

CITY COUNCIL WORKSESSION
on the Fiscal Year 2012-13 Recommended Budget & Proposed CIP

Council Chambers, Plano Municipal Center
1520 Ave K, Plano, TX
Saturday, August 18, 2012 8:00 a.m.

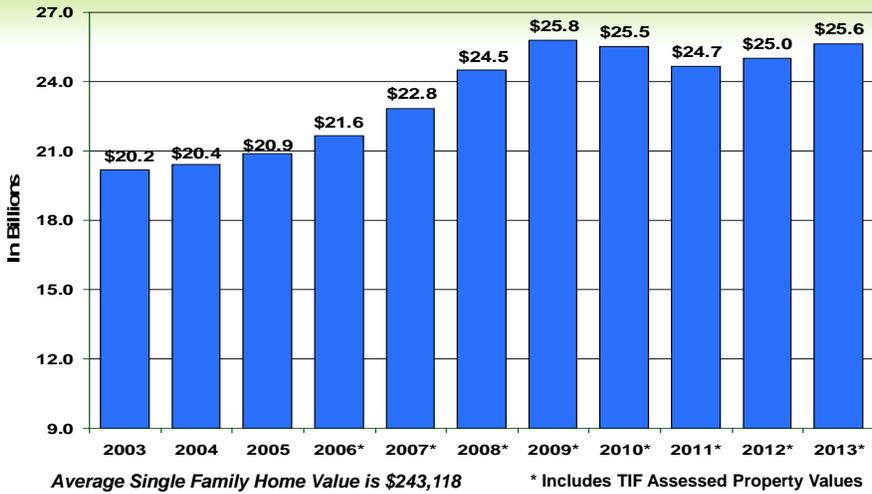
AGENDA

	<u>Presenter</u>
A. Call to Order	Mayor
B. Request for Public Input on Budget & CIP	Council
C. Budget Worksession Overview	
1. Highlights of 2011-12	Glasscock
2. Outlook for 2012-13	Glasscock
D. Council Items and Issues for Discussion (<i>Council may wish to add additional agenda items.</i>)	Council
E. Operating Budget	
1. Revenues	
a. Ad Valorem Tax Base	Rhodes
b. Tax Rate	Rhodes
a. Effective Tax Rate	
b. Rollback Tax Rate	
c. Sales Tax	Rhodes
d. Water & Sewer Rates	Rhodes
a. Proposed Rate Increases	
e. Other Revenues	Rhodes
2. Program Changes	
a. Salary Adjustments/Increase	Parrish
b. Retirement System Update	Parrish
c. Health Plan Update	Parrish
d. Paramedic Assignment Pay Discussion	Peterson
e. Discussion/Direction re Fire Department Staffing for Station #13 and Engine #8	Peterson
f. Discussion/Direction re Asphalt Overlay	Cosgrove
g. Discussion/Direction re City/Public Wi-Fi	Stephens
h. Cont. Discussion - Plano Centre	Fortenberry
i. Cont. Discussion - Neighborhood Reinvestment	Jarrell
j. Cont. Discussion – Residential Insp.Program	O’Banner
k. PTN Fund	Conklin

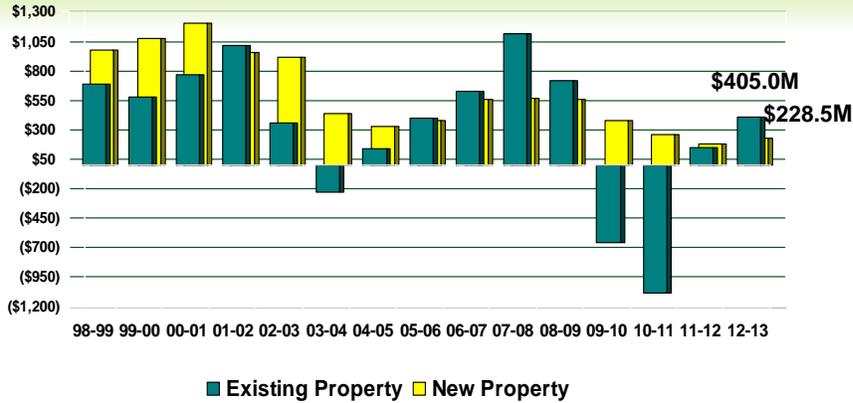
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|----|------------------------------|----------------------|
| F. | Community Investment Program | Glasscock/
Rhodes |
| G. | Proposed Ad Valorem Tax Rate | Glasscock/
Rhodes |
| H. | Adjourn | |

Municipal Center is wheelchair accessible. A sloped curb entry is available at the main entrance facing Municipal Avenue, with specially marked parking spaces nearby. Access and special parking are also available on the north side of building. Requests for sign interpreters or special services must be received forty-eight (48) hours prior to the meeting time by calling the City Secretary at 972-941-7120.

ASSESSED PROPERTY VALUATIONS



CHANGE IN PLANO'S TAXABLE VALUE

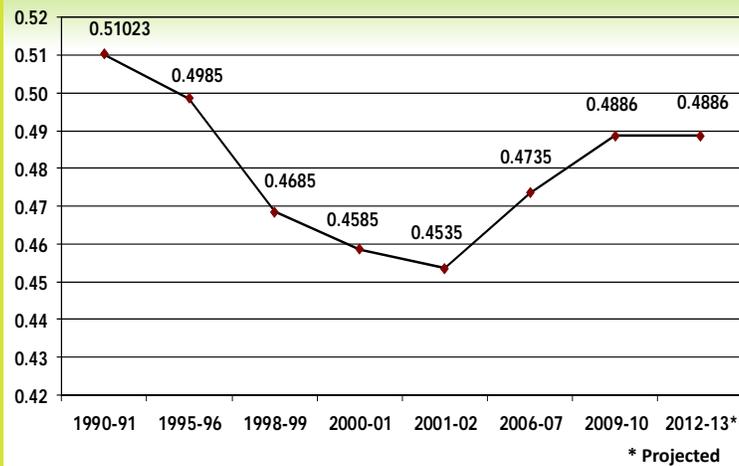


LOST REVENUE FROM AD VALOREM TAX EXEMPTIONS

	Average Home Value	** Total Exemptions APV	Lost Revenue From Exemptions	Lost Revenue Over-65 Tax Freeze
FY 2006-07	\$ 244,661	\$4.58 billion	\$21.2 million	\$ 245,315
FY 2007-08	\$ 253,380	\$4.84 billion	\$22.9 million	\$ 543,383
FY 2008-09	\$ 251,733	\$4.91 billion	\$23.2 million	\$ 604,117
FY 2009-10	\$ 249,679	\$5.10 billion	\$24.5 million	\$ 765,884
FY 2010-11	\$ 245,802	\$5.21 billion	\$25.4 million	\$ 779,912
FY 2011-12	\$ 245,074	\$5.22 billion	\$25.5 million	\$ 771,923
FY 2012-13	\$ 243,118	\$5.37 billion	\$26.3 million	\$ 753,197

** APV is Assessed Property Value

AD VALOREM TAX RATE HISTORY



ANATOMY OF THE TAX RATE

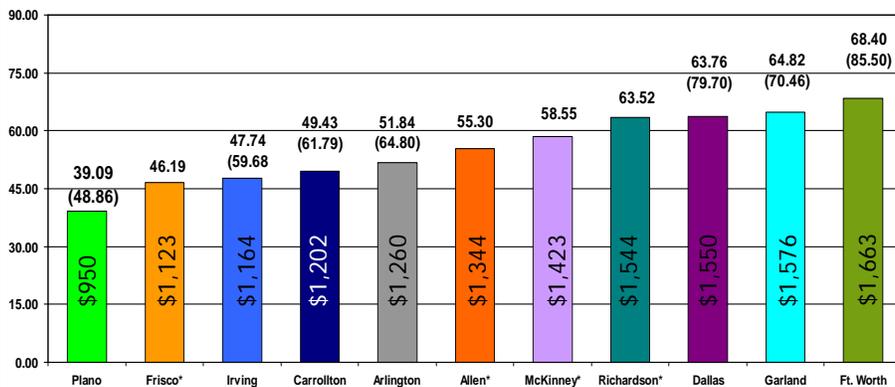
- Guided by Truth In Taxation Laws
- Two parts – Have to pay debt first then remaining can fund operating costs
- Important Definitions –
 - Effective Tax Rate is basically the tax rate you would pass to collect the same tax revenue as last year using this year’s property values. New property is excluded from the calculation. Effective tax rate is 48.54 cents per \$100 of assessed property valuation. Proposed rate is 48.86 cents.
 - Rollback Tax Rate allows units to raise the same amount for operations as in the prior year plus provide for a 8% cushion. Rollback tax rate is 50.42 cents per \$100 of assessed property valuation.

AD VALOREM TAX RATES

RESIDENTIAL CUSTOMERS ONLY
WITH HOMESTEAD EXEMPTION APPLIED TO THE RATE

**Plano and Surrounding Cities
(Proposed FY 12-13 Rates as of August 2012)**

(Cents per \$100 Valuation)



* Cities do not offer Homestead Exemption

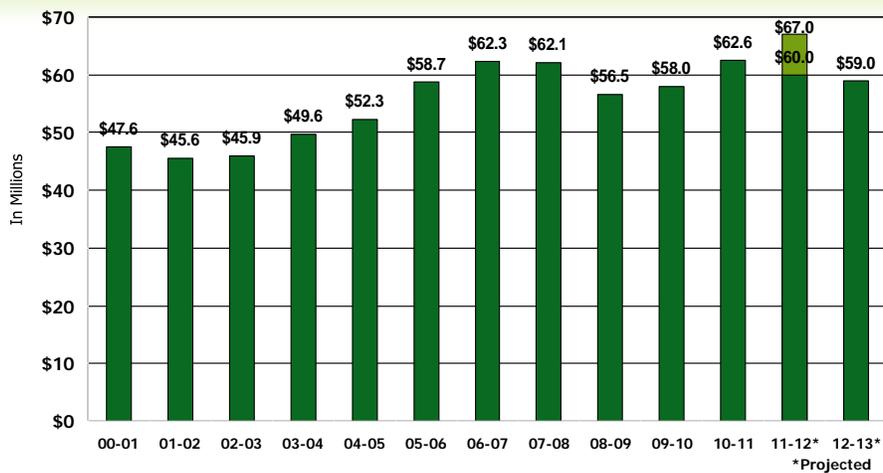
TAXES AND THE AVERAGE HOME 2012 PROPOSED TAX RATES

- Average Home Value \$ 243,118

	<u>Tax Rate</u>	<u>Dollar Amount</u>	<u>%</u>
• City of Plano	.4886	\$ 950	19.6%
• PISD	1.3734	\$ 3,134	64.7%
• Collin County	.2400	\$ 554	11.4%
• CCCC	<u>.0863</u>	<u>\$ 210</u>	<u>4.3%</u>
• Total Taxes/Year	2.1883	\$ 4,848*	100.0%

* Using the 2012 Proposed Tax Rate and the 2012 Average Home Value, this assumes that the General Homestead Exemptions were taken for the City of Plano (20%), for PISD (\$15,000), and Collin County (5%).

ANNUAL SALES TAX RECEIPTS



SALES TAX RECEIPTS SECTOR COMPARISON

Retail vs. Business to Business
January 2009 - June 2012



WATER & SEWER FUND

- ❖ On July 31st, North Texas Municipal Water District (NTMWD) notified us that wholesale water rates will increase 14.1% and wastewater treatment costs by 14.4%.
- ❖ Wastewater treatment cost were originally projected to increase 2.13%. The revised 14% amount is due to increased debt service cost (cited below) and an additional 1 billion gallon flow projection between 2011 and 2012. The increased wastewater volume is currently under review.
- ❖ Significant NTMWD increase is directly tied to pay for the debt service cost associated with the \$300 million pipeline that will run from Lake Texoma to the Wylie Plant in order to fix the zebra mussel infestation.
- ❖ City of Plano plans to pass through a water rate increase of 10% and a wastewater increase of 7% in order to offset the increase in contract cost effective November 1st.

WATER & SEWER FUND CONT.

- ❖ As of 7/31/12, ended the water year using 21.2 billion gallons, resulting in a loss of revenue of approximately \$8.2 million in the 2011-12 water year under the NTMWD Take or Pay Agreement. We are projecting to receive a credit back from the district for unused O&M expenditures of approximately \$2.1 million.
- ❖ The budget assumes Stage II Water restrictions through FY 2012-13.
- ❖ Included in the budget is \$3 million for the Water & Sewer Reserve Fund and establishment of a Meter/AMR Replacement fund of \$1.5 million.
- ❖ The Capital Improvement Projects are cash funded. Total FY 2011-12 equals \$9.7M and FY 2012-13 is budgeted at \$7.4M.
- ❖ A revised fund summary is included in the packet of information. The working capital balance is projected at 70 days which is in line with our Financial Policies.

WATER & SEWER RATE HISTORY

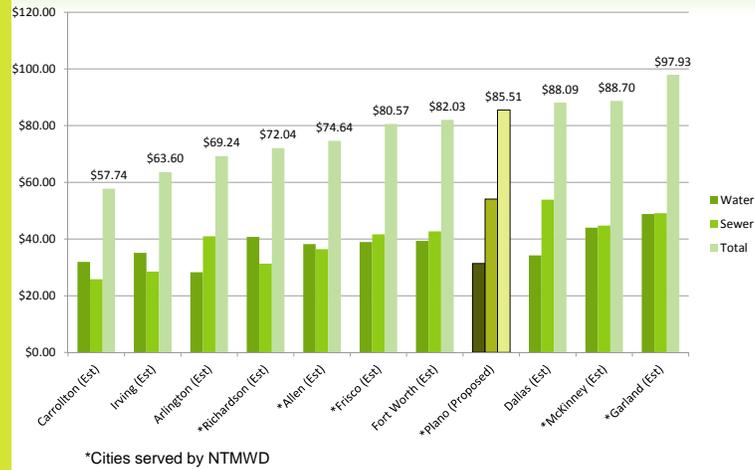
Water rates per 1,000 gallons - NTMWD

2002 – 0.719 cents to 0.80 cents
2003 – 0.80 cents to 0.87 cents
2004 – 0.87 cents to 0.92 cents
2005 – 0.92 cents to 0.97 cents
2006 – 0.97 cents to 1.02 cents
2007 – 1.02 cents to 1.08 cents/
\$1 Meter Increase
2008 – 1.08 cents to 1.18 cents
2009 – 1.18 cents to 1.25 cents
2010 – 1.25 cents to 1.37 cents
2011 – 1.37 cents to 1.49 cents
2012 – 1.49 cents to 1.70 cents
10% rate increase planned

Sewer rates – NTMWD

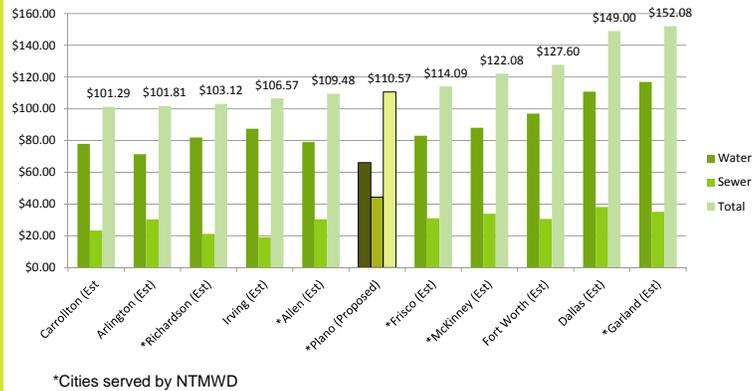
2002 – 19% sewer rate increase - NTMWD
2003 – Sewer Cap raised from 9K to 12K & 5% increase NTMWD
2004 – April – 10% sewer rate reduction, implementation of Winter Quarter Averaging – No NTMWD increase
2005 – 3.5% sewer rate increase – NTMWD
2006 – 12.0% sewer rate increase – NTMWD
2007 – 5.0% sewer rate increase – NTMWD/\$1 Meter Increase
2008 – 6.5% - NTMWD
2009 – 4.2% - NTMWD
2010 – 0.02% decrease – NTMWD
2011 – 1.35% decrease – NTMWD
2012 – 14.40% increase – NTMWD
7% rate increase planned

RESIDENTIAL ¾" COMPARISON FOR 10,000 GALLONS

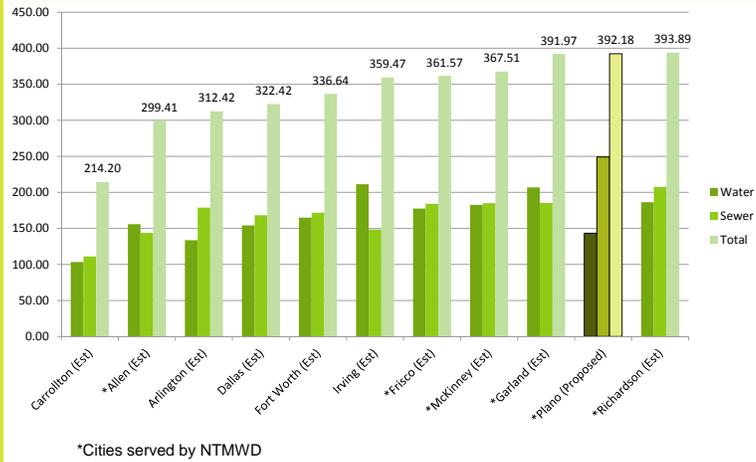


RESIDENTIAL ¾" COMPARISON WITH PLANO HOUSEHOLD AVERAGE MONTHLY USAGE

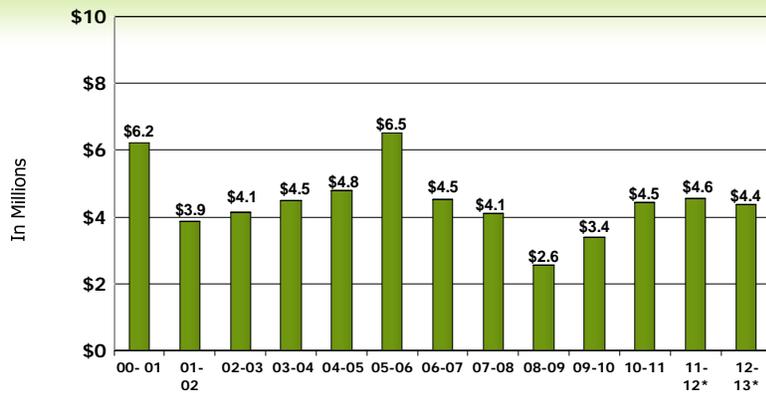
**Plano Household Average Monthly Usage:
Water = 22,860 gallons, Sewer = 6,770 gallons**



COMMERCIAL 1" COMPARISON FOR 50,000 GALLONS



BUILDING AND DEVELOPMENT REVENUE



*Projected

WATER & SEWER

REVISED 8/9/2012

	Actual 2010-11	Budget 2011-12	Re-Est 2011-12	Budget 2012-13	% Change 2012-13
WORKING CAPITAL	\$14,884,163	\$19,634,576	\$28,657,405	\$19,458,052	-0.9%
Revenues					
Water Income	\$73,256,079	\$67,877,991	\$60,555,723	\$66,166,883	-2.5%
Sewer Income	51,773,336	51,448,955	50,537,260	52,070,000	1.2%
Water Taps	69,599	81,143	84,022	85,282	5.1%
Water & Sewer Penalties	1,418,381	1,427,182	1,367,917	1,388,436	-2.7%
Water Meters	228,542	200,143	214,243	217,457	8.7%
Construction Water	176,259	170,929	208,404	211,530	23.8%
Service Connect Fee	187,200	180,057	185,205	187,983	4.4%
Backflow Testing	438,540	425,214	440,158	446,760	5.1%
Sewer Tie-On	18,850	17,752	24,950	25,324	42.7%
Pre-Treatment Permits	44,550	48,801	40,900	41,514	-14.9%
Interest Earnings	70,153	20,000	150,000	150,000	650.0%
Education Building	857,239	436,352	436,352	0	-100.0%
Misc. Income	489,697	442,521	499,052	500,000	13.0%
TOTAL REVENUES	\$129,028,425	\$122,777,040	\$114,744,186	\$121,491,168	-1.0%
TOTAL RESOURCES	\$143,912,588	\$142,411,616	\$143,401,591	\$140,949,220	-1.0%
APPROPRIATIONS					
Operating Expense					
Salaries & Wages	\$8,821,879	\$9,130,362	\$8,918,084	\$9,323,502	2.1%
Materials & Supplies	5,501,942	9,733,718	10,248,275	2,018,807	-79.3%
Contractual	4,334,238	5,407,528	5,827,687	5,514,698	2.0%
NTMWD - Water	35,437,094	39,812,515	37,648,633	45,423,675	14.1%
NTMWD - Wastewater	13,258,155	13,620,784	14,140,884	15,581,649	14.4%
NTMWD - Upper E. Fork Interceptor	7,936,082	8,190,801	8,666,016	8,680,632	6.0%
Retirement of NTMWD Debt	510,635	821,705	815,555	820,560	-0.1%
Sundry	973,652	549,613	662,504	646,123	17.6%
Reimbursements	209,680	212,647	655,642	810,435	281.1%
Subtotal	\$76,983,357	\$87,479,673	\$87,583,280	\$88,820,081	1.5%
Capital Outlay	22,558	320,849	454,285	26,500	0.0%
TOTAL OPERATIONS	\$77,005,915	\$87,800,522	\$88,037,565	\$88,846,581	1.2%
Transfer to General Fund	\$16,795,415	\$16,641,923	\$16,367,049	\$16,721,109	0.5%
Transfer to Debt Service	1,225,000	402,419	402,419	0	-100.0%
Transfer to W & S CIP	12,674,073	10,250,000	9,724,088	7,461,484	-27.2%
Transfer to Capital Reserve	1,200,000	3,000,000	3,000,000	3,000,000	0.0%
Transfer to Loss Fund	658,012	648,627	654,555	658,372	1.5%
Transfer to Technology Fund	300,000	300,000	300,000	300,000	0.0%
Transfer to Reserve Fund	3,000,000	3,000,000	3,000,000	3,000,000	100.0%
Transfer to Meter/AMR Rep. Fund	0	0	0	1,500,000	100.0%
Transfer to Technology Services	2,296,768	2,306,191	2,357,863	2,310,017	0.2%
Transfer for Sustainability	100,000	100,000	100,000	100,000	0.0%
TOTAL TRANSFERS	\$38,249,268	\$36,649,160	\$35,905,974	\$35,050,982	-4.4%
TOTAL APPROPRIATIONS	\$115,255,183	\$124,449,682	\$123,943,539	\$123,897,563	-0.4%
WORKING CAPITAL	\$28,657,405	\$17,961,934	\$19,458,052	\$17,051,657	-5.1%
Days of Operation					70

COMPENSATION PROJECT AND HEALTH PLAN – PLANO TODAY FOR TOMORROW

Jim Parrish, Director Human Resources
Council Work Session – August 18, 2012

Compensation Study - 2012

- Project Scope
 - Evaluate Plano's compensation program and current pay based on market data and internal equity
 - To determine the City's compensation position relative to the public sector target market and
 - To determine what is required for the Plano to be competitive in the marketplace

Strategic Goal

- The project supports the City Council goal of ensuring the City's compensation and other policies are designed to recruit and retain the best possible employee in every position

Comparison Market

- Allen
- Arlington
- Carrollton
- Frisco
- Garland
- Irving
- Lewisville
- McKinney
- Richardson

Compensation Philosophy

- Target the City's range midpoints at median + 5% of the actual averages being paid in the market for comparable jobs
- Salary range middle third is considered market value for journey level experience
- Study data compared to:
 - Median + 5%
 - Median

Current Position in Marketplace

- Median + 5% - overall on average salary structure is 8% Below market
- Median – overall on average salary structure is 3% Below market

Project Approach

- External Data
 - Compensation plans
 - Job descriptions
 - Departmental and City organizational charts
 - Compensation philosophy
 - Comparative market point
 - Pay policies

Project Approach

- Internal Data
 - Position in range for current employees
 - Turnover analysis for two fiscal years by job title, department, job category (labor, trades, administrative, professional, executive)
 - Highest levels experienced among labor maintenance, crew leaders & equipment operators
 - Analysis of departmental input regarding issues experienced in attracting and retaining the right employees. Meetings with each Department Director and Managers

Civil Service

- Civil Service pay market comparison:
 - Median + 5%
 - Police: 1.67% Above Market
 - Fire: 3.2% Above Market
 - Median
 - Police: 6.7% Above Market
 - Fire: 8.4% Above Market
 - Police
 - Recommendation: 2% Increase to base, All Ranks

Fire - Recommendation

Annual Base Salaries \$\$

	Asst. Chief	Bat. Chief	Capt.	Lt.	App. Op.	Rescue Splst.
PLANO	127,002	115,631	93,758	83,697	75,312	67,552
Median	119,457	99,751	87,732	79,320	70,305	62,275
Median +5%	125,430	104,739	92,119	83,286	73,820	65,389
FY12-13 Increase	2.00%	2.00% Lump Sum	3.10% *	3.85% *	2.90% *	2.00%
FY12-13 Base	129,542	115,631	96,665	86,919	77,496	68,903

* Reduce Paramedic Pay for next 4 years by transferring reduction amount to Base (\$111/month) for AO, LT, Capt.

Recommendations (Non-Civil Service)

- Reclassify 14 positions (45 ees) requiring adjustment based on external market conditions and turnover
- Adjust all the salary range minimums 3% and maximums 5%
- Administer 3% across the board increase to base pay (National Forecast 3%)
- Create a step plan for identified labor and skilled craft positions based on tenure
 - Place all affected employees in the steps correlating to date in position
- Reinstate market adjustments at 6, 12 and 18 months for new hires/new promotions for employees whose base pay is within the lower third of their range or until they are at mid-range (based on acceptable performance)
- **Total Cost of All Recommendations \$5.6M**

Step Plan Implementation

- Affected Job Titles
 - Labor Maintenance Worker, Equipment Operator, Sr. Equipment Operator, Crew Leader, Sr. Crew Leader
- Departments Impacted
 - Public Works & Parks and Recreation
- Reasons to Implement
 - Works to bring salaries closer to Market Median
 - Attract and retain qualified employees
 - Reduce turnover (40 resignations in 2010 - 2011 for higher salaries)
 - Employees with many years of service at same pay as new hires due to years without increases
 - Compression of individual pay at range minimum

Step Plan Implementation

- Step increases dependent upon approved funding
- Step increases for first year included in budget recommendation
- Caution
 - Only identified titles in the Labor and Skilled Trades category of positions initially included
 - Different way of budgeting for affected departments
- Cities with Step Plans
 - Arlington
 - Carrollton
 - Garland
 - Irving
 - Richardson

Health Plan



Self-Funded Plan

- Medical plan governed by City of Plano Welfare Benefits Plan through a Risk Pool
- Oversight by Risk Pool Trustees - Deputy City Managers, Finance Director, HR Director
- 115 Trust for future retirement benefits - 59% Funded Ratio as of 10/1/2011 (per Milliman Actuarial Valuation)

Strategic Approach

- 2006 – City developed a strategic approach and organization philosophy to manage the health plan
 - The City of Plano desires a long term strategic plan for management of its benefit programs.
 - Philosophy to be the basis upon which future benefit plan designs will be developed
- “The City cares about its employees and will provide a competitive benefit program that offers:
- Affordable choices
 - Consistent level of cost structure and
 - Encouragement for healthy living”

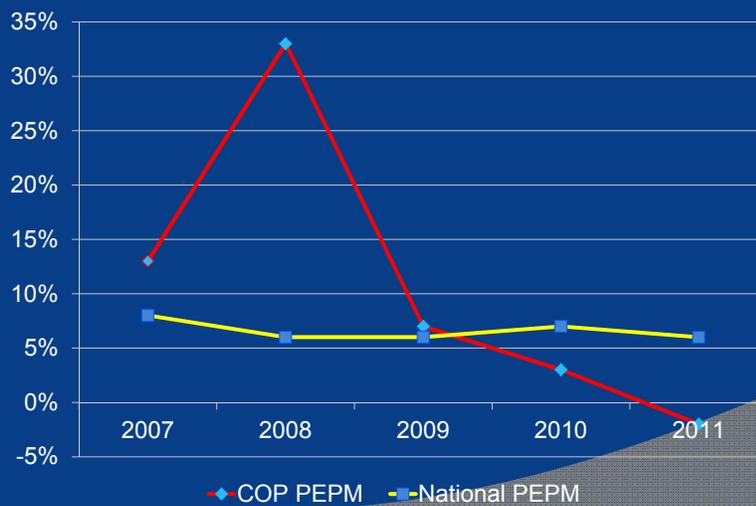
Contribution Philosophy

Annual Active Contributions to Revenue

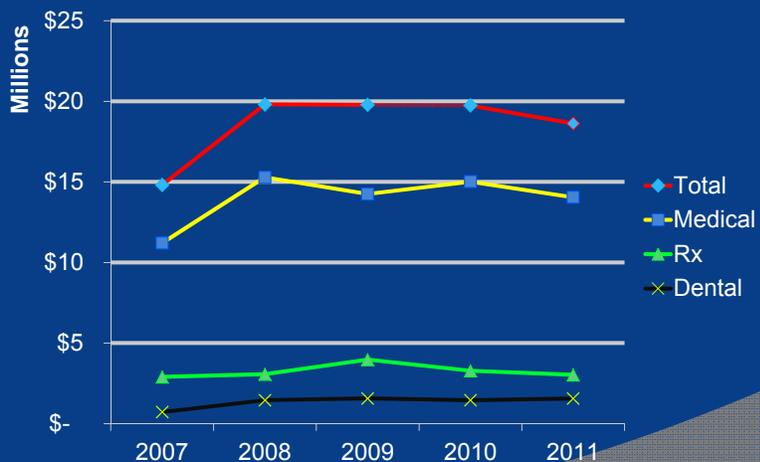
	2008	2009	2010	2011	2012
Employee	11%	11%	15%	18%	18%
City	89%	89%	85%	82%	82%

90% subsidy for Employees
75% subsidy for Dependents

Healthcare Trend



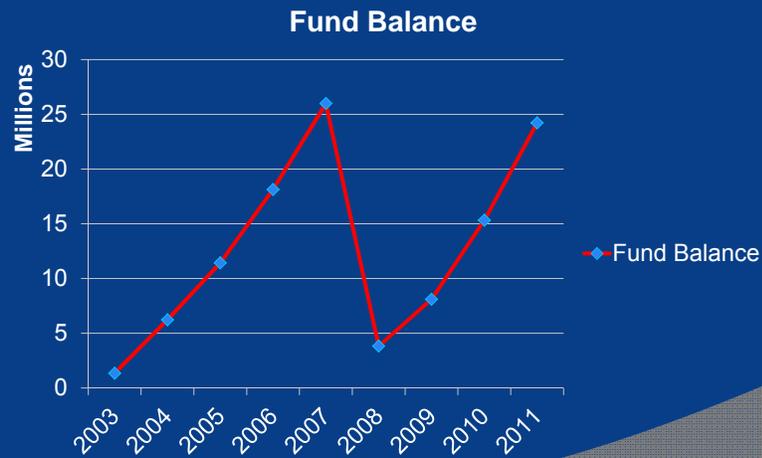
Total Health Claims 2007-2011



Medical Expenses vs. Revenue



Health Claim Fund Balance



Key Insights

Financial

- Medical trend decreased 5% from 2010
- Network utilization increased along with increase in discounts saved the plan \$576K
- Generic Dispensing Rate
 - COP: 73%
 - Industry: 71%

Clinical

- Cardiovascular Disease and Diabetes are key drivers of risk for membership
- Intervertebral Disc Disorders are a driver of cost
- 30% of members are accounting for 88% of plan cost

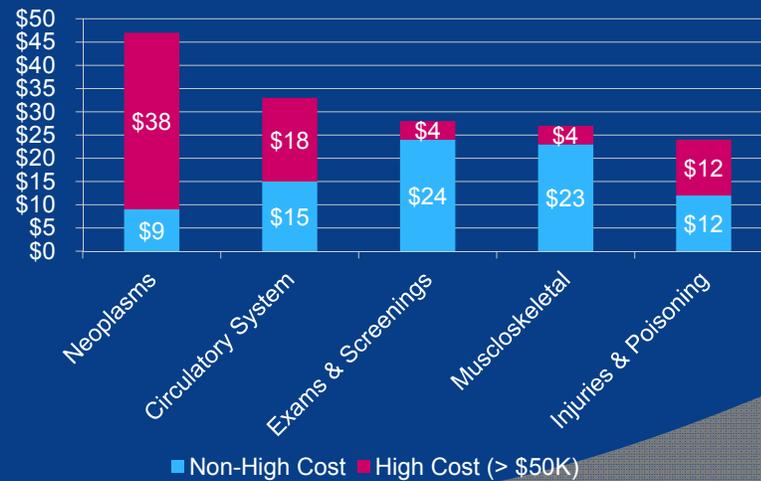
Demographics

- Active Employees – 1,824
- Active Employee Dependents – 2,540
- Pre 65 Retirees – 185
- Retiree Dependents - 34
- Average Family Size – 2.28
- Claimants per 1,000 – 928.9
 - 92% of people on the plan are using the plan

Financial Performance

	2010	2011	Change	Variance from Peer
Covered PMPM	\$346.76	\$332.02	-4.3%	2.2%
Net Paid PMPM	\$281.75	\$268.32	-4.8%	0.4%
Cost Sharing	82.2%	83.5%	1.2%	-0.8%
Net Paid PEPY	\$7,792	\$7,334	-5.9%	11.2%
Network Utilization	95.6%	96.9%	1.3%	1.5%
Rx PMPY	\$691	\$659	-4.6%	\$929

Distribution by Diagnosis by PMPM Cost

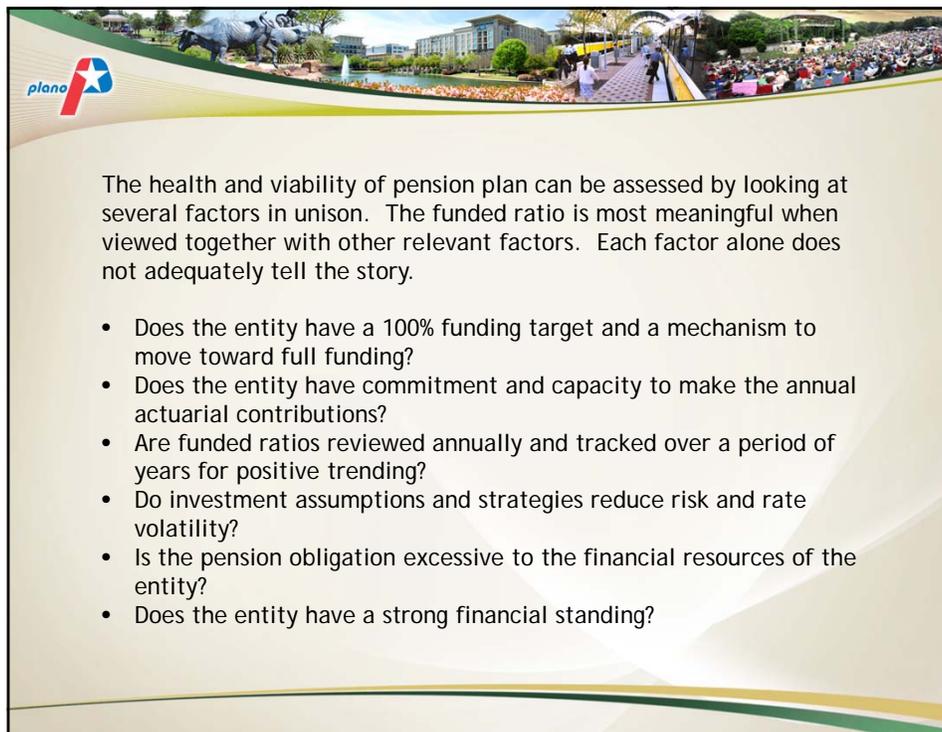


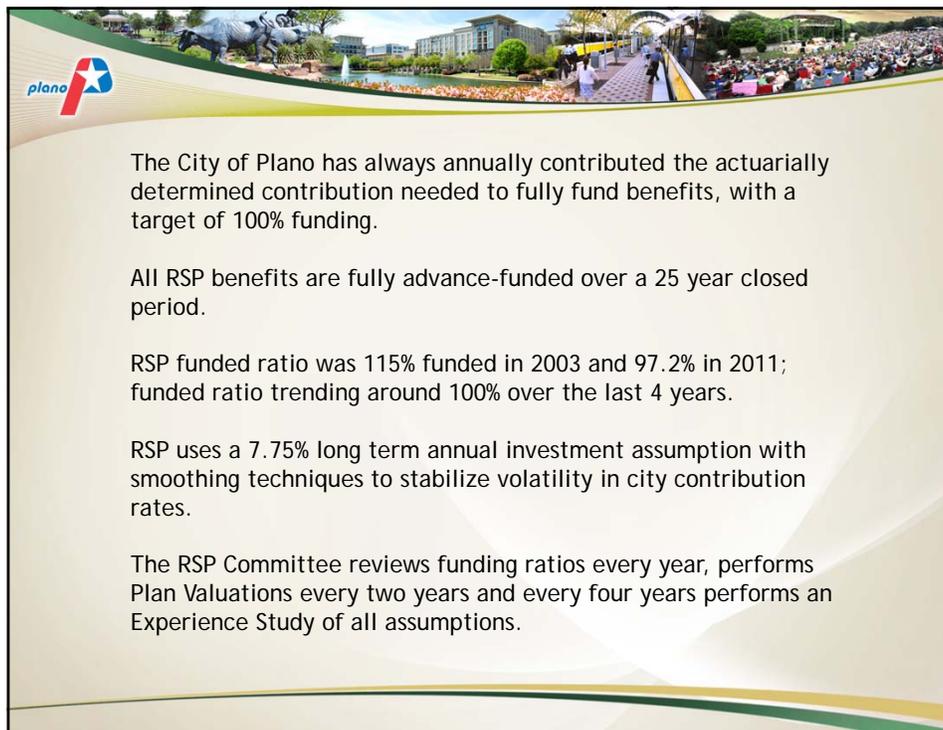
Health Care Reform

- Impacts of Patient Protection and Affordable Care Act (Obama Healthcare Reform)
 - 86% of employers will continue to provide health coverage for Full Time employees in 2014 (EBN)
 - It is expected that the law will increase costs
 - Adult Children coverage to age 26 (2011) 2011: \$21K, 2012: \$17K YTD
 - No reimbursement of over-the-counter medicines from FSA (2011)
 - Comparative effectiveness research tax on employers 2012-\$1 per participant, 2013 - 2019-\$2 per participant
 - \$2,500 cap on salary-reduction contributions to health FSA (2013)
 - Extended Prevention Care for Women – 100% coverage for sterilizations, labs, counseling, birth control Rx and devices (2013)
 - Cadillac Tax - 40% nondeductible excise tax on high-cost employer-sponsored plans (2018)

Future Planning

- ⦿ Review Stop Loss and determine risk tolerance for the future
- ⦿ Calibrate premiums as needed to maintain a sustainable health plan
- ⦿ Continue to implement requirements of PPACA
- ⦿ Continue to explore changes in health care delivery and reimbursement methods
- ⦿ Implement health and wellness initiatives





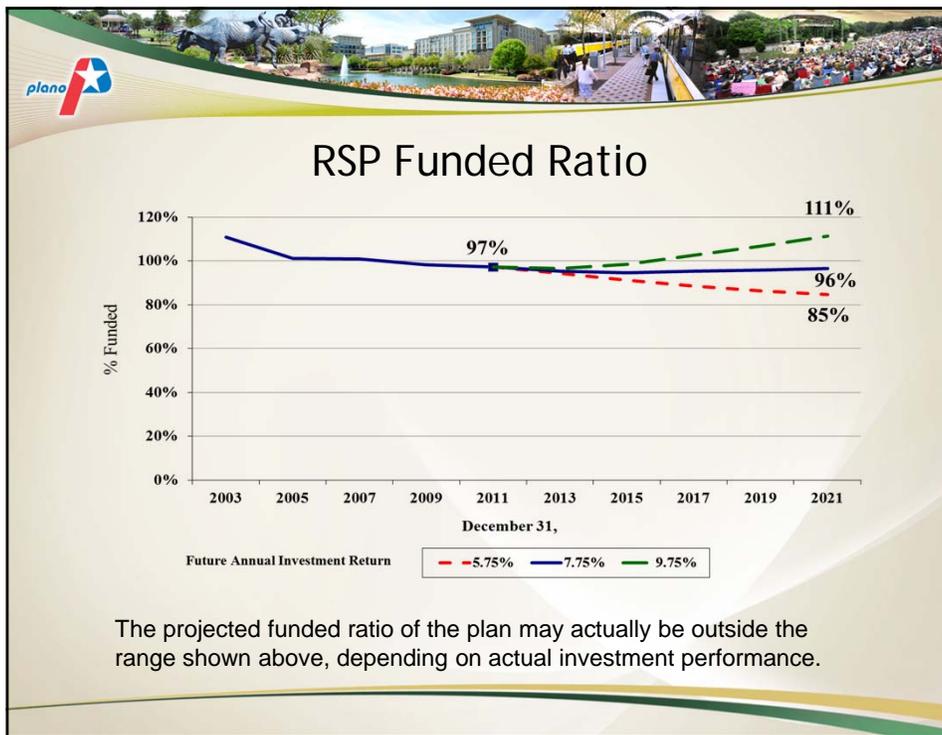
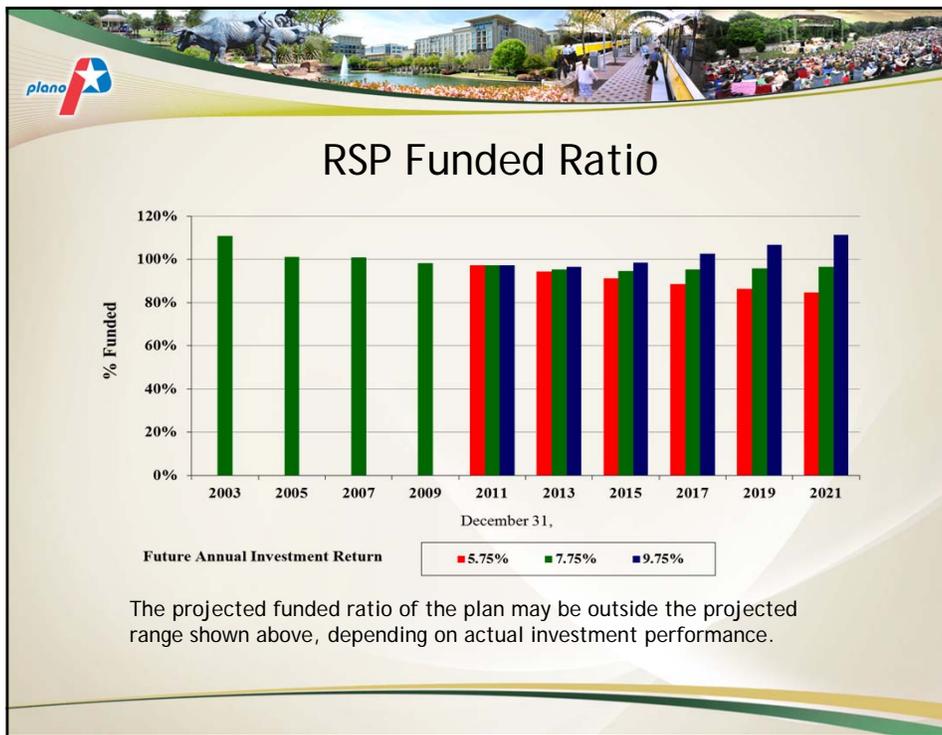
The City of Plano has always annually contributed the actuarially determined contribution needed to fully fund benefits, with a target of 100% funding.

All RSP benefits are fully advance-funded over a 25 year closed period.

RSP funded ratio was 115% funded in 2003 and 97.2% in 2011; funded ratio trending around 100% over the last 4 years.

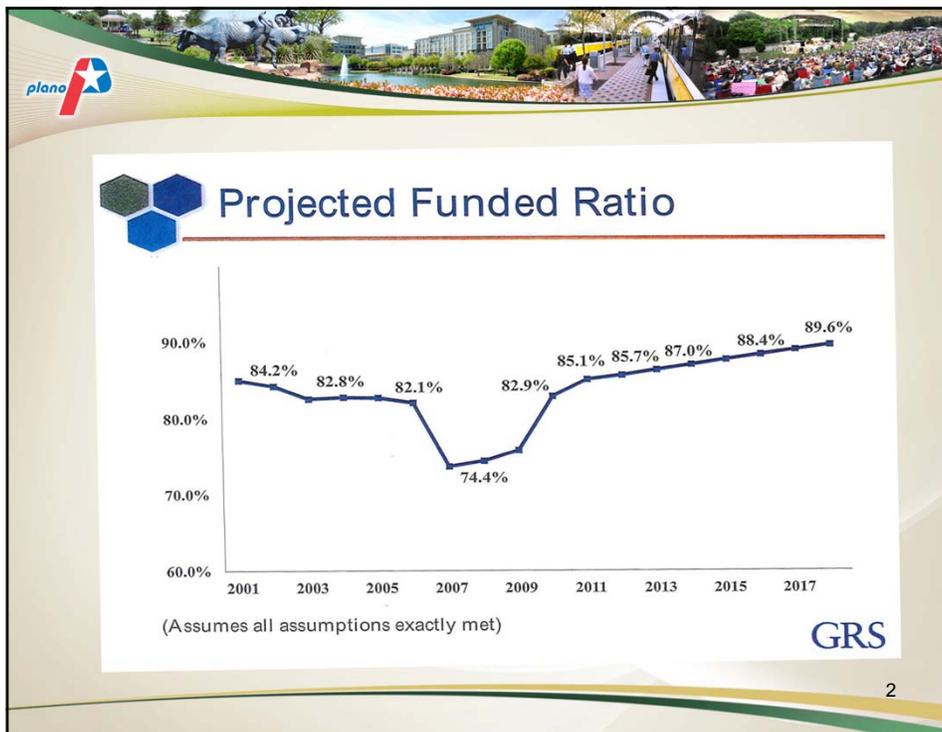
RSP uses a 7.75% long term annual investment assumption with smoothing techniques to stabilize volatility in city contribution rates.

The RSP Committee reviews funding ratios every year, performs Plan Valuations every two years and every four years performs an Experience Study of all assumptions.





City of Plano Texas Municipal Retirement System TMRS

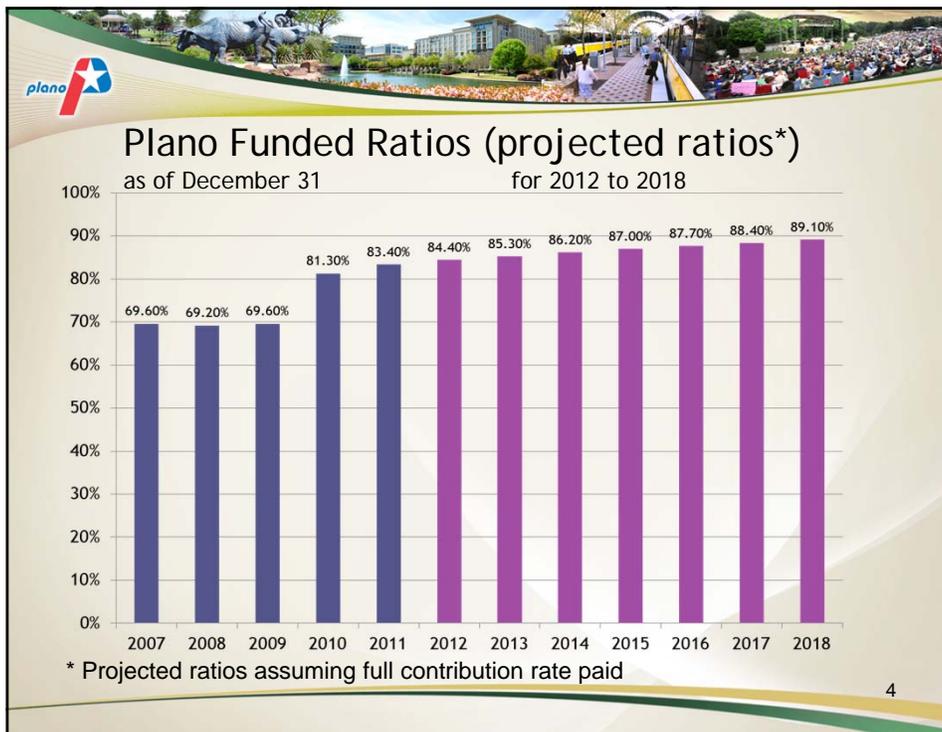


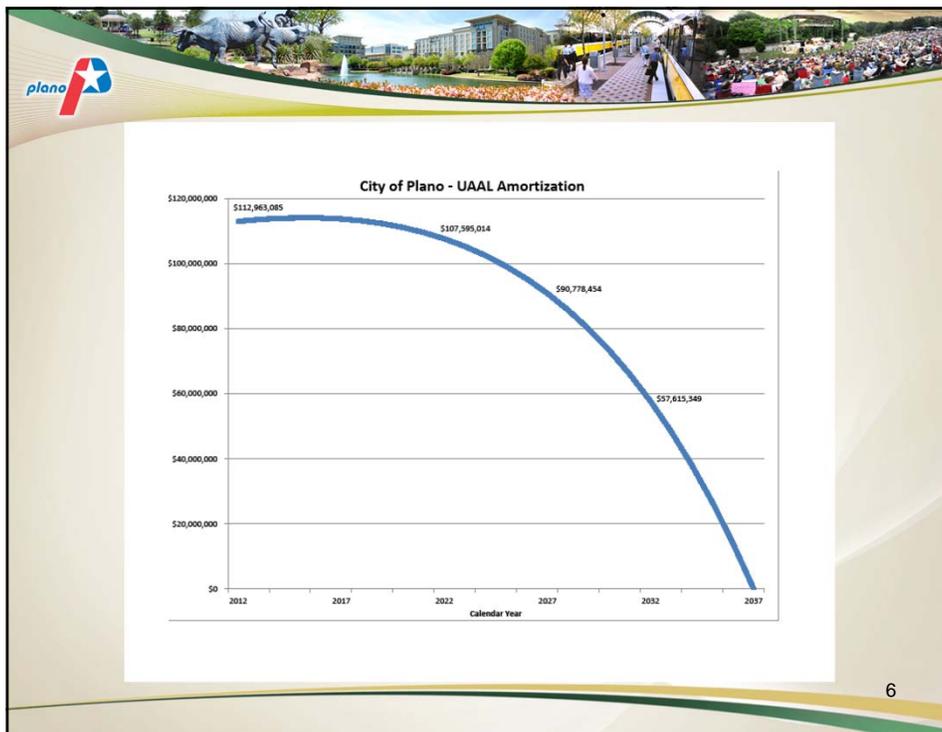


City of Plano's TMRS Plan

- Required by State law to make our annual actuarially determined contributions, with a target of 100% funding
- Systematic Strategy to pay off the unfunded liability over a closed 30 year amortization period
- Plan is currently 83.4% funded and trending upward
- If current assumptions are met, the plan will be 100% funded in 2038
- TMRS uses a 7% long term investment assumption with smoothing techniques to stabilize volatility in city contribution rates
- The TMRS Board reviews funding ratios and performs Plan Valuations every year and performs an Experience Study every four years

3







QUESTIONS?



7



City of Plano Section 115 OPEB Trust Other Post Employment Benefits



What are Other Post Employment Benefits?

- Retiree health insurance
- Retiree prescription drugs
- Retiree dental insurance



The 115 Trust

- Created on March 1, 2008 by City Ordinance
- In response to Government Accounting Standards Board Statement Number 45
- The plan is a single-employer defined benefit plan
- Once funds are transferred they are legally restricted for use only for other post employment benefits as the Trust is irrevocable
- In March of 2008 the City transferred \$23.9 million dollars to the Trust as initial funding, which was 396.8% of the actuarially determined annual required contributions (ARC)



Funding the 115 Trust

- Since the initial funding, the City has annually contributed the actuarially determined contribution needed to fully fund benefits, with a target of 100% funding
- All Trust benefits are fully advanced funded over a 30 year closed period
- Trust funded ratio is 58.9%
- The Trust uses a 7% long term investment assumption
- The Risk Pool Trustees review funding ratios every year, performs actuarial evaluations every two years





- Paramedic Staffing and Deployment**
- Current system designed in 1983
 - Paramedics assigned to engines, ladders, & ambulances
 - Imbalance of duties between “Front Seat” Paramedics and Fire Fighter Paramedics
 - Current compensation based on years of experience
 - Proposed shift to experience and assignment

Paramedic Staffing and Deployment

Matrix Report Recommendations:

- Change approach to staffing (1 per vehicle)
- Discontinue Paramedic pay to “front seat” Medics over time

Paramedic Staffing and Deployment

Proposed Implementation:

- Transfer “Front Seat” assignment pay to base over 4 years
- Initiate ambulance assignment pay gradually over 4 years
- No additional cost
- Recognizes ambulance workload
- Eliminates current morale issues
- Incentivizes fire fighter rotation between ambulances and other vehicles
- Balances number of paramedics to service demands over time

Paramedic Staffing and Deployment

QUESTIONS?



MEMORANDUM

From the Office of the Fire Chief

Date: July 25, 2012
To: Bruce Glasscock
cc: LaShon Ross
From: William Peterson, Interim Fire Chief
Subject: Fire Department Compensation Proposals – FY 2012–2013

With regard to the 2% salary adjustment for the FY 2012–2013 budget year, we would like to propose that we be allowed to use the available funds to begin to implement some of the recommendations included in the Matrix Consulting Group report that was accomplished in 2008. A full proposal is included in Attachment 1. This proposed compensation plan would:

1. Maintain the City's compensation philosophy of at least median plus 5% for all Civil Service salary ranges within the Fire Department in comparison with salaries of other city fire departments in the DFW area. The City regularly participates in a salary survey with other DFW cities to provide and gather this information. Compensation figures for the surveyed cities are on Attachment 1 also.
2. Transfer the top three tiers of Paramedic Assignment Pay for front-seat Medics (Fire Apparatus Operator, Lieutenant, and Captain) to their base salary over a four-year period. With one exception, this proposal complies with the recommendation from the Matrix Consulting Group report published in May 2008. The exception being that the Department allow "front-seat" Paramedics to retain the first tier of Paramedic Assignment Pay of \$149 monthly (\$1,788 annually).
3. Create Ambulance Assignment Pay for EMT and Paramedic personnel assigned to ambulance duty. The Department will reallocate monies from the transfer of Paramedic Assignment Pay for "front-seat" Paramedics to implement this initiative. Initially for FY 2012–2013, EMT and Paramedic personnel will receive \$10 per shift when assigned to ambulance duty. The Department proposes to increase Ambulance Assignment Pay by \$10 per year over a four-year period, up to \$40 per person per shift assigned.

The Department intends to implement Items 2 and 3 above as part of a four-year plan. Item 2 would be implemented in conjunction with annual salary increases in order to offset Paramedic pay adjustments. Item 3 would be incrementally increased over a four-year period as funds become available from the front-seat Medic pay adjustments. Attachment 2 above provides a copy of the proposed Paramedic Assignment Pay for front-seat Medics and the proposed Ambulance Assignment Pay beginning in FY 2012–2013 through FY 2015–2016.

Proposal to Begin Transfer of Paramedic Assignment pay for FAO, Lieutenant, and Captain Positions in the fire Department in Conjunction with FY 2012-2013 Salary Adjustments

Introduction

The Plano Fire Department has been providing EMS to the Plano community using a delivery model that was developed nearly 30 years ago (1983). Although the EMS system is generally well-regarded, experts in the medical community and the Department believed that improvements could be made to benefit the delivery of patient care. In 2007, as part of the Plano Fire Department's continuous quality improvement process an EMS consulting group was hired to study the City's EMS service and provide recommendations for improvement based on the prevailing best practices in the EMS industry. After careful consideration, the Matrix Consulting Group was selected to analyze the Plano EMS system and provide a final report.

Current Issues

After completing a 180-day analysis at a cost of approximately \$60,000 the Matrix Group provided a report that was largely complimentary of the Department's EMS system. The Matrix Group report identified several areas for improvement; however, two areas of primary concern were: 1) EMS personnel on engines and truck companies do not perform a significant share of patient care, and 2) the frequency with which EMS skills are actually practiced in the field. The first issue concerns the fact that the majority of paramedics assigned to an engine or truck are "front-seat" medics, meaning they are company officers or drivers. As officers and drivers, they have limited ability to provide patient care resulting in a limited ability to utilize their paramedic skills. The second issue relates to the first, in that, medics assigned to engines and trucks do not have the same skill level as medics assigned to ambulance units, particularly front-seat medics, due the limited opportunity to practice these skills. Both issues stem from the Department's current policy aimed at incentivizing personnel to remain a paramedic within the Plano EMS system.

The oversupply of front-seat medics grew out of the Department's long-standing and current policy of providing pay incentives that encourage individuals to remain in the paramedic program. The policy anticipated that an employee's increased longevity as a paramedic would be beneficial to the Department by increasing both the individual's skills and experience in the delivery of advanced pre-hospital care. To a certain degree, this philosophy was correct; however, over time, as personnel have changed assignments or have been promoted within the organization, the change in roles and responsibilities has resulted in decreased opportunities to practice paramedic skills. But, because front-seat medics receive additional compensation tied to their paramedic assignment and because the compensation increases with each re-certification period (every 4 years, up to 12 years); there is little incentive for them to drop their paramedic assignment, and in fact, they have a monetary incentive of as much as \$594/month to remain a paramedic in the system.

The increasing number of front-seat medics has been a concern also shared by the Department's EMS Medical Directors, both former and current, which have indicated the need for a careful reduction and balancing of paramedic resources. The rationale for this reduction is to more realistically match the demand for medical service to the actual need in order to produce and maintain a better trained and practicing paramedic corps. In other words, the more frequently a paramedic is challenged with making critical patient care decisions and utilizing his or her advanced skills, the better he or she becomes at making those decisions and performing necessary critical interventions (frequently under very adverse conditions). It has been noted that under the current model, the volume of critically ill patients does not adequately afford the number of paramedics currently in the system with the opportunity to frequently utilize their knowledge and skills; consequently, these skills tend to degrade over time.

From a cost perspective, because paramedic assignment pay incrementally increases each time an individual recertifies as a paramedic, personnel have elected to retain their paramedic status despite their change in roles, ranks, and responsibilities (see Table 1 below). Unfortunately, over time this policy has resulted in two unintended and unanticipated consequences which include an over abundance of paramedics within the EMS system, and a growing number of front-seat medics with varying skill

levels who continue to be compensated at the highest incentive pay level despite their decreased role as medics.

**Plano Fire Department
Paramedic Certification Pay**

Paramedic Pay	Monthly	Annual
< 48 months	\$149	\$1,788
48 - 95 months	\$297	\$3,564
96 - 143 months	\$446	\$5,352
144+ months	\$594	\$7,128

Table 1

The annual budgeted appropriation of paramedic certification pay is approximately \$846,624 each year. Currently, there are 147 paramedics in the Department, 69 are front-seat medics. Of the 69 front-seat medics, 58 are paid at the highest annual certification pay rate, \$7,128 a year; of the remaining 11, 9 are paid at the third tier, \$5,352 a year and 2 are paid at the second tier, \$3,564 a year. The annual paramedic assignment pay for front-seat medics equals approximately \$468,720 which represents 56% of the total annual paramedic assignment pay budget.

Consultant Recommendations:

The Matrix report provided two recommendations to address the issues regarding too many medics and the need to lower the number of front-seat medics within the EMS system. The first recommendation was for the Department to change its approach to paramedic staffing by requiring one paramedic FRS position on each engine, truck, and ambulance unit per shift. All other positions should be made EMT level positions. This approach will lower the overall number of paramedics within the system, have the least amount of impact on paramedic response capabilities, and will improve paramedic utilization. It will also allow a more efficient rotation of personnel between the

ambulance units and the engine and truck companies while reducing the burden on EMS educators and trainers to meet paramedic educational requirements for a growing number of paramedics.

Secondly, the Matrix report recommended the Department take a phased approach to discontinuing paramedic assignment for front-seat medics by removing paramedic assignment pay for officers, drivers, and non-practicing paramedics (all ranks) over a four year period. According to Matrix, this phased approach will mitigate the salary decreases associated with this change and also result in a savings of \$1.2 million over a four year period.

Departmental Actions:

To date, the actions taken by the Department have had minimal impact on addressing the issues brought forth by Matrix. The Department changed its daily paramedic staffing plan from assigning a minimum of two paramedics to every engine, truck and ambulance unit per shift to a minimum of one paramedic on each apparatus per shift. By lowering the number of medics needed within the system, it should further improve skill maintenance and retention over time.

Additionally, the Department addressed the issue of lowering the number of front-seat medics through a passive approach of ceasing paramedic assignment upon promotion to the driver position effective after March 13, 2011. Once promoted, those individuals would be converted to EMT. To date, no FRS paramedics have promoted to driver since this policy took effect. A recommendation to revise this policy is included on page 7 of this document.

Paramedic assignment at the officer and driver ranks has remained voluntary. Officer and driver paramedics who chose to continue their paramedic assignment have undergone the same continuous training as FRS medics and have likewise been expected to perform at the same levels of proficiency as FRS. The Department felt that placing the same educational and skill requirements on the officer and driver paramedics as the FRS medics may cause some to voluntarily opt out of the paramedic program. To date, few if any, driver or officer paramedics have requested to drop their paramedic assignment.

Finally, with regard to reducing the paramedic assignment pay for front-seat medics, the Department did not believe this to be a prudent option at the time due to the state of the economy. City employees had not received an annual salary increase in the past three years (2008-2010) and have, in essence, taken a pay reduction due to increases in the employee's share of the City's health insurance premiums. Therefore, the Department opted not to reduce front-seat medic pay, but instead to utilize all current paramedics within the system. When economic improvement occurs and if further actions are still warranted to reduce the number of front-seat medics, then the Department would begin to gradually reduce assignment pay for front-seat medics.

Recommended Departmental Actions:

- 1) With recent improvements in the economy, the Department should take a modified approach to implementing the Matrix Group's recommendation to discontinue all front-seat paramedics by removing all paramedic assignment pay over a four year period. Instead, we recommend that the Department allow officers and drivers to maintain the lowest tier of paramedic assignment pay at \$149 a month (\$1,788/yearly) for maintaining their paramedic certification.
- 2) We recommend that the lowering of paramedic assignment pay for officers and drivers take place annually over the course of four years in a manner that would transfer the paramedic assignment pay to the base salary for these positions. A transfer of \$1,335 per year (\$111 per month) would occur over a four year period until the top three tiers are transferred. This transfer would require an annual base rate increase of at least 1.8%, 1.6%, and 1.4% for Fire Apparatus Operator (FAO), Lieutenant (Lt.), and Captain (Capt.) respectively each year until the annual target paramedic assignment pay level of \$1,788 is reached. The attached City of Plano – Fire Salary Data 2012 proposes a salary increase for FAO, Lieutenant and Captain positions that will allow the first year transfer to occur while also maintaining a salary range of at least median plus 5% (see Attachment 1).
- 3) Tables 1 through 5 show the proposed paramedic assignment pay for FAO, Lieutenant and Captain for each fiscal year beginning in FY 2012-2013 through FY 2015-2016.

Proposed Paramedic Assignment Pay – FY 2012-2013

Proposed FAO, LT and Capt. Paramedic Pay	Monthly	Annual
< 48 Months	\$149	\$1,788
48-95 Months	\$186	\$2,229
96-143 Months	\$335	\$4,017
144+ Months	\$483	\$5,793

Table 2

Proposed Paramedic Assignment Pay – FY 2013-2014

Proposed FAO, LT and Capt. Paramedic Pay	Monthly	Annual
< 95 Months	\$149	\$1,788
96-143 Months	\$224	\$2,682
144+ Months	\$372	\$4,458

Table 3

Proposed Paramedic Assignment Pay – FY 2014-2015

Proposed FAO, LT and Capt. Paramedic Pay	Monthly	Annual
< 143 Months	\$149	\$1,788
144+ Months	\$261	\$3,123

Table 4

Proposed Paramedic Assignment Pay – FY 2015-2016

Proposed FAO, LT and Capt. Paramedic Pay	Monthly	Annual
	\$149	\$1,788

Table 5

This recommendation will result in a cumulative savings of approximately \$345,348 over the course of the four year transfer to base salary period (see table below). A portion of this savings is proposed to be used for needed salary adjustments and to implement Ambulance Assignment Pay.

	Year 1	Year 2	Year 3	Year 4
Current Amount	\$468,720	\$376,605	\$286,278	\$200,802
<i>FY Savings</i>	(\$92,115)	(\$90,327)	(\$85,476)	(\$77,430)
<i>Cumulative Savings</i>	(\$92,115)	(\$182,442)	(\$267,918)	(\$345,348)

Table 6

Table 6 shows the savings in front-seat medic pay by year based on a removal of the top steps of assignment pay. As shown in the table, the first year results in cost savings of \$92,115 by lowering each tier of assignment pay by \$1,335 from their current levels. Year two results in an additional savings of \$90,327 by lowering each tier of certification pay by \$1,335 from their current levels, except for the second lowest tier, which is lowered by \$441 to bring it to the targeted \$1,788 a year. Year three results in an additional savings of \$85,476 by lowering the highest tier of certification pay by \$1,335 a year, while the second highest tier is lowered by \$894 to bring it to the targeted \$1,788 a year. Finally, year four results in an additional savings of \$77,430 by lowering the highest tier of certification pay by \$1,335 to bring it to the targeted \$1,788 a year.

Combined, the four years result in a cumulative savings of \$345,348, reducing the cost of medic pay for “front seat” medics from \$468,720 annually to \$123,372 annually.

Note: If this recommendation is followed, the Department should revoke its current policy of discontinuing paramedic assignment upon promotion to Fire Apparatus Operator.

4) Additionally, the Matrix report indicated a disparity in workload exists between back-seat medics who ride on engines and trucks and those that ride on ambulance units. We recommend that the Department take a portion of the savings realized from recommendation #1 above and immediately begin to incentivize the ambulance assignment positions by providing ambulance assignment pay for FRS paramedics and EMTs when assigned to an ambulance. For example, a portion of the first year savings of \$92,115 from the front-seat paramedic pay would provide the capability of providing ambulance pay of \$10 per ambulance unit, per person, per shift to be allocated to paramedic and EMTs when assigned to an ambulance. A similar program currently exists in other fire departments located within the DFW area – e.g. Irving, Mesquite, and Richardson. To remain comparable to the ambulance pay of other cities, the Department should raise ambulance assignment pay each year using a portion of savings from the front-seat medic pay transfer in accordance with Table 7 below.

Proposed Ambulance Assignment Pay Plan

Fiscal Year	Ambulance Assignment Pay (per person/per shift)	Annual Cost (2 Personnel x 7 Med Units x 365)
2012-2013	\$10	\$51,100
2013-2014	\$20	\$102,200
2014-2015	\$30	\$153,300
2015-2016	\$40	\$204,400

Table 7

Projected Costs:

Table 8 compares the current paramedic assignment pay costs to future costs after 1) paramedic assignment pay adjustments have been completed, and 2) ambulance assignment pay has been fully implemented. All totals are based on the current number of paramedic personnel and ambulance units within the Plano Fire Department. These totals are subject to change based on EMS staffing levels in the future and are overestimated as a “worst-case” scenario assuming no one would “opt out” over the next four years. The Department anticipates that the current cost of front- seat medics will decrease with the transfer of paramedic assignment pay to base salary as individuals decide to opt out of the paramedic program. The Department also anticipates that the cost for back-seat medics may increase as additional back-seat medics are needed to maintain paramedic staffing levels. The future paramedic assignment pay and ambulance assignment pay amounts are comparable to other DFW cities found in the January 2012 Metroplex Police and Fire Survey – Fire Special Pay Practices (see Attachment 2).

**Proposed Paramedic Assignment Pay and
Ambulance Assignment Pay**

	Current Annual Costs	Future Annual Costs
Front Seat Medics (69)	\$468,720	\$123,372
Back Seat Medics (78)	\$377,904	\$467,064
Ambulance Pay (\$40/person/shift)	\$0	\$204,400
Total Cost	\$832,368	\$794,836

Table 8

Conclusion:

The implementation of these additional recommendations will allow the Department to continue to deliver rapid quality medical care utilizing better trained, more experienced paramedics. Additionally these changes will allow the Department to operate more efficiently as well as economically now and in the future by maintaining the necessary number of skilled personnel to support the EMS system, and by ensuring incentive pay levels are appropriate and assigned commensurate with the required workload. These additional steps will also continue to ensure that the Plano EMS system functions as a top-tier emergency medical services provider in the country and the Plano citizens can expect to receive an even more efficient and effective emergency response should they dial 9-1-1

EMS System Analysis for the Fire Department

CITY OF PLANO, TEXAS

matrix 
consulting group

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May 14, 2008

1. INTRODUCTION AND EXECUTIVE SUMMARY

This first chapter provides an introduction to the final report for the Emergency Medical Service System Analysis conducted for the Fire Department and the City of Plano. This study took place in the winter and spring of 2007 – 2008 and was focused on the delivery of pre-hospital medical care by the Plano Fire Department. The focus of the study was on the following area of interest for the Department and the City:

- Evaluate the organizational structure and management of the EMS program within the Fire Department.
- Evaluate the staffing model and approach utilized to provide emergency medical services including qualifications and certification of personnel, and deployment of resources.
- Evaluate system performance based on performance indicators such as response times, time to patient, dispatch time, chute time, etc.
- Evaluate the provision of equipment and supplies by the Fire Department.
- Evaluate the system policies, directives, and protocols used to direct the provision of emergency medical services within the Department.
- Evaluate dispatch policies related to the nature and level of care provided and required including the use of emergency medical dispatch and other triage methods.
- Evaluate local policies and practices for compliance with national and state regulations including evaluation of infection control and safety programs, and contract provision for these safeguards.
- Evaluate the Department's continuing education, training, and skills assessment program for emergency medical personnel.
- Evaluate the cost of providing EMS within the City of Plano and compare these costs to industry benchmarks.
- Evaluate billing methods and compliance with federal regulations.
- Evaluate potential cost savings and overall cost effectiveness of the EMS program.

In order to conduct the study and to achieve the objectives identified by the Fire Department and the City in the Request for Proposals, the project team from the Matrix Consulting Group performed the following steps during the course of the study:

- Conducted extensive interviews both within the Fire Department and with a wide range of stakeholders. Interviews were conducted with the following:
 - Deputy City Manager
 - Fire Chief
 - Assistant Chief for EMS and Training
 - EMS Battalion Chief
 - EMS Captain
 - EMS Quartermaster
 - Other members of the Fire Department command staff including all Assistant Chiefs
 - Current Medical Director
 - Former Medical Director
 - Representatives of IAFF Local 2149
 - Line staff including Paramedics, EMTs and company officers were interviewed individually and in focus groups
 - Representatives from the Emergency Department of the Medical Center of Plano
 - EMS Support representatives from the Medical Center of Plano
 - Representatives from the Emergency Department of the Presbyterian Plano Hospital
 - South West General Services
 - Representatives from the Emergency Department of the Baylor Regional Medical Center at Plano and the Heart Hospital
 - City of Plano Public Safety Communications staff

- Representatives from Plano Fleet Services
- The project team collected data from the following sources to enable us to conduct our analyses:
 - Management plans, strategic plans, memos and other sources of internal information were collected and reviewed by the project team.
 - Computer Aided Dispatch and Records Management System (CAD/RMS) data were extracted to enable the project team to evaluate the distribution of calls for service, the times associated with calls, etc.
 - Data were extracted from the PFD's TeleStaff system to document deployment and staffing information.
 - Data were taken from the Department electronic patient care report (ePCR) system, SafetyPAD, to document various interventions, drugs utilized, call types and other pertinent information.
- The project team also worked closely with a steering committee comprised of Fire Department staff (both management and labor were represented) and medical control (both the current and former physicians). This group reviewed several interim documents and also provided the project team with feedback and guidance throughout this process.
- As part of the process, the project team developed several interim documents, including:
 - Descriptive Profile – a summary of factual information describing the Fire Department and the delivery of pre-hospital emergency care in particular.
 - Issues List – a preliminary summary of the issues that are addressed in this document.
 - Draft Final Report – this was reviewed with the steering committee to ensure that our factual information was correct and to ensure that we had identified and addressed key issues.

The project team also worked with the Fire Department to develop an understanding of the community that Plano currently is, as well as to develop an

understanding of where the community is headed in terms of demographics. The following provide some summary information about the community¹:

Area	Plano	Collin County
2005	250,096	698,851
2025	270,000	1,046,919
% Change	7.96%	49.8%

The preceding exhibit shows that the significant growth that has been the primary driver in the City of Plano has essentially ceased, with annual growth rates of less than 0.5% over the next 20 years. At the same time, Collin County is forecast to continue to grow rapidly over the time period, with growth rates in excess of 2% per annum. An issue which is likely to have more significance for the City of Plano is the projected shift in the age demographics for the community and the resulting change in the median age for the community which will move from 35.8 years in 2005 to 39.1 years in 2007. This is shown, in the table, below²:

Age Category	2005		2025	
	Number	Percent	Number	Percent
Under 5 years	17,225	6.8%	19,980	7.4%
5 to 9 years	16,800	6.7%	18,630	6.9%
10 to 14 years	20,015	8.0%	16,740	6.2%
15 to 19 years	17,407	6.9%	15,660	5.8%
20 to 24 years	16,539	6.6%	11,610	4.3%
25 to 34 years	35,493	14.1%	38,070	14.1%
35 to 44 years	45,257	18.0%	31,860	11.8%
45 to 54 years	41,623	16.5%	29,160	10.8%
55 to 64 years	24,953	9.9%	38,340	14.2%
65 years and over	16,336	6.5%	49,950	18.5%
Total	251,648		270,000	
Median Age	35.8 years		39.1 years	

The impact of these demographic changes is a significant area of concern for the entire government of the City of Plano. The key issues include:

¹ Information taken from "A Future of Excellence: A Strategic Plan for the Plano Fire Department 2007 – 2011," Appendix B. Information in the table was derived from various sources including the US Census' 2005 American Community Survey and the North Central Texas Council of Governments.

² See the preceding footnote.

- A significant change in the proportion of those who are 65 and over. This age cohort is expected to increase from 6.5% of the population to more than 18.5% in 20 years. At the same time, the age cohort for 55 to 64 years increases from 9.9% to 14.2%. These age groups are major users of emergency medical services, the focus of this study.
- This change is largely derived from a corresponding decline in the age cohorts between 35 and 54 years of age which drop from 18.0% to 11.8% and from 16.5% to 10.8% respectively.
- The other age cohorts do not show significant changes over the time period 2005 – 2025.

While the City of Plano is essentially “land-locked” and will not grow through any significant annexation, workload will grow and change for the Fire Department (and other services in the City) over the next 20 + years as the City ages.

EXECUTIVE SUMMARY

This section of the introduction provides an Executive Summary of our findings and recommendations. In addition to the improvement opportunities identified by the project team, this section also provides a summary of the key strengths that the project team identified in the course of our work with the Fire Department. These relate to the delivery of pre-hospital emergency medical care, as delivered by the PFD:

- The Plano Fire Department has ardently worked to become accredited by the Commission on Fire Accreditation International as well as the Commission on Accreditation of Ambulance Services (CAAS). This illustrates a commitment to continual internal evaluation and pursuit of best practices in fire and EMS.
- The PFD has an excellent system of EMS Medical Control and well documented and detailed emergency medical directives. The EMS Director and his team take an active role in the delivery of continuing education, paramedic training, and quality assurance and control.
- The PFD has implemented an electronic patient care reporting system (EPCR) to automate the documentation of patient care, improved the efficiency of the EMS billing, and has begun to develop performance metric to assess EMS delivery and performance.

- The PFD has an excellent field-training program for new paramedics, which includes multiple points for observation, a phased training approach culminating in a “mega-code”, and extensive interaction between preceptors, new paramedics, and the Medical Director.
- The Plano Fire Department has developed a strategic plan, which identifies clear goals and objectives for the future and opportunities to enhance fire, rescue, and emergency medical care.
- The PFD is actively involved in research on pre-hospital emergency care regionally and nationally including participation in CARES, NAEMS, and Eagles. The Department also continues to explore opportunities to learn about best practices from other Departments and service providers.

In addition to these strengths, the project team has noted the following opportunities for improvement or resource needs in order to maintain the high service levels targeted by the Fire Department and the City of Plano. These are summarized in the table, below:

Report Section	Major Findings	Primary Recommendations	Fiscal Impact
2.3	The current organizational structure of the EMS division is appropriate as an oversight function.	Make no changes to the organizational structure of the EMS and Training Division as it relates to presence of a dedicated EMS unit or to the dedication of two command staff positions to this unit.	N/A
2.4	EMS operational oversight and field supervision can be enhanced by increasing the involvement of Battalion Chiefs.	Increase the responsibilities of the on-duty Battalion Chiefs to including: random non-emergency EMS incident response, all emergency EMS incidents response, additional management of system resources, follow-up with patient families on a selection of EMS calls to assess service levels and improvement opportunities, policy review and evaluation, and follow-up on complaints.	N/A

CITY OF PLANO, TEXAS
Emergency Medical Service Systems Analysis

Report Section	Major Findings	Primary Recommendations	Fiscal Impact
3.1.3	The Plano Fire Department should utilize additional performance metrics to evaluate EMS operations.	<p>The PFD should contact its electronic patient care vendor to evaluate the feasibility of incorporating additional performance measures into a dashboard reporting system. If this is not possible, the PFD should explore purchasing a new EPCR with these capabilities. See the body of this report for recommended performance measures.</p> <p>The Department should also involve public safety communications in capturing additional performance data in the computer aided dispatch system.</p>	N/A
3.3	There are opportunities to improve the current approach to paramedic staffing and deployment.	<p>The Plano Fire Department and the City should change its approach to paramedic staffing by requiring 1 paramedic FRS position on each engine, truck, and ambulance unit per shift. All other positions should be made EMT level positions. This approach has the least amount of impact on paramedic response capabilities and will improve paramedic utilization. These personnel can also more effectively be rotated between the ambulance units and the engine and truck companies. Finally, this approach will reduce the burden of EMS educators and trainers to meet paramedic certification requirements.</p> <p>The PFD and the City should take a phase approach to making this change to mitigate the impact on employee compensation. Each year, the City should change the ordinance to reduce the top step paramedic certification pay for Officers, Apparatus Operators, and non-practicing FRS paramedics by one step.</p>	\$1.2 million over the next 4 years

CITY OF PLANO, TEXAS
Emergency Medical Service Systems Analysis

Report Section	Major Findings	Primary Recommendations	Fiscal Impact
3.4	The PFD should not implement an ambulance driver position or ambulance pay.	The Plano Fire Department should not adopt the Ambulance Driver Position option or Ambulance Pay option under consideration. To address equity and workload concerns and to enhance paramedic and EMT exposure to various patient care situations, the Department should rotate personnel to ensure 30% of all FRS shifts are worked on the ambulance units.	N/A
3.6	The Plano Fire Department's EMS protocols are consistent with medical research, clear, and concise. Additional steps can be taken to improve regional EMS service delivery.	Continue the process of developing a committee of local physicians and nurses to review PFD EMS protocol and discuss issues as they arise. This committee should meet at least once yearly and on an ad hoc basis.	
3.7	Infection control and safety programs are consistent with industry standards.	The Fire Department should continue its own internal policies and vigilance regarding infection control for line personnel. In light of the recent elimination of certain key provision from the Ryan White law, the Fire Department should, in conjunction with the medical director and the hospitals in Plano, continue to work to ensure proper notification and cooperation between the Department's Infection Control Officer and the hospitals who may be treating the source-patient in an infection exposure situation.	N/A
3.8	The Department utilizes a number of best practices related to EMS training and QA/QC. However, there are opportunities for improvement.	Implement the recommendations as detailed on page 69 of this report. Purchase additional simulation equipment for EMS training and consider regionalization and leasing of a training facility.	\$560,000 for additional training resources recoverable within 2 years if regionalized.

The next chapter focuses on the organization and management issues related to the EMS and Training Division as they relate to the delivery of emergency medical services.

15 Fire Fighters for 13th Engine Company

15 Fire Fighters for 13th Engine Company

Background:

- Station 12 and 13 opened without increasing additional personnel
- Currently operating 12 engines, 4 aerial ladders, and 7 ambulances out of 13 stations
- 98 Fire Fighters assigned to each of 3 shifts
- Currently operating with minimum daily staffing of 81
- 85 required to operate 13 engines, 4 aerial ladders, and 7 ambulances
- 20% additional staff required to cover personal leave (vacation, holiday, sick, injury, training)

15 Fire Fighters for 13th Engine Company

Proposed Interim Plan for 13th Engine Company Effective 10-1-12

- Predominant service delivery vehicle for:
 - Medical calls
 - Vehicle Crashes
 - Fires
- No engine company currently at Fire Station 8
- Aerial ladder only operating at Fire Station 8

15 Fire Fighters for 13th Engine Company

Benefits of Placing an Engine Company at FS 8:

- Standardizes service levels across all 13 fire districts
- Places an additional unit in service:
 - Decreases system response times
 - Increases unit availability and coverage
 - Extends the service life of major apparatus

15 Fire Fighters for 13th Engine Company

Current Response Strategy Developed in 1983

- Response based on “one size fits all” (worst case scenario)
- Previously the Industry “best practice”
- Is costly
- Currently viewed as “over-reactive”
- Results in system inefficiencies
- More intuitive than data driven

15 Fire Fighters for 13th Engine Company

Current Drivers for Change:

- CFAI Fire Accreditation
- CAAS EMS Accreditation
- Industry Best Practices
- Matrix Report
- Page, Wolfberg, & Wirth (Liability Concerns)
- National/Local Economy
- Stakeholder Expectations

15 Fire Fighters for 13th Engine Company

Emergency Response Conclusions:

- One Size fits All No Longer Appropriate
- Matching Resources to Needs is More Efficient
- Maximizes Availability of Resources for Multiple Calls in the Station District and/or City
- Improves Overall System Response Capabilities

15 Fire Fighters for 13th Engine Company

Three Options to Place Engine 8 in Service:

- Option One: Reduce staffing on 4 major fire apparatus for 24 hours
- Option Two: Reduce staffing on 2 major apparatus & remove Med unit from service for 24 Hours.
- Option Three: Flexible Staffing – allow apparatus staffing to fluctuate at 2 fire stations based on service needs.

15 Fire Fighters for 13th Engine Company

Recommendations - A Proposed Pilot Strategy:

- Response Based on Historic Demands for Service
- Match Resource to Need:
 - Place Engine 8 in service using Option Three (Flexible Staffing)
Allows apparatus staffing based on service needs at the time
 - Minimizes the time a vehicle is understaffed
 - No additional costs (overtime or apparatus)
 - Data driven solution

15 Fire Fighters for 13th Engine Company

Recommendations (continued):

- Analyze flexible staffing option and manage any anticipated service delivery issues
- Establish Metrics for Evaluation
- Provide Evaluation Documentation after 90-120 Days

Foreseeable Benefits:

- Hire and place 15 Fire Fighters in service earlier than August 2013 to reduce overtime necessary to maintain required staffing

**15 Fire Fighters for 13th
Engine Company**

Questions?



MEMORANDUM

From the Office of the Fire Chief

Date: August 10, 2012
To: Bruce Glasscock, City Manager
LaShon Ross, Deputy City Manager
From: William Peterson, Interim Fire Chief
Subject: Developing an Alternative Data Driven Emergency Response Strategy

As the City of Plano came through its formidable years, the Fire Department was developed into the best that it could be. It was the first department in the State of Texas to become Class 1 ISO. It was the first Texas Department to become CFAI accredited. It was among the first fire department to obtain CAAS accreditation. It is still the only fire department in the United States to currently hold all three distinctions. It was the best of the best. This was largely done under the guise of a maximum sized force to be able to address whatever was thrown at them when they arrived. A large “one size fits all” model. A lot of the Department’s current response models are based on concepts that are 30 to 40 years old.

Today is different. Economics, evolution of call types (EMS vs. Fire), better fire codes, and better informed public have all had a profound impact on the types of calls the fire service responds to. Pressures are being placed on the Department to re-evaluate its response model. Several entities have challenged the Department to do things differently, not just differently but smarter as well. It is time for the Plano Fire Department to begin to evolve its response models.

By the mid 2000’s the EMS service was developing a mantra of “quality versus quantity” and in EMS this has led to more creative response models. These models are often studied with scientific methods to ensure that the models are truly better and not antidotal thoughts. This has resulted in better responses, with fewer specialized personnel, and has seen improvements in patient outcomes. The fire service has been slow to embrace this mantra. They often struggle with heavily unionized workforces, which are less than receptive to changing response plans. The City of Plano has always been on the cutting edge of the service delivery model; this is true in any department in the city and is definitely true in the Fire Department. Now is the time for the City and the Fire Department to once again step out on the cutting edge and show that the fire service can embrace “quality versus quantity”.

Attached is a proposed Pilot Program to gather data to change the current emergency response strategy to an alternative approach that is both data driven and more economical than our current strategy. In the first quarter of the 2012/13 budget year, the Plano Fire Department proposes to introduce a new concept in its staffing model that looks at historic work loading of apparatus, time of the day that this apparatus is needed, and to what extent. The Fire Department proposes to place its 13th engine in service without hiring additional staff, not utilizing additional overtime funding, and utilizing a demand model that better fits the needs of the calls. This model will place 8 personnel at two stations that traditionally house 10 personnel to staff 3 vehicles (Engine, Truck, and Medic Unit). This allows for two personnel to be flexed

between two apparatus. During peak demand hours where ambulances are needed, the personnel will staff the Medic Unit. During this time, the Engine and Truck Company may operate with 3 personnel. Other times they will operate with 4 personnel, depending on the nature of the call and the critical tasks that need to be accomplished at the call.

This will be a pilot program that we propose will initially last between 90 and 120 days. The program will be measured and analyzed utilizing scientific methods to see if the model is sustainable. Questions about a decrease in critical tasks being completed, not necessarily faster but in a reasonable period of time even with a decreased staffing, will be able to be answered. As more information is collected, better informed decisions can be made about staffing models, response models, and task analysis can be made. If this model is not shown to be sustainable, the 15 additional personnel are already budgeted to be brought on line as soon as April 1, 2013. If it is sustainable, these personnel can be utilized to reduce overtime costs that the city currently incurs due to sick time usage and vacation/holiday time. No matter the outcome, the Department will continue to strive to be the best of the best.

15 Fire Fighters for 13th Engine Company

Recommendations for Staffing a 13th Engine Company

William E. Peterson

8/10/2012

To provide a standard level of service across all 13 fire districts the Plano Fire Department recommends options for placing a 13th engine company in service with existing resources and further recommends hiring 15 fire fighters on or before August 2013 to minimize future overtime costs.

Introduction/Background:

The Department seeks to place an engine (apparatus plus four firefighters) in service in Station 8's district to provide the same level of service as other fire districts within the Plano community. The engine remains the predominant and most universal response apparatus in the fire service industry today. In fact, many fire departments consist only of engines, since they provide the primary firefighting agent – water – and the necessary personnel to use it. In the Plano Fire Department, the engine is the initial response apparatus and provides the following emergency functions:

- Basic and advanced emergency medical treatment
- Extrication and victim rescue
- Fire attack and extinguishment
- Overhaul (the actions necessary to ensure the fire is completely out)

For the past 30 years, the Fire Department has operated an engine out of each fire station as a standard level of service. However, due to economic reasons, the Fire Department has opened two fire stations within the past three years without adding additional staffing or apparatus. In fact, the Department has opened two new stations with existing resources by moving one of two engines from Station 2 to open Station 12, and recently moved an engine from Station 8 to open Station 13.

When Engine 8 was moved to Station 13, it left only an aerial ladder staffed with four firefighters to operate out of Station 8. While the aerial ladder is capable of responding to most emergencies, it is a much larger and heavier apparatus than an engine; therefore, it is often slower, more difficult to maneuver due to its size, and more expensive to operate. Aerial ladders are typically housed alongside an engine and respond secondary or as backup to an engine when the engine is not available. Aerial ladders primarily respond along with an engine to structure fires and rescue calls. Unfortunately, as an initial response vehicle, the aerial ladder does not provide the same level of service as does an engine. Besides being slower and more difficult to maneuver, aerial ladders have a lesser capability than do engines when it comes to fire

fighting and responding to major medical events and rescues, such as cardiac arrests and vehicle extrications.

Issue/Options:

Currently, the Department staffs and operates 13 fire stations using 12 engines, 4 aerial ladders, 7 med units, 2 Battalion Chiefs, and 1 utility truck, with a daily minimum of 81 personnel on each of three shifts (A, B, and C). While a minimum of 81 personnel are required to staff each day, there are 98 personnel assigned to each shift to allow for vacancies caused by vacation, holiday, sick, light duty, and training. Should the minimum staffing level drop below 81, the Department will hire personnel on overtime to maintain 81 personnel on duty.

With the exception of Station 8, the other 12 fire stations in Plano operate an engine as their primary response vehicle. As a result, the Department seeks to place an engine in Station 8's district in order to restore the level of service that existed prior to opening Station 13. The Department anticipated the need to place an engine at Station 8 as the Department's 13th engine in the FY 2012-2013 budget by requesting 15 additional personnel.

In addition to staffing the Department's 13th engine company (Engine 8), these 15 personnel will help offset the need to hire overtime as a result of scheduled and unscheduled leave. Unfortunately, due to the Department's current policy of hiring non-certified personnel, the 15 personnel will not be hired, trained, and available for service until August 2013. The Department is diligently working to change this hiring policy, which could make them available for service on or before August 2013. However, because the need to improve the current level of service in Station 8's district exists now, the Department is considering the following options to place an engine in service in Station 8's district with current staffing and without additional expenditure:

Option One – Place a 13th engine company (Engine 8) into service with current staffing by reducing the minimum staffing on four apparatus. The four apparatus that would be affected would be the aerial ladders or engines at fire stations 1, 4, 5, and 8. Engine 8 would be staffed with four fire personnel by taking one person from each fire station and by leaving one of the two apparatus at each of the above fire stations to operate with a

three-person crew. While this option provides the Department with a 13th engine and will increase the current service level in Stations 8's district, there is some concern that it will reduce the capabilities of the four affected apparatus.

According to a report published in April 2010 by the National Institute of Standards and Technology (NIST), units staffed with four persons were able to complete rescue tasks 25% – 30% faster than three-person crews. This means, for example, that when responding to major medical incidents, structural fires, or special rescue scenarios, the tasks performed by a three-person crew (such as medical treatment, search and rescue, ventilation support, and victim extrication) could take longer to accomplish than if staffed with a standard four-person crew.

Option Two – Place a 13th engine (Engine 8) into service in station 8's district by taking one med unit out of service and by reducing the staffing on two other major apparatus. The two individuals from the med unit, combined with the two individuals from the two reduced apparatus (one person from each apparatus), would comprise a four-person crew on Engine 8. Additionally, a second med unit would be taken out of service after 10 p.m. (after peak demand period) and the two individuals from the med unit would be used to return the two previously reduced apparatus back to a four-person staffing level.

The Department currently staffs seven full-time med units each day. The med unit serves as an initial response unit, along with an engine or aerial ladder, to medical emergencies and injured person calls. The med unit provides both treatment and transport capabilities. A recent six-month demand analysis conducted by the Department shows the need for six full-time med units during hours of peak demand, which occur Monday through Friday between 10 a.m. and 10 p.m. The analysis also shows that most evenings after 10 p.m. the Department needs five med units to meet demands. The Department daily staffs seven full-time med units, which benefits the Department by (1) providing better workload distribution among med units, (2) by supplying additional reserve transport capability during high peak demand periods, and (3) by helping the Department meet its response time standard for med unit arrival of 9 minutes and 59 seconds, 90% of the time.

The major disadvantage with this option is the increased time it may take for a med unit to arrive on scene. The Department's current practice regarding response to medical incidents is to respond with an engine or aerial ladder and a med unit. An independent review of the Department's EMS system in 2008 revealed that approximately 50% of the time an engine or aerial ladder arrives on scene ahead of the med unit, with the med unit arriving on average 2–3 minutes later. Using this proposed staffing option may result in the med unit taking longer to arrive on scene due to fewer med units now covering a larger portion of the City. This issue is further exacerbated by the disparity in equipment and supplies carried on a med unit, as compared to that on engines and aerial ladders, resulting in the potential for delay in the time-dependent treatment and transport of serious medical and trauma-related conditions such as seizures, heart attack, shock, and stroke.

Option Three – Place Engine 8 in service using a flexible staffing concept in which a med unit, engine, and aerial ladder stationed together at two separate fire stations are staffed using 8 personnel. Normally, a fire station housing a med unit, engine, and aerial ladder would be staffed with a minimum of 10 personnel – 4 personnel on the engine, 4 personnel on the aerial ladder, and 2 personnel on the med unit. In this case, the 8 personnel would be used to staff an engine, ladder and med unit and would respond to emergency calls on a first-come, first-served basis. The Department anticipates that a majority of the time the personnel will be responding to medical calls with 3 persons on an engine or ladder and 2 individuals assigned to the med unit. At other times the engine and ladder would respond with 4 personnel, depending on the call type.

There will be times, however, when one of the three apparatus may be temporarily taken out of service due to a lack of available staffing. For instance, if all three apparatus are in the fire station and a structure fire is dispatched, the engine and ladder would respond with 4 personnel, leaving no one to staff the med unit. Likewise, should either the engine or aerial ladder individually respond to a call with 4 personnel, and should a med unit response occur during the same time that either the engine or aerial ladder is on a call, the engine or ladder would need to be temporarily removed from service in order to staff the med unit. Despite these issues, this deployment model

provides added flexibility by allowing apparatus to be staffed on the basis of need while attempting to minimize the time an apparatus operates with less than 4 personnel. Should this option be chosen, the Department will establish specific policies and procedures to manage its operational aspects.

Recommendation:

The Department recommends implementing Option Three using the flex staffing model to place Engine 8 or the 13th engine company into service until the 15 fire fighters approved in the FY 2012-2013 budget are hired and trained. Meanwhile, the Department will work to change its current hiring practice to hire only certified personnel. This change will allow the Department to hire, train, and place the 15 personnel into service on or before August 2013. The flex staffing option will remain in effect and operational for approximately 90-120 days. During this time period, an in-depth data analysis will be conducted to determine the frequency, times, and nature of any service delivery problems encountered by using this staffing method. Hiring the 15 additional personnel identified in the Department's FY 2012-2013 budget will reduce the amount of overtime required to maintain a minimum shift staffing level of 81.

Conclusion:

A decreased level of service currently exists in Station 8's district when compared with the other 12 fire districts within the Plano community. By placing an engine in service in Station 8's district, the response capability to medical emergencies, structure fires, and victim rescue will be improved. Using a flexible staffing model, the Department is recommending a solution that uses existing personnel and apparatus to place an additional engine company in service within Station 8's district.

Asphalt Overlay of Plano Streets

Plano History

Between 1983 and 1990, the City overlaid with asphalt a number of concrete streets in Plano in addition to overlaying some existing asphalt streets. The purpose was to extend the life of the streets rather than completely reconstructing the streets. Many of these streets have since been reconstructed by the Public Works/Engineering Department including the Haggard community, the southern portion of the Meadows area, Janwood Drive, Springbrook Drive, P Avenue from 18th Street to Parker Road and 14th Street from K Avenue to Ridgewood. 14th Street had been previously overlaid by TxDOT, and in 1990 the City removed the overlay and fixed the bad concrete pavement and installed a new overlay which lasted until 2010.

The remaining residential streets with asphalt overlays that are scheduled for reconstruction include many streets in the Dallas North additions and the Plano Park addition. All of the concrete street overlays were done because the concrete surface was spalling and flaking off but the structure of the street was in good condition.

No overlays have been done in Plano since 1990. City staff considered other locations to overlay with asphalt but City Council rejected that plan.

In preparing this report, staff visited several cities in the area to observe asphalt overlays and NovaChip® installations.

Is the use of asphalt overlays a cost effective method of extending street life?

The use of asphalt overlays is a cost effective method for extending the life of street pavement by improving ride quality and the sealing of the pavement surface and does provide some structural properties but will not correct base failures.

Asphalt overlays are commonly used by cities, counties, road authorities and state dot's to extend the life of their pavements on both concrete and asphalt roads.

As discussed above, Plano has used asphalt overlays to extend the life of some of our residential streets.

This does not mean that it is maintenance free. Asphalt overlays should only be laid on structurally sound pavement. Existing joints and cracks in the concrete pavement will reflect through the asphalt and will need to be sealed on a regular basis. A geotextile fabric can be placed on the existing pavement prior to placing the asphalt overlay. This will reduce some of the reflective cracking. Most geotextile fabrics prevent the asphalt overlay from being recycled.

What are the alternatives?

Alternatives include diamond grinding to improve ride quality as we did on Legacy Drive or the use of ultrathin asphalt overlay (NovaChip®) or SuperPave mix, which will seal the pavement, hide patched concrete and improve ride quality. With either of these options, the existing concrete pavement will still need to be repaired prior to their application.

Diamond grinding does not seal the pavement; but when done, all existing joints and cracks are resealed. The concrete patches are not hidden by this method although the appearance of the patch is not as noticeable. Additionally, you lose some thickness of the concrete structure in the pavement; in theory reducing the thickness of the pavement also reduces its strength.

NovaChip® was developed in the late 1980's, and it was first introduced to the United States in 1992.

NovaChip® is an ultrathin, bonded, gap-graded wearing course placed by a specialized machine in one pass. The process is applied using a self-priming paver. This exclusive pavement process applies an ultrathin, gap-graded hot mix wearing course over a polymer rich asphalt emulsion. This can be placed as thin as 0.5 inches (12.5 mm) to 1.5 inches (38 mm) thick. The emulsion cools quickly and bonds the asphalt to the pavement rapidly. Compaction is the final step in this process. The process rapidly secures the NovaChip® to the existing surface and allows for minimal traffic delays.

The ultrathin asphalt overlay will seal the concrete surface and bridge over joints and cracks better than a normal overlay. Larger cracks and joints will still reflect through the overlay. Any pavement that is cracked or deteriorated will need to be replaced before application of the asphalt overlay. This pavement would have to be repaired to the original joint pattern of the pavement to prevent these random cracks from reflecting through the coating.

Benefits include:

- Improves skid resistance on difficult, accident-prone areas
- Fast application process
- Open to traffic in minutes
- Reduces noise and hydroplaning over normal asphalt pavement
- Bonds well to concrete and asphalt
- Economical
- Limited milling necessary
- Less reflective cracking

The SuperPave (SUperior PERforming Asphalt PAVements) system was developed to give highway engineers and contractors the tools they need to design asphalt pavements that will perform better under extremes of temperature and heavy traffic loads. It represents an improved system for specifying the components of asphalt concrete, asphalt mixture design and analysis, and asphalt pavement performance prediction.

The SuperPave system was developed by the Strategic Highway Research Program (SHRP). The asphalt research program had three objectives: to investigate why some pavements perform well, while others do not; to develop tests and specifications for materials that will outperform and outlast the pavements being constructed under earlier mix designs; and to work with highway agencies and industry to have the new specifications put to use.

After five years of intensive research and testing, SHRP introduced the SuperPave system in 1992. The Federal Highway Administration (FHWA) then assumed responsibility for further development and validation of the SuperPave specifications and test procedures and initiated a national program to encourage the adoption of the SuperPave system.

SuperPave offers several advantages over the traditional asphalt design process.

Benefits include:

- Longer pavement life with less rutting
- Less fatigue cracking
- Less thermal cracking
- Reduced maintenance costs

Are there new products that improve asphalt overlay performance?

There are a number of products, such as the TruePave® fabric, that will prevent cracks and joints from reflecting the new asphalt paving on the market. The City of Plano tried a fabric on Janwood when it was overlaid. It failed. Some people have used a fabric with the NovaChip®; the City of Farmers Branch did not.

Using the asphalt overlays would seal the concrete surface and bridge over joints to prevent water from reaching the base. NovaChip® is an open graded asphalt mix that helps water drain off, reduces water spray on the road, improves skid resistance on the pavement and reduces road noise. Ultrathin overlays cannot be used over blowups, pumping slabs, faulted joints or crack widths greater than 3/8". A normal asphalt overlay would not be able to cover cracks and joints as wide as an ultrathin overlay would.

Newer mix designs, such as SuperPave, can be used that take into account the local climate conditions and traffic load. For SuperPave, the designer has the flexibility to design the pavement for the conditions in the area. The asphalt emulsion can be modified to meet specific requirements of Plano.

Will the use of asphalt overlays reduce slab failures?

Asphalt will reduce the number of slab failures, to some extent, by sealing and preventing water infiltration into the base of the road; but it will not completely stop slab failures. Failures will still occur where the base of the road has already deteriorated, utility trench settlement occurs and where trees are planted adjacent to the road in the median and along the parkway.

Environmental conditions, such as the recent drought, also cause our soils to shrink causing loss of support to the pavement. Water also enters the base from adjacent landscape irrigation causing differential shrink/swell rates to the base of the pavement. The trees draw moisture from under the pavement causing the pavement to settle and when the roots die they leave voids under the pavement.

Who in the region uses asphalt overlay? Why and what is their experience?

Many of the surrounding cities use asphalt overlays as a method of extending the life of their roads both for residential and thoroughfare pavements. These include Richardson, Garland, Addison, Farmers Branch, Carrollton, Highland Park and Dallas. Dallas is one of the heaviest users of this process on major arterials. TxDOT and the NTTA also use asphalt overlays as a pavement rehabilitation/preservation method.

They see this method as a way that is cost effective to extending the life of a road segment or street rather than rebuilding a street. If the structure of the road is sound but the surface is deteriorating, overlays are considered cost effective. They extend the service life and are a low life-cycle cost when placed on structurally sound pavement.

Dallas uses an estimate for asphalt overlay at \$200,000.00 per lane mile which includes the concrete pavement repairs needed, seal coat and asphalt overlay. This also includes the ancillary items such as barricading and other costs. This seems extreme but was verified by a City of Dallas pavement engineer. This equates to a cost of \$34.09 per square yard (SY).

Richardson's last asphalt overlay was done in 2006. Arapaho Road, a six lane divided thoroughfare, was overlaid from Coit to Floyd with a length of 7,300 feet. The concrete repairs were done in two phases before the overlay was done. The concrete repair cost was \$1,930,000. 65,500 SY of asphalt was laid at 1.5 to 2 inches thick (7,205 tons of asphalt). The asphalt cost \$262,000 at \$4.00/SY. Also, Richardson had to spend another \$10,000 for milling a notch at the gutter to avoid an asphalt rolled edge. The whole project cost approximately \$2,202,000.

The last structural overlay done by NTTA was around 2001, and the last thin ¾" asphalt overlay was done on the south end of Dallas North Toll Road in 2008. Also, NTTA has used the NovaChip® product on President George Bush Turnpike.

The City of Farmers Branch did pavement repairs and then overlaid with the NovaChip® product on Midway Road, Webb Chapel, and Marsh Lane where they repaired 34,252 SY of concrete paving and placed 172,375 SY of NovaChip® in 2009. The work on Webb Chapel went from LBJ Freeway to Beltline Road, approximately 2.5 to 3.0 miles of six lane divided thoroughfare. Total price for the project was \$4,053,500.00. This equates to approximately \$23.52/SY.

City staff looked at the NovaChip® product in Farmers Branch and a similar installation on Mockingbird Lane in Highland Park. The product is holding up well. The concrete joints are reflecting thru most of the asphalt overlay.

Staff looked at the NovaChip® product in Farmers Branch and an asphalt overlay in Carrollton north of Farmers Branch. The NovaChip® product is older but has performed better. Staff would be in favor of using the NovaChip® product rather than a SuperPave or typical overlay. The NovaChip® product has performed better than the traditional asphalt overlay with less cracking. The NovaChip® product can be placed with a thinner layer than a SuperPave overlay, which would work better as an overlay since it would impact the drainage less and require less milling of the existing pavement.

Should we experiment with overlays?

The City recently completed pavement repairs on Coit Road between Spring Creek Parkway and Plano Parkway. The Arterial Concrete Pavement Repair cost totaled approximately \$690,815. If we had planned to overlay this section with a thin asphalt overlay, we would have done the concrete repairs differently. We would not have repaired any spalling areas, and we would have done complete panel replacement rather than partial panels to reduce the potential for reflective cracking. We estimate that this would have increased the concrete repair cost by about 40%. We have estimated the cost for doing this project with a final paved surface of NovaChip® thin bonded overlay similar to what Farmers Branch and University Park did.

Doing the identical project with the additional concrete replacement needed for the NovaChip® process, the overlay with NovaChip®, traffic markings and other items, including inflation, would total \$2,235,082.

This equates to a cost of \$115,329.00 per lane mile ($\$2,235,082.00 / 3.23 \text{ miles} / 6 \text{ lanes}$) compared to Dallas's \$200,000.00 per lane mile cost.

See attached breakdown of costs.

Staff would like to try this product on two streets. We will be rehabbing Independence Parkway later this year or early next year. This street has both straight sections and curved sections. This would be a good test area. Secondly, we have a problem with the Plano Parkway Bridge over Spring Creek (near Accent Drive south of Collin Creek Mall). There is some spalling on the bridge deck which must be repaired. We can either completely replace the deck or do repairs with a thin asphalt overlay. We would like to do the overlay. This would repair the bridge at a lower cost and less inconvenience to the public.

Other factors to consider, such as start-up costs for maintenance.

If the City starts to use asphalt overlays as a pavement rehabilitation method, start-up cost would be minimal; and minor repairs for main breaks and pavement failures on overlaid streets could be done with existing equipment such as dump trucks, flat plate compactors and asphalt handling equipment. If rollers were needed, they could be leased from equipment rental companies.

As more streets received overlays, the Street Section would need equipment to maintain these asphalt overlays. Initially, the crews who do the concrete repairs could do the asphalt repairs as well. However, over time we would probably need separate crews. This would consist of the following costs:

Equipment

	Item	Quantity	Unit Price	Total
1.	Double Cab Crew Trucks	2	47,000	94,000
2.	Double Drum Steel Roller	1	58,000	58,000
3.	Standard Asphalt Paver	1	169,000	169,000
4.	Asphalt Tack Pot	1	25,000	25,000
5.	Tandem Dump Truck	1	125,000	125,000
6.	Bobtail Dump Truck	1	80,000	80,000
7.	Miscellaneous Hand Tools and Equipment *	LS	5,000	5,000
	TOTAL			\$556,000

*Does not include the cost of asphalt, NovaChip®, asphalt tack material or equipment maintenance costs for Fleet Services.

Personnel – One Crew

	Item	Quantity	Unit Price	Total
1.	Crew Leader	1	54,735	54,735
2.	Sr. Equipment Operator	1	54,375	54,375
3.	Labor/Maintenance Workers	6		288,522
	TOTAL PERSONNEL - ANNUAL			\$397,632

Conclusions

Asphalt overlays can contribute to extending the life of a road as long as the base is stable and existing concrete is structurally sound. Additionally, asphalt streets can provide a smoother and quieter ride.

Several mix designs are available as “thin asphalt overlays”, including the NovaChip® product or SuperPave mix design. Thin asphalt overlays are classified as any mat less than 1.5” thick. Outside gutter lines would need to be milled down to maintain the mat thickness up to the gutter and to maintain drainage capacity.

Even though the NovaChip® product or SuperPave mix design will be more expensive than a regular asphalt overlay, the thinner layer and the overall performance justifies the additional cost.

It is to be expected that if and when repairs are made because of pavement failure or a utility cut, the original material used in the overlay may not be available. NovaChip® and SuperPave mixes are not run on a daily basis by the asphalt plants, and the asphalt suppliers’ plants do not run every day. Regular asphalt will not perform the way the specialized NovaChip® or SuperPave mix designs perform. This may lead to delays in completing repairs waiting on acceptable repair material or using what is available.

The asphaltic material will seal the pavement to prevent water intrusion which deteriorates the base by pumping fines out of the base and causes differing expansion and contraction of the soil. The asphalt layer will need to be maintained on a periodic basis by crack and joint sealing to maintain the integrity of the asphalt mat. This is true for our existing concrete pavement as well.

Design costs are not included in this analysis; and outside consultants would need to be retained to correctly design any asphaltic mix that is placed for the climate and the traffic volume, especially truck traffic. Additional QC/QA requirements would be needed when the mix is being produced and the overlay placed.

The daily price on all asphalt products is impacted by the price of oil which has increased and is projected to continue increasing faster than the cost of producing and transporting concrete is projected to increase.

The Public Works Department recommends that we try asphalt as an overlay on our thoroughfares on a test basis. It would not use it in our neighborhoods. We would recommend that the product be tested on a section of Independence Parkway and on Plano Parkway on the bridge, west of Accent Drive.

**PRICE COMPARISON OF NOVA CHIP OVERLAY
VS
EXISTING CONCRETE REPAIR METHOD
COIT RD - PLANO PKWY TO SPRING CREEK PKWY**

ITEM	UNIT	UNIT COST	QTY	NOVA CHIP COST	EXISTING PROJECT
Full Depth Saw Cut, R/D of Saw Water Sludge	LF	\$1.50	28,942	\$43,413.00	\$31,010.10
F/I Longitudinal & Transverse Butt Joint	LF	\$2.70	28,942	\$78,143.40	\$55,818.18
R/D Concrete Street Paving	SY	\$5.00	13,470	\$67,350.00	\$48,107.25
F/I Conc Street Paving 8"	SY	\$47.00	13,470	\$633,090.00	\$452,208.15
F/I 6" Monolithic Curb	LF	\$4.00	4,840	\$19,360.00	\$13,827.80
R/F/I 4" Sidewalk	SF	\$3.50	4,952.45	\$17,333.58	\$17,333.58
F/I Mono Median Nose	EA	\$500.00	3	\$1,500.00	\$1,500.00
F/I Concrete BFR TYP A	EA	\$700.00	14	\$9,800.00	\$2,800.00
F/I Concrete BFR TYP D	EA	\$250.00	40	\$10,000.00	\$8,250.00
F/I Concrete BFR TXDOT TYP 21	EA	\$800.00	2	\$1,600.00	\$1,800.00
Traffic Pavement Markings	LS	\$120,000	1	\$120,000	\$8,860
Remove Existing Pavement Markings	LS	\$70,848	1	\$70,848	\$0.00
F/I Asphalt Joint Material	LF	\$1	50,000	\$0	\$50,000.00
Barricading	MTH	\$8,310.00	8	\$50,480.00	\$1,500.00
Milling	LF	\$1.73	34,074	\$58,948.02	\$0.00
Nova Chip Overlay	SY	\$7.47	140,993	\$1,053,217.71	\$0.00
TOTAL PROJECT COST				\$2,235,083.71	\$690,815.06

1. Concrete quantities have been increased by 40% due to additional repairs needed due to the Nova Chip Process.
2. Additional quantities have been added to BFR items due to Nova Chip being considered a overlay. ADA states all BFR's have to be improved to new standards. The City of Plano may also expect a small increase in the amount of sidewalk replacement due to this same requirement.
3. Barricading prices were based on Farmers Branch Project. The City of Plano may see a reduced amount for this item based on history.
4. The Milling and Nova Chip Overlay prices have been increased by 8% from the Farmers Branch project for inflation. The Farmers Branch Project was completed in June of 2009.
5. This estimate is for 17,037 LF (3.23 miles) of 6 lane divided arterial roadway including intersections, turn lanes, and cross overs.

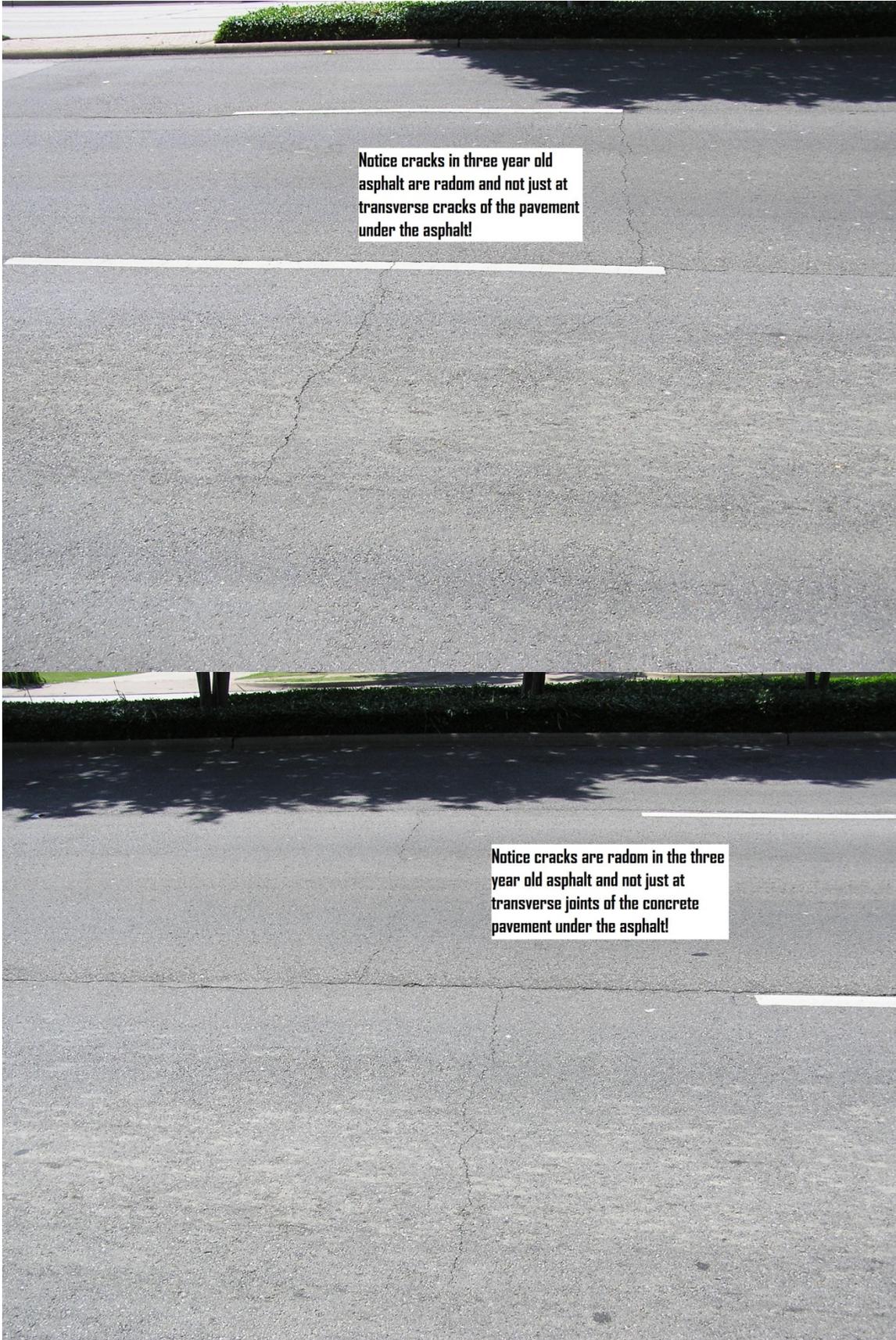


1. Novachip in intersection.
2. Concrete strip and asphalt at the bottom right.



Novachip on Arterial St.





Notice cracks in three year old asphalt are radom and not just at transverse cracks of the pavement under the asphalt!

Notice cracks are radom in the three year old asphalt and not just at transverse joints of the concrete pavement under the asphalt!



Novachip is four years old and cracks are only forming at the existing joints of the concrete pavement under the novachip and are tighter than the cracks of the three year old asphalt section.

Novachip is four years old and some transverse joints have not cracked.



Public WiFi in City of Plano Facilities

David Stephens
Director, Technology Services
August 18, 2012

- 
- There is an increasing expectation for free public WiFi access, especially in government facilities.
 - There will be a 350% increase in public WiFi access locations around the US in the next 4 years (Wireless Broadband Alliance).
 - Most common locations are:
 - Libraries
 - Public open spaces
 - Entertainment venues
 - Shopping districts
 - Airports

Current City of Plano WiFi Locations

- The 5 Plano Public Libraries are the prime locations for free public WiFi in government facilities.
- Public WiFi has recently been offered in the Council Chambers during City Council Meetings and P&Z meetings.

Use of WiFi - Libraries

- The Libraries have approximately 150 PC's that the public can use.
- WiFi services added in October 2011 in the libraries.
- Serviced 1899 wireless patrons in July and 13,788 patrons since service started.
- Bandwidth to the Internet was not increased but overall bandwidth requirements increased.
- Patrons complaining about WiFi speed being slow.

Use of WiFi – Council Chambers

- Plano started offering free WiFi in Council Chambers in April, 2012.
- Nominal use during Council and P&Z Meetings.
- Increased staff usage after public meetings were over.

Concerns

- Increased use of limited Internet connectivity would impact city operations.
 - Currently have two 45MB connections to Internet.
- Need for consistency in filtering.
 - Council mandated that Library Internet access be filtered in 1999.
 - Does this mandate apply to all Internet access from City sponsored services?

Concerns (continued)

- Growing demand from other departments that want to provide WiFi services.
 - Parks & Recreation
 - 5 recreation centers
 - Other facilities

Options

1. No change
 - Keep limited bandwidth at 5 libraries.
 - Provide public WiFi only during Council & P&Z meetings at Plano Municipal Center.
 - No additional cost.
2. Increase bandwidth to City facilities.
 - Increase bandwidth to Libraries.
 - Increase bandwidth to Recreation Centers.
 - No increase in Internet bandwidth.
 - No additional technical support staff.
 - Cost \$77,312.

Options (continued)

3. Increase bandwidth to City sites and Internet

- Increase bandwidth to Libraries & Recreation Centers.
- Allocate 45MB connection to the Internet solely for public access.
- No additional technical support staff.
- Cost \$132,712.

Questions



Date: August 14, 2012
To: Bruce D. Glasscock, City Manager
From: Amy Fortenberry, Director of Parks & Recreation
Subject: Plano Centre Options

At the July 25 city council meeting, staff outlined options for the future of Plano Centre. The discussion is a result of decreased revenues and long term bookings, the aging facility, increased competition, and changes in Plano since the facility's opening 22 years ago. Discussion on the center's future ranged from exiting the conference/civic center business and divesting of the property to building an integrated hotel and convention center near the Legacy area. After discussion, council asked staff to return with options at various price points not to exceed \$10 million.

The improvement options are being refined and will be ready for consideration at the August 18 council work session. Staff will provide information about the level of improvement that can be expected and the anticipated return on investment for each option. While the costs are not available at the time of preparing this memo, financial information on how this projected might be funded is included below.

Funding Scenarios:

Option 1: Capital Reserve Fund. Improvements up to \$4M can be included in FY 2012-13 Proposed Capital Reserve Fund budget. This option does not impact the property tax, operating budget, or other projects in the Capital Reserve Fund (the City has realized savings from other projects). The Proposed budget already includes \$2 million for Plano Centre improvements. With council approval, an additional \$2 million from other project savings can be applied towards this project.

Option 2: Certificate of Obligations (5-Yr term / 4.65% interest rate) for up to \$9 million. This option creates additional debt that may be repaid by the property tax. The FY 2012-13 proposed interest only payment would range from \$139,500 to \$209,250 depending on the amount of the note and the proposed annual payment (starting in FY 2013-14) would be \$1.4 million on a \$6 million note, \$1.8M on an \$8 million note. This option creates a burden to the property tax however the City will pay off the 2007 Tax Note in FY 2012-13 (final payment \$2.1 million) and the existing capacity may be moved from the 2007 Tax Note to this project. A \$9 million note would result in utilizing the full \$2.1 million that is being retired on the 2007 Tax Note.

A request was made by some council members at the July 25 meeting for the approximate value of the Plano Centre and the surrounding land. The Collin Central Appraisal District lists the land (roughly 48 acres) and improvements around \$11 million. Of course, a market appraisal would be needed if we wanted more specific information or chose to sell the property.

M E M O R A N D U M

DATE: July 19, 2012

TO: Bruce D. Glasscock, City Manager
Frank Turner, Deputy City Manager

FROM: Christina Day, Community Services Manager
Selso Mata, Chief Building Official
Cynthia O'Banner, Director of Property Standards
Jerry Cosgrove, Director of Public Works
Danny Alexander, Crime Analysis Unit Supervisor
Erin Merritt, Neighborhood Police Officer

CC: Phyllis Jarrell, Director of Planning
Greg Rushin, Chief of Police
Cathy Zeigler, Director of Libraries
Bob Loftin, Librarian

RE: **Keeping Plano A City of Vibrant and Renewing Neighborhoods**

The City Council recently adopted a strategic vision for Plano that includes “a city of vibrant and renewing neighborhoods” as one of its six pillars, recognizing the impact of neighborhoods on quality of life, community perception, and economic stability. Plano has 98% of our residentially zoned land built and functioning within neighborhoods. Most houses were built over a thirty year span between 1970 and 2000. The community’s moderately priced housing was largely built more than 30 years ago, as demonstrated in Figure One below.

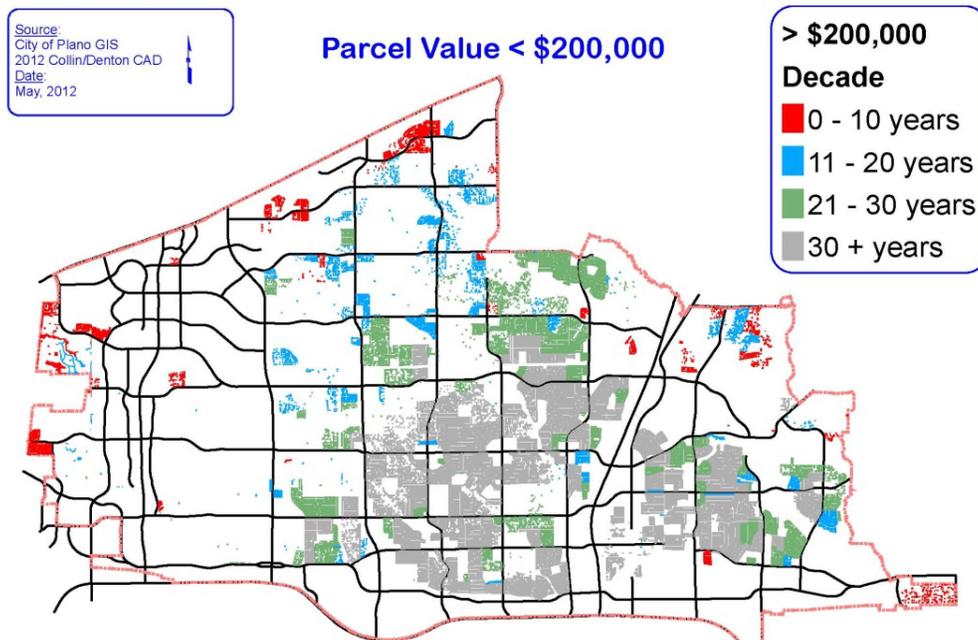


Figure 1: Plano’s Moderately Priced Housing by Age

In order for Plano's neighborhoods to remain competitive with new housing being built in neighboring cities to the north and east, they must be maintained. The City has been actively promoting maintenance of the residential built environment for years through:

1. Building Code Enforcement
2. Property Code Enforcement
3. Housing Rehabilitation and Emergency Repairs
4. Neighborhood Policing and Crime Prevention
5. Neighborhood Planning and Outreach
6. Social Service Support

These methods have been successful to date, with Plano's neighborhoods remaining safe and attractive; however, times are changing. In response to the demands for redevelopment, code compliance, and other shifting service requirements, staffing and other local resources have been redeployed in a continuing effort to remain efficient.

Since the 1980s, Plano has relied on Federal block grant money to assist income-qualified residents with rehabilitation of dwellings. However, as shown in Figure 2 below, that funding source is declining steadily over time, as our needs have risen due to the age of housing. We believe that the City must find alternative means for reinvesting in housing and neighborhoods if we are to remain a competitive and desirable destination for new residents. Of late, we have collaborated increasingly with volunteer philanthropic groups to assist homeowners in need; however, this is insufficient to meet the long-term demand.

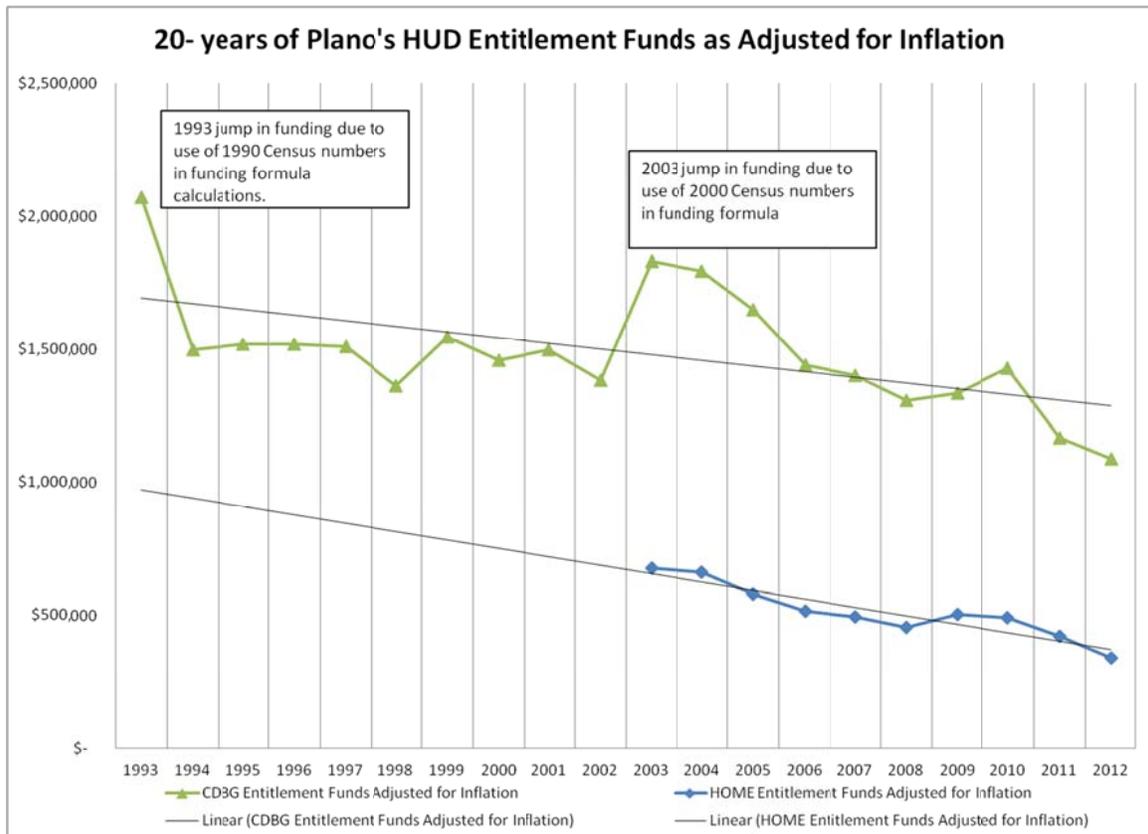


Figure 2: HUD Entitlement Funds Adjusted for Inflation

Plano's housing stock impacts quality of life, community perception, and economic development. Sally Bane, Director of Economic Development, confirms that "the variety of housing stock is an important consideration of any corporation considering relocation. Companies want to ensure that a targeted community has vibrant neighborhoods to satisfy the full spectrum of their employees' housing needs. Plano's ability to maintain desirable neighborhoods will continue to be an important factor in remaining attractive to prospective companies." In order to maintain vibrant and renewing neighborhoods, the cross-departmental group authoring this memo (representing Building Inspections, Planning, Police, Property Standards, and Public Works) is asking the Council to consider two action items:

1. Invest in a Comprehensive Review of Neighborhood Services - \$50,000

We recommend that the first step in administering the new fund be to hire a consultant during fiscal year 2012-13. The consultant would work closely with our multi-department team to conduct a comprehensive study resulting in a neighborhood and housing operational plan for the City. No department currently has the capacity to conduct this scale of project in-house with existing staff. The proposed study would:

- Analyze the status of Plano neighborhoods,
- Review current level of services provided by the City supporting neighborhoods and housing,
- Consider gaps or overlaps in service,
- Make recommendations for maintenance of and/or modifications to our business practices to ensure Plano's best chance of success in avoiding neighborhood decline over at least the next ten years, and
- Recommend implementation of a program for housing reinvestment utilizing the neighborhood vitality funds.

2. Establish a Neighborhood Vitality Fund - \$450,000

In December 2006, the City published a workforce housing study, focused on moderately-priced housing in the city. This study considered "workforce housing" a critical element of the community's economic vitality and included actions that the City of Plano could take to accommodate the provision of suitable housing for employees and potential employees of businesses and government entities in Plano. One primary recommendation of the report was a housing reinvestment incentive program, which was well received by Council in 2008, but not implemented due to budget concerns.

In order to ensure we, as a community, are leading the way with regard to this important issue, staff is requesting to set aside \$450,000. In future years, the program will likely need an on-going funding commitment in an amount to be determined later as the program is developed and initiated. We envision these funds being used primarily as an incentive for homeowners' reinvestment in Plano's moderately-priced housing, focusing on extending the life of the structure. We will explore options for leveraging these funds through public and private partnerships, with organizations such as the Federal Home Loan Bank. Taking action now will help to ensure the community is appropriately investing in the future.

We hope that City Council will also envision the value in investing in a comprehensive review of our practices. A broad view of current programs and organization will help sustain the community through the next decade of aging homes, population, and infrastructure. Staff wishes to move forward with a full understanding of the conditions and the most effective and economic measures of addressing current needs, and with the support of Council as requested, we should have the means and resources to do so.



Date: August 14, 2012
To: Bruce Glasscock, City Manager
Thru: Frank Turner, Deputy City Manager
From: Cynthia O'Banner, Property Standards Director
Subject: Rental Housing Inspection Program Proposal Update

Several weeks ago on July 25, 2012, a proposed Rental Housing Inspection Program was presented to City Council for consideration and direction. Questions were brought forth during the discussion for which the questions and answers are detailed below:

1. *How will we determine when a property becomes a rental or a re-rental property and will the 'rental' determination be easy to make?*

Occupancy determination will mainly be based upon information from new water utility account activation. It is foreseen that occupancy will be fairly easily to determine utilizing water utility account information along with other sources of information, such as central appraisal district information as needed to create a database of properties without a homestead designation to which educational material can be created and distributed. Additionally, ordinance definitions will clarify program terminology.

2. *Will the majority of inspections be done after the actual move-in of the new tenant?*

Yes, however upon request, an inspection may be scheduled and completed prior to a new tenant move-in. A provision may also be incorporated to give consideration to accepted third party inspections that were previously performed at a property within the past 6 months. Scheduling of inspections is expected to improve over time as familiarity with the program increases.

3. *Have we consulted real estate/ landlord groups?*

Department staff met with real estate stakeholders to discuss the main framework and prospective of the proposed program. Valuable information was shared along with a greater insight into the objectives of all participating in the discussion. Discussions are expected to continue with the inclusion of smaller property management companies that manage properties for absentee owners.

4. *Will the Customer Utility Department be required to perform an extra step to inquire about whether the new connect is for tenant activation?*

No, the Customer Utility Department is already retrieving occupancy information during new account activations.

5. Will the Water Department be prepared to inform residents of the required inspection?

Yes, to better augment community outreach efforts concerning the inspection program, an announcement concerning the inspection will be shared with residents during their new connection request.

6. How will we get in contact with absentee owners; will letters be mailed to the owners last known address?

Yes, an inspection notice will be mailed to the property owner for confirmation of the inspection. Again, the database should get better as the program matures.

7. What will we do if we are unable to get in contact with an owner?

In-house and other public record information will be utilized to make contact with the owner. As applicable, owner contact information may be requested from the tenant or the owner may opt to designate an authorized representative. Failure to confirm the inspection by the owner may result in the issuance of a judicial citation(s) to the owner at their last known address.

8. What are other cities doing?

A number of cities were surveyed reflecting a varying range in scope of each rental housing inspection program (see attached chart)

9. What do we foresee as potential legal thresholds?

- Property access authority when consent is not given
- Establishing an administrative review/appeal process regarding violation decisions
- Determining judicial alternatives/remedies

10. What issues may arise if there are additional inspections (i.e. similar to the problems surrounding in-home day care issue when ordinance wasn't changed)?

- Properties that are unknown to be tenant occupied through record access
- Unexpected surge in new connect projections
- Unknown impact on Building Inspection permit activity

11. How will we address locating rental properties for which the property owner or property manager maintains the utilities in his name?

Review of local appraisal district records to determine how the property address compares to the owner's mailing address and if there is a homestead exemption on file for the property address.

12. What has been the outcome of the discussion with the real estate community?

A statement of opposition of any such program was made by one participant however all other participants involved in the discussion were seemingly aligned with the scope and goals of the program with the understanding that the program should benefit all, inclusive of owners, property managers, tenants and the city.

The responses to the questions are intended to provide further clarification of the proposed program. Additional program details will be discussed during the City Council work session on August 18, 2012.

Rental Housing Inspection Programs

City	Established	Registration Fees	Inspection Fees
Carrollton	2006	\$50 Annual	None
Farmers Branch	1984 2008 (amended)	\$75 Annual	\$0 Inspection \$50 Re-inspection
Garland	2005	\$55 Annual	\$0
Lewisville	2008	\$0	\$50 Inspection; refundable fee added to water bill; credited after inspection
Coppell	2011	\$5 Annual	\$20 Inspection
North Richland Hills	2012	\$0	\$0
Richardson	2004 2011 (amended)	\$75 Annual	\$0 Inspection \$75 1 st Re-inspection \$120 Subsequent re-inspections
The Colony	2008 2010 (moratorium)	\$5 Annual (2008) \$30 Annual (2010)	\$50 Inspection



Plano Television Network Fund

CITY of PLANO



Plano Television Network (PTN)

- On-air in 1988 as result of local cable franchise for Telecable (Time Warner)
- Established Public, Education and Government (PEG) Channels in Plano
- Currently provide five PEG channels in Plano through Time Warner and two through Verizon
- 2001 Cable Community Grant (10 yrs) \$150,000/yr for return of seven channels

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Plano Television Network 1988-2010

- PEG fee = \$0.38 per account in addition to cable franchise fee of 5% of gross
- Added PEG for Verizon 2006 at 1% gross
- Added PEG for AT&T Uverse 2007 at 1% gross
- Added PEG for Grande Communications 2010 at 1% gross

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Texas Senate Bill 5

- Effective after January 1, 2011 and upon expiration of local franchise agreement(s)
- Become state franchise agreements under Texas Public Utility Commission
- All PEG fees at 1% of gross
- “may be used by the municipality as allowed by federal law”

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Federal Law

- Considered a franchise fee
- Limited to “**capital costs**” only
- PEG funds cannot be used for operational expenses

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Annual Revenue (estimate 11-12)

Grande	\$	6,858
AT&T	\$	59,218
Time Warner	\$	243,788
Verizon	\$	468,916

CITY of PLANO



FY 2012-13 Budget
(PTN only)

Operational Costs = \$ 984,955

PTN Fee (PEG rev) = \$ 770,308

General Fund Transfer = \$ 250,000

Fund balance = \$ 32,955

Result will affect fund balance attributed to restricted capital

CITY of PLANO

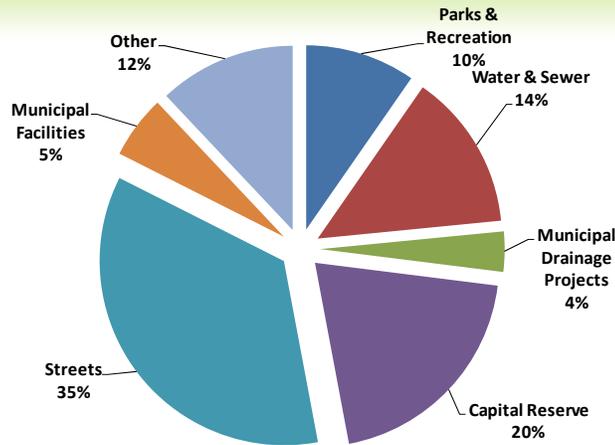


Questions?

Thank You

CITY of PLANO

COMMUNITY INVESTMENT PROGRAM FY 2012-13 EXPENDITURES \$98,115,900



CIP COMING ON-LINE

- ⊙ Included within the FY 2012-13 Budget is funding of \$412,606 for operating expenditures associated with hiring 15 new positions for the opening of Fire Station #13, Technology Serves remodel, City House and the Fire Station #4.
- ⊙ Additional CIP operating expenditures are projected in FY 2013-14 through FY 2015-16 to complete the hiring process of staffing Fire Station #13, a ladder truck and pumper at a total cost of \$5.1 million.