

Fire/EMS Development Fee Study

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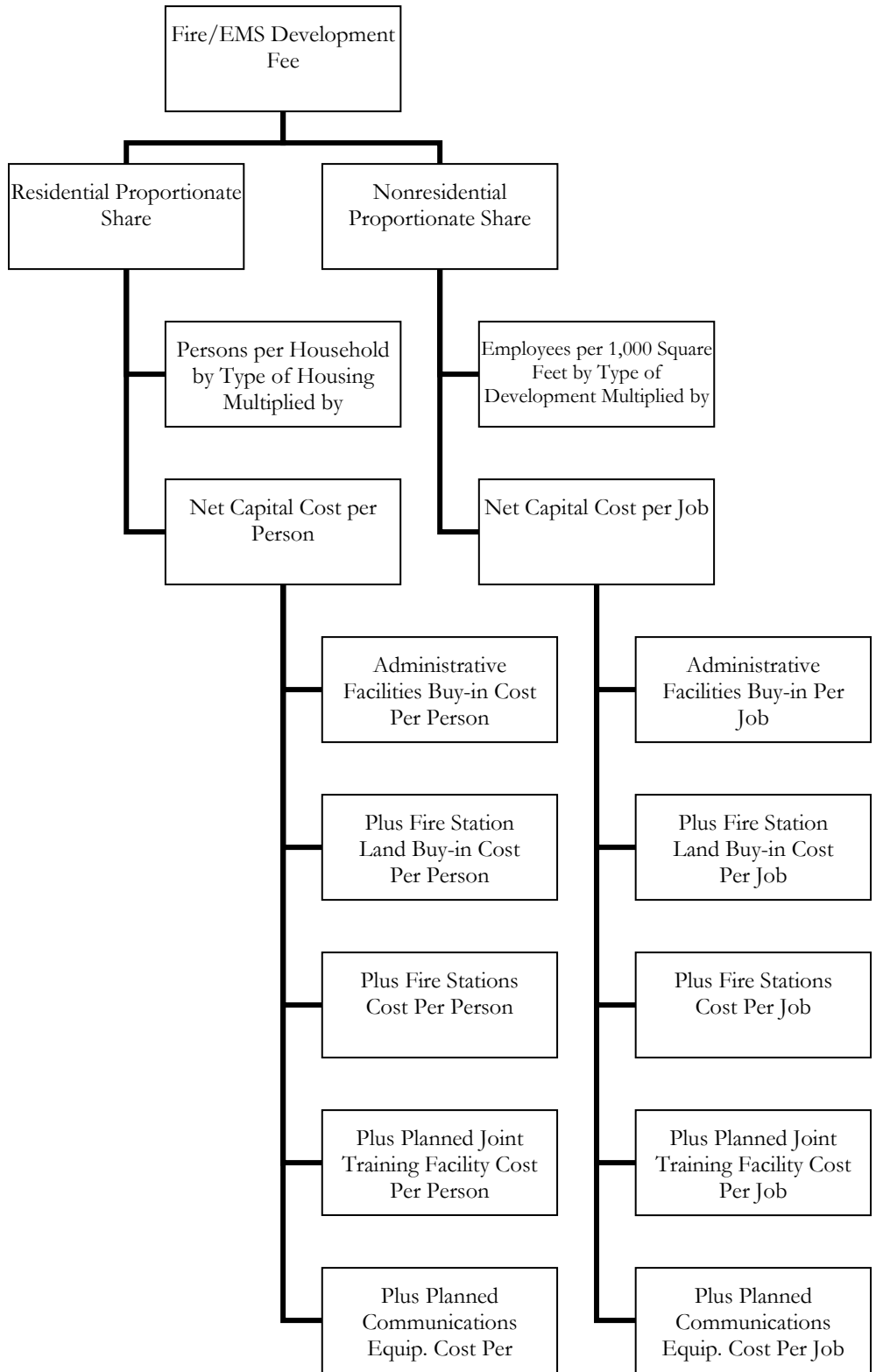
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Fire and Emergency Medical Services

METHODOLOGY

All three development fee methodologies are used to calculate the Fire/EMS Development Fee. The buy-in methodology is used for the Fire Department's Administrative Space in the new Public Safety Building and fire station locations. The incremental expansion methodology is used for fire stations and apparatus. The plan-based methodology is used for the Joint Training Facility and communications equipment. For residential development, capital costs are calculated per person while capital costs for nonresidential development are calculated on a per employee basis.

Figure 1: Fire and EMS Development Fee Methodology



PROPORTIONATE SHARE

Figure 2 shows the calls for service information provided by the Surprise Fire Department. Approximately 86% of non-road related calls were to residential addresses with the remaining 14% going to nonresidential addresses. Road related calls are omitted from this analysis because the origin and destination of these trips is unknown and thus these calls cannot be attributed to residential or nonresidential development. Likewise, calls for service to unidentifiable land use are omitted from this analysis.

Figure 2: Calls for Service

	<i>Calls</i>	<i>%</i>
Calls for Service to Residential Addresses	4,392	86%
Calls for Service to Nonresidential Addresses	702	14%
TOTAL	5,094	100%

Source: Surprise Fire Department. Random sample, excludes traffic related calls.

FIRE ADMINISTRATIVE FACILITIES BUY-IN

Figure 3 lists the 8,500 square feet of administrative facilities for the Fire Department at the new Public Safety Building. These facilities have sufficient capacity for fifteen years. The buy-in methodology is used to calculate the level-of-service for these facilities when they are at capacity in FY2022.

The original cost of these facilities (\$3,043,000) is used to calculate this component of the Fire Development Fee. To calculate the cost per demand unit, the original cost is first multiplied by the proportionate share factors for residential and nonresidential development. This figure is then divided by the corresponding demand units for FY2022. For residential development, the cost per person is calculated as follows: $\$3,043,000 \times .86 = \$2,623,647$; $\$2,623,647 / 250,320$ persons in FY2022 = \$10.48 per person. This calculation is repeated to calculate the cost per job for nonresidential development.

Figure 3: Fire Administrative Facilities Buy-in Component

	<i>Square Feet*</i>	<i>Original Cost/ SF*</i>	<i>Total</i>
Fire Share of New Public Safety Building	8,500	\$358	\$3,043,000

	Proportionate Share	FY2022 Demand Units	Cost per Demand Unit
Residential	86%	250,320 Peak Population	\$10.48
Nonresidential	14%	57,523 Jobs	\$7.29

* Surprise Facilities Management Division.

LOS Administration Square Footage per Person	0.03
LOS Administration Square Footage per Job	0.02

LAND FOR FIRE STATIONS

The City has acquired land in preparation for constructing three future fire stations. The development agreements with which these sites were acquired state that development fees will be used to repay developers for these sites. These stations will be constructed in order “maintain response time goals of 5 minutes 80% of the time” (City of Surprise, *Capital Improvements Plan FY2007*). Thus, the projected number of total persons and jobs to be served by these three station locations is used to derive the cost per person and job.

The current LOS being provided to existing residential and nonresidential development is 0.00037 stations per person and 0.00039 stations per job based on the five permanent stations that will be completed at the end of FY2007. To calculate the number of persons and jobs to be served by the three future fire station locations, the number of future stations is multiplied by the proportionate share factor then divided by the current LOS. Using residential development as an example: (3 station locations x .86)/0.00037 = 69,204 persons to be served. This calculation is repeated using the nonresidential data which yields a result of 17,725 jobs to be served.

The buy-in cost is \$9.03 per person and \$9.39 per job. For residential development, the cost per person is calculated as follows: \$725,000 x .86 = \$623,500; \$623,500/69,204 persons to be served = \$9.03 per person. This calculation is repeated using the nonresidential data to calculate the cost per job.

Figure 4: Land for Fire Stations Buy-in LOS Standards

<i>Future Station Location</i>	<i>Original Cost*</i>
Asante	\$270,000
Greer Ranch	\$185,000
Austin Ranch	\$270,000
TOTAL	\$725,000

* City of Surprise Fire Department.

CURRENT LOS ANALYSIS

	<i>Number of Stations</i>	<i>Proportionate Share</i>	<i>Demand Units Served</i>	<i>Stations per Demand Unit</i>
Residential	5	86%	115,340 persons	0.000037
Nonresidential	5	14%	17,725 jobs	0.000039

DEMAND UNITS TO BE SERVED

	<i>Number of Stations</i>	<i>Proportionate Share</i>	<i>Demand Units To Be Served</i>	<i>Stations per Demand Unit</i>
Residential	3	86%	69,204 persons	0.000037
Nonresidential	3	14%	10,635 jobs	0.000039

Buy-in Cost Per Person	\$9.03
Buy-in Cost Per Job	\$9.39

FIRE STATIONS

Surprise is currently constructing Fire Station 305 and 306. These stations will be completed by the end of FY2007. At that time the City will have a total of 59,400 square feet of fire station facilities. The City’s CIP states these stations will “maintain response time goals of 5 minutes 80% of the time.” Thus the number of persons and jobs in FY2007 is used to calculate the LOS the City will have when these stations are complete and will maintain into the future.

The 59,400 square feet will have a total value of \$17,820,000; an average of \$300 per square foot. This results in a cost of \$133.21 per person and \$138.55 per job. For residential development, the cost per person is calculated as follows: \$17,820,000 x .86 = \$15,364,240; \$15,364,240/115,340 persons in FY2007= \$133.21 per person. This calculation is repeated to calculate the cost per job for nonresidential development.

Figure 5: Fire Stations LOS Standards

<i>Station</i>	<i>Square Feet*</i>	<i>Cost/SF*</i>	<i>Total</i>
FS301	15,500		
FS302	5,300		
FS303	11,600		
FS305 (to be completed end of FY07)	16,000		
FS306 (to be completed of FY07)	10,000		
Fire Auxillary Facility	1,000		
TOTAL	59,400	\$300	\$17,820,000

* Surprise Fire Department.

	Proportionate Share	FY2007 Demand Units	Cost per Demand Unit
Residential	86%	115,340 Peak Population	\$133.21
Nonresidential	14%	17,725 Jobs	\$138.55

LOS Station Square Feet per Person 0.44
 LOS Station Square Feet per Job 0.46

FIRE APPARATUS

Surprise is currently constructing Fire Station 305 and 306. These stations will be completed in by the end of FY2007. At that time the City will have a total of 28 pieces of apparatus feet of fire. The City’s CIP states these stations (and apparatus) will “maintain response time goals of 5 minutes 80% of the time.” Thus the projected number of persons and jobs in FY2007 is used to calculate the LOS the City will have at that time and will maintain into the future.

The 28 units will have a total value of \$9,339,600. This results in a cost of \$69.82 per person and \$72.61 per job. For residential development, the cost per person is calculated as follows: \$9,339,600 x .86 = \$8,052,517; \$8,052,517/115,340 persons in FY2007= \$69.82 per

person. This calculation is repeated to calculate the cost per job for nonresidential development.

Figure 6: Fire Stations LOS Standards

<i>Apparatus/Equipment</i>	<i># of Units*</i>	<i>Cost/ Unit *</i>	<i>Total</i>
Pumper (includes 2 units for 2 station under construction)	10	\$661,000	\$6,610,000
Ladder Truck	1	\$1,143,000	\$1,143,000
Ladder Tender	1	\$590,000	\$590,000
Brush Truck	2	\$147,500	\$295,000
HAZMAT Truck	1	\$84,000	\$84,000
AR301	1	\$73,000	\$73,000
Chief's Sedan	1	\$47,200	\$47,200
Assistant Chief's 4X2 SUV	1	\$43,200	\$43,200
Assistant Chief's 4X4 SUV	1	\$82,000	\$82,000
Chaplain's Sedan	1	\$32,200	\$32,200
Battlion Chief's 4X4 Truck	1	\$129,600	\$129,600
4X4 Pickup Truck	1	\$49,200	\$49,200
Marked Prevention Sedan	1	\$36,200	\$36,200
Prevention Sedan	1	\$28,300	\$28,300
Prevention 4x4 Pickup Truck	1	\$30,700	\$30,700
Prevention Pickup Truck	3	\$22,000	\$66,000
TOTAL	28		\$9,339,600

* Surprise Fire Department.

	Proportionate Share	FY2007 Demand Units	Cost per Demand Unit
Residential	86%	115,340 Peak Population	\$69.82
Nonresidential	14%	17,725 Jobs	\$72.61

LOS Fire Apparatus per 1,000 Persons	0.21
LOS Fire Apparatus per 1,000 Nonres. Trip	0.22

PLANNED JOINT TRAINING CENTER COMPONENT

Figure 7 lists the City's planned Joint Training Center from the CIP. The project is a result of both new and existing residential development and is estimated to provide sufficient capacity for the next twenty years. Thus the total City population and number of jobs in FY2027 (which includes both new and existing development) is used to calculate the cost per person and job. New growth will pay for its share of this project via the Fire Development Fee while existing growth's share will have to be funded from non-development fee sources.

The planned project will cost \$16.35 per person and \$9.70 per nonresidential vehicle trip. For residential development, the cost per person is calculated as follows: \$5,300,000 x .86 = \$4,569,611; \$4,569,611/279,554 persons in FY2027= \$16.35 per person. This calculation is repeated to calculate the cost per job for nonresidential development.

Figure 7: Planned Joint Training Center Component

AVERAGE APPROACH

<i>Project</i>	<i>FY2007</i>	<i>FY2008</i>	<i>FY2009</i>	<i>FY2010</i>	<i>FY2011</i>	<i>TOTAL</i>
Joint Training Center	\$3,000,000	\$0	\$1,300,000	\$0	\$1,000,000	\$5,300,000
TOTAL	\$3,000,000	\$0	\$1,300,000	\$0	\$1,000,000	\$5,300,000

* City of Surprise, *Capital Improvements Plan FY2007*.

	<i>%</i>	<i>Share of Cost</i>
Residential Proportionate Share	86%	\$4,569,611
Nonresidential Proportionate Share	14%	\$730,389
Net New Residential Demand Units FY2027 (population)		279,554
Net New Nonresidential Demand Units FY2027 (jobs)		75,290
Cost Per Person		\$16.35
Cost Per Job		\$9.70

PLANNED FIRE COMMUNICATIONS EQUIPMENT COMPONENT

Figure 8 lists the City’s planned radio purchase from the CIP. This project is the result of new residential and nonresidential development only and is estimated to provide sufficient capacity for through the end of the CIP planning horizon. Thus the net increase in City population and number of jobs in FY2011 is used to calculate the cost per demand unit. Development fees will be used to fund these projects.

The planned projects will cost \$40.11 per person and \$39.43 per job. For residential development, the cost per person is calculated as follows: \$2,000,000 x .86 = \$1,724,382; \$1,724,382/42,988 net new persons FY2007-FY2011= \$40.11 per person. This calculation is repeated to calculate the cost per job for nonresidential development.

Figure 8: Planned Communications Equipment Component

MARGINAL APPROACH

<i>Project</i>	<i>FY2007</i>	<i>FY2008</i>	<i>FY2009</i>	<i>FY2010</i>	<i>FY2011</i>	<i>TOTAL</i>
Radio Purchase	\$0	\$0	\$2,000,000	\$0	\$0	\$2,000,000
TOTAL	\$0	\$0	\$2,000,000	\$0	\$0	\$2,000,000

* City of Surprise, *Capital Improvements Plan FY2007*.

	<i>Proportionate Share</i>	<i>Share of Cost</i>
Residential Proportionate Share	86%	\$1,724,382
Nonresidential Proportionate Share	14%	\$275,618
Net New Residential Demand Units FY2007 - FY2011 (population)		42,988
Net New Nonresidential Demand Units FY2007 - FY2011 (jobs)		6,990
Cost Per Person		\$40.11
Cost Per Job		\$39.43

DEVELOPMENT FEE STUDY

The City should update its development fees every three years to ensure the methodologies, assumptions, and cost factors used in the calculations are still valid and accurate. As we do with many of our Arizona development fee clients, TischlerBise has included the cost of

preparing the current Fire/EMS Development Fee in the fee calculations in order to create a source of funding to conduct this regular update. This cost (\$8,500) is allocated using the proportionate share factors and projected increase in population and jobs over the next three years. A three year period is used since this is the period of time at which the development fee methodology should be revisited in a growing community. This results in a development fee study cost per demand unit of \$0.26 per person and \$0.25 per job.

FIRE/EMS DEVELOPMENT FEE

Figure 9 provides a summary of the level of service standards used to calculate development fees for fire and emergency medical services. Fire/EMS Development Fees are calculated for both residential and nonresidential land uses. Developers may be eligible for site-specific credits or reimbursements only if they provide system improvements that have been included in the Fire/EMS Development Fee calculation schedule. Specific policies and procedures related to site-specific credits for system improvements are addressed in the ordinance that establishes the City's fees. Project improvements normally required as part of the development approval process are not eligible for credits against development fees.

As shown in the bottom of Figure 9, the capital costs per demand unit are \$279.26 per person and \$277.23 per job.

Figure 9: Fire/EMS Development Cost Summary

		<i>Standards:</i>	
Persons Per Household			
	Single Family Detached	2.53	
	Single Family Attached; Multi-family, 1-9 Units In Structure	2.36	
	Multi-family, 10 Or More Units in Structure	1.87	
	All Other Housing Types	2.24	
Employees Per 1,000 Square Feet			
	Com / Shop Ctr 25,000 SF or less		3.33
	Com / Shop Ctr 25,001-50,000 SF		2.86
	Com / Shop Ctr 50,001-100,000 SF		2.50
	Com / Shop Ctr 100,001-200,000 SF		2.22
	Com / Shop Ctr over 200,000 SF		2.00
	Office / Inst 10,000 SF or less		4.48
	Office / Inst 10,001-25,000 SF		4.15
	Office / Inst 25,001-50,000 SF		3.91
	Office / Inst 50,001-100,000 SF		3.69
	Office / Inst over 100,000 SF		3.35
	Business Park		3.16
	Light Industrial		2.31
	Warehousing		1.28
	Manufacturing		1.79
	Hotel (per room)		0.44
Cost Summary			
		<u>Per Person</u>	<u>Per Employee</u>
	Buy-in Administrative Facilities	\$10.48	\$7.29
	Stations and Apparatus	\$203.02	\$211.16
	Buy-in Land for Fire Stations	\$9.03	\$9.39
	Planned Joint Training Center	\$16.35	\$9.70
	Planned Communications Equipment	\$40.11	\$39.43
	Development Fee Study	\$0.26	\$0.25
	Net Capital Cost per Demand Unit	\$279.26	\$277.23

Figure 10 contains a schedule of the Fire/EMS Development Fees. For residential land uses, persons per household (2.53 for a single family detached unit) are multiplied by the capital cost per person (\$279.26), for a development fee per unit of \$706. For nonresidential land uses, such as a commercial shopping center less than 25,000 square feet, the number of employees per 1,000 square feet (3.33) is multiplied by the capital cost per employee (\$277.23), for a fee of \$923 per 1,000 square feet.

Figure 10: Fire/EMS Development Fee Schedule

Development Fees

<u>Residential</u>	<u>Per Housing Unit</u>
Single Family Detached	\$706
Single Family Attached; Multi-family, 1-9 Units In Structure	\$658
Multi-family, 10 Or More Units in Structure	\$522
All Other Housing Types	\$624
<u>Nonresidential</u>	<u>Per 1,000 Sq Ft</u>
Com / Shop Ctr 25,000 SF or less	\$923
Com / Shop Ctr 25,001-50,000 SF	\$792
Com / Shop Ctr 50,001-100,000 SF	\$693
Com / Shop Ctr 100,001-200,000 SF	\$615
Com / Shop Ctr over 200,000 SF	\$554
Office / Inst 10,000 SF or less	\$1,241
Office / Inst 10,001-25,000 SF	\$1,150
Office / Inst 25,001-50,000 SF	\$1,083
Office / Inst 50,001-100,000 SF	\$1,022
Office / Inst over 100,000 SF	\$928
Business Park	\$876
Light Industrial	\$640
Warehousing	\$354
Manufacturing	\$496
Hotel (per room)	\$121