC) Pension Investment Status (Jeremy Miller, Representative from RVK and Larry Marinesi)

Information

3. San Diego Transit Corporation (SDTC) Employee Retirement Plan's Actuarial Valuation as of July 1, 2016 (Anne Harper of Cheiron Inc. and Larry Marinesi)

Action would forward a recommendation to the Board of Directors to receive the SDTC Employee Retirement Plan's (Plan) actuarial valuation as of July 1, 2016, and adopt the pension contribution amount of \$15,087,407 for fiscal year 2018.

Possible Action

4. <u>Potential for MTS Sales Tax Ballot Measure (Karen Landers)</u>
Action would receive a report and provide direction.

Possible Action



to California Government Code Section 54957.6 Agencies: San Diego Transit Corporation (SDTC) and San Diego Trolley, Inc. (SDTI) Employee Organization: Public Transit Employees Association (PTEA) (Representing SDTI Train Operators, Electromechanics, Servicers and Clerical Employee Organization: International Brotherhood of Electrical Workers, Local 465 (Representing SDTC Mechanics and Servicers)

CLOSED SESSION - CONFERENCE WITH LABOR NEGOTIATORS Pursuant

Employee Organization: International Brotherhood of Electrical Workers, Local

D. REVIEW OF DRAFT January 19, 2017 BOARD AGENDA

465 (Representing SDTI Flaggers)

Ε., REVIEW OF SANDAG TRANSPORTATION COMMITTEE AGENDA Review of SANDAG Transportation Committee Agenda and discussion regarding any items pertaining to MTS, San Diego Transit Corporation, or San Diego Trolley, Inc. Relevant excerpts will be provided during the meeting.

Possible Action

Possible

Action

F. COMMITTEE MEMBER COMMUNICATIONS AND OTHER BUSINESS

Agency-Designated Representative: Jeff Stumbo

- G. **PUBLIC COMMENTS**
- H_{ϵ} NEXT MEETING DATE: February 2, 2017
- 1. **ADJOURNMENT**

5.

DRAFT

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM EXECUTIVE COMMITTEE 1255 Imperial Avenue, Suite 1000 San Diego, CA 92101

December 1, 2016

MINUTES

A. ROLL CALL

Chairman Mathis called the Executive Committee meeting to order at 9:00 a.m. A roll call sheet listing Executive Committee member attendance is attached.

B. APPROVAL OF MINUTES

Ms. Bragg moved for approval of the minutes of the November 3, 2016, MTS Executive Committee meeting. Mr. McClellan seconded the motion, and the vote was 4 to 0 in favor with Mr. Gloria absent.

C. COMMITTEE DISCUSSION ITEMS

Fare Collection Update and Whitepaper (Sharon Cooney)

Sharon Cooney, Chief of Staff, provided an update on the fare collection system and the completed whitepaper. She discussed the current fare collection system and its challenges; Payment Card Industry Data Security Standards (PCI-DSS); and options for upgrading and procuring a new fare collection system. She reviewed the planning process for system modernization and the Cubic proposals submitted to MTS. Ms. Cooney introduced Alan Cheng and Hany Haroun with CH2M. She stated that CH2M was hired to help MTS develop the fare collection whitepaper which details the items that are recommended for the regional fare collection system. Mr. Cheng provided a background on CH2M and the process for creating MTS's fare collection whitepaper. Ms. Cooney reviewed the recommendations from the peer agency review workshop and discussed the ideal fare system components, which are included in the whitepaper. She also provided the various cost estimates and funding options for a next generation fare system. Ms. Cooney stated that the recommendation for next steps will be to develop a concept of operations, which will help minimize risk in the procurement stage.

Robert Borowski, Enterprise Business Solutions Manager, provide an update on PCI-DSS compliance. He noted that there are several requirements to become compliant and MTS has already begun internal controls working towards compliance. Mr. Borowski reviewed and discussed the options available to MTS to become fully PCI-DSS compliant.

Mr. Jablonski provided a brief update on upgrading the Webtix software. He also noted that stored value is currently in the testing phase and is anticipated to come online soon.

Action Taken

No action taken.

Transit Optimization Plan (TOP) Update (Denis Desmond)

Denis Desmond, Manager of Planning, provided an update on the TOP. He reviewed the results for the community survey; market analysis goals; current housing and employment density; regional plan 2050 countywide projections; and population and employment. He also discussed statistics for high job to population ratios; San Diego commuters; senior density; youth density; college-age density; minority density; low-income density; and zero-vehicle households. Mr. Desmond reviewed the results for population growth for past and projected dates; northbound pedestrian border crossings; and age trends for bus and trolley users. He discussed the service evaluation results; historical trends; ridership by time of day; weekday ridership; Saturday and Sunday ridership; productivity; farebox recovery; subsidy per passenger; and slow routes. Lastly, Mr. Desmond reviewed the next steps in the TOP process.

Action Taken

Information item only. No action taken,

D. REVIEW OF DRAFT December 8, 2016 BOARD AGENDA (TAKEN BEFORE CLOSED SESSION)

Recommended Consent Items

- 6. On-Call Tree Trimming and Removal Services for the San Diego Trolley Contract Award
 - Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL199.0-16 with Singh Group, Inc., a Disadvantaged Business Enterprise (DBE), for on-call tree trimming and removal services for a three (3) year period.
- 7. Proposed Revisions to San Diego Metropolitan Transit System (MTS) Board Policy No. 41, "Signature Authority", and Repeal of MTS Board Policy No. 4, "Construction Contract Change Orders"
 - Action would: (1) Approve the proposed revisions to MTS Board Policy No. 41, "Signature Authority"; and (2) Repeal MTS Board Policy No. 4, "Construction Contract Change Orders".
- 8. MTS Sale of 2007 45' Bluebird Express Commuter Bus to Transdev Services, Inc.
 Action would authorize the negotiated sale of MTS Vehicle No. 8511 (2007 45' Bluebird Express, VIN # 1BAGRBFA07W100519) to Transdev Services, Inc.
- Approval of Route 950 Major Service Changes
 Action would approve making permanent the pilot major expansion of Route 950 service that began in January 2016.
- 10. Architectural and Engineering (A&E) On-Call Services Master Agreements Award
 Action would authorize the Chief Executive Officer (CEO) to execute MTS A&E On-Call
 master agreements with HDR Engineering, HNTB, Kimley Horn & Associates, Jacobs
 Engineering, Hatch Mott MacDonald, Dokken Engineering, Pacific Railway Enterprises,
 Nasland, and Global Signals Group following successful negotiations with each firm for
 the provision of On-Call A&E services for a five-year agreement.

11. Disadvantaged Business Enterprise (DBE) and Labor Compliance Consulting Services -Contract Award

Action would authorize the Chief Executive Officer (CEO) to execute the following contracts for DBE and Labor Compliance Consulting Services for a five (5) year period: (1) MTS Doc. No. G1964.0-17 with GCAP Services, Inc. (certified DBE firm) for the DBE Consulting Services; and (2) MTS Doc. No. G1965.0-17 with Gafcon, Inc. for the Labor Compliance Consulting Services.

- 12. Investment Report - October 2016
- 13. S70 and SD100 Printed Circuit Boards - Sole Source Purchase Order Action would authorize the Chief Executive Officer (CEO) to issue a purchase order to Siemens Transportation Systems Corporation (Siemens), on a sole source basis, for the purchase of printed circuit boards and related items.
- Transit Smart Cards Contract Award 14. Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G1926.0-16 with Paragon Magnadata, Inc. for the provision of Transit Smart Cards for three (3) base years with two (2) 1-year options, exercisable at MTS's sole discretion.
- E. REVIEW OF SANDAG TRANSPORTATION COMMITTEE AGENDA (TAKEN BEFORE CLOSED SESSION)

There was no SANDAG Transportation Committee agenda discussion.

F۰ COMMITTEE MEMBER COMMUNICATIONS AND OTHER BUSINESS (TAKEN BEFORE CLOSED SESSION)

There was no Committee Member Communications and Other Business discussion.

G. PUBLIC COMMENTS (TAKEN BEFORE CLOSED SESSION)

There were no Public Comments.

The Executive Committee convened for Closed Session at 11:00 a.m.

C3. CLOSED SESSION - CONFERENCE WITH REAL PROPERTY NEGOTIATORS Pursuant to California Government Code Section 54956.8 Property: Assessor's Parcel Number (APN) 384-311-38; 8606 Cuyamaca Street, Santee, California

Agency Negotiators: Paul Jablonski, Chief Executive Officer; Karen Landers, General Counsel; and Tim Allison, Manager of Real Estate Assets Negotiating Parties: Graphic Business Solutions

Under Negotiation: Price and Terms of Payment

The Executive Committee reconvened from Closed Session at 11:15 a.m.

Executive Committee Meeting – DRAFT MINUTES December 1, 2016
Page 4 of 4

Oral Report on Final Actions Taken in Closed Session

C3. The Executive Committee received a report and gave instructions to staff.

H. NEXT MEETING DATE

The next Executive Committee meeting is scheduled for January 12, 2017, at 9:00 a.m. in the Executive Committee Conference Room.

I. ADJOURNMENT

Chairman Mathis adjourned the meeting at 11:15 a.m.

Chairman	

Attachment: A. Roll Call Sheet

EXECUTIVE COMMITTEESAN DIEGO METROPOLITAN TRANSIT SYSTEM

ROLL CALL

MEETING OF (DAT	ΓE)	December 1, 2016		CALL TO ORDER (TIME)	9:00 a.m.
RECESS				RECONVENE	
CLOSED SESSION	۱	11:00 a.m.		RECONVENE	11:15 a.m.
				ADJOURN	11:15 a.m.
BOARD MEMBER	1	(Altern	ate)	PRESENT (TIME ARRIVED)	ABSENT (TIME LEFT)
BRAGG	\boxtimes	(Rios)		9:00 a.m.	11:15 a.m.
MCCLELLAN	Ø	(McWhirter)		9:00 a.m.	11:15 a.m.
GLORIA		(Cole)			
MATHIS	×			9:00 a.m.	11:15 a.m.
ROBERTS	⊠	(Cox)		9:00 a.m.	11:15 a.m.
Transportation Cor	nmitte	ee Rep Slot (Mathis	3)		
SIGNED BY THE C	LERK	OF THE BOARD:	<u>J</u>	ulia tuer	
CONFIRMED BY TH	1E GE	ENERAL COUNSEL	:_ GU	re Cho	



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. C1

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM EXECUTIVE COMMITTEE

January 12, 2017

SUBJECT:

APPOINTMENT OF SAN DIEGO ASSOCIATION OF GOVERNMENTS TRANSPORTATION COMMITTEE REPRESENTATIVE AND ALTERNATE (SHARON COONEY)

RECOMMENDATION:

That the Executive Committee take nominations from the floor and elect and appoint a representative and an alternate from the MTS Board to serve on the San Diego Association of Governments (SANDAG) Transportation Committee for the 2017 calendar year.

Budget Impact

None.

DISCUSSION:

MTS Board Policy No. 22 specifies:

On or before its first meeting in January, the Executive Committee shall appoint one of its members to serve as the representative and one of its members to serve as the alternate to the San Diego Association of Governments (SANDAG) Transportation Committee to serve for a term of one year. In the event that the Executive Committee feels a member of the Board who does not serve on the Executive Committee is their preferred representative or alternate for the SANDAG Transportation Committee, the Executive Committee shall have the ability to select the representative or alternate from the full Board. In that instance, the SANDAG Transportation Committee representative, or the alternate in his or her absence, shall attend the Executive Committee meetings as a voting member.

The 2016 SANDAG Transportation Committee representative was Chairman Harry Mathis, and the alternate was Board Member Lorie Bragg.



The nomination and election procedures pursuant to Robert's Rules of Order are as follows:

- 1. The Chairman of the Executive Committee opens the agenda item.
- 2. The Chairman requests nominations from the floor. Nominations do not require a second.
- 3. The Chairman closes the nominations.
- 4. The Chairman asks for any Executive Committee discussion.
- 5. The Chairman calls for the vote on each candidate in the order in which they were received. The vote continues until a candidate is elected.

Paul C. Jablonski

Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, sharon.cooney@sdmts.com



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. C2

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM EXECUTIVE COMMITTEE

January 12, 2017

SUBJECT:

SAN DIEGO TRANSIT CORPORATION (SDTC) PENSION INVESTMENT STATUS (JEREMY MILLER, REPRESENTATIVE FROM RVK AND LARRY MARINESI)

INFORMATIONAL ONLY

Budget Impact

None at this time.

DISCUSSION:

Representatives from RVK will provide the Executive Committee with an update as to the performance of the SDTC Employee Retirement Plan (Plan). RVK's pension investment performance analysis (Attachment A) for the Plan as of June 30, 2016 includes assets with a market value of \$153,645,350.

During fiscal year 2016, the Plan's assets decreased by approximately \$5.6 million. This resulted from a net payout of benefits and expenses less contributions of \$5.5 million and a net investment loss of \$0.1 million. The Plan's twelve managers achieved a combined investment return of -.09% for the year. The Plan's returns over the past three and five years are 4.10% and 3.69% respectively. Since inception (10/1/1982), the Plan's investments have returned 9.13%.

The Plan's investment advisor, Jeremy Miller, will be attending the meeting to discuss capital markets' performance in general and the Plan's performance specifically.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. RVK Pension Investment Performance Analysis



Treasury Yield Curve (%)

Capital Markets Review

General Market Commentary

The citizens of the United Kingdom voted to leave the European Union, While the 'Brexit' process will unfold over the next two years, global equity markets sold off sharply over two days before recovering modestly by the end of the month.

4 00

- As the flight to safety continued across Europe, the yield on Germany's 10-year sovereign debt fell below zero for the first time ever, and the British Pound dropped to its lowest level in 30 years,
- ECB President Mario Draghi stated that Britain's decision to leave the EU could decrease Euro Zone growth by up to 0.5% over the next three years. The lowered growth estimates are due to uncertainty regarding future trade agreements between the UK and Euro Zone countries.

2.50 2.00

- 0.26% and the MSCI EAFE (Net) Index returned -3.36%. Emerging markets returned 4.00% as Equity markets posted mixed returns in June as the S&P 500 (Cap Wtd) Index returned measured by the MSCI EM (Net) Index
- The Barclays US Aggregate Bond Index returned 1.80% in June, outperforming the 1,47% return by the Barclays US Treasury Intermediate Term Index. International fixed income markets returned 4,42%, as measured by the Citi Non-US World Government Bond Index
- Public real estate, as measured by the Wilshire US REIT Index, returned 6.49% in June and 12.48% over the trailing five-year period.
 - The Cambridge US Private Equity Index returned 2,99% for the trailing one-year period and 11,48% for the trailing five-year period ending March 2016.
 - Absolute return strategies, as measured by the HFN FOF Multi-Strat Index, returned -1.02% for the month and -6.48% over the trailing one-year period.
 - Crude oil's price fell by 1.57% during the month, and has decreased by 18.73% YoY

							Ireasury Yield Curve (%) Jun-16	٥
Economic Indicators	Jun-16		May-16	Jun-15	10 Yr	20 Yr	3 Month 0.26	
Federal Funds Rate (%)	0.30	4	0.29	0.08	1.07	2.47	6 Month 0,36	
Breakeven Inflation - 1 Year (%)	1,17	•	1,43	0.73	0.92	N/A	1 Year 0.45	
Breakeven Inflation - 5 Year (%)	1.40	•	1.49	1.67	1.73	N/A	3 Year 0 71	
Breakeven Inflation - 10 Year (%)	1.44	•	1,58	1.89	2.05	N/A	5 Year 1.01	
Breakeven Inflation - 30 Year (%)	1.61	•	1.74	2.03	2.27	N/A	7 Year 1,29	
Barclays US Agg Bond Index - Yield (%)	1.91	•	2.20	2.39	3.24	4,44	10 Year 1.49	
Barclays US Agg Bond Index - OAS (%)	0.55	4	0.51	0.51	0.72	0.67	20 Year 1,86	
Barclays US Agg Credit Index - OAS (%)	1.47	4	1.41	1,37	1.70	1,53	30 Year 2.30	
Barclays US Corp. HY Index - OAS (%)	5.94	4	5.66	4.76	5.98	5,80		
Capacity Utilization (%)	75,37	4	74,94	76.36	76.32	78,02	Market Performance (%)	MTD
Unemployment Rate (%)	4.9	4	4.7	5,3	7.0	0.9	S&P 500 (Cap Wtd)	0.26
PMI - Manufacturing (%)	53.2	4	51.3	53.1	51.9	52.2	Russell 2000	-0.06
Baltic Dry Index - Shipping	099	•	612	800	2,654	2,308	MSCI EAFE (Net)	-3,36
Consumer Conf (Conf Board)	97.40	4	92.40	99,80	74.73	93.21	MSCI EAFE SC (Net)	-5.28
CPI YoY (Headline) (%)	1.0	I	1.0	0.1	0	2,2	MSCI EM (Net)	4.00
CPI YoY (Core) (%)	2.3	4	2.2	80	1.9	2.0	Barclays US Agg Bond	1.80
PPI YoY (%)	-2.0	4	-2.3	-2.6	2,0	2.0	BofA ML 3 Mo US T-Bill	0.04
M2 YoY (%)	7.0	4	6.8	5.6	6.4	6.3	NCREIF ODCE (Gross)	2,13
US Dollar Total Weighted Index	90.64	•	96 06	98 88	78,17	86.76	Wilshire US REIT	6.49
WTI Crude Oil per Barrel (\$)	48	>	49	59	80	55	HFN FOF Multi-Strat	-1.02
Gold Spot per Oz (\$)	1,322	4	1.215	1,172	1,176	762	Bloomberg Cmdty Index (TR)	4.13

							Treasury Yield Curve (%) Jun-16	1-16	May-16	No. III NO.	Jun-15		Jun-14	
S	Jun-16	2 546	May-16	Jun-15	10 Yr	20 Yr	3 Month 0.	0.26	0:34		0.01		0.04	
(0)	0.30	4	0.29	0.08	1.07	2.47	6 Month 0.	0.36	0.49		0.11		0.07	
Year (%)	1.17	•	1.43	0.73	0.92	N/A	1 Year 0.	0.45	0.68		0.28		0.11	
Year (%)	1.40	•	1.49	1.67	1.73	N/A	3 Year 0	0.71	1.03		1.01		0.88	
0 Year (%)	1.44	•	1.58	1,89	2.05	N/A	5 Year 1.	1.01	1.37		1.63		1.62	
0 Year (%)	1.61	•	1.74	2.03	2.27	N/A	7 Year	1.29	1.66		2.07		2.13	
Index - Yield (%)	1.91	•	2.20	2.39	3.24	4,44	10 Year 1.	1.49	1.84		2.35		2.53	
Index - OAS (%)	0.55	4	0.51	0.51	0.72	0.67	20 Year	98	2.23		2.83		3.08	
it Index - OAS (%)	1.47	4	1.41	1,37	1.70	1,53	30 Year 2.3	2.30	2.64		3.11		3,34	
Index - OAS (%)	5.94	4	5.66	4.76	5.98	5,80								
	75,37	◀	74.94	76.36	76,32	78,02	Market Performance (%)	MTD	D QTD	CYTD	1 Yr	3 Yr	5 Yr	į.
(%) ∈	4.9	4	4.7	5,3	7.0	0.9	S&P 500 (Cap Wtd)	0.26		3.84	3.99	11.66	12.10	4
(%)	53.2	4	51.3	53.1	51.9	52.2	Russell 2000	-0.0	9,79	2,22	-6.73	7,09		3
guiddin	099	◀	612	800	2,654	2,308	MSCI EAFE (Net)	-3.3		-4.42	-10.16	2.06	1.68	5.0
Board)	97.40	4	92.40	99.80	74.73	93.21	MSCI EAFE SC (Net)	-5.2		-3,18	-3.67	7,26		0
	1.0	I	1,0	0.1	← ∞	2,2	MSCI EM (Net)	4.00		6.41	-12.05	-1.56	-3.78	8
	2.3	4	2:2	100	1.9	2.0	Barclays US Agg Bond	1.8		5,31	00.9	4.06		4
	-2,0	◀	-2.3	-2.6	2,0	2.0	BofA ML 3 Mo US T-Bill	0.04		0.15	0.19	0.09		0.
	7.0	4	6.8	5.6	6.4	6.3	NCREIF ODCE (Gross)	2.13		4.36	11.82	13,00		10
ed Index	90.64	•	96.06	98 88	78,17	92.98	Wilshire US REIT	6.49		11,09	22.82	13.63	12.48	20.
el (\$)	48	•	49	59	80	55	HFN FOF Multi-Strat	-1 02		-2.83	-6.48	1.35		S
	1,322	◄	1.215	1,172	1,176	762	Bloomberg Cmdty Index (TR)	4.13		13.23	-13.34	-10.56	-10.83	4

10 Yr

7.42 6.20 3,57

1.92 3.94

1.58 3.54 1.04 6,17 66.9

16

5.13

93 .58 .11

88

0.15

0,66 1.41

0.04 0,10

30 Y

20 % -Jun-13

10 7

___Jun-14 1

Jun-15 > 5

1 May-16 3 <

Jun-16

N 8

3 8

0.50 0.00

1.50

2.52

1.96

3,22 3.52

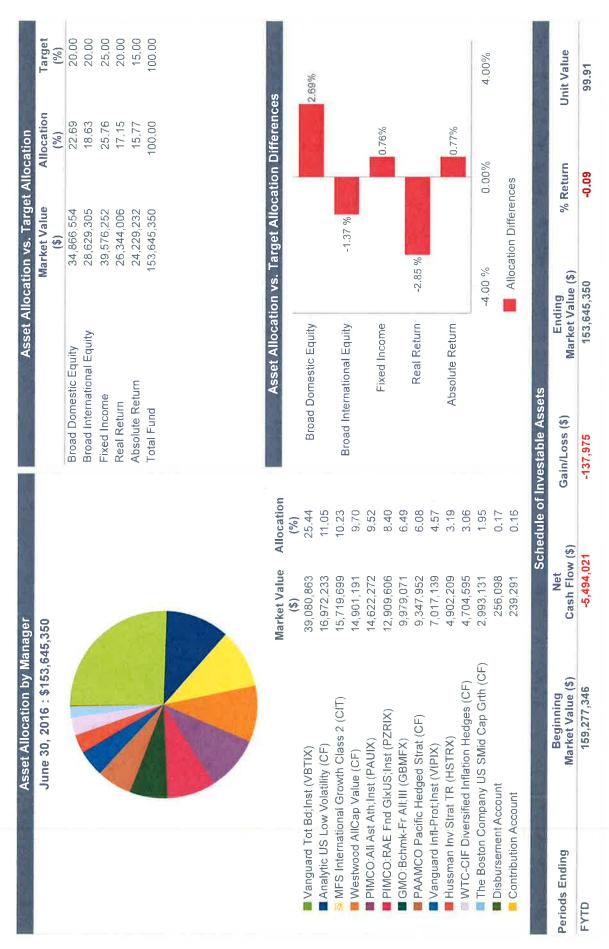
NCREIF performance is reported quarterly; MTD and QTD returns are shown as "N/A" on interim-quarter months. Data shown is as of most recent quarter-end, Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service.

Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as "N/A,"



1.24

AA by Manager, AA vs. Target, and Schedule of Investable Assets San Diego Transit Corporation Employees Retirement Plan



Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees, Market values and performance are preliminary and subject to change. Fiscal year ends June 30th.



San Diego Transit Corporation Employees Retirement Plan Asset Allocation & Performance

j	Allocation	on						Pe	Performance (%)	(%)					
	Market						÷	en	цn	10				Since	Inception
	Value (\$)	%	MTD	QTD	CYTD	FYTD	Year	Years	Years	Years	2015	2014	2013	Incep.	Date
San Diego Transit Total Fund	153,645,350	100,00	1.39	2.65	5.01	-0.09	-0.09	4.10	3.69	4.33	-2.64	2.66	9.74	9.13	10/01/1982
Policy Index			0.46	1.62	2,98	-0.24	-0.24	4.19	4.11	4,53	-1.57	3.86	9.78	9,28	
Difference			0.93	1.03	2.03	0.15	0.15	-0.09	-0.42	-0.20	-1.07	-1.20	-0.04	-0.15	
Domestic Equity Composite	34,866,554	22.69	2.85	4.20	66.9	4.73	4.73	11.48	11.00	6.73	1.06	12.58	31.19	7.02	03/01/2005
Russell 3000 Index			0.21	2.63	3.62	2.14	2.14	11,13	11,60	7.40	0.48	12.56	33.55	7.41	
Difference			2.64	1.57	3.37	2.59	2.59	0.35	-0.60	-0.67	0.58	0.02	-2.36	-0.39	
International Equity Composite	28,629,305	18.63	-0.32	0.94	2.66	-6.03	-6.03	3.20	1.32	0.70	4.55	4.73	21.80	2.16	03/01/2005
MSCI ACW Ex US Index (USD) (Net)			-1.53	-0.64	-1.02	-10.24	-10.24	1,16	0.10	1.87	-5.66	-3.87	15,29	3.60	
Difference			1.21	1.58	3.68	4.21	4.21	2.04	1.22	-1.17	1.11	-0.86	6.51	-1.44	
Fixed Income Composite	39,576,252	25.76	0.85	1.96	3.77	3.54	3.54	3.60	3.75	6.25	0.72	4.56	-1.07	5.70	03/01/2005
Bloomberg US Agg Bond Index			1.80	2.21	5,31	00.9	6.00	4.06	3.76	5,13	0.55	5.97	-2.02	4.67	
Difference			-0.95	-0.25	-1.54	-2.46	-2.46	-0.46	-0.01	1.12	0.17	-1.41	0.95	1.03	
Real Return Composite	26,344,006	17,15	3.28	4.72	10,34	72.0-	-0.77	-0.89	0.68	N/A	-10.41	-2.41	3.69	1.22	06/01/2007
Real Return Actual Alloc Index (Active)			1.71	2.92	6.44	1.48	1.48	1,57	2.33	A/A	-4.47	0.99	-0.24	2,83	
Difference			1,57	1.80	3.90	-2.25	-2.25	-2.46	-1.65	N/A	-5.94	-3.40	-3.45	-1.61	
Absolute Return Composite (Net)	24,229,232	15.77	0.52	1.65	1.62	-2.77	72.77	1.24	0.57	NA	-2.61	2.25	1.89	1.24	06/01/2007
HFRI FOF: Cnsvt Index			-0.46	0.52	-1.57	-3.33	-3.33	1.94	1,92	1.36	0.37	3.14	7.70	0.37	
Difference			0.98	1.13	3,19	0.56	0.56	-0.70	-1.35	N/A	-2.98	-0.89	-5.81	0.87	

Performance shown is gross of fees with the exception of the Absolute Return Composite which is shown net of fees. Inception dates shown represent the firstmarket values full month following initial funding. Fiscal year ends June 30th. Performance and market values are preliminary and subject to change. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. Returns may be slightly adjusted to tie out with actuarial and audited financial statements.



A-4

San Diego Transit Corporation Employees Retirement Plan Comparative Performance

	MTD	QTD	CYTD	FYTD	Year	3 Years	5 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
San Diego Transit Total Fund	1.39	2.65	5.01	-0.09	-0.09	4.10	3.69	4.33	-2.64	2.66	9.74	9.13	10/01/1982
Policy Index	0.46	1,62	2.98	-0.24	-0.24	4.19	4.11	4.53	-1.57	3.86	9.78	9.28	
Difference	0.93	1.03	2,03	0.15	0.15	-0.09	-0.42	-0.20	-1.07	-1.20	-0.04	-0.15	
Westwood AllCap Value (CF) (1)	1.51	3,33	4.05	-1.64	-1.64	9.01	9.77	7.57	-2.45	10.79	34.61	10.59	07/01/1986
Russell 3000 Val Index (2)	0.83	4.57	6.29	2.42	2.42	9.58	11.07	6.57	4.13	12.70	32.69	9.86	
Difference	0.68	-1.24	-2.24	4.06	4.06	-0.57	-1.30	1.00	1.68	1.91	1.92	0.73	
Analytic US Low Volatility (CF)	4.37	4.87	10.12	13.32	13.32	14.10	A/N	N/A	4.99	16,65	24.58	14.62	10/01/2012
MSCI US Minimum Vol Index (USD) (Net)	4.50	5.59	11,36	16.46	16.46	14.21	13.89	8 98	4.92	15.76	24.37	14.31	
Difference	-0.13	-0.72	-1.24	-3.14	-3.14	-0.11	N/A	N/A	0.07	0.89	0.21	0.31	
Russell 1000 Index	0.23	2.54	3.74	2.93	2.93	11.48	11.88	7.51	0.92	13.24	33.11	12.97	
Difference	4.14	2.33	6.38	10.39	10.39	2.62	N/A	N/A	4.07	3.41	-8.53	1.65	
The Boston Company US SMid Cap Grth (GF)	1.08	4.77	4.77	-5.39	-5.39	9.59	11.06	N/A	-1.28	4.82	41.47	17.31	04/01/2009
Russell 2500 Grth Index	-0.74	2.70	-0.03	-7.69	-7.69	90.6	9.27	7.96	-0.19	7.05	40.65	18.07	
Difference	1.82	2.07	4.80	2.30	2.30	0.53	1.79	N/A	-1.09	-2.23	0.82	-0.76	
PIMCO:RAE Fnd GIXUS;Inst (PZRIX)	-0.07	1.07	2.64	-10.43	-10.43	1.78	N/A	A/N	-10.81	-5.55	24.39	3.20	03/01/2012
FTSE RAFI Dvl'd Ex US 1000 TR Index	-3.94	-1.56	4.03	-12.51	-12.51	1.72	0.40	2.28	4.80	4.79	25.41	2.87	
Difference	3.87	2.63	29.9	2.08	2.08	90.0	N/A	N/A	-6.01	-0.76	-1.02	0.33	
MSCI ACW Ex US Index (USD) (Net)	-1.53	-0.64	-1.02	-10.24	-10.24	1.16	0.10	1.87	-5.66	-3.87	15.29	1.62	
Difference	1.46	1.71	3.66	-0.19	-0.19	0.62	N/A	N/A	-5.15	-1.68	9.10	1.58	
MFS International Growth Class 2 (CIT)	-0.53	0.84	2.67	-5.09	-5.09	4.19	N/A	N/A	1.29	4.19	N/A	3 08	03/01/2013
MSCI ACW Ex US Grth Index (USD) (Net)	-0.39	0.46	0,13	-6.20	-6.20	3.11	1.52	2.81	-1.25	-2.65	15.49	2.10	
Difference	-0.14	0.38	2.54	4.11	4.11	1.08	N/A	N/A	2.54	-1.54	N/A	0.98	
Vanguard Tot Bd;Inst (VBTIX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A/A	N/A	07/01/2016
Vanguard Spl B US Agg Index (Flt Adj)	1.89	2,32	5.52	6.12	6.12	4.07	3.81	5.16	0.44	5.85	-1.97	A/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
PIMCO:All Ast Ath;Inst (PAUIX)	3.85	4.79	10.87	-1.13	-1.13	-0.43	1.70	N/A	-10.89	-1.40	4.57	3.95	06/01/2008
All Asset Custom Index (Eql Wtd) (3)	0.93	2.00	4.44	2,47	2,47	3.43	4.04	5.07	-1.07	3.73	1,67	4.20	
Difference	2.92	2.79	6.43	-3.60	-3.60	-3.86	-2.34	N/A	-9.82	-5.13	-6.24	-0.25	
Consumer Price Index+5%	0.74	2.45	4.42	6.05	6.05	6.11	6.39	6.82	5.77	5.79	6.58	6.39	
Difference	3.11	2.34	6,45	-7.18	-7.18	-6.54	4.69	N/A	-16.66	-7.19	-11.15	-2.44	

Performance shown is gross of fees with the exception of GMO:Bchmk-Fr All;III (GBMFX), Hussman Inv:Strat TR (HSTRX), and PAAMCO Pacific Hedged Strat (CF), which are shown net of fees. Performance is preliminary and subject to change. Manager inception dates shown represent the first full month following initial funding. Fiscal year ends June 30th, RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. Please see Addendum for for more information regarding custom hybrids denoted with a number in parentheses. Returns may be slightly adjusted to tie out with actuarial and audited financial statements.



A-5

San Diego Transit Corporation Employees Retirement Plan Comparative Performance

	MTD	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
Vanguard Energy Idx; Adm (VENAX)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/01/2016
MSCI Wrld Energy Index (USD) (Net)	4.27	10.57	-5.47	16.23	-5.47	-3.10	-2.46	1.29	-22.80	-11.60	18.12	A/A	
Difference	N/A	N/A	N/A	A/N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Vanguard Infl-Prot;inst (VIPIX)	2.36	1.80	4.81	6.48	4.81	2.49	2.76	A/N	-1.60	4.14	-8.77	3.59	08/01/2010
Bloomberg US Trsy: US TIPS Index	2.08	1.71	4.35	6.24	4.35	2.31	2.63	4.76	-1.44	3,64	-8.61	3,49	
Difference	0.28	60 0	0.46	0.24	0.46	0.18	0.13	N/A	-0.16	0.50	-0.16	0.10	
GMO:Bchmk-Fr All;III (GBMFX)	0.49	0.86	4.30	1.02	-4.30	N/A	N/A	N/A	4.30	N/A	N/A	-1.51	04/01/2014
60% MSCI ACWI (Net)/40% B US Agg Idx	0.36	1.49	0.33	2.97	0.33	5.42	4.98	4.98	-0.98	4.96	12.32	2.41	
Difference	0.13	-0.63	-4.63	-1.95	4.63	N/A	N/A	N/A	-3.32	N/A	A/N	-3.92	
Consumer Price Index+5%	0.74	2,45	6.05	4.42	6.05	6,11	6.39	6.82	5.77	5.79	6.58	5.93	
Difference	-0.25	-1.59	-10.35	-3.40	-10.35	N/A	N/A	N/A	-10.07	N/A	N/A	-7.44	
Hussman Inv:Strat TR (HSTRX)	2.43	5.47	10.33	12.52	10.33	4.76	N/A	N/A	-1.01	3.78	-8.37	1.61	10/01/2011
Bloomberg US Agg Bond Index	1.80	2.21	00.9	5.31	00.9	4.06	3.76	5,13	0.55	5.97	-2.02	3.15	
Difference	0.63	3.26	4.33	7.21	4.33	0.70	N/A	N/A	-1.56	-2.19	-6.35	-1.54	
BofA ML 3 Mo US T-Bill Index + 5% (4)	0.45	1.30	5.20	2.62	5.20	5.09	5.20	6.35	5.05	5.04	5.10	5.19	
Difference	1.98	4.17	5.13	9.90	5,13	-0.33	N/A	N/A	90.9-	-1.26	-13 47	-3.58	
PAAMCO Pacific Hedged Strat (CE)	J. 48	0.43	7.48	2.45	7 48	0 20	174	MIZA	4 65	0.54	1001	4 00	7000140100
			000	5 - 7	00.0		+ 1.1		20.1	0.0	13.01	00'1	00/01/2000
HFRI FOF: Chavt Index	-0.46		-3.33	-1.57	-3.33	1.94	1.92	1.36	0.37	3,14	7.70	0.37	
Difference	-0 02	-0.09	-4.15	-1 58	-4.15	-1.35	-0.18	N/A	-2.02	-2.63	5.91	1.51	
BofA ML 3 Mo US T-Bill Index + 5% (4)	0.45	1,30	5.20	2.62	5.20	5.09	5.20	6.35	5.05	5.04	5,10	5,93	
Difference	-0.93	-0.87	-12.68	-5.77	-12.68	4.50	-3.46	N/A	-6.70	-4.53	8.51	4.05	



Performance shown is gross of fees with the exception of GMO:Bchmk-Fr All;III (GBMFX), Hussman Inv:Strat TR (HSTRX), and PAAMCO Pacific Hedged Strat (CF), which are shown net of fees, Performance is preliminary and subject to change. Manager inception dates shown represent the first full month following initial funding. Fiscal year ends June 30th. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. Please see Addendum for for more information regarding custom hybrids denoted with a number in parentheses.

San Diego Transit Corporation Employees Retirement Plan Addendum

Performance Related and Miscellaneous Comments

- Manager inception dates shown represent the first full month following initial funding.
- Performance is annualized for periods greater than one year
- RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the "Performance Methodology" definition in the Glossary of the most recent quarterly performance report.
 - PIMCO:All Ast Ath;Inst (PAUIX) performance prior to Aug-2011 is represented by PIMCO:All Asset;Inst (PAAIX).
- Vanguard Infl-Prot;Inst (VIPIX) performance prior to Jun-2012 is represented by Vanguard Infl-Prot;Adm (VAIPX).
- Performance is gross of fees with the exception of GMO: Bchmk-Fr All:III (GBMFX), Hussman Inv: Strat TR (HSTRX), and PAAMCO Pacific Hedged Strat (CF), which are net of
- PIMCO:RAE Fnd GIXUS;Inst (PZRIX) performance prior to Jun-2015 is represented by Research Affiliates Global AC Ex-US, L.P. (CF)
- Fiscal year ends June 30th

Custom Hybrid Comments

- The Policy Index is calculated monthly and currently consists of 20% Russell 3000 Index, 20% MSCI ACW Ex US Index (USD) (Net), 25% Bloomberg US Agg Bond Index, 20% Real Return Actual Allocation Index, and 15% HFRI FOF Cnsvt Index.
- The Real Return Actual Allocation Index is an active index which is calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark within the Real Return Composite.
- Performance shown for Westwood AllCap Value (CF) (1) represents Westwood AllCap Value (CF) from Aug-2011 through present; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SMidCap Equity (CF) from Jul-2008 through Jul-2011; Westwood LargeCap Value (CF) from Oct-2004 through Jun-2008; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SmallCap Growth (CF) from Jan-1997 through Sep-2004; and Westwood LargeCap Value (CF) from Jul-1986 through Dec-1996.
- 2011; Russell 1000 Val Index from Oct-2004 through Jun-2008; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SmallCap Growth (CF) applied to the Russell 1000 Val Index from Jul-1986 Performance shown for Russell 3000 Val Index (2) represents Russell 3000 Val Index from Aug-2011 through present; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SMidCap Equity (CF) applied to the Russell 1000 Val Index and Russell 2500 Val Index, respectively, from Jul-2008 through Jul-
- Performance shown for All Asset Custom Index [3] represents All Asset Custom Index (Eql Wtd) from Jan-2014 through present; and All Asset Composite Index from Oct-1997 through Dec-2013.
- Performance shown for BotA ML 3 Mo US T-Bill Index + 5% [4] represents BofA ML 3 Mo US T-Bill Index + 5% from Feb-2013 through present; and ICE 3 Month LIBOR Index + 5% from Jan-1980 through Jan-2013.



San Diego Transit Corporation Employees Retirement Plan

Addendum

• The All Asset Custom Index (Eql Wtd) is an equal-weighted hybrid created independently by RVK specifically for PIMCO's All Asset strategies, and it consists of the following benchmarks:

- 1. Short Term Strategies: BofA ML 1 Year T-Bill Index
- 2. US Core and Long Maturity Bond Strategies: Bloomberg US Agg Bond Index
 - EM and Global Bond Strategies: PIMCO GLADI Index*
- 4. Credit Strategies: BofA ML US Hi Yld Master II Index
 5. Inflation Related Strategies: Bloomberg US Trsy: US TIPS Index
 6. US Equity Strategies: Russell 3000 Index
 7. Global Equity Strategies: MSCI ACW Index (USD) (Net)
 8. Alternative Strategies: BofA ML 3 Mo US T-Bill Index + 3%

- * Performance for the PIMCO GbI Advantage Bond Index (London Close) prior to January 2004 consists of the JPM EMBI GbI Dvfd TR Index (USD)
- The All Asset Composite Index is an equal-weighted hybrid of the 14 benchmarks for each of the core funds held by PIMCO:All Asset; Inst (PAUIX). RVK began calculating the benchmark returns in January 2007. Prior performance was calculated by PIMCO.



PORTLAND

CHICAGO

NEW YORK

Disclaimer of Warranties and Limitation of Liability - This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only and does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets.





1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. C3

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM EXECUTIVE COMMITTEE

January 12, 2017

SUBJECT:

SAN DIEGO TRANSIT CORPORATION (SDTC) EMPLOYEE RETIREMENT PLAN'S ACTUARIAL VALUATION AS OF JULY 1, 2016 (ANNE HARPER OF CHEIRON INC. AND LARRY MARINESI)

RECOMMENDATION:

That the Executive Committee forward a recommendation to the Board of Directors to receive the SDTC Employee Retirement Plan's (Plan) actuarial valuation as of July 1, 2016 (Attachment A), and adopt the pension contribution amount of \$15,087,407 for fiscal year 2018.

Budget Impact

Board adoption would result in the annual pension contribution of \$15,087,407 for fiscal year 2018.

DISCUSSION:

The actuarial valuation of the Plan as of July 1, 2016 has recently been completed and the entire report is included in Attachment A. The purpose of the actuarial valuation is to compute the annual pension contribution amount and rate.

This valuation was completed in November 2016, by Cheiron, Inc. and has produced an increase in the contribution amount as compared to the Actuarial Experience Study that was completed in April 2016. The Actuarial Experience Study recommended a contribution amount of \$14,720,000 based upon the previous fiscal year results, and the July 1, 2016 valuation recommends a \$15,087,407 contribution amount. This contribution amount would be used for the fiscal year 2018 budget.

There are many factors that have an effect on the annual contribution rate. These factors include changes such as demographic and salary experience as well as investment gains









and losses. The plan's actuarial experience during fiscal year 2016 resulted in a \$367,407 increase in cost compared to the previous year primarily due to relative flat investment returns partially offset by updates in the effects of the closed plan and changes in demographic and salary experience.

The following table details how the cost of the plan has changed since the last actuarial valuation and more recent Actuarial Experience Study:

Total Contribution Reconciliation	
July 1, 2015, middle of year	\$ 12,009,330
Estimated increase in cost due to assumption changes	2,710,670
Actuarial Experience Study: contribution based on July 1, 2015 valuation	\$ 14,720,000
Additional increase from assumption changes	97,407
Change due to investment experience	831,555
Change due to effect of closed plan on benefits earned	(273,952)
Change due to demographic and salary experience	(237,592)
Change due to contributions greater than anticipated	(53,564)
Change due to admin expenses greater than expected	 3,553
July 1, 2016, middle of year	\$ 15,087,407

Anne Harper and Alice Alsberghe of Cheiron, Inc. will provide an overview of the report in more detail and be available for any questions.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Actuarial Report (EC Only Due to Volume)



Retirement Plans of San Diego Transit Corporation

Actuarial Valuation as of July 1, 2016

Produced by Cheiron

November 2016

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Letter of Tran	smittal i
Foreword	ii
Section I	Executive Summary1
Section II	Assets13
Section III	Liabilities
Section IV	Contributions
<u>Appendices</u>	
Appendix A	Membership Information
Appendix B	Actuarial Assumptions and Methods34
Appendix C	Summary of Plan Provisions
Appendix D	Glossary56





November 16, 2016

Mr. Larry Marinesi San Diego Transit Corporation 1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490

Dear Mr. Marinesi:

At your request, we have conducted an actuarial valuation of the Retirement Plans of San Diego Transit Corporation (SDTC) as of July 1, 2016. This report contains information on the Plan's assets, liabilities, and contribution levels. In the Foreword, we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of the Plans. This report was prepared solely for the Retirement Board and MTS Board in accordance with applicable law for the purposes described herein. It is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Sincerely, Cheiron

Anne D. Harper, FSA, EA, MAAA

ame Hayen

Consulting Actuary

Alice I. Alsberghe, ASA, MAAA

Dli alf

Associate Actuary

FOREWORD

Cheiron has performed the actuarial valuation of the Retirement Plans of San Diego Transit Corporation as of July 1, 2016. The valuation is organized as follows:

- In Section I, the **Executive Summary**, we describe the purpose of an actuarial valuation, summarize the key results found in this valuation, and disclose important trends;
- The Main Body of the report presents details on the Plan's
 - Section II Assets
 - Section III Liabilities
 - Section IV- Contributions
- In the **Appendices**, we conclude our report with detailed information describing plan membership (Appendix A), actuarial assumptions and methods employed in the valuation (Appendix B), a summary of pertinent plan provisions (Appendix C), and a glossary of key actuarial terms (Appendix D).

The results of this report rely on future plan experience conforming to the underlying assumptions. To the extent that actual plan experience deviates from the underlying assumptions, the results would vary accordingly.

In preparing our report, we relied on information (some oral and some written) supplied by the Plan Administrator. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.



SECTION I – EXECUTIVE SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe, and identify the following as of the valuation date:

- The financial condition of the Plan,
- Past and expected trends in the financial progress of the Plan, and
- The total contribution amount to be made during Fiscal Year 2017-2018.

In the balance of this Executive Summary, we present (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key financial results, (C) changes in Plan cost, (D) an examination of historical trends, and (E) the future expected financial trends for the Plan.

A. Valuation Basis

This valuation determines total employer and employee contributions for the plan year.

The Plan's funding policy is to contribute an amount equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method,
- Assumed Administrative Expenses, and
- Amortization of the Unfunded Actuarial Liability.

The employee will contribute according to the Plan schedules below. Member contribution rates in the future may change in response to collective bargaining. It will be the responsibility of the employer to contribute the remaining portion of the total contribution determined in this report.

- IBEW members contributed 3% of Compensation to the Plan in April 2013 and 4% of Compensation in April 2014. The contribution rate increased to 6% of Compensation in April 2015 and increased to 8% of Compensation in April 2016.
- ATU drivers and clerical members contributed 3% of Compensation in July 2013. The contribution rate increased to 5% of Compensation in July 2014, to 6% in July 2015, and to 7% of Compensation in July 2016. The contribution rate will increase to 8% of Compensation in December 2017.
- Non-contract members hired before July 1, 2013 contributed 2% of Compensation to the Plan prior to January 2014. The Non-contract member contributions increased to 4% of Compensation in January 2014, to 6% of in January 2015, and to 7% of Compensation on January 1, 2016. As of January 1, 2017, the member contribution rate will increase to 8% of Compensation.



SECTION I – EXECUTIVE SUMMARY

• PEPRA: New Members must contribute half of the normal cost of the Plan, rounded to the nearest 0.25%. Currently, PEPRA members are paying 6.25% of pay and the employer pays the remaining cost of the Plan.

This valuation was prepared based on the Plan provisions shown in Appendix C. There have been no changes in plan provisions since the prior valuation.

An actuarial experience study was performed for the period July 1, 2010 through June 30, 2015. The Budget Development Committee adopted assumption changes in April 2016 based on the recommendations from that study. Please refer to the actuarial experience study report for the rationale for each assumption change. A description of the new assumptions can be found in Appendix B – Actuarial Assumptions and Methods of this report. The most notable changes were decreasing the investment return assumption from 7.50% to 7.00% and updating the base mortality tables along with incorporating anticipated future mortality improvements.

The SDTC Plans are closed to new entrants, except for Non-Contract members. A closed plan has very different dynamics as active plan membership declines and grows older and a larger portion of the Plan's liability shifts to payees. This dynamic shortens the investment horizon thus mitigating investment risk becomes more important. If the asset mix changes to reflect the expected pattern of benefit payments, it will become more conservative and the expected return on plan assets will decrease. Thus, adjusting the plan's investment rate of return to be consistent with the expected trending decrease of future asset returns is necessary.

Finally, the true cost of the Plan is a function of actual Plan experience, not the actuarial assumptions. It is important to set realistic assumptions to mitigate the risk of Plan contribution volatility.



SECTION I – EXECUTIVE SUMMARY

B. Key Findings of this Valuation

The key results of the July 1, 2016 actuarial valuation are as follows:

- The total contribution increased to \$15,087,407. This is an increase of \$3,078,077 from the July 1, 2015 valuation, but only a \$367,407 increase from the experience study estimate. The actuarial contribution determined in this report is the total contribution required from both the employer and the employees. See Table I-2 for a reconciliation of the contribution cost from last year to this year.
- The \$3.1 million contribution increase is primarily due to the changes in the actuarial assumptions that resulted in a \$2.8 million increase from the July 1, 2015 valuation, but only a \$0.1 million increase from the experience study estimate. The actuarial liability increased by \$29,699,872 from the revised assumptions, and is being amortized as a level dollar contribution over a closed 21-year period.
- The Plan's funded ratio, the ratio of actuarial (smoothed) assets over the actuarial liability, decreased from 65.7% last year to 58.2% as of July 1, 2016. However, the estimated funded ratio based on the experience study was 59.1%. The majority of the decrease was a result of the increase in actuarial liability due to the assumption changes. Investment losses as of June 30, 2016 accounted for about 1.0% of the total decrease.
- The unfunded actuarial liability (UAL) is the excess of the Plan's actuarial liability over the actuarial value of assets. The Plan's UAL increased from \$88,174,093 to \$121,020,524 as of July 1, 2016. However, the UAL increase is only about \$4,810,000 based on the estimated UAL of \$116,830,000 from the experience study.
- During the year ending June 30, 2016, the return on Plan assets was -0.35% on a market value basis as compared to the prior 7.50% assumption. This resulted in a market value loss on investments of \$12,244,603. The actuarial value of assets (AVA) recognizes 20% of the difference between the expected and actual return on the market value of assets (MVA) for each of the prior five years. This method of smoothing the asset gains and losses returned 2.91% on the smoothed value of assets, an actuarial asset loss of \$7,610,524.
- The Plan experienced a gain on the actuarial liability of \$2,174,475, or 0.7% of the expected actuarial liability under the prior assumptions. In aggregate, the Plan experienced a loss of \$4,978,340 from all sources combined. See Table III-3 for more details.
- Overall, participant membership decreased compared to last year since the Plan is closed to most new entrants. Total projected payroll decreased 5.80% from \$31,357,373 for FYE June 30, 2016 to \$29,538,619 for FYE June 30, 2017. Average pay remained level. These figures do not include payroll for members participating in the defined contribution plans.



SECTION I – EXECUTIVE SUMMARY

Below we present Table I-1, which summarizes all the key results of the valuation with respect to membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

Summa		Table I-1 Principal Pla	n R	esults		
		July 1	, 20	15		
				Impact of Experience		July 1, 2016
Participant Counts		Valuation		Study		Valuation
Active Participants		586		586		552
Participants Receiving a Benefit		902		902		921
Inactive Participants		226	_	226	_	225
Total		1,714		1,714		1,698
Projected Plan Member Payroll ¹ for Fiscal Year 2016 and 2017	\$	31,357,373	\$	31,357,373	\$	29,538,619
Assets and Liabilities						
Actuarial Liability (AL)	\$	256,745,469	\$	285,400,000	\$	289,255,802
Actuarial Value of Assets (AVA)	_	168,571,376	_	168,570,000	_	168,235,278
Unfunded Actuarial Liability (UAL)	\$	88,174,093	\$	116,830,000	\$	121,020,524
Market Value of Assets (MVA)	\$	158,647,332	\$	158,647,332	\$	152,932,851
Funded Ratio (AVA)		65.7%		59.1%		58.2%
Funded Ratio (MVA)		61.8%		55.6%		52.9%
Contributions						
Total Normal Cost ²	\$	3,859,080	\$	4,380,000	\$	4,055,874
Total UAL Contribution	_	8,150,250		10,340,000	_	11,031,534
Total Contribution (middle of year)	\$	12,009,330	\$	14,720,000	\$	15,087,407

¹Based on valuation data projected using half-year of salary increases but excludes payroll for members expected to leave employment or retire during the year.



² Inlcudes assumed administrative expenses of \$250,000 in the prior year and \$260,000 in the current year.

SECTION I – EXECUTIVE SUMMARY

C. Changes in Plan Cost

Table I-2 below summarizes the impact of actuarial experience on Plan cost.

Table I-2	71,82 18	
Total Contribution Reconciliat	ion	
July 1, 2015, middle of year	\$	12,009,330
Estimated increase in cost due to assumption changes 1	_	2,710,670
Estimated contribution based on July 1, 2015 valuation	\$	14,720,000
Additional increase from assumption changes ²		97,407
Change due to investment experience		831,555
Change due to effect of closed plan on benefits earned		(273,952)
Change due to demographic and salary experience		(237,592)
Change due to contributions greater than anticipated		(53,564)
Change due to admin expenses greater than expected	_	3,553
July 1, 2016, middle of year	\$	15,087,407

¹ Estimate based on July 1, 2015 valuation data.

An analysis of the cost changes from the prior valuation reveals the following:

- The Plan cost in dollars increased by \$3,078,077.
- The cost increased by \$2,808,077 due to assumption changes.

Based on the estimated contribution reported in the Actuarial Experience Study for July 1, 2010 through June 30, 2015 using the new assumptions and shown in the second column of Table I-1, the expected change in contribution using the July 1, 2015 valuation data was \$2.7 million. Using the current July 1, 2016 valuation data, the actual change in contribution due to assumption changes is an additional \$0.1 million for a total of \$2.8 million cost increase due to assumption changes.

The assumption changes that had the most significant cost impact were mortality and the investment return, which increased the contribution by \$1.9 million and \$1.3 million, respectively. The mortality assumption now includes a mortality improvement scale to anticipate future improvements in members' lifespans. The investment return assumption was decreased from 7.50% to 7.00% to better align with future market expectations. For more details and rationale of the changes, please refer to the Actuarial Experience Study Report dated April 2016.



² Based on actual July 1, 2016 data and 21-year vs 22-year amortization payment period.

SECTION I – EXECUTIVE SUMMARY

• Investment experience produced an investment loss on both a market value basis and an actuarial value basis.

The assets of the Plan returned -0.35% on a market value basis and 2.91% based on the actuarial value of assets, both lower than the prior assumed rate of 7.50%. This resulted in an increase of \$831,555 in the total contribution.

The market value of assets is lower than the actuarial value; there are approximately \$15.3 million in deferred investment losses. These net losses will be recognized in future years.

- Closing the Plan to most new entrants decreases the total amount of benefits that are being earned by the remaining active membership. This decreased the Plan contribution by \$273,952.
- Actual demographic experience will always differ from the actuarial assumptions.

Overall, the demographic experience of the Plan – rates of retirement, death, disability, and termination – was more positive than predicted by the actuarial assumptions. Specifically, there were fewer retirements than anticipated for all groups. In addition, salaries did not increase as expected mainly since less overtime was worked, primarily by the ATU Drivers. The retirement and salary experience produced actuarial gains which were somewhat offset by fewer retiree deaths than expected. These experience deviations from the assumptions caused a decrease in the contribution of \$237,592.

• Plan contributions were slightly higher than expected.

The employer and employee contributions of \$12.9 million (\$12.5 million plus interest based on contributions being made mid-year) exceeded expected contributions of \$12.4 million. The higher contributions decreased this year's Plan contribution by \$53,564.

• Administrative expenses were about as expected and had a de minimis impact on the contribution.



SECTION I – EXECUTIVE SUMMARY

One of the most important measures of a plan's risk is the ratio of plan assets to payroll shown in Table I-3 below.

This ratio indicates the sensitivity of the Plan to the returns earned on plan assets. We note in the table that plan assets currently are over five times covered payroll for the Plan; as funding improves and the Plan reaches 100% funding, the ratio of asset to payroll will increase to nearly 10 times payroll, perhaps higher depending on the Plan's future demographic makeup. Although both of these ratios are lower than those of many other public plans, which typically range from eight to 11 times payroll, the increase in the asset to payroll ratio that is expected to accompany an improvement in the Plan's funding still represents a substantial increase in the volatility of the contributions.

Table I	-3	
Asset to Payroll Ratio :	as of July 1, 20	16
Active Member Payroll	\$	29,538,619
Assets (Market Value)	\$	152,932,851
Ratio of Assets to Payroll		5.18
Ratio with 100% Funding		9.77

To appreciate the impact of the ratio of assets to payroll on plan cost, consider the situation for a new plan with almost no assets. Even if the assets suffer a bad year of investment returns, the impact on the Plan cost is nil, because the assets are so small.

On the other hand, consider the situation for this Plan. Suppose the Plan's assets lose 10% of their value in a year. Since they are assumed to earn 7.0%, there is an actuarial loss of 17.0% of plan assets. Based on the current ratio of asset to payroll (5.18), that means the loss in assets is about 88% of active payroll (518% of the 17.0% loss). There is only one source of funding to make up for this loss: contributions. Consequently, barring future offsetting investment gains, the loss must be made up with future contributions. The loss would be even larger – over 166% of payroll – if the Plan were 100% funded.



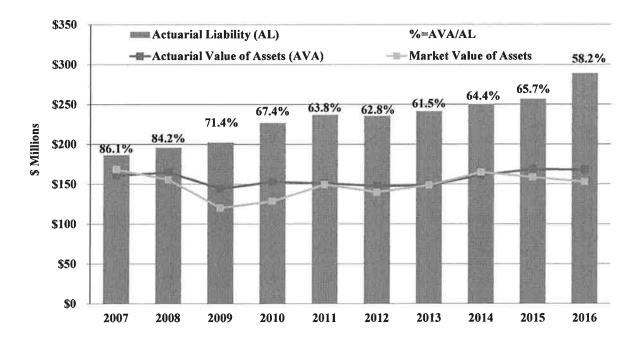
SECTION I – EXECUTIVE SUMMARY

D. Historical Trends

Despite the fact that for most retirement plans the greatest attention is given to the current valuation results – in particular the size of the current unfunded actuarial liability and the total contribution – it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

The chart below compares the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) to the Actuarial Liabilities (AL). The percentage shown at the top of each bar is the ratio of the Actuarial Value of Assets to the Actuarial Liability (the funded ratio). The funded ratio decreased in 2016 from 65.7% to 58.2%. The main reason for the decrease is due to the changes in actuarial assumptions, which increased the Actuarial Liability by almost \$30 million.

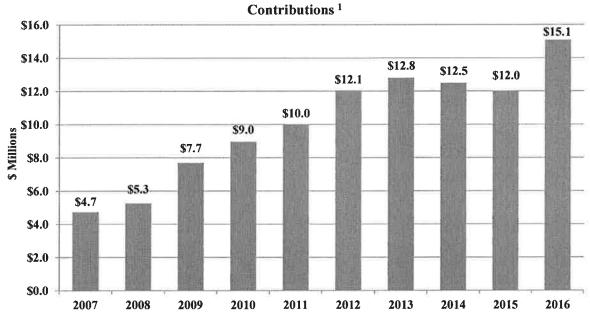




SECTION I – EXECUTIVE SUMMARY

Contributions

The chart below shows a history of the Plan's actuarially determined total contribution. The Plan's actuarially determined contributions have increased from 2007 to 2012 primarily due to the phasing in over five years of the 2009 asset loss, along with assumption changes in 2010, and actuarial funding policy changes in 2012. The contributions levelled off between \$12-\$13 million from 2012 to 2015 primarily due to closing the Plan to new entrants. In 2016, the change in actuarial assumptions increased the total contribution to \$15.1 million.



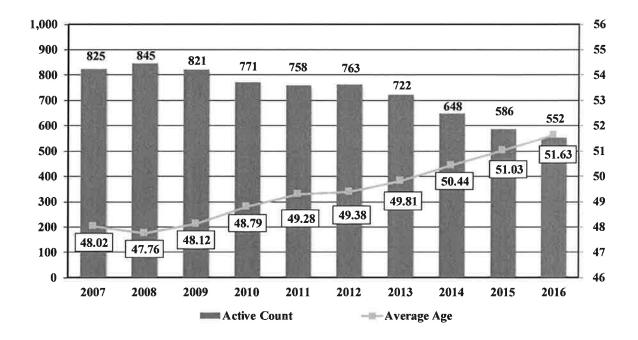
¹ Beginning with 2015, contribution amounts are mid-year values for the upcoming fiscal year.



SECTION I – EXECUTIVE SUMMARY

Participant Trends

The number and average age of active Plan members for the last 10 years is shown in the chart below. We can see that membership has declined from 825 actives on July 1, 2007, to 552 on July 1, 2016, a decrease of 33%. In addition, the average age of an active member has increased by over three years during the period shown. These trends can be expected to continue, as most new employees participate instead in the defined contribution plan.



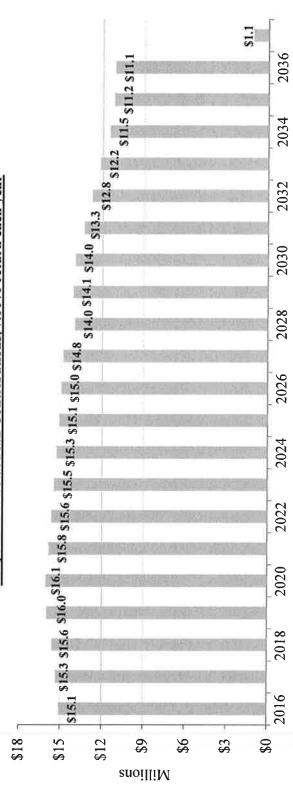


SECTION I – EXECUTIVE SUMMARY

E. Future Expected Financial Trends

The analysis of projected financial trends is perhaps the most important component of this valuation. In this Section, we present our assessment of the implications of the July 1, 2016 valuation results in terms of benefit security (assets over liabilities) and contributions over the next 20 years. All the projections in this section are based on the assumption that the Plan will exactly achieve the 7.00% investment return assumption each year, which is clearly an impossibility. We assume the current funding method and amortization policy adopted in 2012 will remain in place throughout the projection period.





The contribution graph shows that the Plan's contributions are expected to gradually increase over the next five years as the Plan recognizes the \$15.3 million in net deferred asset losses primarily from the unfavorable returns during FYE 2015 and FYE 2016. Thereafter, the Plan's contributions are expected to steadily decline from \$16.1 million in 2020 to \$11.1 million in 2036. The gradual decline in the contribution is due to the cost of benefits accruing gradually decreasing as the number of active members decline. Since



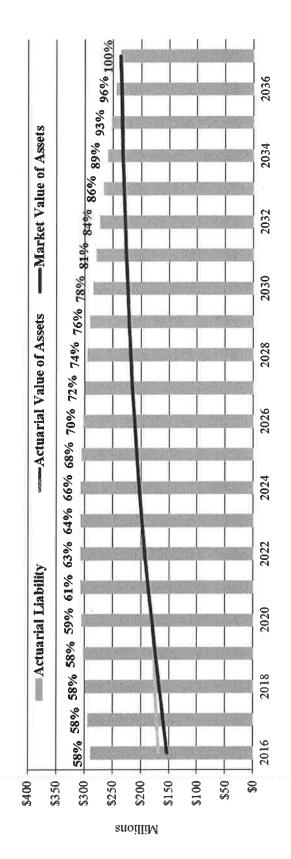
SECTION I – EXECUTIVE SUMMARY

the Plan is closed to most new entrants, there are fewer new benefits being earned. During Fiscal Year 2036-37, the last payment will be made to pay off the Plan's current UAL.

Asset and Liability Projections:

The following graph shows the projection of assets and liabilities assuming that assets will earn the 7.00% assumption each year during the projection period.

Projection of Assets and Liabilities, 7.00% return each year



The funded status is expected to remain somewhat level at 58% over the next four years and then gradually increases over the projection period. The Plan is projected to be fully funded by 2037 assuming the actuarial assumptions are achieved. However, it is the actual return on Plan assets that will determine the future funding status and contribution to the Plan.



SECTION II -- ASSETS

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on Plan assets including:

- **Disclosure** of Plan assets as of June 30, 2015 and June 30, 2016,
- Statement of the changes in market values during the year,
- Development of the Actuarial Value of Assets.

Disclosure

There are two types of asset values disclosed in the valuation, the Market Value of Assets and the Actuarial Value of Assets. The market value represents a snapshot value that provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the Actuarial Value of Assets that reflect smoothing of annual investment returns.



SECTION II -- ASSETS

Table II-1 discloses and compares each component of the market value of assets as of June 30, 2015 and June 30, 2016.

	「able I	I-1		
Statement of A	Assets	at Market Va	llue	
Investments		June 30, 2015		June 30, 2016
Common Stock	\$	31,190,085	\$	68,155,978
Mutual Funds		83,066,245		29,503,540
REIT Mutual Funds		0		0
Corporate Debt / Bond Funds		27,257,921		39,094,483
Closely Held Instruments		10,103,201		9,347,952
US Treasury Obligations		6,699,908		7,017,138
Short-Term Investments		955,670		525,759
Total Investments	\$	159,273,030	\$	153,644,850
Receivables:				
Dividends and Interest	\$	4,332	\$	511
Other Reveivables	_	0	_	0
Total Receivables	\$	4,332	\$	511
Payables				
Due to Plan Sponsor	\$	513,185	\$	614,669
Other Payables		116,845		97,841
Total Payables	\$	630,030	\$	712,510
Market Value of Assets	\$	158,647,332	\$	152,932,851



SECTION II -- ASSETS

Changes in Market Value

The components of asset change are:

- Contributions (employer and employee)
- Investment income (realized and unrealized)
- Benefit payments
- Expenses (other)

Table II-2 shows the components of a change in the market value of assets during FYE 2015 and FYE 2016.

	June 30, 2015	June 30, 2016
Contributions		
Employer's Contribution	11,352,628	10,711,282
Members' Contributions	1,363,092	1,754,869
Total Contributions	12,715,720	12,466,151
Investment Income		
Interest	1,037,532	794,562
Dividends	461,886	1,300,112
REIT Mutual Funds	0	0
Miscellaneous	1,907	0
Realized & Unrealized Gain/(Loss)	(2,973,933)	(2,232,649
Investment Expenses	(546,258)	(402,118
Net Investment Income	(2,018,866)	(540,093
Dis burs e ments		
Benefit Payments	(16,584,043)	(17,350,158
Administrative Expenses	(262,808)	(290,381
Total Disbursments	(16,846,851)	(17,640,539
Net increase (Decrease)	(6,149,997)	(5,714,481
Net Assets Held in Trust for Benefits:		
Beginning of Year	164,797,329	158,647,332
End of Year	158,647,332	152,932,851



SECTION II -- ASSETS

Actuarial Value of Assets (AVA)

The Actuarial Value of Assets represents a "smoothed" value developed by the actuary to reduce the volatile results, which could develop due to short-term fluctuations in the market value of assets. For this Plan, the actuarial value of assets is calculated on a modified market-related value. The market value of assets is adjusted to recognize, over a five-year period, investment earnings which are greater than (or less than) the assumed investment return. The actuarial value is constrained to fall within 20% of the market value.

Table II-3 Development of Actuarial Value of Assets as of June 30, 2016						
	(a)	(b)	(c) = (b) - (a)	(d)	(c) x (d)	
	Expected	Actual	Unexpected	Phase-In	Phase-In	
Plan Year	<u>Earnings</u>	Earnings	Earnings	<u>Factor</u>	Adjustment	
2011 -12	11,416,386	(5,002,447)	(16,418,833)	0%	0	
2012 -13	10,765,036	12,739,686	1,974,650	20%	394,930	
2013 -14	11,577,862	18,159,297	6,581,435	40%	2,632,574	
2014 -15	12,204,882	(2,018,866)	(14,223,748)	60%	(8,534,249)	
2015 -16	11,704,510	(540,093)	(12,244,603)	80%	(9,795,682)	
1. Total Unreco	1. Total Unrecognized Asset Gains/(Losses)					
2. Market Valu	152,932,851					
3. Actuarial Value of Assets as of June 30, 2016: [(2) - (1)] 168,235,278						
4. Ratio of Acta $[(3) \div (2)]$	uarial Value to Ma	arket Value			110.01%	



SECTION II -- ASSETS

Investment Performance

The following table calculates the investment related gain/loss for the plan year on both a Market Value and an Actuarial Value basis. The Market Value gain/loss is an appropriate measure for comparing the actual asset performance to the previous valuation's long-term 7.50% assumption. The assumed rate of investment return as of July 1, 2016 is 7.00%.

Tab Asset G		
	Market Value	Actuarial Value
As of June 30, 2015	\$ 158,647,332 \$	168,571,376
Employer Contributions	10,711,282	10,711,282
Employee Contributions	1,754,869	1,754,869
Benefit Payments	(17,350,158)	(17,350,158)
Administrative Expenses	(290,381)	(290,381)
Expected Investment Earnings (7.50%)	11,704,510	12,448,814
Expected Value as of July 1, 2016	\$ 165,177,454 \$	175,845,802
Investment Gain/(Loss)	(12,244,603)	(7,610,524)
As of June 30, 2016	\$ 152,932,851 \$	168,235,278
Return	-0.35%	2.91%



SECTION III – LIABILITIES

In this section, we present detailed information on Plan liabilities including:

- **Disclosure** of Plan liabilities at July 1, 2015 and July 1, 2016,
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them. Note that these liabilities are not appropriate for settlement purposes, including the purchase of annuities and the payment of lump sums.

- Present Value of Future Benefits: Used for measuring all future Plan obligations; the obligations of the Plan earned as of the valuation date and those to be earned in the future by current Plan participants, under the current Plan provisions.
- Actuarial Liability: Used for funding calculations, this liability is calculated taking the total Projected Value of Future Benefits and subtracting all future Normal Costs. The method used for this Plan is called the Entry Age Normal (EAN) funding method.
- Unfunded Actuarial Liability: The excess of the Actuarial Liability over the Actuarial Value of Assets.



SECTION III – LIABILITIES

Table III-1 discloses each of these liabilities for the current and prior valuations.

Table Liabilities and Unfund		arial Liahility	
Liablines and Ontune	ou Actua	July 1, 2015	July 1, 2016
(1) Present Value of Future Benefits		•	
Active Participant Benefits			
ATU/Drivers	\$	61,804,520	\$ 64,923,440
IBEW/Mechanics		25,877,939	30,181,082
ATU/Clerical		2,230,968	2,349,503
Non-Contract/Admin ¹		22,151,039	24,852,172
Total	\$	112,064,466	\$ 122,306,197
(2) Inactive Actuarial Liability			
ATU/Drivers	\$	90,931,896	\$ 105,512,188
IBEW/Mechanics		18,886,334	21,406,389
ATU/Clerical		4,158,209	4,931,004
Non-Contract/Admin		53,341,186	59,307,124
Total	\$	167,317,625	\$ 191,156,705
(3) Active Actuarial Liability			
ATU/Drivers	\$	47,587,422	\$ 51,160,485
IBEW/Mechanics		20,985,788	24,162,304
ATU/Clerical		1,895,298	1,938,988
Non-Contract/Admin ¹		18,959,336	20,837,320
Total	\$	89,427,844	\$ 98,099,097
(4) Total Actuarial Liability, [(2) + (3)]	\$	256,745,469	\$ 289,255,802
(5) Plan Assets (Actuarial Value)		168,571,376	168,235,278
(6) Unfunded Actuarial Liability (UAL), [(4) - (5)]	\$	88,174,093	\$ 121,020,524

Includes PEPRA members.



SECTION III – LIABILITIES

Table III-2 below analyzes the increases or decreases in the liabilities since the last valuation.

Changes in Liabilities

Each of the liabilities disclosed in the prior table are expected to change at each valuation. The components of that change (as shown in Table III-2 below), depending upon which liability is analyzed, can include:

- Benefits accrued since the last valuation
- Plan amendments changing benefits (None for the 2016 Valuation)
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial assumptions
- A change in the actuarial funding method or software

Table III-2 Changes in Actuarial Liability							
Actuarial Liability at July 1, 2016	\$	289,255,802					
Actuarial Liability at July 1, 2015	\$ _	256,745,469					
Liability Increase (Decrease)	\$	32,510,333					
Change due to:							
Actuarial Methods / Software Changes	\$	0					
Assumption Changes		29,699,872					
Accrual of Benefits		3,469,595					
Actual Benefit Payments		(17,350,158)					
Interest		18,865,499					
Actuarial (Gain)/Loss	_	(2,174,475)					
Liability Increase (Decrease)	\$	32,510,333					



SECTION III – LIABILITIES

Unfunded liabilities will change (as shown in Table III-3 below) because of all of the above, and also due to changes in Plan assets resulting from:

- Contributions different than expected
- Investment earnings different than expected
- Expenses different than expected

TABLE III-3 Development of Actuarial Gain / (Loss)	
1. Unfunded Actuarial Liability (UAL) at Start of Year (not less than zero)	\$ 88,174,093
2. Expected UAL Payment	(7,855,663)
3. Interest on (1) and (2) to End of Year	6,023,882
4. Increase in UAL due to Assumption Changes	29,699,872
5. Expected Unfunded Actuarial Liability at End of Year, [(1) + (2) + (3) + (4)]	\$ 116,042,184
6. Actual Unfunded Actuarial Liability at End of Year (not less than zero)	121,020,524
 7. Actuarial Gain/(Loss), [(5) – (6)] (a) Liability Gain/(Loss) (b) Asset Gain/(Loss) on Actuarial Value (c) Contributions made to Plan more than expected (d) Administrative expenses more than expected 	\$ (4,978,340) 2,174,475 (7,610,524) 490,229 (32,520)



SECTION IV - CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions are needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

Based on the assumptions and cost method, Plan assets are currently below the target level of assets determined by the cost method; consequently, there is an unfunded actuarial liability. As a result, the required Plan contribution consists of three components: The Normal Cost, the amortization of the Unfunded Actuarial Liability (UAL), and assumed administrative expenses.

The Normal Cost represents the cost of the additional benefits earned each year by active Plan members. The balance of the Plan contribution represents the amortization of the unfunded liability, which is a payment designed to bring the Plan's assets up to the target level set by the actuarial cost method. Currently, the amortization of UAL represents about two-thirds of the total contribution.

As the UAL is paid over time, the Plan contribution is expected to decrease to a level near the Normal Cost plus administrative expenses. The Normal Cost itself will be changing since the Plan is closed to new members other than non-contract employees.

The table below presents the total Plan contributions (both employer and employee) for the current and prior valuations.

	Table IV- Development of Annua	ribution	Lile	
		July 1, 2015		July 1, 2016
(1)	Total Actuarial Liability	\$ 256,745,469	\$	289,255,802
(2)	Plan Assets (Actuarial Value)	168,571,376	5	168,235,278
(3)	Unfunded Actuarial Liability (UAL), [(1) - (2)]	\$ 88,174,093	\$	121,020,524
4)	UAL Amortization Payment	\$ 7,855,663	\$	10,664,586
(5)	Total Plan Normal Cost	\$ 3,469,595	\$	3,660,961
8)	Expected Administrative Expenses	\$ 250,000	\$	260,000
9)	Total Cost, $[(4) + (5) + (8)]$	\$ 11,575,258	\$	14,585,547
10)	Total Cost (interest adjusted to middle of year) 1	\$ 12,009,330	\$	15,087,407

 $^{^{}I}$ Interest is 7.50% for the prior year and 7.00% for the current year.



SECTION IV – CONTRIBUTIONS

The table below presents the calculation of the UAL payments for the Plan under the amortization policy adopted in 2012.

Table IV-2 Development of the Amortization Payment as of July 1, 2016									
Type of Base	Date Established	Initial Balance	Initial Amortization	Outstanding Balance	Remaining Amortization	Amortization Amount			
Initial Unfunded Actuarial Liability	7/1/2012	\$ 87,613,245	25	\$ 81,848,320	21	\$ 7,059,532			
2. Actuarial Loss	7/1/2013	6,555,553	15	5,744,685	12	675,951			
3. Actuarial Gain	7/1/2014	(2,132,368)	15	(1,962,960)	13	(219,505)			
I. Actuarial Loss	7/1/2015	740,624	15	712,267	14	76,116			
. Assumption Changes	7/1/2016	29,699,872	21	29,699,872	21	2,561,656			
5. Actuarial Loss	7/1/2016	4,978,340	15	4,978,340	15	510,836			
TOTAL				\$ 121,020,524		\$ 10,664,586			
				Total UAL Payment,	Middle of Year	\$ 11,031,534			



APPENDIX A – MEMBERSHIP INFORMATION

Data pertaining to active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan Administrator on electronic media. As is usual in studies of this type, Member data was neither verified nor audited; however, it was reviewed to ensure that it complies with generally accepted actuarial standards.

Summary of Participant Data

Active Participants

Nacine 1 articipants	JU	L.L. 1 2015	WI.	July 1, 2016
Non-Contract/Admin		July 1, 2015	2	
Number		66		63
Average Age		51.8		51.8
Average Service		17.1		17.2
Average Pay	\$	69,402	\$	72,738
Non-Contract/PEPRA		July 1, 2015		July 1, 2016
Number		9		11
Average Age		43.5		43.3
Average Service		3.2		3.8
Average Pay	\$	60,536	\$	64,143
ATU/Cle rical		July 1, 2015		July 1, 2016
Number		19		18
Average Age		49.7		48.6
Average Service		11.8		11.9
Average Pay	\$	43,872	\$	45,275
ATU/Drivers		July 1, 2015		July 1, 2016
Number		353		325
Average Age		51.9		52.7
Average Service		13.6		14.5
Average Pay	\$	53,898	\$	52,229
IBEW/Mechanics		July 1, 2015		July 1, 2016
Number		139		135
Average Age		49.1		50.0
Average Service		18.0		18.8
Average Pay	\$	54,431	\$	57,109
Total		July 1, 2015		July 1, 2016
Number		586		552
Average Age		51.0		51.6
Average Service		14.8		15.6
Average Pay	\$	55,548	\$	55,774



APPENDIX A – MEMBERSHIP INFORMATION

Summary of Participant Data

Deferred Participants

Terminated Vested	än,	July 1, 2015	Jul	y 1, 2016
Number		226		225
Average Age		53.1		53.2
Average Annual Benefit	\$	7,616	\$	7,239

In-Pay Participants

an a ay I articipants	1		
Service Retired		July 1, 2015	July 1, 2016
Number		669	693
Average Age		69.0	69.7
Average Annual Benefit	\$	21,902	\$ 22,130
Beneficiaries		July 1, 2015	July 1, 2016
Number		140	139
Average Age		71.0	71.4
Average Annual Benefit	\$	9,349	\$ 9,414
Disabled		July 1, 2015	July 1, 2016
Number		93	89
Average Age		67.6	68.9
Average Annual Benefit	\$	9,405	\$ 9,758
Total		July 1, 2015	July 1, 2016
Number		902	921
Average Age		69.2	69.9



APPENDIX A - MEMBERSHIP INFORMATION

Data Summary as of July 1, 2016

Acfive Participants	Non-Contr	act/Administ	rative	ATU/	ATU/	IBEW/	
	Non-PEPRA	PEPRA	Sub-Total	Clerical	Drivers	Mechanics	Total
Number	63	11	74	18	325	135	552
Average Age	51.8	43.3	50.5	48.6	52.7	50.0	51.6
Average Service	17.2	3.8	15.2	11.9	14.5	18.8	15.6
Average Pay	\$72,738	\$64,143	\$71,460	\$45,275	\$52,229	\$57,109	\$55,774

Inactive Participants	Non-Contr	Non-Contract/Administrative	rative	ATU/	ATU/	IBEW/	
	Non-PEPRA	PEPRA	Sub-Total	Clerical	Drivers	Mechanics	Total
Service Retired							
Number	116	n/a	116	33	454	06	693
Average Age	67.4	n/a	67.4	71.8	70.1	70.2	2.69
Average Annual Benefit	\$36,392	n/a	\$36,392	\$13,572	\$19,559	\$19,850	\$22,130
Beneficiaries							
Number	28	n/a	28	3	88	20	139
Average Age	6.79	n/a	6.79	70.2	72.6	70.8	71.4
Average Annual Benefit	\$18,115	n/a	\$18,115	\$3,146	\$7,499	\$6,598	\$9,414
Disabled							
Number	2	n/a	2	т	73	11	89
Average Age	2.99	n/a	2.99	77.9	0.69	66.4	6.89
Average Annual Benefit	\$5,279	n/a	\$5,279	\$6,102	\$9,511	\$13,206	\$9,758
Terminated Vested							
Number	21	n/a	21	12	141	51	225
Average Age	51.1	n/a	51.1	54.8	53.3	53.3	53.2
Average Annual Benefit	\$16,000	n/a	\$16,000	\$4,373	\$6,821	\$5,460	\$7,239



APPENDIX A – MEMBERSHIP INFORMATION

Status Reconciliation - All Divisions Changes in Plan Membership as of July 1, 2016

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Total
Participant count as of July 1, 2015	586	226	93	699	140	1,714
New Entrants	2					2
Rehires	-	(1)				0
Disabilities			2	(2)		0
Retirements/ Domestic Relations Order (DRO)	(18)	(14)		32	1	
Vested Terminations	(12)	12				0
Died, with Beneficiaries' Benefit Payable		(1)		(2)	3	0
Transfers						0
Died, without Beneficiary, and Other Terminations	(5)		4)	(9)		(15)
Beneficiary Deaths					(5)	(5)
Data Corrections	(2)	3	(2)	2		-
Total Change	(34)	(1)	(4)	24	(1)	(91)
Participant count as of July 1, 2016	552	225	88	693	139	1,698



APPENDIX A – MEMBERSHIP INFORMATION

Status Reconciliation - Non-Contract/Administrative¹ Changes in Plan Membership as of July 1, 2016

	Active	Terminated Vested	Disabled	Retired	Disabled Retired Beneficiaries	Total
Participant count as of July 1, 2015	75	24	7	111	78	240
New Entrants	2					2
Rehires						
Disabilities						0
Retirements/ DRO	(2)	(3)		8		0
Vested Terminations	,	,		ı		0
Died, with Beneficiaries' Benefit Payable					0	0
Transfers	1				•	1
Died, without Beneficiary, and Other Terminations				=		0
Beneficiary Deaths						0
Data Corrections	(2)					
Total Change	Ξ	(3)	0	5	0	-
Participant count as of July 1, 2016	74	21	7	116	28	241

Includes 9 active individuals participating in PEPRA.

Status Reconciliation - Clerical

Changes i	n Plan Mei	Changes in Plan Membership as of July 1, 2016	July 1, 201	91		
	Active	Terminated Vested	Disabled	Disabled Retired	Beneficiaries	Tetal
Participant count as of July 1, 2015	19	14	3	30	4	70
New Entrants						0
Rehires						0
Disabilities						0
Retirements/ DRO	(1)	(2)		m		0
Vested Terminations	,	,				0
Died, with Beneficiaries' Benefit Payable						0
Transfers	33					
Died, without Beneficiary, and Other Terminations	(3)					3
Beneficiary Deaths	,				(1)	E
Data Corrections				0		0
Total Change	(E)	(2)	0	3	(1)	=
Participant count as of July 1, 2016	18	12	3	33) en	69



APPENDIX A - MEMBERSHIP INFORMATION

Status Reconciliation - ATU/Drivers Changes in Plan Membership as of July 1, 2016

		Vested	District Notifice	73 m w	Benchesiks	10131
Participant count as of July 1, 2015	353	135	92	441	68	1,094
New Entrants						0
Rehires						0
Disabilities			2	(2)		0
Retirements/ DRO	(12)	(8)		20		-
Vested Terminations	(11)	11				0
Died, with Beneficiaries' Benefit Payable				(2)	2	0
Transfers	(3)					(3)
Died, without Beneficiary, and Other Terminations	(2)		(3)	(4)		(6)
Beneficiary Deaths					(4)	4
Data Corrections		3	(2)	-	0	2
Total Change	(28)	9	(3)	13	(1)	(13)
Participant count as of July 1, 2016	325	141	73	454	88	1,081

Status Reconciliation - IBEW/Mechanics Changes in Plan Membership as of July 1, 2016

	Active	Terminated Vested	Disabled	Retired	Disabled Retired Beneficiaries	Total
Participant count as of July 1, 2015	139	53	12	87	19	310
New Entrants						0
Rehires	1	(1)				0
Disabilities						0
Retirements/ DRO	(3)	(1)		4		0
Vested Terminations	Ξ	1				0
Died, with Beneficiaries' Benefit Payable		(1)			-	0
Transfers	Ξ					Ξ
Died, without Beneficiary, and Other Terminations			(1)	(1)		(2)
Beneficiary Deaths						0
Data Corrections						0
Total Change	(4)	(2)	[E]	m	-	(3)
Participant count as of July 1, 2016	135	51	11	06	20	307



APPENDIX A - MEMBERSHIP INFORMATION

		Total	0	0	0	90	w	9	12	14	18	10	_	0	74
		35 & up	0	0	0	0	0	0	0	0	3	_	0	0	4
strative¹ (Counts)		30 to 34	0	0	0	0	0	0	0	2	2	0	0	0	4
nistrative		25 to 29	0	0	0	0	0	0	0	4	7	_	0	0	7
ıct/Admiı		20 to 24	0	0	0	0	0	0	1	0	33	0	-	0	5
on-Contra		15 to 19	0	0	0	0	0	_	3	'n	7	3	0	0	12
Age / Service Distribution Of Active Participants - No. As of July 1, 2016	Service	10 to 14	0	0	0	2	1	0	3	-	c,	33	0	0	13
Participant As of July 1	Sei	5 to 9	0	0	0	3	2	3	_	3	3	2	0	0	17
Jf Active		4 to 5	0	0	0	0	_	1	1	0	0	0	0	0	3
ibution (3 to 4	0	0	0	-	0	0	2	0	0	0	0	0	3
rice Dista		2 to 3	0	0	0	2	1	1	0	_	0	0	0	0	S
uas/agi		1 to 2	0	0	0	0	0	0	1	0	0	0	0	0	-
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	0
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total

Includes 11 active individuals participating in PEPRA.

	Total	80	80	80	\$62,891	\$61,638	\$58,724	\$62,052	870,609	\$82,928	\$83,041	\$68,117	S0	871,460
	35 & up	0	0	0	0	0	0	0	0	94,321	85,155	0	0	892,030
0	30 to 34	0	0	0	0	0	0	0	78,938	119,121	0	0	0	899,030
	25 to 29	0	0	0	0	0	0	0	70,584	79,477	96,464	0	0	\$76,822
	20 to 24	0	0	0	0	0	0	49,421	0	88,263	0	68,117	0	\$76,465
	15 to 19	0	0	0	0	0	88,712	61,301	73,728	75,186	85,106	0	0	\$74,957
vice	10 to 14	0	0	0	64,901	60,911	0	61,859	71,926	67,101	87,284	0	0	\$70,105
Ser	5 to 9	0	0	0	62,838	65,871	54,201	61,437	62,094	65,363	62,809	0	0	\$62,252
	4 to 5	0	0	0	0	44,739	58,164	47,129	0	0	0	0	0	\$50,011
	3 to 4	0	0	0	44,000	0	0	73,898	0	0	0	0	0	\$63,932
	2 to 3	0	0	0	70,408	70,796	42,869	0	68,927	0	0	0	0	\$64,682
	1 to 2	0	0	0	0	0	0	895,69	0	0	0	0	0	896,388
	Under 1	0	0	0	0	0	0	0	0	0	0	0	0	80
	Age	Inder 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total

Includes 11 active individuals participating in PEPRA.



APPENDIX A - MEMBERSHIP INFORMATION

		Total	0	0	0	7	3	_	3	3	4	_	_	0	18
		35 & up	0	0	0	0	0	0	0	0	0	0	0	0	0
(5		30 to 34	0	0	0	0	0	0	0	0	-	0	0	0	1
al (Count		25 to 29	0	0	0	0	0	0	0	0	0	-	0	0	1
U/Clerics		20 to 24	0	0	0	0	0	0	0	0	1	0	0	0	1
ints - AT		15 to 19	0	0	0	0	0	0	0	0	_	0	0	0	
Active Participa s of July 1, 2016	Service	10 to 14	0	0	0	0	_	0	_	2	_	0	0	0	S
of Active Pa As of July 1	Ser	5 to 9	0	0	0	2	7	0	-	-	0	0	1	0	7
ibution C		4 to 5	0	0	0	0	0	0	1	0	0	0	0	0	=
ice Distr		3 to 4	0	0	0	0	0	-	0	0	0	0	0	0	-
Age / Service D		2 to 3	0	0	0	0	0	0	0	0	0	0	0	0	0
¥		1 to 2	0	0	0	0	0	0	0	0	0	0	0	0	0
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	0
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total

		Total	80	80	80	\$42,987	\$43,038	\$53,256	\$40,593	\$45,256	\$50,365	\$41,055	\$46,547	80	845,275
		35 & up		0	0	0	0	0	0	0	0	0	0	0	80
alary)		30 to 34	0	0	0	0	0	0	0	0	48,588	0	0	0	\$48,588
verage S		25 to 29	0	0	0	0	0	0	0	0	0	41,055	0	0	\$41,055
erical (A		20 to 24	0	0	0	0	0	0	0	0	57,872	0	0	0	\$57,872
- ATU/CI		15 to 19	0	0	0	0	0	0	0	0	53,947	0	0	0	\$53,947
ficipants by 1, 2016	Service	10 to 14	0	0	0	0	41,055	0	41,055	47,356	41,055	0	0	0	\$43,576
tive Part As of Jul	Sei	5 to 9	0	0	0	42,987	44,029	0	41,055	41,055	0	0	46,547	0	\$43,241
ion Of Ac		4 to 5	0	0	0	0	0	0	39,669	0	0	0	0	0	839,669
Distribut		3 to 4	0	0	0	0	0	53,256	0	0	0	0	0	0	\$53,256
Service		2 to 3	0	0	0	0	0	0	0	0	0	0	0	0	80
Age/		1 to 2	0	0	0	0	0	0	0	0	0	0	0	0	80
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	80
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total



APPENDIX A - MEMBERSHIP INFORMATION

		Total	0	0	3	15	17	29	48	69	89	63	6	4	325
	3	35 & up	0	0	0	0	0	0	0	0	0	5	2	1	80
s)		30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	0
s (Counts		25 to 29	0	0	0	0	0	0	0	15	14	12	7	1	44
U/Driver		20 to 24	0	0	0	0	0	0	7	9	6	7	0	0	24
ants - AT		15 to 19	0	0	0	0	7	33	6	13	14	13	-	1	99
Particips ly 1, 2016	Service	10 to 14	0	0	0	-	9	=======================================	13	11	∞	11	2	1	64
Of Active Par As of July 1.	Sei	5 to 9	0	0	2	9	7	12	17	19	17	13	7	0	95
ibution (4 to 5	0	0	1	7	0	3	4	4	9	2	0	0	27
vice Disti		3 to 4	0	0	0	_	2	0	3	1	0	0	0	0	7
\ge/Ser		2 to 3	0	0	0	0	0	0	0	0	0	0	0	0	0
		1 to 2	0	0	0	0	0	0	0	0	0	0	0	0	0
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	0
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total

		Total	20	80	\$45,841	\$43,167	\$50,947	\$48,954	\$50,440	\$54,466	\$51,744	855,389	\$53,363	\$59,042	\$52,229
		35 & up	0	0	0	0	0	0	0	0	0	64,278	55,051	54,535	\$60,753
alary)		30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	80
erage S.		25 to 29	0	0	0	0	0	0	0	60,520	56,732	59,829	65,276	64,414	\$59,431
ivers (A)		20 to 24	0	0	0	0	0	0	60,412	60,363	51,653	59,410	0	0	\$56,823
.ATU/Dr		15 to 19	0	0	0	0	66,824	51,231	55,377	55,150	58,781	56,460	52,064		\$56,694
icipants - 7, 2016	rice	10 to 14	0	0	0	54,062	50,988	52,546	51,782	59,134	53,330	54,690	51,970	54,031	\$53,872
tive Part As of July	Service	5 to 9	0	0	46,062	49,062	49,066	48,302	50,193	49,324	45,088	47,833	41,805	0	\$48,126
өв Of Ac		4 to 5	0	0	45,399	37,434	0	36,113	40,518	36,732	40,563	38,438	0	0	\$38,705
Distributí		3 to 4	0	0	0	37,027	41,532	0	37,795	36,655	0	0	0	0	\$38,590
Service		2 to 3	0	0	0	0	0	0	0	0	0	0	0	0	80
/age/		1 to 2	0	0	0	0	0	0	0	0	0	0	0	0	80
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	80
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total



APPENDIX A - MEMBERSHIP INFORMATION

		Total	0	0	10	13	7	10	15	25	29	21	4		135
		_													
		35 & up	0	0	0	0	0	0	0	0	5	4	0	0	6
ints)		30 to 34	0	0	0	0	0	0	0	5	3	_	0	0	6
nics (Con		25 to 29	0	0	0	0	0	0	5	7	9	5	-	0	24
V/Mechanic		20 to 24	0	0	0	0	0	4	2	7	2	7	1	0	13
s - IBEW		15 to 19	0	0	0	_	4	5	4	9	7	5	1	0	33
irticipant y 1, 2016	Service	10 to 14	0	0	0	2	2	0	_	1	4	-	0	1	12
Active Parti As of July 1	Ser	5 to 9	0	0	10	6	-	_	3	4	2	3		0	34
Age / Service Distribution Of Active Participants - IBEW/ As of July 1, 2016		4 to 5	0	0	0	0	0	0	0	0	0	0	0	0	0
e Distrib		3 to 4	0	0	0	_	0	0	0	0	0	0	0	0	1
/Service		2 to 3	0	0	0	0	0	0	0	0	0	0	0	0	0
Age		1 to 2	0	0	0	0	0	0	0	0	0	0	0	0	0
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	0
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total

		ıtal	80	80	559,183	\$52,048	828	,725	,578	\$57,418	,785	,001	549,402	648	\$57,109
		_ 	\$	∽	859	\$52	861	\$57	856	\$57	860	\$55	849	\$31	\$57
		35 & up	0	0	0	0	0	0	0	0	66,168	67,596	0	0	\$66,803
Salary)		30 to 34	0	0	0	0	0	0	0	64,741	62,837	60,458	0	0	863,630
(Average		25 to 29	0	0	0	0	0	0	63,313	60,357	66,406	57,319	67,596	0	\$62,154
echanics		20 to 24	0	0	0	0	0	64,704	64,027	64,027	64,027	49,590	60,458	0	\$61,740
BEW/Me		15 to 19	0	0	0	965'29	58,609	54,619	60,377	52,302	54,942	55,573	37,905	0	\$55,479
ipants - I y 1, 2016	Service	10 to 14	0	0	0	67,596	67,596	0	31,648	63,167	55,658	36,787	0	31,648	\$54,689
tive Participants - l As of July 1, 2010	Ser	5 to 9	0	0	59,183	49,142	63,167	45,344	43,631	46,053	54,847	41,251	31,648	0	\$50,671
ı Of Activ		4 to 5	0	0	0	0	0	0	0	0	0	0	0	0	80
stríbution		3 to 4	0	0	0	31,562	0	0	0	0	0	0	0	0	\$31,562
Service Di		2 to 3	0	0	0	0	0	0	0	0	0	0	0	0	80
Age / Se		1 to 2	0	0	0	0	0	0	0	0	0	0	0	0	80
		Under 1	0	0	0	0	0	0	0	0	0	0	0	0	80
		Age	Under 20	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 & up	Total



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Method

For the Retirement Plans of San Diego Transit Corporation (the Plan), the actuarial funding method used to determine the normal cost and the unfunded actuarial liability is the Individual Entry Age to Final Decrement cost method. This method is consistent with the method required under the GASB accounting statements.

Under this Cost Method, the Normal Cost is calculated as the amount necessary to fund Members' benefits as a level percentage of total payroll over their projected working lives. At each valuation date, the Actuarial Liability is equal to the difference between the liability for the Members' total projected benefit and the present value of future Normal Cost contributions. The total Normal Cost is calculated as the sum of the individual Normal Costs for each active member (Individual Entry Age Method).

The excess of the Actuarial Liability over the smoothed value of Plan assets is the Unfunded Actuarial Liability (UAL); the initial unfunded actuarial liability as of July 1, 2012 is amortized in level dollar payments over a 25-year period ending June 30, 2037.

Changes in the Unfunded Actuarial Liability due to Plan amendments or changes in actuarial assumptions will be amortized in level dollar payments over a separate period, of length from five to 30 years depending on the source. The UAL resulting from the recently adopted assumption changes effective with the July 1, 2016 actuarial valuation is amortized in level dollar payments over a 21-year period, also ending June 30, 2037.

Changes in the Unfunded Actuarial Liability due to actuarial gains and losses are amortized over closed separate 15-year periods. Though the Retirement Board may make exceptions, in general, the intent is to follow the guidelines published by the California Actuarial Advisory Panel and the Government Finance Officers' Association.

The total Plan cost is the sum of the Normal Cost, assumed administrative expenses, and the amortization of the Unfunded Actuarial Liability. The employer is responsible for contributing the difference between the total cost and member contributions.

Actuarial Value of Plan Assets

The Actuarial Value of Assets (AVA) is determined using an adjusted Market Value. Under this method, a preliminary AVA is determined as the Market Value of Assets on the valuation date less a decreasing fraction (4/5, 3/5, 2/5, 1/5) of the gain or loss in each of the preceding four years. The gain or loss for a given year is the difference between the actual investment return (on a market-to-market basis) and the assumed investment return based on the Market Value of Assets at the beginning of the year and actual cash flow. The AVA is adjusted, if necessary, to remain between 80% and 120% of the Market Value.



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions

The economic and demographic assumptions are based on the experience study covering the period from July 1, 2010 through June 30, 2015 that was adopted at the Budget Development Meeting in April 2016. The rationale for all the assumptions can also be found in the experience study report dated April 2016. All assets and liabilities are computed as of the valuation date, July 1, 2016.

1. Rate of Return

The annual rate of return on all Plan assets is assumed to be 7.00%, net of investment expenses.

2. Cost of Living

The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.75% per year.

3. Post Retirement COLA

Benefits for Non-Contract retirees assumed to increase after retirement at the rate of 2.0% per year.

4. Pay for Benefits

In most cases, pay for benefits is based on each Participant's pay during the year preceding the valuation date. Special procedures are used in some cases, as noted for full-time Participants.

Pay			

Unit Participants

Pay for New Participants

Drivers

The larger of gross pay or 1,800 hours times the member's hourly

rate

Mechanics

2,150 hours times the Participant's

hourly rate

Clerical

Gross pay

The larger of gross pay or 2,100 hours

times the Participant's hourly rate

Non-Contract

Gross pay

The larger of gross pay or 2,080 hours

times the Participant's hourly rate

Part-time Participants are assumed to work 1,040 hours in the calculations shown above.



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

5. Merit Pay (Longevity and Promotion) Increases

Assumed pay increases for active Participants consist of increases due to inflation (cost of living adjustments) and those due to longevity and promotion. Based on an analysis of pay levels and service, we developed the following assumptions:

	Longev	ity and Prom	otion Increa	ases
Service	ATU Drivers	IBEW Mechanics	Clerical	Non-Contract
0	6.00%	7.50%	10.00%	3.50%
1	6.00%	7.50%	10.00%	3.50%
2	6.00%	7.50%	0.25%	3.50%
3	6.00%	7.50%	0.25%	3.50%
4	6.00%	7.50%	0.25%	3.50%
5	6.00%	7.50%	0.25%	3.50%
6	6.00%	7.50%	0.25%	3.50%
7	6.00%	7.50%	0.25%	3.50%
8	0.50%	7.50%	0.25%	3.50%
9	0.50%	7.50%	0.25%	3.50%
10+	0.50%	0.50%	0.25%	0.25%

In addition, annual adjustments in pay due to inflation will equal the CPI, for an additional annual increase of 2.75%. The combination of rates is compounded rather than using an additive method.

6. Active Participant Mortality

Rates of mortality for all active Participants are given by the Combined Healthy Retired Pensioners (RP) 2000 Tables published by the Society of Actuaries using males rates for both male and female members with generational improvements using Scale MP-2015.

7. Healthy Inactive Participant and Beneficiary Mortality

Rates of mortality for healthy inactive Participants, spouses, and surviving spouses are given by the Combined Healthy Retired Pensioners (RP) 2000 Tables with Blue Collar Adjustments for males and no collar adjustments for females published by the Society of Actuaries with generational improvements using Scale MP-2015.



APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

8. Disabled Participant Mortality

Rates of mortality for male disabled members are given by the Retired Pensioners (RP) 2014 Tables for Disabled Annuitants. Rates of mortality for female disabled members are given by Retired Pensioners (RP) 2000 Combined Healthy Table published by the Society of Actuaries, with future mortality improvements to 2010, the midpoint of the experience used for the mortality study, using projection scale MP-2015.

9. Mortality Improvement

For active and healthy inactive Participants, mortality is assumed to improve in future years in accordance with the MP-2015 generational improvement tables. For disabled Participants no explicit provision for mortality improvement is used.

10. Disability

Among ATU Drivers and IBEW Mechanics, 0.50% of Participants eligible for a disability benefit are assumed to become disabled each year. Disabled Participants are assumed not to return to active service. No disability is assumed for Clerical and Non-Contract Participants.

11. Plan Expenses

Plan administrative expenses of \$260,000 are included in the annual cost calculated, increasing each year with the rate of inflation.

12. Family Composition

100% of active Participants are assumed married. Male spouses are assumed four years older than their wives are.



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

13. Service Retirement

Retirement is assumed to occur in accordance with the rates shown in the following table:

Age	ATU Drivers	IBEW Mechanics	Clerical/Non Contract
52	0%	0%	10%
53-54	0%	0%	10%
55-56	10%	5%	10%
57-59	10%	5%	15%
60-61	15%	10%	15%
62	25%	20%	40%
63-64	25%	20%	30%
65	40%	40%	30%
66-69	30%	30%	30%
70 and older	100%	100%	100%

Non-Contract retirement assumption at age 52 is for PEPRA participants only, 0% otherwise.

14. Termination

Service-based or age-based termination rates are shown below by group. For all participants, termination rates are assumed zero once a participant is eligible for retirement.

Termination for ATU Driver, IBEW Mechanic, and Non-Contract Participants is assumed to occur in accordance with the service-based rates shown in the following table:

Service	ATU Driver	IBEW Mechanic	Non- Contract
0	25.0%	25.0%	10.0%
1	25.0%	25.0%	10.0%
2	12.0%	12.0%	10.0%
3	12.0%	12.0%	10.0%
4 – 9	5.0%	5.0%	10.0%
10 +	2.0%	2.0%	3.0%



APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Termination for Clerical Participants is assumed to occur in accordance with the agebased rates shown in the following table:

Cleri	ical
Age	Rate
20-24	25.0%
25-29	11.0%
30-34	13.0%
35-39	17.0%
40-44	12.0%
45-49	8.0%
50 and older	5.0%

15. Employment Status

No future transfers among Participant groups are assumed.

16. Changes in Actuarial Methods and Assumptions since the Prior Valuation

In April 2016, the Budget Development Committee adopted revised assumptions as detailed in this Appendix B and in Appendix B of the experience study report. For complete detail of the assumptions used in the prior valuation, please refer to the experience study report dated April 2016 or the July 1, 2015 actuarial valuation report. The assumptions were revised for investment rate of return, inflation, and merit pay increases, as well as the decrements, mortality, disability, service retirement, and termination.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

A. Definitions

Average Monthly Final Earnings:

Average Monthly Final Earnings means the average monthly compensation during the consecutive months that produces a Participant's highest average compensation, computed by dividing the Compensation Earnable for such period by the number of months in such period.

- For ATU, IBEW, and Clerical Participants, the averaging period is thirty-six (36) consecutive months.
- For Non-Contract Participants, the number of consecutive months is twelve (12).
- Public Employees' Pension Reform Act (PEPRA): For Non-Contract Participants hired on and after July 1, 2013, the number of consecutive months is thirty-six (36).
- Those months during which the Participant did not receive Compensation from the Employer equivalent to one-half the regular working days will be excluded. The average is then based on that portion of the averaging period remaining after the excluded months.
- PEPRA: It is possible that exclusions for months in which the Participant did not work full-time may be subject to change.
- Use the total of the Periodic Pensionable Earnings from the highest three calendar (payroll) years. These years need not be consecutive years. There shall be no skips and drops within the three calendar (payroll) years. Add the total Periodic Pensionable Earnings to Terminal Earnings and then divide by 36.

Compensation:

Compensation means the remuneration for services paid by the Employer. The monetary value of board, lodgings, fuel, car allowance, laundry, or other advantages furnished to a Participant is not included.

PEPRA: For Participants joining the Plan on or after July 1, 2013, only base compensation up to the Social Security-integrated PEPRA compensation limit (\$117,020 for 2015 and 2016) will count for computing Plan benefits and employee and employer contributions; in particular, all or most overtime will be excluded.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

Compensation Earnable:

Compensation Earnable is the Compensation actually received by a Participant during a period of employment. For ATU and Non-Contract Participants, any bonus or retroactive wage increases are treated as compensation when received rather than when the services are performed. For IBEW Participants, Compensation Earnable is limited to 2,140 hours of straight time equivalent hours in any 12-month period.

In addition, the value of any vacation or sick leave accumulated but unused when benefits begin is excluded from Compensation Earnable and from Average Monthly Final Earnings.

PEPRA: For Participants joining the Plan on and after July 1, 2013, it is likely that some sources of compensation, such as those underlined above, may be excluded from benefit and contribution computations for these new Participants.

Credited Years Of Service:

In general, Credited Years of Service is continuous Service with the San Diego Transit Corporation and its predecessor company from the last date of employment through the date of retirement, death, disability, or other termination of service.

As of November 10, 1997, part-time ATU employees receive one Credited Year of Service for every 2,080 Hours of Service worked as a part-time employee after December 1, 1990.

For Non-Contract Participants, Credited Years of Service includes any year commencing on or after July 1, 1982 in which the Participant completes at least 1,000 Hours of Service. In addition, Credited Years of Service for Non-Contract Participants will exclude any period of Service after the Participant's Normal Retirement Date.

A Participant who is disabled and recovers from disability and reenters the Plan as an active Participant will not receive Credited Years of Service for the period of disability.

B. Membership

All full-time and certain part-time IBEW employees hired prior to May 1, 2011 will become Participants on their date of hire. IBEW employees hired on and after May 1, 2011 will become Participants of a separate defined contribution plan and will not be Participants of this Plan.

All full-time and certain part-time ATU employees hired prior to November 1, 2012 will become Participants on their date of hire. ATU



APPENDIX C – SUMMARY OF PLAN PROVISIONS

employees hired on and after November 1, 2012 will become Participants of a separate defined contribution plan and will not be Participants of this Plan.

All Non-Contract employees become Participants after earning one Credited Year of Service.

PEPRA: Any Participant joining the Plan for the first time on or after January 1, 2013 is a New Participant.

C. Retirement Benefit

Eligibility:

Clerical and Non-Contract Participants are eligible for normal service retirement upon attaining age 63 and completing five or more Credited Years of Service and eligible for early service retirement upon attaining age 53 and completing five or more Credited Years of Service.

ATU and IBEW Participants are eligible for normal service retirement upon attaining age 63 (65 for IBEW) and completing five or more Credited Years of Service and eligible for early service retirement upon attaining age 55 and completing five or more Credited Years of Service.

PEPRA: New Participants are eligible to retire upon attaining age 52 and completing five or more Credited Years of Service.

Benefit Amount: The monthly service retirement benefit is the Participant's Average Monthly Final Earnings multiplied by the percentage figures shown in the tables below.

- For ATU and Clerical Participants terminating prior to October 1, 2005, ATU/Clerical Table A-1 is used; for ATU and Clerical Participants terminating on and after October 1, 2005, ATU/Clerical Table A-2 is used. Prior to July 1, 2006, the benefit from the table is limited to 60%.
- For IBEW Participants terminating prior to January 1, 2007, IBEW Table A-1 is used; for IBEW Participants terminating on and after January 1, 2007, IBEW Table A-2 is used.
- For Non-Contract participants terminating prior to July 1, 2000, Non-Contract Table A-1 is used; for Non-Contract participants terminating on and after July 1, 2000, Non-Contract Table A-2 is used.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

For Participants with fractions of a year of age or service, the Participant's age or service will be rounded to the completed quarter year, and the percentage multiplier will be computed from the table using interpolation.

ATU participants who are active from November 10, 1997 to December 31, 1998 and from November 10, 1997 to December 31, 1999 receive an additional 2.5% and 2.5%, respectively. However, the multiplier from Table A-1 or A-2, as augmented by the additional 2.5% increments, is still limited to 60% prior to July 1, 2006 and 70% thereafter.

Non-Contract Participants who are active as of July 1, 1994 and July 1, 1995 receive an additional 6% and 2%, respectively. However, the benefit multiplier, as augmented by the additional 6% and 2% increments, is still limited to 60% under Table A-1 and 70% under Table A-2.

A Participant who is disabled and recovers from disability and reenters the Plan as an active Participant will have this benefit amount reduced by the actuarial equivalent of the benefits paid during the period of disability.

PEPRA: For New Participants, the benefit multiplier will be 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age.

Form of Benefit: The normal form of benefit is an annuity payable for the life of the Participant, with no continuation of benefits to a beneficiary after death. The retirement benefit will be paid as a 50% Joint and Survivor benefit actuarially equivalent to the normal form for participants who have been married for at least one year. Otherwise, the normal form will be paid.

> Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant (if any) upon death.

> The ATU and IBEW benefits have been amended from time to time to remove the actuarial reduction in benefits for previously retired Participants whose spouses have died before them. However, these adjustments are retroactive only, and they do not apply to benefits paid to currently active Participants.

> ATU and IBEW Participants may elect an Alternative Retirement Formula if they terminate employment before early retirement but after 10 Credited Years of Service or were hired between April 1, 1968 and March 31, 1971



APPENDIX C – SUMMARY OF PLAN PROVISIONS

and desire to retire at their Normal Retirement Date. These Participants are eligible for a deferred benefit commencing at age 65 based on Table B.

Tables A-1 and A-2 for each employee group, as well as Table B, can be found at the end of Appendix C herein.

D. Disability Retirement Benefit

Eligibility:

A Participant is eligible for a Disability Retirement Benefit if:

- The Participant has earned five Credited Years of Service (ATU, IBEW, Clerical and Non-Contract), and
- The Participant is unable to perform the duties of his or her job with the Corporation, cannot be transferred to another job with the Corporation, and has submitted satisfactory medical evidence of permanent disqualification from his or her job.

Benefit Amount: The Disability Retirement Benefit is a monthly benefit equal to the lesser of:

- 1. 1.5% times Credited Years of Service at Disability Retirement Date times the Participant's Average Monthly Final Earnings; and,
- The Normal Retirement Benefit calculated using the Average Monthly Final Earnings at Disability Retirement Date and the projected Credited Years of Service to Normal Retirement Date.

The benefit is reduced by 50% of the amount of any earned income from other sources in excess of 50% of the Participant's Average Monthly Earnings during the 12 months prior to disability; this reduction applies to all IBEW and Non-Contract Participants, but only to ATU Participants hired after June 30, 1983.

PEPRA: Note that the Disability Retirement Benefit for New Participants is based on the new definition of Compensation, which is subject to a maximum and excludes overtime.

Form of Benefit: The normal form of benefit is an annuity commencing at disability and payable for the life of the Participant, with no continuation of benefits to a beneficiary after death. The Disability Retirement Benefit will be paid as a 50% Joint and Survivor benefit actuarially equivalent to the normal form



APPENDIX C – SUMMARY OF PLAN PROVISIONS

for participants who have been married for at least one year. Otherwise, the normal form will be paid.

Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant (if any) upon death.

The ATU and IBEW benefits have been amended from time to time to remove the actuarial reduction in benefits for previously retired Participants whose spouses have died before them. However, these adjustments are retroactive only, and they do not apply to benefits paid to currently active Participants.

E. Pre-Retirement Death Benefit

Eligibility:

A vested Participant is entitled to elect coverage of a pre-retirement spouse's benefit.

For years, a Participant is age 55 or under, the cost of the coverage is paid by the Company. For the years a Participant is over age 55 and has elected this coverage the cost of this coverage is paid by the Participant in the form of a reduced benefit upon retirement. The reduction is 3.5¢ per \$10 of monthly benefit for each year of coverage.

There is no cost for this benefit for any ATU, Clerical, or Non-Contract Participant whose monthly benefit commences after November 27, 1990. There is no cost for this benefit for any IBEW Participant whose monthly benefit commences after December 3, 1996.

In order for the spouse to be eligible for this benefit, the participant must be married to the spouse for one year prior to death, unless death occurs from accidental causes.

Benefit Amount: For a Participant who is eligible to retire at death, the pre-retirement death benefit is 50% of the benefit that would have been payable had the Participant retired immediately prior to his or her death and elected to receive a 50% Joint and Survivor annuity.

> For a Participant who dies before being eligible to retire, the preretirement death benefit is 50% of the benefit that would have been payable had the Participant survived to his or her earliest retirement date, retired, elected to receive a 50% Joint and Survivor annuity, and died immediately.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

PEPRA: Note that the Pre-Retirement Death Benefit for New Participants is based on the new definition of Compensation, which is subject to a maximum and excludes overtime.

Form of Benefit: For a Participant who is eligible to retire at death, the death benefit begins when the Participant dies and continues for the life of the surviving spouse.

> For a Participant who dies before being eligible to retire, the death benefit begins when the Participant would have reached his or her earliest retirement date and continues for the life of the surviving spouse.

> Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant or spouse (if any) upon death.

F. Termination Benefit

Eligibility:

A Participant is eligible for a termination benefit after earning five Credited Years of Service.

Benefit Amount: The termination benefit is computed in the same manner as the Normal Retirement Benefit, but it is based on Credited Years of Service and Average Monthly Final Earnings on the date of termination.

> Effective July 1, 2000, Non-Contract participants who terminate prior to eligibility for early service retirement will have their benefits actuarially reduced if they begin receiving benefits before Normal Retirement Age.

> PEPRA: For New Participants, the benefit multiplier will be 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age. Note also that the Termination Benefit for New Participants is based on the new definition of Compensation, which is subject to a maximum and excludes overtime.

> We assume a refund of employee contributions, with no interest, if termination occurs before five years of service.

Form of Benefit: The Participant will be eligible to commence benefits at the later of termination and earliest retirement eligibility age.

> The normal form of benefit is an annuity payable for the life of the Participant, with no continuation of benefits to a beneficiary after death.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

The retirement benefit will be paid as a 50% Joint and Survivor benefit actuarially equivalent to the normal form for participants who have been married for at least one year. Otherwise, the normal form will be paid.

Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant (if any) upon death.

The ATU and IBEW benefits have been amended from time to time to remove the actuarial reduction in benefits for previously retired Participants whose spouses have died before them. However, these adjustments are retroactive only, and they do not apply to benefits paid to currently active Participants.

G. Cost of Living Adjustments

Eligibility:

An annual Cost of Living Adjustment (COLA) has been added for Non-Contract Participants who were actively employed on or after June 30, 1999. One time only (ad hoc) COLAs were granted to ATU and IBEW Participants in 1991 and 1992.

Benefit Amount: For Non-Contract Participants, the cumulative COLA is the increase in the Consumer Price Index (CPI) since the Participant began receiving benefits.

> The COLA is subject to the following limits for Non-Contract Participants:

- The cumulative COLA cannot exceed 2% compounded annually for all years since the Participant's benefits began;
- The annual COLA is zero if the CPI increase in that year is less than 1%:
- The annual COLA is limited to 6% of the initial benefit amount in any year; and,
- A Participant's benefit cannot be reduced below the benefit level when payments commenced.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

H. Voluntary Early Retirement Program

The Plan provided enhanced benefits to ATU participants who voluntarily elected early retirement during the window period from July 1, 1998 through February 20, 1998.

The Plan provided enhanced benefits to certain IBEW participants who voluntarily elected early retirement during the window period from July 1, 2004 through December 31, 2004.

I. DROP Program

The Plan provided DROP benefits to a number of ATU participants who elected retirement from July 1, 2002 through December 31, 2002.

J. Funding

- IBEW members contributed 3% of Compensation to the Plan in April 2013 and 4% of Compensation in April 2014. The contribution rate increased to 6% of Compensation in April 2015 and will increase to 8% of Compensation in April 2016.
- ATU drivers and clerical members contributed 3% of Compensation in July 2013. The contribution rate increased to 5% of Compensation in July 2014 and to 6% in July 2015. The contribution rate will increase to 7% of Compensation in July 2016 and to 8% of Compensation in December 2017.
- Non-contract members hired before July 1, 2013 contributed 2% of Compensation to the Plan prior to January 2014. The Non-contract member contributions increased to 4% of Compensation in January 2014, to 6% of in January 2015, and will increase to 7% of Compensation on January 1, 2016. As of January 1, 2017, the member contribution rate will increase to 8% of Compensation.
- PEPRA: New Members must contribute half of the normal cost of the Plan, rounded to the nearest 0.25%. Currently, PEPRA members are paying 6.25% of pay and the employer pays the remaining cost of the Plan.

The Corporation pays the actuarial cost of the Plan as reduced by Member contributions. Member contribution rates in the future may change in response to collective bargaining.

K. Changes in Plan Provisions since Prior Valuation

None.



APPENDIX C – SUMMARY OF PLAN PROVISIONS

ATU/Clerical Table A-1: Retirement Benefit Multipliers

Credited Years		Age at Retirement									
Of Service	55	56	57	58	59	60	61	62	63+		
5	5.9%	6.3%	6.7%	7.2%	7.8%	8.3%	8.9%	9.5%	10.1%		
6	7.1%	7.5%	8.1%	8.7%	9.3%	10.0%	10.7%	11.4%	12.1%		
7	8.2%	8.8%	9.4%	10.1%	10.9%	11.7%	12.4%	13.3%	14.1%		
8	9.4%	10.1%	10.8%	11.6%	12.4%	13.3%	14.2%	15.1%	16.1%		
9	10.6%	11.3%	12.1%	13.0%	14.0%	15.0%	16.0%	17.0%	18.1%		
10	11.8%	12.6%	13.5%	14.4%	15.5%	16.7%	17.8%	18.9%	20.1%		
11	12.9%	13.8%	14.8%	15.9%	17.1%	18.3%	19.5%	20.8%	22.2%		
12	14.1%	15.1%	16.2%	17.3%	18.6%	20.0%	21.3%	22.7%	24.2%		
13	15.3%	16.3%	17.5%	18.8%	20.2%	21.7%	23.1%	24.6%	26.2%		
14	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	24.9%	26.5%	28.2%		
15	17.6%	18.9%	20.2%	21.7%	23.3%	25.0%	26.7%	28.4%	30.2%		
16	18.8%	20.1%	21.5%	23.1%	24.8%	26.7%	28.4%	30.3%	32.2%		
17	20.0%	21.4%	22.9%	24.5%	26.4%	28.3%	30.2%	32.2%	34.3%		
18	21.2%	22.6%	24.2%	26.0%	27.9%	30.0%	32.0%	34.1%	36.3%		
19	22.3%	23.9%	25.6%	27.4%	29.5%	31.7%	33.8%	36.0%	38.3%		
20	23.5%	25.2%	26.9%	28.9%	31.0%	33.3%	35.5%	37.9%	40.3%		
21	24.7%	26.4%	28.3%	30.3%	32.6%	35.0%	37.3%	39.7%	42.3%		
22	25.9%	27.7%	29.6%	31.8%	34.1%	36.7%	39.1%	41.6%	44.3%		
23	27.0%	28.9%	31.0%	33.2%	35.7%	38.3%	40.9%	43.5%	46.3%		
24	28.2%	30.2%	32.3%	34.6%	37.2%	40.0%	42.6%	45.4%	48.4%		
25	29.4%	31.4%	33.7%	36.1%	38.8%	41.7%	44.4%	47.3%	50.4%		
26	30.6%	32.7%	35.0%	37.5%	40.3%	43.3%	46.2%	49.2%	52.4%		
27	31.7%	34.0%	36.4%	39.0%	41.9%	45.0%	48.0%	51.1%	54.4%		
28	32.9%	35.2%	37.7%	40.4%	43.4%	46.7%	49.8%	52.0%	56.4%		
29	34.1%	36.5%	39.1%	41.9%	45.0%	48.3%	50.0%	55.0%	58.4%		
30	35.3%	37.7%	40.4%	43.4%	46.5%	50.0%	51.0%	55.5%	60.0%		
31	36.5%	39.0%	41.7%	44.8%	48.1%	51.0%	51.5%	56.0%	60.0%		
32	37.6%	40.2%	43.1%	46.2%	49.6%	51.5%	52.0%	56.5%	60.0%		
33	38.8%	41.5%	44.4%	47.6%	50.0%	52.0%	52.5%	57.0%	60.0%		
34	40.0%	42.8%	45.8%	49.1%	51.0%	52.5%	53.0%	57.5%	60.0%		
35 or more	41.2%	44.0%	47.1%	50.0%	51.5%	53.0%	53.5%	58.0%	60.0%		



APPENDIX C – SUMMARY OF PLAN PROVISIONS

ATU/Clerical Table A-2: Retirement Benefit Multipliers

Credited Years	Age at Retirement											
Of Service	Clerical											
	53	54	55	56	57	58	59	60	61	62	63+	
5	8.71%	9.33%	10.00%	10.26%	10.52%	10.78%	11.05%	11.31%	11_57%	11.83%	12.09%	
6	10.45%	11.20%	12.00%	12.31%	12.62%	12.94%	13.26%	13.57%	13.88%	14.20%	14.519	
7	12.19%	13.06%	14.00%	14.36%	14.73%	15.09%	15.47%	15.83%	16.20%	16.56%	16.93%	
8	13.94%	14.93%	16.00%	16.42%	16,83%	17.25%	17.68%	18,10%	18.51%	18,93%	19.34%	
9	15.68%	16.79%	18.00%	18.47%	18.94%	19.40%	19.89%	20.36%	20.83%	21.29%	21,769	
10	17.42%	18.66%	20.00%	20.52%	21,04%	21.56%	22.10%	22.62%	23.14%	23.66%	24.189	
-11	19.16%	20.53%	22.00%	22.57%	23.14%	23.72%	24.31%	24.88%	25.45%	26.03%	26,609	
12	20.90%	22.39%	24.00%	24,62%	25.25%	25.87%	26,52%	27.14%	27.77%	28.39%	29,029	
13	22.65%	24.26%	26.00%	26,68%	27.35%	28.03%	28.73%	29.41%	30.08%	30.76%	31.439	
14	24.39%	26.12%	28.00%	28.73%	29.46%	30.18%	30.94%	31.67%	32.40%	33.12%	33.859	
15	26.13%	27.99%	30.00%	30.78%	31.56%	32.34%	33.15%	33.93%	34.71%	35.49%	36.27	
16	27.87%	29.86%	32.00%	32.83%	33,66%	34,50%	35,36%	36.19%	37.02%	37.86%	38.69	
17	29.61%	31.72%	34.00%	34.88%	35.77%	36.65%	37,57%	38.45%	39.34%	40,22%	41.11	
18	31.36%	33.59%	36.00%	36.94%	37.87%	38.81%	39.78%	40.72%	41.65%	42.59%	43.529	
19	33.10%	35.45%	38.00%	38.99%	39.98%	40.96%	41.99%	42.98%	43.97%	44.95%	45 94	
20	34.84%	37.32%	40.00%	41.04%	42.08%	43.12%	44.20%	45.24%	46.28%	47.32%	48.36	
21	36.58%	39.19%	42.00%	43.09%	44.18%	45.28%	46.41%	47.50%	48,59%	49.69%	50.78	
22	38.32%	41.05%	44.00%	45.14%	46.29%	47,43%	48,62%	49,76%	50.91%	52.05%	53,20	
23	40.07%	42.92%	46.00%	47.20%	48.39%	49.59%	50.83%	52.03%	53.22%	54.42%	55.61	
24	41.81%	44.78%	48,00%	49.25%	50.50%	51.74%	53.04%	54,29%	55.54%	56.78%	58.03	
25	43.55%	46.65%	50.00%	51.30%	52.60%	53.90%	55.25%	56.55%	57.85%	59.15%	60.45	
26	45.29%	48.52%	52.00%	53.35%	54.70%	56.06%	57.46%	58.81%	60.16%	61,52%	62,87	
27	47.03%	50.38%	54.00%	55.40%	56.81%	58.21%	59.67%	61.07%	62.48%	63.88%	65.29	
28	48.78%	52.25%	56,00%	57.46%	58.91%	60.37%	61.88%	63.34%	64.79%	66,25%	67.70	
29	50.52%	54.11%	58.00%	59.51%	61.02%	62.52%	64.09%	65.60%	67.11%	68.61%	70.00	
30	52.26%	55.98%	60.00%	61.56%	63.12%	64,68%	66.30%	67.86%	69.42%	70.00%	70.00	
31	54.00%	57.85%	62.00%	63.61%	65.22%	66.84%	68.51%	70.00%	70.00%	70.00%	70.00	
32	55.74%	59.71%	64.00%	65.66%	67.33%	68.99%	70.00%	70.00%	70.00%	70.00%	70.00	
33	57.49%	61.58%	66.00%	67.72%	69.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00	
34	59.23%	63.44%	68.00%	69.77%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00	
35 or more	60.97%	65.31%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00	



APPENDIX C – SUMMARY OF PLAN PROVISIONS

IBEW Table A-1: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement										
	55	56	57	58	59	60	61	62	63	64	65+
5	5.2%	5.5%	5.9%	6.3%	6.7%	7.2%	7.8%	8.3%	8.9%	9.5%	10.1%
6	6.2%	6.6%	7.1%	7.5%	8.1%	8.7%	9.3%	10.0%	10.7%	11.4%	12.1%
7	7.2%	7.7%	8.2%	8.8%	9.4%	10.1%	10.9%	11.7%	12.4%	13.3%	14.1%
8	8.2%	8.8%	9.4%	10.1%	10.8%	11.6%	12.4%	13.3%	14.2%	15.1%	16.1%
9	9.3%	9.9%	10.6%	11.3%	12.1%	13.0%	14.0%	15.0%	16.0%	17.0%	18.1%
10	10.2%	11.0%	11.8%	12.6%	13.5%	14.4%	15.5%	16.7%	17.8%	18.9%	20.1%
11	11.2%	12.1%	12.9%	13.8%	14.8%	15.9%	17.1%	18.3%	19.5%	20.8%	22.2%
12	12.3%	13.2%	14.1%	15.1%	16.2%	17.3%	18.6%	20.0%	21.3%	22.7%	24.2%
13	13.3%	14.3%	15.3%	16.3%	17.5%	18.8%	20.2%	21.7%	23.1%	24.6%	26.2%
14	14.4%	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	24.9%	26.5%	28.2%
15	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	25.0%	26.7%	28.4%	30.2%
16	16.4%	17.6%	18.8%	20.1%	21.5%	23.1%	24.8%	26.7%	28.4%	30.3%	32.2%
17	17.5%	18.7%	20.0%	21.4%	22.9%	24.5%	26.4%	28.3%	30.2%	32.2%	34.3%
18	18.5%	19.8%	21.2%	22.6%	24.2%	26.0%	27.9%	30.0%	32.0%	34.1%	36.3%
19	19.6%	20.9%	22.3%	23.9%	25.6%	27.4%	29.5%	31.7%	33.8%	36.0%	38.3%
20	20.6%	22.0%	23.5%	25.2%	26.9%	28.9%	31.0%	33.3%	35.5%	37.9%	40.3%
21	21.6%	23.1%	24.7%	26.4%	28.3%	30.3%	32.6%	35.0%	37.3%	39.7%	42.3%
22	22.7%	24.2%	25.9%	27.7%	29.6%	31.8%	34.1%	36.7%	39.1%	41.6%	44.3%
23	23.7%	25.3%	27.0%	28.9%	31.0%	33.2%	35.7%	38.3%	40.9%	43.5%	46.3%
24	24.8%	26.4%	28.2%	30.2%	32.3%	34.6%	37.2%	40.0%	42.6%	45.4%	48.4%
25	25.8%	27.5%	29.4%	31.4%	33.7%	36.1%	38.8%	41.7%	44.4%	47.3%	50.4%
26	26.9%	28.6%	30.6%	32.7%	35.0%	37.5%	40.3%	43.3%	46.2%	49.2%	52.4%
27	27.9%	29.7%	31.7%	34.0%	36.4%	39.0%	41.9%	45.0%	48.0%	51.1%	54.4%
28	29.0%	30.9%	32.9%	35.2%	37.7%	40.4%	43.4%	46.7%	49.8%	52.0%	56.4%
29	30.0%	32.0%	34.1%	36.5%	39.1%	41.9%	45.0%	48.3%	50.0%	55.0%	58.4%
30	31.1%	33.1%	35.3%	37.7%	40.4%	43.4%	46.5%	50.0%	51.0%	55.5%	60.0%
31	32.1%	34.2%	36.5%	39.0%	41.7%	44.8%	48.1%	51.0%	51.5%	56.0%	60.0%
32	33.2%	35.3%	37.6%	40.2%	43.1%	46.2%	49.6%	51.5%	52.0%	56.5%	60.0%
33	34.3%	36.5%	38.8%	41.5%	44.4%	47.6%	50.0%	52.0%	52.5%	57.0%	60.0%
34	35.4%	37.6%	40.0%	42.8%	45.8%	49.1%	51.0%	52.5%	53.0%	57.5%	60.0%
35 or more	36.5%	38.7%	41.2%	44.0%	47.1%	50.0%	51.5%	53.0%	53.5%	58.0%	60.0%



APPENDIX C – SUMMARY OF PLAN PROVISIONS

IBEW Table A-2: Retirement Benefit Multipliers

Credited Years				Age	at Retirer	nent			
Of Service	55	56	57	58	59	60	61	62	63+
5	10.00%	10.26%	10.52%	10.78%	11.05%	11.31%	11.57%	11.83%	12.09%
6	12.00%	12.31%	12.62%	12.94%	13.26%	13.57%	13.88%	14.20%	14.51%
7	14.00%	14.36%	14.73%	15.09%	15.47%	15.83%	16.20%	16.56%	16.93%
8	16.00%	16.42%	16.83%	17.25%	17.68%	18.10%	18.51%	18.93%	19.34%
9	18.00%	18.47%	18.94%	19.40%	19.89%	20.36%	20.83%	21.29%	21.76%
10	20.00%	20.52%	21.04%	21.56%	22.10%	22.62%	23.14%	23.66%	24.18%
11	22.00%	22.57%	23.14%	23.72%	24.31%	24.88%	25.45%	26.03%	26.60%
12	24.00%	24.62%	25.25%	25.87%	26.52%	27.14%	27.77%	28.39%	29.02%
13	26.00%	26.68%	27.35%	28.03%	28.73%	29.41%	30.08%	30.76%	31.43%
14	28.00%	28.73%	29.46%	30.18%	30.94%	31.67%	32.40%	33.12%	33.85%
15	30.00%	30.78%	31.56%	32.34%	33.15%	33.93%	34.71%	35.49%	36.27%
16	32.00%	32.83%	33.66%	34.50%	35.36%	36.19%	37.02%	37.86%	38.69%
17	34.00%	34.88%	35.77%	36.65%	37.57%	38.45%	39.34%	40.22%	41.11%
18	36.00%	36.94%	37.87%	38.81%	39.78%	40.72%	41.65%	42.59%	43.52%
19	38.00%	38.99%	39.98%	40.96%	41.99%	42.98%	43.97%	44.95%	45.94%
20	40.00%	41.04%	42.08%	43.12%	44.20%	45.24%	46.28%	47.32%	48.36%
21	42.00%	43.09%	44.18%	45.28%	46.41%	47.50%	48.59%	49.69%	50.78%
22	44.00%	45.14%	46.29%	47.43%	48.62%	49.76%	50.91%	52.05%	53.20%
23	46.00%	47.20%	48.39%	49.59%	50.83%	52.03%	53,22%	54.42%	55.61%
24	48.00%	49.25%	50.50%	51.74%	53.04%	54.29%	55.54%	56.78%	58.03%
25	50.00%	51.30%	52.60%	53.90%	55.25%	56.55%	57.85%	59.15%	60.45%
26	52.00%	53.35%	54.70%	56.06%	57.46%	58.81%	60.16%	61.52%	62.87%
27	54.00%	55.40%	56.81%	58.21%	59.67%	61.07%	62.48%	63.88%	65.29%
28	56.00%	57.46%	58.91%	60.37%	61.88%	63.34%	64.79%	66.25%	67.70%
29	58.00%	59.51%	61.02%	62.52%	64.09%	65.60%	67.11%	68.61%	70.00%
30	60.00%	61.56%	63.12%	64.68%	66.30%	67.86%	69.42%	70.00%	70.00%
31	62.00%	63.61%	65.22%	66.84%	68.51%	70.00%	70.00%	70.00%	70.00%
32	64.00%	65.66%	67.33%	68.99%	70.00%	70.00%	70.00%	70.00%	70.00%
33	66.00%	67.72%	69.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
34	68.00%	69.77%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
35 or more	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%



APPENDIX C – SUMMARY OF PLAN PROVISIONS

Non-Contract Table A-1: Retirement Benefit Multipliers

Credited Years					Age	at Retire	ment		-		
Of Service	53	54	55	56	57	58	59	60	61	62	63+
5	5.2%	5.5%	5.9%	6.3%	6.7%	7.2%	7.8%	8.3%	8.9%	9.5%	10.1%
6	6.2%	6.6%	7.1%	7.5%	8.1%	8.7%	9.3%	10.0%	10.7%	11.4%	12.1%
7	7.2%	7.7%	8.2%	8.8%	9.4%	10.1%	10.9%	11.7%	12.4%	13.3%	14.1%
8	8.2%	8.8%	9.4%	10.1%	10.8%	11.6%	12.4%	13.3%	14.2%	15.1%	16.1%
9	9.3%	9.9%	10.6%	11.3%	12.1%	13.0%	14.0%	15.0%	16.0%	17.0%	18.1%
10	10.2%	11.0%	11.8%	12.6%	13.5%	14.4%	15.5%	16.7%	17.8%	18.9%	20.1%
11	11.2%	12.1%	12.9%	13.8%	14.8%	15.9%	17.1%	18.3%	19.5%	20.8%	22.2%
12	12.3%	13.2%	14.1%	15.1%	16.2%	17.3%	18.6%	20.0%	21.3%	22.7%	24.2%
13	13.3%	14.3%	15.3%	16.3%	17.5%	18.8%	20.2%	21.7%	23.1%	24.6%	26.2%
14	14.4%	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	24.9%	26.5%	28.2%
15	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	25.0%	26.7%	28.4%	30.2%
16	16.4%	17.6%	18.8%	20.1%	21.5%	23.1%	24.8%	26.7%	28.4%	30.3%	32.2%
17	17.5%	18.7%	20.0%	21.4%	22.9%	24.5%	26.4%	28.3%	30.2%	32.2%	34.3%
18	18.5%	19.8%	21.2%	22.6%	24.2%	26.0%	27.9%	30.0%	32.0%	34.1%	36.3%
19	19.6%	20.9%	22.3%	23.9%	25.6%	27.4%	29.5%	31.7%	33.8%	36.0%	38.3%
20	20.6%	22.0%	23.5%	25.2%	26.9%	28.9%	31.0%	33.3%	35.5%	37.9%	40.3%
21	21.6%	23.1%	24.7%	26.4%	28.3%	30.3%	32.6%	35.0%	37.3%	39.7%	42.3%
22	22.7%	24.2%	25.9%	27.7%	29.6%	31.8%	34.1%	36.7%	39.1%	41.6%	44.3%
23	23.7%	25.3%	27.0%	28.9%	31.0%	33.2%	35.7%	38.3%	40.9%	43.5%	46.3%
24	24.8%	26.4%	28.2%	30.2%	32.3%	34.6%	37.2%	40.0%	42.6%	45.4%	48.4%
25	25.8%	27.5%	29.4%	31.4%	33.7%	36.1%	38.8%	41.7%	44.4%	47.3%	50.4%
26	26.9%	28.6%	30.6%	32.7%	35.0%	37.5%	40.3%	43.3%	46.2%	49.2%	52.4%
27	27.9%	29.7%	31.7%	34.0%	36.4%	39.0%	41.9%	45.0%	48.0%	51.1%	54.4%
28	29.0%	30.9%	32.9%	35.2%	37.7%	40.4%	43.4%	46.7%	49.8%	52.0%	56.4%
29	30.0%	32.0%	34.1%	36.5%	39.1%	41.9%	45.0%	48.3%	50.0%	55.0%	58.4%
30	31.1%	33.1%	35.3%	37.7%	40.4%	43.4%	46.5%	50.0%	51.0%	55.5%	60.0%
31	32.1%	34.2%	36.5%	39.0%	41.7%	44.8%	48.1%	51.0%	51.5%	56.0%	60.0%
32	33.2%	35.3%	37.6%	40.2%	43.1%	46.2%	49.6%	51.5%	52.0%	56.5%	60.0%
33	34.3%	36.5%	38.8%	41.5%	44.4%	47.6%	50.0%	52.0%	52.5%	57.0%	60.0%
34	35.4%	37.6%	40.0%	42.8%	45.8%	49.1%	51.0%	52.5%	53.0%	57.5%	60.0%
35 or more	36.5%	38.7%	41.2%	44.0%	47.1%	50.0%	51.5%	53.0%	53.5%	58.0%	60.0%



APPENDIX C – SUMMARY OF PLAN PROVISIONS

Non-Contract Table A-2: Retirement Benefit Multipliers

Credited Years		Age at Retirement										
Of Service	53	54	55	56	57	58	59	60	61	62	63+	
5	8.71%	9.33%	10.00%	10.26%	10.52%	10.78%	11.05%	11.31%	11.57%	11.83%	12.09%	
6	10.45%	11.20%	12.00%	12.31%	12.62%	12.94%	13.26%	13.57%	13.88%	14.20%	14.51%	
7	12.19%	13.06%	14.00%	14.36%	14.73%	15.09%	15.47%	15.83%	16.20%	16.56%	16.93%	
8	13.94%	14.93%	16.00%	16.42%	16.83%	17.25%	17.68%	18.10%	18.51%	18.93%	19.34%	
9	15.68%	16.79%	18.00%	18.47%	18.94%	19.40%	19.89%	20.36%	20.83%	21.29%	21.76%	
10	17.42%	18.66%	20.00%	20.52%	21.04%	21.56%	22.10%	22.62%	23.14%	23.66%	24.18%	
11	19.16%	20.53%	22.00%	22.57%	23.14%	23.72%	24.31%	24.88%	25.45%	26.03%	26.60%	
12	20.90%	22.39%	24.00%	24.62%	25.25%	25.87%	26.52%	27.14%	27.77%	28.39%	29.02%	
13	22.65%	24.26%	26.00%	26.68%	27.35%	28.03%	28.73%	29.41%	30.08%	30.76%	31.43%	
14	24.39%	26.12%	28.00%	28.73%	29.46%	30.18%	30.94%	31.67%	32.40%	33.12%	33.85%	
15	26.13%	27.99%	30.00%	30.78%	31.56%	32.34%	33.15%	33.93%	34.71%	35.49%	36.27%	
16	27.87%	29.86%	32.00%	32.83%	33.66%	34.50%	35.36%	36.19%	37.02%	37.86%	38.69%	
17	29.61%	31.72%	34.00%	34.88%	35.77%	36.65%	37.57%	38.45%	39.34%	40.22%	41.11%	
18	31.36%	33.59%	36.00%	36.94%	37.87%	38.81%	39.78%	40.72%	41.65%	42.59%	43.52%	
19	33.10%	35.45%	38.00%	38.99%	39.98%	40.96%	41.99%	42.98%	43.97%	44.95%	45.94%	
20	34.84%	37.32%	40.00%	41.04%	42.08%	43.12%	44.20%	45.24%	46.28%	47.32%	48.36%	
21	36.58%	39.19%	42.00%	43.09%	44.18%	45.28%	46.41%	47.50%	48.59%	49.69%	50.78%	
22	38.32%	41.05%	44.00%	45.14%	46.29%	47.43%	48.62%	49.76%	50.91%	52.05%	53.20%	
23	40.07%	42.92%	46.00%	47.20%	48.39%	49.59%	50.83%	52.03%	53.22%	54.42%	55.61%	
24	41.81%	44.78%	48.00%	49.25%	50.50%	51.74%	53.04%	54.29%	55.54%	56.78%	58.03%	
25	43.55%	46.65%	50.00%	51.30%	52.60%	53.90%	55.25%	56.55%	57.85%	59.15%	60.45%	
26	45.29%	48.52%	52.00%	53.35%	54.70%	56.06%	57.46%	58.81%	60.16%	61.52%	62.87%	
27	47.03%	50.38%	54.00%	55.40%	56.81%	58.21%	59.67%	61.07%	62.48%	63.88%	65.29%	
28	48.78%	52.25%	56.00%	57.46%	58.91%	60.37%	61.88%	63.34%	64.79%	66.25%	67.70%	
29	50.52%	54.11%	58.00%	59.51%	61.02%	62.52%	64.09%	65.60%	67.11%	68.61%	70.00%	
30	52.26%	55.98%	60.00%	61.56%	63.12%	64.68%	66.30%	67.86%	69.42%	70.00%	70.00%	
31	54.00%	57.85%	62.00%	63.61%	65.22%	66.84%	68.51%	70.00%	70.00%	70.00%	70.00%	
32	55.74%	59.71%	64.00%	65.66%	67.33%	68.99%	70.00%	70.00%	70.00%	70.00%	70.00%	
33	57.49%	61.58%	66.00%	67.72%	69.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
34	59.23%	63.44%	68.00%	69.77%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	
35 or more	60.97%	65.31%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	



APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table B: Alternate Retirement Formula Multipliers

Credited Years Of Service	Percentage
10	20,1%
11	22.2%
12	24.2%
13	26.2%
14	28.2%
15	30.2%
16	32.2%
17	34.3%
18	36.3%
19	38.3%
20	40.3%
21	42.3%
22	44.3%
23	46.3%
24	48.4%
25	50.4%
26	52.4%
27	54.4%
28	56.4%
29	58.4%
30	60.4%
31	62.5%
32	64.5%
33	66.5%
34	68.5%
35 or more	70.5%



APPENDIX D - GLOSSARY

1. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs such as mortality, withdrawal, disability, retirement, changes in compensation, and rates of investment return.

2. Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. Actuarial Gain (Loss)

The difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. Actuarial Liability

The portion of the Actuarial Present Value of Projected Benefits, which will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. Actuarial Present Value (Present Value)

The value as of a given date of a future amount or series of payments. The Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made.

6. Actuarial Valuation

The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.



APPENDIX D GLOSSARY

7. Actuarial Value of Assets

The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values.

8. Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date, with each value based on the same set of actuarial assumptions.

9. Amortization Payment

The portion of the pension plan contribution that is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

12. Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses, which is allocated to a valuation year by the Actuarial Cost Method.

13. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of Actuarial Assumptions, taking into account such items as increases in future compensation and service credits.

14. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.





Classic Values, Innovative Advice



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. C4

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM EXECUTIVE COMMITTEE

January 12, 2017

SUBJECT:

POTENTIAL FOR MTS SALES TAX BALLOT MEASURE (KAREN LANDERS)

RECOMMENDATION:

That the Executive Committee receive a report and provide direction.

Budget Impact

None at this time.

DISCUSSION:

At the December 2016 MTS Board of Directors meeting, Councilman David Alvarez requested that MTS legal counsel research whether MTS has the ability to pursue its own sales tax measure to support future transit capital and operational funding needs.

MTS General Counsel has concluded that MTS cannot place a sales tax measure on the ballot unless the Legislature amends MTS's enabling legislation, expressly authorizing such action.

Article XIII, Section 24 of the California Constitution states that only local governments may impose a tax to be used for municipal purposes. However, before a local government may impose a tax, it must have express authorization from the State Legislature to do so.

MTS's enabling legislation, Public Utilities Code Sections 120000, et seq., does not include authorization to impose a sales tax. Instead, the San Diego Association of Governments (SANDAG) is designated as the region's Metropolitan Planning Organization and its Regional Transportation Commission. SANDAG is charged with preparing the regional transportation improvement plan (RTIP) and the regional



¹²⁵⁵ Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • www.sd**mts**.com

Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS is the taxicab administrator for seven cities.

¹ State statutes refer to the sales tax as a "retail transactions and use tax."

transportation plan (RTP). MTS and North County Transit District (NCTD), as the ultimate operators of public transit in the region, provide input to SANDAG during the development of the RTIP and RTP.

SANDAG's enabling legislation expressly grants SANDAG with the authority to adopt an ordinance proposing a sales tax to fund public transportation purposes consistent with the RTIP and RTP. SANDAG is then required to allocate resulting sales tax revenues to MTS and NCTD for transit purposes consistent with the RTIP and RTP. The maximum tax rate SANDAG may propose is 1%. (See Public Utilities Code §§ 132302-132332.) SANDAG's legislation expressly authorizes a county-wide sales tax measure. (See Public Utilities Code § 132301.)

Therefore, a legislative amendment to either MTS or SANDAG's enabling legislation is required before SANDAG or MTS may propose a MTS-only related sales tax measure, which would be voted on only within MTS's jurisdictional boundaries.

Paul O Jablonski

Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 619.231.1466 FAX 619.234.3407



Agenda

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

9:00 a.m.

James R. Mills Building Board Meeting Room, 10th Floor 1255 Imperial Avenue, San Diego

This information will be made available in alternative formats upon request. To request an agenda in an alternative format, please call the Clerk of the Board at least two working days prior to the meeting to ensure availability. Assistive Listening Devices (ALDs) are available from the Clerk of the Board/Assistant Clerk of the Board prior to the meeting and are to be returned at the end of the meeting.

ACTION RECOMMENDED

- 1. Roll Call
- Approval of Minutes December 8, 2016

Approve

- 3. <u>Public Comments</u> Limited to five speakers with three minutes per speaker. Others will be heard after Board Discussion items. If you have a report to present, please give your copies to the Clerk of the Board.
- 4. <u>Elect Vice Chair, Chair Pro Tem, and Committee Appointments (Sharon Cooney)</u>
 Action would: (1) elect a Vice Chair and a Chair Pro Tem for 2017; and (2) consider the nominating slate proposed by the Ad Hoc Nominating Committee for the appointment of representatives to MTS committees for 2017 and vote to appoint representatives to those committees.

Elect

Please SILENCE electronics during the meeting







1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • www.sdmts.com

Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS is the taxicab administrator for seven cities.

MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lernon Grove, National City, Poway, San Diego, Santee, and the County of San Diego.

CONSENT ITEMS

6. Solar Powered Rail Lubricators - Contract Award Approve Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1342.0-17 with Zemarc Corporation for the provision of up to 16 solar powered rail lubricator kits. 7. Proposed Revisions to San Diego Metropolitan Transit System (MTS) Board Policy Approve No. 44, "Travel Expense Policy" Action would approve the proposed revisions to MTS Board Policy No. 44, "Travel Expense Policy". Siemens Industry, Inc. (Siemens) Traction Power Substations (TPSS) Procurement: 8. **Approve** Release for Exercising TPSS Option Notice - Up to an Additional 17 TPSS Action would authorize the Chief Executive Officer (CEO) to issue a Release for Exercising TPSS Options Notice to Siemens for the purchase of up to 17 TPSS. MTS Sale of 2014 Ford E450 Starcraft Paratransit Bus to First Transit Inc. **Approve** 9. Action would authorize the negotiated sale of MTS Vehicle No. 3936 (2014 Ford E450 Starcraft, VIN #1FDFE4FS7EDB17985) to First Transit, Inc. 10. Green Line Train to Wayside Communications (TWC) System Upgrade - Contract Approve Award Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL214.0-17 with Global Signals Group, Inc. (GSG) for TWC system upgrade. 11. Courthouse Station - Purchase New Shelters - Contract Award Approve Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1328.0-17 with Tolar Manufacturing Company, Inc. for the purchase of Courthouse Station Shelters. Information 12. Investment Report - November 2016 13. 2017 State and Federal Legislative Programs Approve Action would approve staff recommendations for 2017 federal and state legislative programs. 14. Fare Collection Concept of Operations - Contract Award Approve **CLOSED SESSION** a. CLOSED SESSION - CONFERENCE WITH LABOR NEGOTIATORS Pursuant to Possible 24. California Government Code Section 54957.6 Action

Oral Report of Final Actions Taken in Closed Session

NOTICED PUBLIC HEARINGS

25. None.

DISCUSSION ITEMS

30.	San Diego Transit Corporation (SDTC) Pension Investment Status (Jeremy Miller, Representative from RVK and Larry Marinesi)	Information
31,	San Diego Transit Corporation (SDTC) Employee Retirement Plan's Actuarial Valuation as of July 1, 2016 (Anne Harper of Cheiron Inc. and Larry Marinesi) Action would receive the SDTC Employee Retirement Plan's (Plan) actuarial valuation as of July 1, 2016.	Approve
32.		
33.		
34.		
REPO	PRT ITEMS	
45.	Security Update (Manny Guaderrama)	Information
46.	Storm Water Briefing (Karen Landers & Mylene Noceda)	Information
47.		
48.		
49.		
60.	Chairman's Report	Information
61.	Chief Executive Officer's Report	Information
62.	Board Member Communications	
63.	Additional Public Comments Not on the Agenda If the limit of 5 speakers is exceeded under No. 3 (Public Comments) on this agenda, additional speakers will be taken at this time. If you have a report to	
	present, please furnish a copy to the Clerk of the Board. Subjects of previous hearings or agenda items may not again be addressed under Public Comments.	
64.	Next Meeting Date: February 9, 2017	
65.	Adjournment	



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. 6

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

January 19, 2017

Draft for Executive Committee Review Date: 1/12/17

SUBJECT:

SOLAR POWERED RAIL LUBRICATORS - CONTRACT AWARD

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1342.0-17 (in substantially the same format as Attachment A) with Zemarc Corporation for the provision of up to 16 solar powered rail lubricator kits.

Budget Impact

The total value of this agreement shall not exceed \$193,504.36 (\$179,170.70 plus \$14,333.66 CA sales tax), which is funded from the MTS Capital Improvement Project (CIP) 2008101801.

DISCUSSION:

Solar powered rail lubricator kits are required by MTS's Rail Operations to help minimize the wear of the trolley tracks by the Light Rail Vehicle (LRV), thereby increasing the life of the rails by at least ten (10) years. Also, the lubricant has the added value of decreasing the noise the LRV makes and allowing for a smoother ride, which creates a better experience for the customers and surrounding communities.

The kits are comprised of three major parts; the reservoir, pump and displacement valve. MTS needs up to three 200-pound reservoirs and up to ten 800-pound reservoirs. The smaller reservoirs are needed for locations that have smaller right-of-way space. The pump is used to transfer the lubricant from the reservoir to the displacement valve which releases the required amount of lubricant onto the rail as the trolley vehicle passes.

MTS has opted to use solar power pumps because they require less maintenance and are more reliable than battery powered pumps. The solar power rail lubricators are









placed at 14 locations throughout the Blue, Green and Orange Lines. One unit was replaced in fiscal year 2013, leaving 13 other units in need of replacement.

MTS Policy No. 52, "Procurement of Goods and Services", requires a formal competitive process for procurements exceeding \$100,000.

On November 11, 2016 staff issued an Invitation for Bids (IFB) for the purchase of Solar Powered Rail Lubricators. Only one (1) responsive and responsible bid was received by the due date of December 13, 2016 from Zemarc Corporation as shown below:

COURTHOUSE STATION SPECIAL TRACKWORK MATERIALS							
COMPANY NAME BID AMOUNT Meets Buy America Requirements							
Zemarc	\$193,504.36	Υ					
MTS Independent Cost Estimate (ICE)	\$193,504.36						

^{*}MTS' ICE is based on a previous purchase price.

Line #	Description	Qty.	Unit Price	Ext. Price		
1	24 Volt DC single track w/200# steel reservoir complete (taxable):	Up to 3 Kits	\$15,985.90	\$47,957.70		
2	24 Volt DC single track w/800 #ABS plastic reservoir complete kits (taxable):	Up to 10 Kits	\$13,121.30	\$131,213.00		
3	Training and or Training Materials (non-taxable):	Lump Sum	Included	\$0.00		
5	5 CA Sales Tax - 8.00% (taxable Lines #1 and #2):					
	Grand Total Amount:					

After conducting a cost analysis in relation to a previous purchase and reviewing all bids received for responsiveness and responsibility, Zemarc Corporation was found to be the lowest responsive and responsible bidder at \$193,504.36. Compared to the ICE, Zemarc's bid amount was determined to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. L1342.0-17 (in substantially the same format as Attachment A), with Zemarc Corporation for the purchase of Solar Powered Rail Lubricators.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Draft MTS Doc. No. L1342.0-17

ATTACHMENT A (DRAFT)

L1342.0-17 CONTRACT NUMBER

STANDARD PROCUREMENT AGREEMENT FOR SOLAR POWER RAIL LUBRICATORS

FILE/PO NUMBER(S)

THIS AGREEMENT is entered into this day by and between San Diego Metropolitan Transit S following, hereinafter referred to as "Contractor":	of System ("MTS"), a	2017, in the State of California California public agency, and the					
Name: Zemarc Corporation	Address:	1255 Stone Drive					
Form of Business: Corporation (Corporation, partnership, sole proprietor, etc.)	San Marc	cos, CA 92078					
	Telephon	ne: <u>760-471-0901</u>					
Authorized person to sign contracts: Andy Fitz-Patri		Product Manager Title					
The attached Standard Conditions are part of this MTS services and materials, as follows:	s Agreement. Th	e Contractor agrees to furnish to					
Solar Power Rail Lubricators, as specified in the Minimum Technical Specifications (attached as Exhibit A), Zemarc Corporation's Bid dated December 7, 2016 (attached as Exhibit B), and in accordance with the Standard Procurement Agreement, including the Standard Conditions Procurement (attached as Exhibit C), and the Federal Requirements (attached as Exhibits D).							
This contract will be effective for one (1) year from the	e issuance of the	Notice to Proceed.					
Total contract value shall not exceed \$193,504.36 w	ithout the express	written consent of MTS.					
SAN DIEGO METROPOLITAN TRANSIT SYSTEM	CONTRACTO	OR AUTHORIZATION					
By:Chief Executive Officer	Firm: _						
Approved as to form:	Ву:	Signature					
By:Office of General Counsel							
AMOUNT ENCUMBERED	BUDGET ITEM	FISCAL YEAR					
\$ 193,504.36	2008101801	FY 17					
By:		· · · · · · · · · · · · · · · · · · ·					
Chief Financial Officer		Date					
(total pages, each bearing contract number)		SA-PROCUREMENT REVISED (REV 5-16) DATE					



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. $\frac{7}{}$

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

Draft for Executive Committee Review Date: 1/12/17

SUBJECT:

PROPOSED REVISIONS TO SAN DIEGO METROPOLITAN TRANSIT SYSTEM (MTS) BOARD POLICY NO. 44, "TRAVEL EXPENSE POLICY"

RECOMMENDATION:

That the Board of Directors approve the proposed revisions to MTS Board Policy No. 44, "Travel Expense Policy" (Attachment A).

Budget Impact

None.

DISCUSSION:

MTS staff is proposing updates to Board Policy No. 44, "Travel Expense Policy". The purpose of the modifications is to provide clarity and guidance regarding Fair Labor Standards Act (FLSA) compliance for non-exempt employees who have been approved to travel on behalf of MTS.

Paul C. Jablønski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Proposed Revisions to Policy No. 44 (red-line version)





1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Policies and Procedures No. 44

SUBJECT:

Board Approval: 9/12/131/19/17

MTS TRAVEL EXPENSE POLICY

PURPOSE:

To establish guidelines for MTS employees and Board members who have been approved to travel on behalf of MTS.

POLICY:

- 44.1 <u>Agencies</u>. This policy applies to all MTS agencies including MTS, San Diego Transit Corporation, San Diego Trolley, Inc., and San Diego Vintage Trolley, Inc.
- Travel Authorization. Persons traveling for work relating to or for the benefit of MTS requesting that MTS pay for travel must request advance approval through a "Travel Authorization Form" (Attachment A). The form must be completed and approved based on when the need for travel is known, and if possible, at least two weeks prior to the trip. The requests can be approved as follows: department managers or directors can approve requests up to \$500, the Chief Operating Officer(s), Chief Financial Officer, or General Counsel can approve up to \$1,500, and all amounts in excess of \$1,500 must be approved by the Chief Executive Officer. The Chief Executive Officer must also approve all travel authorizations for his/her direct reports regardless of amount. The top-level approver will route the form back to the Finance Department. Finance will send a copy of the "Travel Authorization Form" to the traveler and keep the original as backup for a pending "Travel Expense Report."

This authorization form is a required step for reimbursement of travel expenses but will not by itself serve as the basis for reimbursement of travel costs, as reimbursement requests shallmay be made on a "Travel Expense Report" (Attachment C). All Board member and employee travel shall be consistent with Policy No. 29, "Attendance at Transit-Related Conferences." -Travel reservations will be made by the individual traveler, the Clerk of the Board for Board of Director travel, or individuals as designated by the Chief Operating Officers or Chief Executive Officer.



44.3 Expense Report. The "Travel Expense Report" portion of the form will be used to record actual trip expenses, and must be completed within one week from the return date. The department manager or director must indicate approval of the submitted expenses (Chief Executive Officer approval for direct report travel; Chief Executive Officer, General Counsel, or Chief Financial Officer approval for Board of Director travel; and General Counsel approval of Chief Executive Officer travel). The form is routed to the Finance Department for processing, with a personal check attached for any funds due to MTS (if MTS direct expenses or travel advances exceed the total amount due). Failure to submit expense reports within this timeframe may result in not being reimbursed or collection actions taken if money is owed to MTS. Extensions may be granted by the Chief Executive Officer.

All expenses should be itemized, including items MTS may have paid for in advance (e.g., airfare, conference registration) so that the report provides a complete record of all expenses. It is the traveler's responsibility to submit a completed report in order to receive prompt reimbursement.

- Receipts. Itemized receipts for expenditures must be attached to the "Travel Expense Report" for all expenses where a receipt is practically attainable (mandatory, unless a written satisfactory explanation is provided for expenses in excess of \$10). Such written explanations may be subjected to approval by the Chief Executive Officer. Hotel charges must be evidenced by an itemized hotel bill, as a credit card receipt is not sufficient.
- 44.5 <u>Travel Advances</u>. Travel advances are provided on a case-by-case basis as determined by need and approved by the Chief Financial Officer and/or Chief Executive Officer. A travel advance is a loan that provides cash resources to assist the employee while traveling and is not a payment by MTS for travel expenses. Persons requesting that MTS provide advance proceeds must request approval using the "Travel Advance Request" (Attachment B). This form must be completed and approved at least two weeks prior to the trip-taking place, and these advances will typically be distributed one week prior to the departure date. Any travel advance shall not exceed the total estimated amount of the trip less any items paid by MTS.

Travel costs incurred prior to departure may be reimbursed when paid. An example is a traveler paying for conference registration or booking and paying for air travel personally several weeks in advance. Reimbursements for these costs are not considered an advance. These items should be included on a "Request for Payment/Payment Voucher" or "Travel Expense Report" and only after the "Travel Authorization Request" has been approved.

- MTS does not reimburse employees based on per diem but rather reimburses employees for reasonable costs necessarily incurred for work travel in accordance with the terms of this policy. Employees must provide itemized receipts for all meals, hotel, airfare, registration, etc. The following expenditure guidelines and the Annual Travel Cost Rates set by MTS (rates for the current calendar year 2017 are attached as ExhibitAttachment E) should be observed as upper limits unless particular circumstances reasonably dictate otherwise:
 - a. <u>Upper Limits</u>. Upper limits for meals, hotels, and similar costs will be updated, approved by the Chief Executive Officer, and published annually. See Attachment E for 2017the current calendar year rates.

- b. <u>Air Travel</u>. Air travel is to be coach class for the most direct route. Traveler arrangements should be made as far as possible in advance in order to secure the most favorable rates. MTS will -cover the cost if it is more cost effective (i.e., difference in airfare as compared to the additional cost for hotel and meals) to include a Saturday stay. Travelers should consider this option when practical.
- c. <u>Personal Auto Use</u>. In the event that a private auto is used for the trip, mileage will be paid in accordance with the current IRS Mileage Reimbursement Rates. Maximum reimbursement shall not exceed the cost of a comparable coach airfare to the same location.
- d. <u>Ground Transportation</u>. In using surface transportation, the most practical, least expensive alternative must be utilized. Such transportation includes travel to and from the airport and reasonable business-related trips at the location. Employees and Board members are encouraged to utilize public transportation where available.
- e. <u>Parking</u>. MTS will reimburse the lesser of the parking cost for a personal auto left at the airport or the cost of a shuttle service or cab to and from the airport.
- f. <u>Personal Travel</u>. A traveler may wish to combine MTS-related travel with personal travel or include family members in the trip. If personal travel is included within the trip, prior authorization and approval of this request must be notated on the "Travel Authorization Form," and MTS will reimburse the cost equivalent to a single-person trip. Under no circumstances will MTS advance payments to cover such personal travel.
- g. Rental Car. The use of rental cars must be preapproved as part of the "Travel Authorization Form". In the event a rental car is required, MTS will only reimburse the least expensive compact-size vehicle. MTS will not reimburse for rental car insurance coverage due to the fact that employees are included under MTS's general automobile insurance coverage.
- h. Meals (While in Travel Status). Meals, including tip, shall generally average no more than the maximum rate approved and published annually. Alcohol consumed with a meal is not reimbursable, including applicable taxes and tips related to the alcohol cost. The amount per day applies to each 24-hour day of travel, and partial days would be prorated accordingly. Exceptions to the maximum rates must be approved by the Chief Executive Officer or General Counsel.
- Business Meal. Reasonable business (involving outside persons or when necessary to conduct MTS-related business) meals are permitted. All such meals must be itemized, including the names of all attendees, with justification.
- j. Hotel. Travelers will be reimbursed for the cost of a moderate and reasonably priced single-occupancy hotel room. —The maximum reimbursement is limited to the rate approved and published annually. Hotel stays in high-cost cities shall be approved by the Chief Executive Officer. These maximum limits may be waived if the traveler is staying at a hotel where a conference is being held and approved by the Chief

- Executive Officer. Baggage-handling service fees are reimbursable at standard rates.
- k. Other Business-Related Expenses. Other business-related expenses while traveling such as supplies, equipment rental, reprographics, facsimiles, internet access, and other documented business-related expenses may be reimbursed when traveling on MTS business and used for MTS purposes.
- I. <u>Travel Outside of the U.S.</u> Reimbursement for travel to a foreign country will be calculated at the average exchange rate during the trip. All reimbursement for any Value Added Taxes charged for hotel accommodations must be returned to MTS.
- m. <u>Telephone Calls (While in Travel Status)</u>. Reimbursements for telephone calls are permitted provided that such calls are directly related to MTS business. Travelers are required to provide an itemized list of all calls detailing the person(s) called and the reason for the call(s) for which reimbursement is requested. Personal calls are permitted up to a maximum of \$10 per day.
- n. <u>Registration</u>. Travelers requesting to attend a conference or training that requires registration should do so in sufficient time to take advantage of any discounts.
- o. <u>Conferences</u>. Conference luncheons, special banquets, or other set-price official affairs that exceed the actual cost listed under meals may be reimbursed if they are necessary to the attendance of the conference and must be authorized in advance with the submission of the "Travel Authorization Form".
- p. <u>Cancellation Penalties</u>. In the event that registration, airfare, hotel deposit, or any other such items that require prepayment are paid and the traveler is unable to attend and the prepayment is nonrefundable, then the traveler <u>maywould</u> be responsible for reimbursing MTS for the full cost unless the inability to attend is for valid business reasons, medical conditions, or personal emergencies, as approved by the Chief Executive Officer for employees or by the Executive Committee for Board members.
- q. Non-allowable Expenses. MTS will not provide any reimbursement for personal entertainment expenses, alcoholic beverages, movies in hotels, personal items, charitable contributions, air travel insurance, any travel expenses for family members (including but not limited to transportation, hotels, and meals), or any other expenses not deemed necessary for business purposes.
- r. <u>Political Events</u>. MTS will not provide reimbursement for expenses incurred for the purpose of attending political events. An event shall be considered "political" if it is held for the purpose of supporting, opposing, or raising money to support or oppose any candidate, ballot measure, or political party.

s. <u>Non-Discrimination</u>. MTS will not provide any reimbursement for expenses incurred with any private club that discriminates on the basis of race, gender, religion, sexual orientation, or other invidious criteria in its membership policy.

Exceptions to these guidelines must be approved by the Chief Executive Officer for employees and by the Executive Committee for Board members.

- 44.7 <u>Within-Area Expenses</u>. The form entitled "Expense Report (within area expenses)" (see Attachment D) must be used to record any potential eligible expenses.
 - a. <u>Submittal of Form</u>. Employees must submit this form together with receipts after applicable expenses are incurred. This report applies to expenses incurred within the San Diego County area only.
 - b. <u>Eligible Expenses</u>. Eligible expenses must be related to and necessary for carrying out MTS business. They may include, but not be limited to, business meals or meetings, mileage, parking, or other miscellaneous out-of-pocket expenses related to MTS business. The Chief Executive Officer or Chief Financial Officer may, in their judgment, disallow any extraordinary or inappropriate expenses. Whenever possible, local travel should be by public transportation. If it is impractical to use public transit, an MTS vehicle or private auto should be used.
 - c. <u>Description and Purpose</u>. The report should include the date, description / purpose (including destination), and the applicable department / account code (if operations) or the applicable project / task detail (if capital).
 - d. <u>Approvals</u>. All necessary approvals must be obtained in advance and the completed form must be submitted to the Finance Department within one week after expenses are incurred.
- 44.8 Overtime. No overtime pay shall be earned while an employee is in an out-oftown travel status. Travel status is defined as the time an employee begins and completes the authorized business-related travel.

<u>Travel Time</u>. MTS pays non-exempt employees for travel time in accordance with the Fair Labor Standards Act (FLSA).

- a. Home to Work Travel. In general, the time an employee spends commuting from home to work and from work to home is not work time and is not compensable.
- b. Single-Day Travel. Time spent by a non-exempt employee in travel as part of his or her normal work activities (travel is performed for the benefit of MTS and at its request)—, such as travel to a seminar during regular working hours, is considered hours worked. If the employee is required to travel to another city and return home in the same day, the travel time to and from the other city is considered hours worked regardless whether the travel occurs within the employee's normal work schedule or by common carrier. However, meal periods and the travel time between the employee's home and the point of public transportation (i.e. airport, train station) are not considered hours worked.

c. Overnight Travel. Travel by a non-exempt employee who (at the request and for the benefit of MTS) will be away from home overnight is work time only during those periods that coincide with the employee's regular working hours (i.e. Monday through Friday 9 a.m. to 5 p.m.). Such time is counted as hours worked even if it occurs on a non-working day (i.e. Saturday or Sunday between 9 a.m. and 5 p.m.). Travel outside regular working hours as a passenger in a plane, train, boat, bus or automobile is not considered hours worked. Driving a vehicle, regardless of whether the travel takes place within or outside normal work hours, counts as hours worked if it is for the benefit of MTS. (If an employee drives a car as a matter of personal preference in lieu of a different authorized mode of travel, only the estimated travel time associated with the authorized mode will be counted as hours worked.) To the extent that an employee performs work while traveling (i.e. preparing for a meeting, reviewing documents, making telephone calls), this time constitutes hours worked even if the travel time would otherwise not be compensable. Regular meal periods and time spent at a hotel with freedom to use time for the employee's own purposes is not compensable. The employee will not be compensated for time not working even if it occurs within the employee's regular work schedule (I.e. employee goes sightseeing).

Non-exempt employees shall record and report all hours worked in accordance with the above guidelines. Overtime will be paid to the extent that hours worked, including travel hours specified above, exceed 40 hours in a workweek. If you have any guestions, please contact Human Resources.

POLICY.44.TRAVEL EXPENSE POLICY

Attachments:

- A. Travel Authorization Form
- B. Travel Advance Request
- C. Travel Expense Report
- D. Expense Report (within-area expenses)
- E. Annual Travel Cost Rates Calendar Year 2016

Original Policy approved on 8/12/93.

Policy amended on 10/27/94.

Policy revised on 4/29/04.

Policy revised on 1/26/06.

Policy revised on 7/19/07.

Policy revised on 6/24/10.

Attachments updated by Staff 1/16/13.

Policy and attachments revised on 9/12/13.

Attachments updated by Staff 7/24/14.

Attachments updated by Staff 5/18/15.

Attachments updated by Staff 2/2/16.

Policy and attachments revised on 1/19/17.

Attachment A

(Revised 2.2.2016) Metropolitan Transit System

Chief Executive Officer:

TRAVEL AUTHORIZATION

FORM

MIS
SDTO

	(complete this form first, before any travel expenses are incurred)	□ SDTC
PART I - EMPLOYEE INFORMATION		
Report Date: 2/2	/2016 Costs to be charged to:	
Employee Name:	Department/Acct Code:	
Title:	OPERATIONS ONLY	
Department Name:	Project/Task Detail: CIP ONLY	
Travel Dates:	Location:	
PART II - TOTAL ESTIMATED EXPENSES		
Transportation		
Air Train		
Car		
Mileage rate = 54¢ / mile Rental car insurance is not reimbursab	ole	
Total Transportation		s -
Shuttles / Taxi / Parking		
Lodging		
Days		
Rate		
Total Lodging		\$ -
Meals Days		
Rate		
Total Meals		\$
Other Costs		
Registration Other		
Other		
Total Other	你们可能的现在分词的名词复数	\$.
	Grand Total Estimated Expenses	\$
	Less: Amount To Be Paid Directly By MTS	\$ -
	Maximum Amount To Be Paid By Traveler	\$
PART III - SIGNATURES and APPROVALS	Signature	Date
Traveler:		
Department Manager / Director:		
COO / CFO / General Counsel:	;	
Budget Manager:		
CFO / General Counsel:		

Attachment B

(Revised 2.2.2016) Metropolitan Transit System	(complete th	AVEL ADVANCE REQUEST nisform, if needed, to request cal for travel)	☐ MTS ☐ SDTC sh ☐ SDTI
PART I - EMPLOYEE INFORMATION	Report Date:	2/2/2016	3
Employee Name:	Title:		
Department Name:	Travel Dates:		
Meeting Name/Purpose:			
PART II - TOTAL ESTIMATED EXPENSES			
Grand Total Estimated Expenses (from travel authorization for	m)	\$: # 5
Less: Amount To Be Paid Directly By MTS (from travel author	orization form)	\$	
Maximum Amount To Be Paid By Traveler (from travel authorize	zation form)	\$:
Total Advance Requested		\$	3 4 41)
PART III - SIGNATURES and APPROVALS			
	Signature		Date
Traveler:			
Department Manager / Director:	====3:	= 13	
COO:			
CFO / General Counsel:		· · · · · · · · · · · · · · · · · · ·	
Chief Executive Officer:			

(Revised 1.4.2017)	Metropolitais Transis Systems
PART I - EMPLOYEE	INFORMATION
Report Date:	1/4/2017

Chief Financial Officer.

TRAVEL EXPENSE

☐ MTS

		3	Aetropoli	lan Tran	nit Byateir	v	(comp	ere this	REP form no sturn fro	later th	an i waa	after		SD1	
PART I -	EMPLOYEE INFORMATION														
Report D	ate:	1/4	1/2017			_ c	sts to b	e char	ged to:						
Employee Name:				D	epartme	nt/Acet	Code:								
Title:	•						PERAT	IONS	ONLY						
Departme	ent Name:					2	Project [©] CIP	Task Di ONLY		0 <u>=</u>					
Meeting I	Name/Purpose:														
PART II -	TOTAL EXPENSES									_					
v (8)		D	AY 1	0	AY2	100	DAY 3	D	AY4		DAY 5	D/	AY 6		Total
Travel Da	ites			11/16	Ho Pil			16.11	16,31			BIV S	447		THE REAL PROPERTY.
Location	(City, State)													-501	Ports a
Transport	tation**													\$	18 Ve
Shuttles/	Taxis													5	C S
Parking	MATERIAL STATES													s	\\ \ .
Lodging														5	Valle of
Meals	Breakfast (\$20 daily limit)*	5	U BE	5		5		s		s		s	0.0	5	
(Use Detail	Lunch (\$25 daily limit)*	\$		\$		3	7.2	s		S		\$		5	
Tabs)	Dinner (\$50 daily limit)*	5		S		s		s	FILE	s		\$		5	
Other:	Registration			1										5	-
Other:														s	
Other:														s	
Other:														s	1
Total		S		3		S	10.76	S	州世	3	3 25	\$		s	
one weel 2. Attach Explain a	expense report must be fill k after completing trip. receipts for all purchases all items over \$10 not havin e related trip items paid sep	over \$ g rece	10. ipts	TS;				Less Subta	otal	aid Ite	f∏S (pleas			ş S	.e.
'There is	h an asterisk. an overall daily cap of \$65 es and \$80 for Large U.S. Ci								Cash A unt Due		ed pess	e enter a + r	tumber)	s	
na	car insurance is not reimbu														
-	y that the above report is true			(СЕО ар	proval	ofexce	ption(s)	from I	ne Tra	vel Polic	y:			
Traveler:				Print	ed Nam	2				Si	gnature				Date
	Supervisor (Up to \$3000):							-						*-	
-	ent Director (Up to \$5000):														

Attachment D



3. Briefly describe the item or the destination and the purpose.

EXPENSE REPORT (within-area expenses)

\sqcup	MTS
	SDTC
П	SDTI

						Finance	e Use O	nly:			
						PEID				-	
PART I - EN	MPLOYEE INFORMAT	ION									
Employee	Name:				Period:			to		_	
Employee	Signature:										
	that the expenses re										
PART II - E	XPENSES AND MILE	AGE DETAIL									
Date	OPERATIONS ONLY Dept./Acct Code	CIP ONLY Project/Task Detail	Description / Purpose		ephone i5100	E	eeting Exp 5230	(54)	leage ‡/mile) '5230		Other
		4		\$		\$.	\$		\$	-
		1		\$	12	\$	E	\$	ž.	\$	-
	**			\$	o ∈ :	\$		\$	*	\$	-
				\$	100	\$	æ	\$	ĕ	\$	-
	-			\$	126	\$	læi	\$	2	\$	-
				\$	19	\$	(*)	\$	*	\$	-
	-			\$	15	\$	Ę	\$	(4)	\$	-
				\$	1 P.1	\$	- e:	\$		_\$_	_
			TOTALS	\$		\$		\$		\$	
							G	RAND 1	OTAL	\$	
PART III - A	PPROVALS										
Department	Director (Up to \$500):										
Chief Financ	ial Officer (Up to \$1500)										
Chief Execut	tive Officer (CEO):	·									
Expense F	Report Instructions	s			Sall A			E.R.			1
1.	Employees must	submit this form w	hen requesting reimbursement.	This r	eport a	pplies t	to expe	nses			
	incurred within the	e San Diego metrop	politan area only.								
2.			and necessary for carrying out I								
			s, or meetings, parking, or other The CFO or CEO may, in their ju						04		
			ceipts for all out-of-pocket expen		711L, UIS	ailUW di	ny exua	oruma	THE T		

Attachment E

Annual Travel Cost Rates Calendar Year 20162017

Hotel Maximum (quoted price - not including taxes or fees)

Small / Medium U.S. Cities Large U.S. Cities / International \$170.00 \$220.00

Average Daily Meal Maximum

Small / Medium U.S. Cities Large U.S. Cities / International

\$65.00 \$80.00

Mileage Reimbursement Rate

As set by the IRS, effective January 1, 20162017 per mile

\$0.54535

NOTES:

- These are maximum rates. A higher cap may be obtained if pre-authorized by the CEO. If an
 employee does not obtain pre-authorization by the CEO and exceeds the limits, they can attach a
 written appeal to their expense report detailing why a limit was exceeded. Rates must be
 reasonable and necessary under the circumstances and will customarily be lower.
- 2. Meal caps are detailed out below, with an overall daily cap of \$65.00 for Small / Medium U.S. Cities and \$80.00 for Large U.S. Cities / International.

Breakfast - \$20.00 Lunch - \$25.00 Dinner - \$50.00

If an employee exceeds a meal cap, they can attach a written appeal to their expense report detailing why the meal cap was exceeded.

- 3. If a conference registration fee covers meals, employees are to participate in those meals.
- 4. Small / Medium U.S. Cities are defined for this rate structure as those with less than 1 million persons in the metropolitan area.
 - Large U.S. Cities are defined for this rate structure as those with more than 1 million persons in the metropolitan area.
- 5. The Mileage Rate is directly tied to the rate set by the IRS and will be revised more frequently than annually if done so by the IRS.



1255 Imperial Avenue, Suite 1000 San Diego, CA 92101-7490 (619) 231-1466 • FAX (619) 234-3407

Agenda Item No. 8

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

Draft for Executive Committee Review Date: 1/12/17

SUBJECT:

SIEMENS INDUSTRY, INC. (SIEMENS) TRACTION POWER SUBSTATIONS (TPSS) PROCUREMENT: RELEASE FOR EXERCISING TPSS OPTION NOTICE – UP TO AN ADDITIONAL 17 TPSS

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to issue a Release for Exercising TPSS Options Notice to Siemens for the purchase of up to 17 TPSS (Attachment A).

Budget Impact

Current budget estimates for the 17 TPSS procurement with Siemens is \$17,170,120 including 8% sales tax, spare parts, and training. Funding for costs related to 14 TPSS will be provided by the Mid-Coast Light Rail Transit Extension Project (Capital Improvement Program (CIP) No.12826P) through a reimbursement agreement with the San Diego Association of Governments (SANDAG). Three (3) additional TPSS will be funded by MTS under the TPSS Procurement Project (CIP No. 2008101301).

<u>Description</u>	<u>Price</u>
14 Substations for Mid-Coast	\$ 14,806,356.53
3 Substations for MTS	\$ 2,363,763.47
Total	\$ 17,170,120.00

DISCUSSION:

On January 19, 2012, to comply with Federal Transit Administration (FTA) procurement rules, the MTS Board of Directors authorized the CEO to formally exercise a base and an option contract to purchase up to 34 TPSS (17 base and 17 option TPSS) from Siemens.









To date, MTS has purchased and received 17 TPSS under the base contract. Fourteen of the 17 option TPSS were designated for the proposed Mid-Coast Light Rail Transit Extension Project (Mid-Coast) and three (3) were considered for future MTS Blue Line TPSS replacement needs. In exercising the option, MTS set the price of the TPSS (based on the current contract price plus an escalator based on the Producer Price Index for Railroad TPSS Parts).

Funding for the fourteen TPSS has been identified and authorized by the FTA's Full Funding Grant Agreements (FFGA), which was executed on September 14, 2016. In addition. MTS will apply funding from the FY19 CIP for the purchase of the remaining three (3) TPSS for Blue Line TPSS replacement. MTS will have the right to terminate the three substation options with Siemens before April 1, 2018.

Today's proposed action would authorize the CEO to issue a Release for Production Notice (Attachment A) to Siemens. The timing of the Release for Exercising TPSS Option Notice will be at the CEO's discretion, based upon the proposed production schedule from Siemens, and the funding availability in future fiscal years.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to issue a Release for Production Notice (in substantially the same format as Attachment A) with Siemens.

Paul C. Jablonski

Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Release for Exercising TPSS Options Notice (MTS Doc. No. L1032.1-12)

B. Price Breakdown

MTS Doc. No. L1032.11-12

January 19, 2017

Mr. Steffen Goeller Vice President and General Manager Siemens Industry, Inc. – Mobility Division 20393 SW Avery Ct. Tualatin, OR 97062

Dear Mr. Goeller:

Subject: AMENDMENT NO. 11 TO MTS DOC. NO. L1032.0-12; RELEASE TO EXERCISE OPTION – 17 ADDITIONAL TRACTION POWER SUBSTATIONS (TPSS)

This shall serve as Amendment No. 11 to our agreement for the Traction Power Substations notices as further described below.

STATEMENT OF WORK

Pursuant to the technical specifications/scope of work of MTS Doc. No. L1032.0-12 Traction Power Substations, the San Diego Metropolitan Transit System (MTS) shall exercise the Option for 17 additional substations with the following changes:

1. TPSS Price and Configuration Changes:

- a. Install six (6) breakers for one TPSS at San Diego River site;
- b. Install roll up door behind the rectifier, new additional rear doors for surge arrestors, and increase the height of the rear external doors;
- c. Modify Blue Light circuit to include an additional Blue Light on the bridge;
- d. Install Air Conditioners with Coastal/Weatherization package at four (4) TPSS locations;
- e. Install Disconnect Switches inside the TPSS:
- f. Provide Smart Client licenses for HMI;
- g. Provide sound testing at night time at four (4) TPSS locations;
- h. Provide additional spare parts, training, and testing; and
- i. Waive the bonding requirement.

The final updated TPSS Procurement Technical Specifications is attached as Exhibit A.

SCHEDULE

The Option coverage period shall be effective February 1, 2017 through January 29, 2020.

PAYMENT

The total cost for all work under this Amendment shall not exceed \$17,170,120.00, without prior written approval from MTS. The total value of this contract including this amendment shall not exceed \$30,346,728.13.

Please sign and return the copy marked "original" to the Contracts Specialist at MTS. All other terms and conditions shall remain the same and in effect. Retain the other copy for your records.

Sincerely,	Agreed:
Paul C. Jablonski Chief Executive Officer	Steffen Goeller, V.P. and General Manager Siemens Industry, Inc. – Mobility Division
	Date:

JAN2017 L1032.11-12 SIEMENS TPSS

Attachment:

Exhibit A – TPSS Procurement Technical Specifications

Cc: T. Nguyen, R. Atkinson, T. Girard, F. Byle, Procurement file

PRICE BREAKDOWN

MID-COAST	
Substation 1	999,059.87
Substation 2	1,001,859.23
Substation 3	999,059.87
Substation 4	999,059.87
Substation 5	999,059.87
Substation 6	999,059.87
Substation 7	999,059.87
Substation 8	999,059.87
Substation 9	1,001,859.23
Substation 10	999,059.87
Substation 11	1,001,859.23
Substation 12	1,001,859.23
Substation 13	1,001,859.23
Substation 14	976,141.63
Fixed Costs (including spares, admin, training, misc.)	828,439.82
MIDCOAST TOTAL	14,806,356.53
MTS	
Substation I	787,921.16
Substation II	787,921.16
Substation III	787,921.16
MTS TOTAL	2,363,763.47
GRAND TOTAL	17,170,120.00

^{*}All costs include 8% sales tax.

^{**}Per Board Policy No. 63, Section 63.2b: Recognizing that sales tax rates may change during the term of a contract, MTS staff is authorized to pay the actual amount of sales tax owed at the time a purchase is completed pursuant to state law, even if it differs from the amount of sales tax anticipated at the time the contract or purchase order was executed.



Agenda Item No. 9

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

Draft for Executive Committee Review Date: 1/12/17

SUBJECT:

MTS SALE OF 2014 FORD E450 STARCRAFT PARATRANSIT BUS TO FIRST TRANSIT, INC.

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the negotiated sale of MTS Vehicle No. 3936 (2014 Ford E450 Starcraft, VIN #1FDFE4FS7EDB17985) to First Transit, Inc.

Budget Impact

Proceeds from the sale of the MTS vehicle will be recorded to the MTS operating revenue account 901010-440200.

DISCUSSION:

On October 12, 2016, MTS paratransit vehicle number 3936 was involved in a collision resulting in major damage to the vehicle. The bus, owned by MTS, is operated by First Transit, Inc., as part of MTS's Paratransit service contract. Under the First Transit contract, First Transit is responsible for maintaining and operating the vehicles. First Transit is responsible for repairing any MTS vehicles damaged during First Transit's operations.

First Transit obtained a fair market valuation from Creative Bus Sales for this vehicle in its condition prior to collision. The estimated fair market value of the vehicle prior to collision was \$35,000. First Transit also obtained an estimated cost to repair the vehicle from Miramar Truck Body & Equipment, who determined that the cost to repair the vehicle would be at least \$35,000. First Transit has offered to purchase this vehicle from MTS at the fair market value of \$35,000.



Board Policy No. 33 states that "capital assets with an individual value in excess of \$10,000 or an aggregate value in excess of \$25,000 may be disposed of on a negotiated sale basis provided a finding by the MTS Board of Directors by a two-thirds vote that special circumstances exist that make it in the best interest of the Board." In accordance with Board Policy No. 33, alternatives to the proposed negotiated sale would include a competitive sale or internet auction. Given the current state of the vehicle, the highest return would be realized by a sale price based on the value of the vehicle prior to the collision.

Therefore, MTS staff recommends that the MTS Board of Directors authorize the negotiated sale of MTS Vehicle No. 3936 (2014 Ford E450 Starcraft, VIN #1FDFE4FS7EDB17985) to First Transit, Inc.

Paul C. Jablonski

Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. First Transit Offer Letter to MTS



7490 Copley Park Pl San Diego, CA 92111 Tel: 858 277 1496 Fax: 858 737 7897

December 1, 2016

Jay Washburn Manager Paratransit and Minibus Metropolitan Transit System 100 16th Street San Diego, CA 92001

Dear Mr. Washburn:

On October 12, 2016, MTS Paratransit vehicle 3936 was involved in collision resulting in major damage to the vehicle. First Transit has obtained the attached fair market valuation from Creative Bus Sales for this vehicle at \$35,000.00. First Transit has also obtained a cost to repair the vehicle from Miramar Truck Body & Equipment with a minimum cost to exceed \$35,000.00. It is our determination based on these assessments that the vehicle's repair costs exceed the fair market value of the vehicle. At this time, First Transit would like to offer to purchase this vehicle at the fair market value of \$35,000.

The following is a summary identifying the vehicle, repair costs and fair market value:

Vehicle Number	3936
Vin	1FDFE4FS7EDB17985
Odometer	72,079
Year	2014
Make	Ford
Model	E450 Starcraft

Fair Market Value \$35,000.00 Repair cost to exceed: \$35,000.00

I would like to thank you for your consideration with this offer and believe this represents a fair equitable resolution to this matter. Please feel free to contact me at your convenience.

Sincerely,

John Lewis, General Manager

Enc: Fair Market Valuation – Creative Bus Sales

Estimate to Repair – Miramar Truck Body & Equipment



Agenda Item No. 10

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

Draft for Executive Committee Review Date: 1/12/17

SUBJECT:

GREEN LINE TRAIN TO WAYSIDE COMMUNICATIONS (TWC) SYSTEM UPGRADE - CONTRACT AWARD

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL214.0-17 (in substantially the same format as Attachment A) with Global Signals Group, Inc. (GSG) for TWC system upgrade.

Budget Impact

The total value of this agreement shall not to exceed \$1,414,743.49, inclusive of any delivery charges and California sales tax. Funding would come from the Capital Improvement Project (CIP) 2005002402 and is locally funded.

DISCUSSION:

This project is to complete the Green Line Communications upgrade project at 18 remaining stations from Morena/Linda Vista to Santee Town Center and to bring these stations up to the current communications and signaling standards, which will meet the MTS system-wide compatibility. The work also includes reconfiguring the communications rooms at Fashion Valley and Qualcomm stations to provide additional space for the installation of the new communications equipment.

MTS Policy No. 52, "Procurement of Goods and Services", requires a formal competitive bid process for procurements exceeding \$100,000.



On October 14, 2016, MTS issued an Invitation for Bids (IFB) to interested parties for the Green Line Train to Wayside Communications (TWC) System Upgrade. On December 7, 2016, MTS received a total of three (3) bids, in which all bids were deemed responsive:

BIDDER NAME	TOTAL AMOUNT		
Global Signals Group, Inc. (GSG) *	\$ 1,414,743.49		
HMS Construction Company	\$ 1,634,451.69		
Mass Electric Construction Company	\$ 1,695,718.92		

^{*}Lowest responsive, responsible bidder

After the evaluation of all bids, GSG was found to be the lowest responsive and responsible bidder at \$1,414,743.49. Based on the comparison between the Independent Cost Estimate (ICE) of \$1,617,718 and GSG's bid amount, MTS's cost savings will be approximately \$202,974.51 or approximately 13% for the project.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. PWL214.0-17 (in substantially the same format as Attachment A) with Global Signals Group, Inc. (GSG) for TWC system upgrade.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Draft MTS Doc. No. PWL214.0-17

B. Cost Breakdown

STANDARD SERVICES AGREEMENT

DRAFT

PWL214.0-17
CONTRACT NUMBER
OPS 960.2
FILE NUMBER(S)

THIS AGREEMENT is entered into this day of between San Diego Metropolitan Transit System ("MTS"), a hereinafter referred to as "Contractor":	California pu	_2017, in the state of California by and blic agency, and the following contractor,
Name: Global Signals Group, Inc. (GSG)	Address:	5333 Mission Center Rd., Suite 358
Form of Business: Corporation (Corporation, partnership, sole proprietor, etc.)		San Diego, CA 92108 619.241.2870
Authorized person to sign contracts: Raymond Rizma Name	<u>n</u>	Principal/Engineering & Commercial Title
The attached Standard Conditions are part of this agreement and materials, as follows:	it. The Contr	actor agrees to furnish to MTS services
Provide Green Line Train to Wayside Communications (TWO Technical Specifications (attached as Exhibit A), Global Sign with the Standard Services Agreement, including Standard Communications (TWO Technical Specifications)	nal Group's B	id (attached as Exhibit B), in accordance
The contract period performance shall be for up to a one (1) to Proceed. Payment terms shall be net 30 days from the inv	voice date.	
The total contract cost shall not exceed \$1,414,743.49 (incluperformance bond) without prior written approval from MTS.		ales tax, freight, mobilization, and
SAN DIEGO METROPOLITAN TRANSIT SYSTEM		CONTRACTOR AUTHORIZATION
By: Chief Executive Officer	Firm	
Approved as to form:	Ву:	Signature *
Office of General Counsel	Title	
AMOUNT ENCUMBERED BUDG	ET ITEM	FISCAL YEAR
\$1,414,743.49 CIP/WBSE	#200500240	2 17-18
By: Chief Financial Officer		Date

SAN DIEGO METROPOLITAN TRANSIT SYSTEM (MTS) BID SUMMARY - TOTALS (BASE AND OPTION)

FOR: GREEN LINE TRAIN-TO-WAYSIDE COMMUNICATIONS (TWC) SYSTEM UPGRADE BID DUE DATE: 12/7/2016

			GLOBAL SIGNALS GROUP					
		BAS	E BID	OPTION				
#	STATION/DESCRIPTION	MATERIAL LABOR		MATERIAL	LABOR			
1	Morena/Linda Vista	\$ 26,526.73	\$ 26,312.00	N/A	N/A			
2	Fashion Valley	\$ 34,425.87	\$ 33,756.00	\$ 10,902.73	\$ 31,571.45			
3	Hazard Center	\$ 26,997.61	\$ 26,312.00	N/A	N/A			
4	Mission Valley Center	\$ 26,725.47	\$ 26,312.00	N/A	N/A			
5	Rio Vista	\$ 26,867.60	\$ 26,312.00	N/A	N/A			
6	Fenton Parkway	\$ 26,538.20	\$ 26,312.00	N/A	N/A			
7	Qualcomm Stadium	\$ 27,804.91	\$ 41,172.00	\$ 12,727.40	\$ 38,818.00			
8	Mission San Diego	\$ 26,983.03	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
9	Grantville	\$ 27,118.47	\$ 41,172.00	\$ 11,086.20	\$ 18,945.45			
10	SDSU	\$ 27,143.95	\$ 41,172.00	\$ 11,086.20	\$ 18,945.45			
11	Alvarado Medical Center	\$ 27,390.73	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
12	70th Street	\$ 27,173.11	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
13	Grossmont Transit Center	\$ 26,631.49	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
14	Amaya Drive	\$ 26,751.91	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
15	El Cajon	\$ 26,695.75	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
16	Arnele Avenue	\$ 26,779.99	\$ 26,312.00	\$ 11,086.20	\$ 18,945.45			
17	Gillespie Field	\$ 26,548.33	\$ 13,156.00	\$ 11,086.20	\$ 18,945.45			
18	Santee Town Center	\$ 25,944.61	\$ 13,156.00	\$ 11,086.20	\$ 18,945.45			
19	SUBTOTALS	\$ 491,047.76	\$ 499,328.00	\$ 145,578.33	\$ 278,789.40			
20	TOTAL (BASE AND OPTION)	\$	990,375.76	\$	424,367.73			
21	Performance Bond (100%)) \$ 35,640.00						
ji.	GRAND TOTAL: BASE + OPTION (BASIS OF AWARD)	\$		1	,414,743.49			



Agenda Item No. 11

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

Draft for
Executive Committee
Review Date: 1/12/17

SUBJECT:

COURTHOUSE STATION - PURCHASE NEW SHELTERS- CONTRACT AWARD

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1328.0-17 (in substantially the same format as Attachment A) with Tolar Manufacturing Company, Inc. for the purchase of Courthouse Station Shelters.

Budget Impact

The total value of this agreement shall not exceed \$109,324.08 (\$101,226 plus \$8,098.08 CA sales tax), which will be funded under the MTS Capital Improvement Project (CIP) account 2004007503.

DISCUSSION:

On March 12, 2015, the Board of Directors approved Resolution No. 15-5 authorizing the CEO to submit an application for a proposed downtown Courthouse Station Project to provide expanded capacity on the MTS trolley system. At that time, the project was in the conceptual development phase only.

As a result of the future Mid-Coast Trolley operations' plan and the necessity to relieve trolley congestion at the Santa Fe Depot station, the proposed downtown Courthouse Station project would relocate the existing westerly terminus of the Orange Line from Santa Fe Depot to a new station within the C Street corridor between State Street and Union Street.

In order to open the new station within the next year, the long lead time materials require purchasing well ahead of the construction of the station. Two (2) shelters are needed for the project and can take up to six (6) months to fabricate.



MTS Policy No. 52, "Procurement of Goods and Services", requires a formal competitive process for procurements exceeding \$100,000.

On October 27, 2016 staff issued an Invitation for Bids (IFB) for the Courthouse Station to purchase new shelters. Two (2) responsive and responsible bids were received by the due date of November 29, 2016 from Tolar Manufacturing Company, Inc. and Grahovac Construction as follows (tax is not included in bid comparison):

COURTHOUSE STATION SPECIAL TRACKWORK MATERIALS					
COMPANY NAME	BID AMOUNT	Meets Buy America Requirements			
** Tolar Manufacturing Company, Inc.	\$101,226.00	Y			
Grahovac Construction	\$260,805.16	Υ			
MTS Independent Cost Estimate (ICE)	\$198,000.00				

^{**} Lowest responsive and responsible Bidder

After conducting price reasonability analyses and reviewing all bids received for responsiveness and responsibility, Tolar Manufacturing was found to be the lowest responsive and responsible bidder at \$109,324.08 (including tax). Based on the comparison between the ICE, Tolar Manufacturing Company, Inc.'s bid amount was determined to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. L1328.0-17 (in substantially the same format as Attachment A), with Tolar Manufacturing Company, Inc. for the purchase of Courthouse Station Shelters.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Draft MTS Doc. No. L1323.0-17

B. Tolar Manufacturing Company, Inc. Bid

C. Courthouse Station Renderings

ATTACHMENT A DRAFT

L1328.0-17 CONTRACT NUMBER

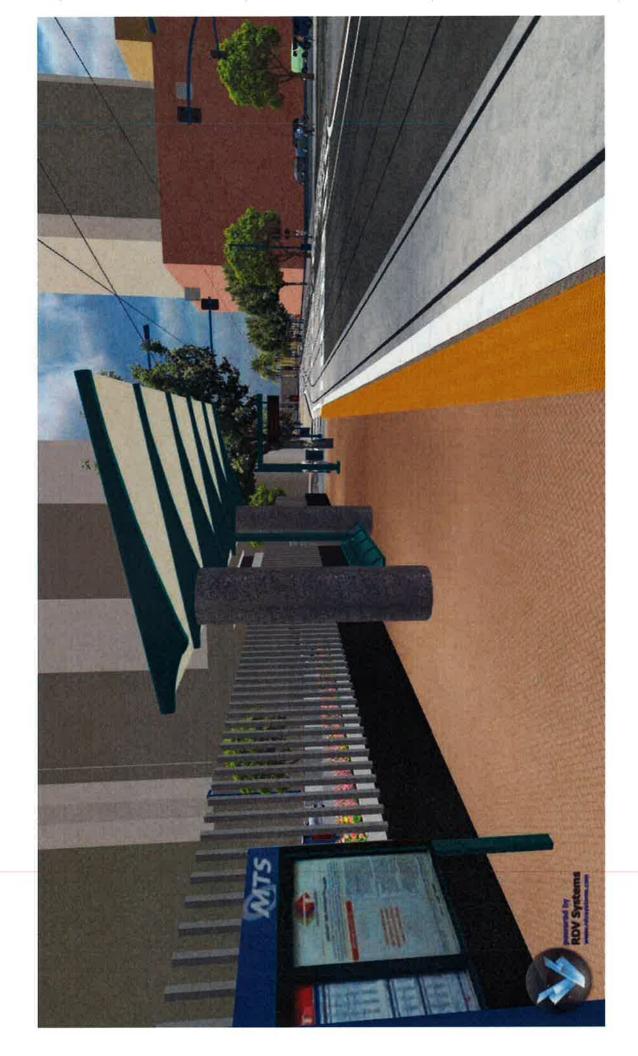
FILE/PO NUMBER(S)

STANDARD PROCUREMENT AGREEMENT FOR COURTHOUSE STATION – PURCHASE NEW SHELTERS

THIS AGREEMENT is entered into this day of by and between San Diego Metropolitan Transit Sy following, hereinafter referred to as "Contractor":	of 2017, in the State of California stem ("MTS"), a California public agency, and the
Name: Tolar Manufacturing Company, Inc.	Address: 258 Mariah Circle
Form of Business: Corporation (Corporation, partnership, sole proprietor, etc.)	Corona, CA 92879
	Telephone: <u>951-547-8214</u>
Authorized person to sign contracts: Kerry Berlin Nam	Business Dev. Manager e Title
The attached Standard Conditions are part of this MTS the following:	Agreement. The Contractor agrees to furnish to
Courthouse Station Special Trackwork Materials as (attached as Exhibit A), Tolar's Bid dated November 2 with the Standard Conditions Procurement Agreeme (attached as Exhibit C), and the Federal Requirement Total contract value shall not exceed in the amount MTS. (Delivery Period – February 1, 2017 through Aug	28, 2016 (attached as Exhibit B), and in accordance nt, including the Standard Conditions Procurement s (attached as Exhibit D). of \$109,324.08 without prior written approval from
SAN DIEGO METROPOLITAN TRANSIT SYSTEM	CONTRACTOR AUTHORIZATION
By:Chief Executive Officer	Firm:
Approved as to form:	By:Signature
By:Office of General Counsel	Title:
AMOUNT ENCUMBERED	BUDGET ITEM FISCAL YEAR
\$ 109,324.08	2004007503 FY 17
By: Chief Financial Officer	Date
(total pages, each bearing contract number)	SA-PROCUREMENT REVISED (REV 6-13) DATE

MTS BID FORMS						
SAN DIEGO METROPOLITAN TRANSIT SYSTEM						
Project:		TROLLEY STATION S	HELTER	RS		
MTS Do	oc. No.: <u>L1328.0-17</u>					
Contrac	etor:					
ITEM#	ITEM DESCRIPTION QTY. PRICE EACH TOTAL					EST. LEAD TIME (DAYS)
1	Shelters		2	\$ 50,613	\$ 101,226	120
2	Storage fee - (weekly o	charge)	1	\$ Ø	\$ 10	
				SUBTOTAL	\$101,226	
				TAX	\$ 6,098.	
NOTE: A	LL BIDDERS MUST COMPL	ETE DID EODMS AS DOO	#DED E			
RESPONS		ETE BID I ONING AG THO	11020, 17	ALUNE TO DO U	O WILL DELIN II	HE BID HOH
F.O.B. F		pe of Work - Section 2.				
DELIVE	RY DATE: 120	DAYS FROM NT	P UN	LESS DIRECT	to BTHERN	14 BY MTS
Read attached General Provisions carefully. They are a part of your bid. Unit prices will prevail regardless of extensions submitted by the Bidder. The following Addenda have been noted and attached hereto:						
AD	DENDA 1, 2 a	3				
DATE:		NOVEMBER 28	201	6		
FIRM:	100	TOLAR MANUE	ACTU	RING COMPA	ary (NO	٠
SIGNATURE:						
TYPE O	R PRINT NAME:	KERRY BER	ساما			
TITLE: BUSINESS DEVELOPMENT MANAGER						
ADDRES	ADDRESS: 258 MARIAH CIRCLE					
CITY, ST	ΓΑΤΕ & ZIP:	CORONA, C	A 9	2979		
PHONE NUMBER: 951 - 547 - 8214						
E-MAIL ADDRESS: KBERLINGTOLARMEG.COM						
Where d	id you hear about this pr	ocurement?:	1			
Newspaper (Please list:)						
MTS Contact Other (Please list: ONVIA						
	TOTAL CONTRACTOR OF THE PROPERTY OF THE PROPER					

RETURN THIS FORM WITH YOUR BID RETAIN OTHER PAGES FOR YOUR RECORDS







Agenda Item No. 12

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

January 19, 2017

Draft for
Executive Committee
Review Date: 1/12/17

SUBJECT:

INVESTMENT REPORT - NOVEMBER 2016

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

Attachment A comprises a report of the San Diego Metropolitan Transit System (MTS) investments as of November 30, 2016. The combined total of all investments has decreased month to month from \$133.0 million to \$123.1 million. This \$9.9 million decrease is attributable to \$47.9 million in capital expenditures and \$2.7 million for the scheduled annual payment on outstanding Pension Obligation Bonds, partially offset by \$36.9 million received from San Diego Association of Governments (SANDAG) for the procurement of new Light Rail Vehicles and \$2.3 million held in retention by MTS for Siemens, as well as normal timing differences in other payments and receipts.

The first column provides details about investments restricted for capital improvement projects.

The second column, unrestricted investments, reports the working capital for MTS operations allowing payments for employee payroll and vendors' goods and services.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, Sharon.Cooney@sdmts.com

Attachment: A. Investment Report for November 2016



San Diego Metropolitan Transit System Investment Report November 30, 2016

	Restricted	Unrestricted	Total	Average rate of return
Cash and Cash Equivalents				
JP Morgan Chase - concentration account		21,193,394	21,193,394	0.00%
Total Cash and Cash Equivalents		21,193,394	21,193,394	
Cash - Restricted for Capital Support				
San Diego County Investment Pool				
Proposition 1B TSGP grant funds	8,553,150	3,686,121	12,239,271	
Total Cash - Restricted for Capital Support	8,553,150	3,686,121	12,239,271	
Investments - Working Capital				
Local Agency Investment Fund (LAIF)	13,588,808	76,126,602	89,715,410	0.678%
Total Investments - Working Capital	13,588,808	76,126,602	89,715,410	
Total cash and investments	\$ 22,141,958	\$ 101,006,117	\$ 123,148,075	



Agenda Item No. 13

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

January 19, 2017

Draft for Executive Committee Review Date: 1/12/17

SUBJECT:

2017 STATE AND FEDERAL LEGISLATIVE PROGRAMS

RECOMMENDATION:

That the Board of Directors approve staff recommendations for 2017 federal and state legislative programs (see Attachments A and B).

Budget Impact

None.

DISCUSSION:

The draft state and federal legislative programs (Attachments A and B) are attached for review. The changes from the 2016 programs are identified. Upon approval by the MTS Board, these programs will be used to define MTS legislative advocacy efforts in calendar year 2017. Staff will return to the Board for approval of any amendments that are required to address unforeseen events or policy initiatives.

Paul C. Jablonski Chief Executive Officer

Key Staff Contact: Sharon Cooney, 619.557.4513, sharon.cooney@sdmts.com

Attachments: A. Draft Federal Legislative Program (redline version)

B. Draft State Legislative Program (redline version)









DRAFT

San Diego Metropolitan Transit System (MTS) 20167 Federal Legislative Program

I. Transit Funding

- Oppose legislation that would reduce direct funding to transit agencies or transportation funding in general, and support increased appropriation levels for existing transit funding programs.
- Seek a permanent compressed natural gas tax credit program for transit operators.
- Support legislation that would help offset the impact on transit budgets caused by increases in fuel costs.
- Support legislation that would generate new revenue for transit projects and operating costs.
- Support legislation to bring funding to railroad corridors.
- Seek funding for railroad bridge and infrastructure rehabilitation.
- Seek funding to offset the costs associated with implementation of hybrid and alternative technologies in the transit fleet.
- In partnership with interested cities, seek funding dedicated to grade-separation projects.
- Seek programs in the defense appropriation process that would help offset the cost to provide transit services for military facilities.
- Oppose attempts to discontinue federal funding for school paratransit services or for nonemergency medical transport.
- Oppose actions by the General Services Administration that might adversely impact transit functions at the San Ysidro Border and seek funding to mitigate any changes to transit facilities currently used or owned by MTS.

II. Public Safety

- Oppose attempts to create duplicative state rail safety regulatory agencies.
- Seek stiffer federal criminal penalties for vandalism or theft of transit property.
- Seek federal penalties for assaults on transit workers.
- Support legislation that increases funding for transit security projects and personnel.
- Support legislation that provides reimbursement to transit operators for lost employee work hours due to emergency preparedness and antiterrorism training.
- Oppose legislation or regulations that would have an adverse impact on transit agencies' ability to provide safe transportation to their customers.
- Support legislation that assists transit operators to carry out their responsibilities as first responders to emergency situations.
- Support efforts to enhance the transit agency's ability to coordinate with other local emergency personnel for disaster response and evacuation preparedness.

III. Regulatory Matters

- Support legislation that would facilitate the delivery of capital projects.
- Oppose unfunded mandates that impact transit operators.
- Support efforts to increase competition in the fuel market.
- Support legislation that would require manufacturers of wheelchairs and scooters to notify customers prior to purchase of any vehicles that are larger than what the Americans with Disabilities Act requires transit agencies to accommodate for boarding.
- Oppose proposals that limit the use of eminent domain for public transportation projects.
- Monitor and respond to legislation in the areas of finance, employment, and safety that could affect agency governance or operations, including issues related to contractors.

- Support efforts to ensure that climate change legislation recognizes that transit investment can help achieve emission reduction goals, and seek inclusion of transit funding in any climate change legislation.
- Oppose efforts to enlarge the universe of paratransit service eligibility to classifications of individuals that could effectively be served through fixed-route services.
- Seek limits on the interpretation of the Americans With Disabilities Act with regard to service animals.
- Monitor and respond to attempts to alter access guidelines in a way that would financially burden transit operators without providing funding.
- Oppose regulatory interpretations of Title VI that are not in keeping with the policy's intent or which cause actions by transit agencies that constitute unfunded mandates.
- Seek positive closure to the Department of Labor's case regarding the California Public Employees' Pension Reform Act (PEPRA).

IV. Support for Legislative Programs of Other Agencies or Organizations

- Support the legislative programs of other agencies, such as SANDAG, NCTD or other jurisdictions, where consistent with the MTS legislative program.
- Support provisions in the legislative programs of organizations, such as the California Transit Association and American Public Transportation Association, where consistent with the MTS legislative program.

V. Capital Projects

- 1. Seek funding for the following capital projects:
 - Mid Coast Trolley Extension
 - MTS Bus Replacement Vehicles
 - Fare Collection System

DRAFT

San Diego Metropolitan Transit System (MTS) 20167 State Legislative Program

I. Transit Funding

- Oppose legislation that would reduce direct funding to transit agencies, or transportation funding in general; support legislation that would generate new revenue for transit projects and operating costs.
- Oppose legislation that would expand the use of Transportation Development Act (TDA) funds to non-transit purposes not currently covered by statute.
- Support legislation that would help offset the impact on transit budgets caused by increases in fuel costs.
- In partnership with interested cities, seek funding dedicated to grade-separation projects.
- Seek legislation to exempt transit agencies from state sales tax.
- Seek favorable programmatic guidelines for Cap and Trade related funding sources.
- Oppose attempts to legislate local fare programs or to remove fare setting decisions from transit agencies.
- Seek legislation to clarify State Transit Assistance funding allocations.

II. Transit-Oriented Development

- Support legislation that provides funding incentives for mixed-use projects and transitoriented development.
- Support legislation that aids transit operators' efforts to create transit-oriented development.

III. Public Safety

- Oppose legislation or regulations that would have an adverse impact on transit agencies' ability to provide safe transportation to their customers.
- Support efforts to enhance penalties for crimes against transit staff or related to transit property.
- Support legislation that would protect the records of transit code compliance officers to the same degree as sworn officers.
- Seek legislation that would permit transit agencies to adjudicate code violations.
- Support legislation that would remove Vehicle Code restrictions on the placement of video and audio recorders inside taxicabs.

IV. Climate Change

- Advocate for favorable implementation of AB 32.
- Oppose efforts to require actions by the transit operators in support of state climate change initiatives that constitute unfunded mandates.
- Assist the California Air Resources Board (CARB) in crafting the Advanced Clean Transit program, and oppose efforts to impose the purchase of a specific technology that would have adverse impacts on MTS's ability to provide adequate levels of transit service.

V. Regulatory Matters

- Support legislation that would facilitate the delivery of transit capital projects—especially through the availability of alternative procurement practices, such as design build.
- Oppose unfunded mandates that impact transit operators.
- Oppose legislation that adversely limits the use of eminent domain for public transportation projects.
- Seek relief from regulations which prevent MTS from providing service in the most cost efficient way possible.
- Oppose legislation that would limit MTS's use of data to provide better service to customers.
- Oppose efforts to eliminate or restrict transit exemption provisions in the California Environmental Quality Act (CEQA); seek legislative clarification that service and fare adjustments are always exempt from CEQA.
- Seek ways to improve the state's oversight of rail operators, currently the jurisdiction of the California Public Utilities Commission.

VI. Labor Relations

- Monitor and respond to legislation relating to personnel matters.
- Support legislation that protects the integrity of collective bargaining agreements, and oppose efforts to mandate benefits or working conditions.
- Monitor and respond to legislation designed to clarify provisions of the Public Employees Pension Reform Act of 2012.

VII. Support Legislative Programs of Other Agencies or Organizations

- Support the legislative programs of other agencies, such as SANDAG and NCTD, where consistent with the MTS legislative program.
- Support provisions in the legislative programs of organizations, such as the California
 Transit Association and American Public Transportation Association, where consistent
 with the MTS legislative program.



Agenda Item No. 14

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM **BOARD OF DIRECTORS**

Draft for

January 19, 2017

Executive Committee

Review Date: 1/12/17

SUBJECT:

FARE COLLECTION CONCEPT OF OPERATIONS - CONTRACT AWARD

AGENDA ITEM WILL BE PROVIDED AT EXECUTIVE COMMITTEE MEETING









Attachment will be provided with Board materials.