

DRAFT #2

2016 Capital Facility Development Impact Fee Study

Prepared for:
City of Boulder, Colorado

March 25, 2016



4701 Sangamore Road
Suite S240
Bethesda, Maryland 20816
800.424.4318
www.tischlerbise.com

Capital Facility
Development Impact Fee Study
City of Boulder, Colorado

CONTENTS

EXECUTIVE SUMMARY.....1
Impact Fee Summary.....1
Figure 1. Summary of Proposed Fee Methods and Infrastructure Components.....3
Figure 2. Generic Impact Fee Formula.....4
Maximum Allowable Impact Fees by Type of Land Use.....5
Figure 3. Summary of DRAFT Maximum Allowable Impact Fees.....5
LIBRARY IMPACT FEES.....6
Methodology.....6
Figure 4. Library Impact Fee Methodology Chart.....6
Library Level of Service Standards and Costs.....7
Figure 5. Library Buildings Level of Service Standards and Cost Factors.....7
Figure 6. Library Collection Materials Level of Service Standards.....8
Credit Evaluation.....8
Library Input Factors and Maximum Supportable Impact Fees.....9
Figure 7. Library Input Factors and Maximum Supportable Impact Fees.....9
Figure 8. Library Fee Comparison: Current Cost per Person to Updated Cost per Person.....10
Projected Revenue.....11
Figure 9. Projected Library Impact Fee Revenue.....11
PARKS AND RECREATION IMPACT FEES.....12
Methodology.....12
Figure 10. Parks and Recreation Impact Fee Methodology Chart.....13
Parks & Recreation Level of Service Standards and Costs.....14
Figure 11. Outdoor Park Improvements Level of Service Standards and Cost Factors.....15
Figure 12. Recreation Buildings and Pools Level of Service Standards and Cost Factors.....17
Figure 13. Administrative and Support Facilities Level of Service Standards and Cost Factors.....18
Credit Evaluation.....18
Parks and Recreation Input Factors and Maximum Supportable Impact Fees.....19
Figure 14. Parks and Recreation Input Factors and Maximum Supportable Impact Fees.....20
Figure 15. Parks and Recreation Fee Comparison: Current Cost per Person to Updated Cost per Person.....21
Projected Revenue.....22
Figure 16. Projected Parks and Recreation Impact Fee Revenue.....22
HUMAN SERVICES IMPACT FEES.....23
Methodology.....23
Figure 17. Human Services Impact Fee Methodology Chart.....23
Human Services Level of Service Standards and Costs.....24

Figure 18. Human Services Level of Service Standards and Cost Factors.....24

Credit Evaluation24

Human Facilities Input Factors and Maximum Supportable Impact Fees.....25

Figure 19. Human Services Input Factors and Maximum Supportable Impact Fees.....25

Figure 20. Human Services Fee Comparison: Current Cost per Person to Updated Cost per Person26

Projected Revenue27

Figure 21. Projected Human Services Impact Fee Revenue27

MUNICIPAL FACILITIES IMPACT FEES28

Methodology28

Figure 22. Municipal Facilities Impact Fee Methodology Chart.....29

Proportionate Share Factors30

Figure 23. Proportionate Share Factors for Municipal Facilities Impact Fees.....31

Municipal Facilities Level of Service Standards and Costs31

Figure 24. Municipal Facilities Office Buildings Level of Service Standards and Cost Factors ..32

Figure 25. Boulder Community Hospital Land Purchase Details33

Figure 26. Municipal Facilities Land Level of Service Standards and Cost Factors.....34

Figure 27. Municipal Court Level of Service Standards and Cost Factors35

Credit Evaluation36

Residential Impact Fees for Municipal Facilities37

Figure 28. Municipal Facilities Input Factors and Maximum Supportable Residential Impact Fee Schedule37

Figure 29. Municipal Facilities Fee Comparison (Residential): Current Cost per Person to Updated Cost per Person38

Nonresidential Impact Fees for Municipal Facilities39

Figure 30. Municipal Facility Input Factors and Maximum Supportable Nonresidential Impact Fee Schedule39

Figure 31. Municipal Facilities Fee Comparison (Nonresidential): Current Cost per Employee to Updated Cost per Employee40

Projected Revenue41

Figure 32. Projected Municipal Facilities Impact Fee Revenue41

POLICE IMPACT FEES.....42

Methodology42

Figure 33. Police Facilities Impact Fee Methodology Chart43

Proportionate Share Factors44

Figure 34. Proportionate Share Factors for Police Impact Fees45

Police Facilities Level of Service Standards and Costs45

Figure 36. Police Facilities Level of Service Standards and Cost Factors46

Figure 37. Police Communications Infrastructure Level of Service Standards and Cost Factors47

Credit Evaluation47

Residential Impact Fees for Police Facilities.....48

Figure 38. Police Input Factors and Maximum Supportable Residential Impact Fee Schedule..48

Figure 38. Police Fee Comparison (Residential): Current Cost per Person to Updated Cost per Person49

Nonresidential Impact Fees for Police Facilities.....50
Figure 40. Police Input Factors and Maximum Supportable Nonresidential Impact Fee Schedule.....50
Figure 40. Police Facilities Fee Comparison (Nonresidential): Current Cost per Trip to Updated Cost per Trip.....51
Projected Revenue52
Figure 42. Projected Police Facilities Impact Fee Revenue.....52
FIRE IMPACT FEES53
Figure 43. Fire Impact Fee Methodology Chart54
Proportionate Share Factors55
Figure 44. Fire Proportionate Share Factors55
Fire Level of Service Standards and Costs56
Figure 45. Fire Station Inventory and Costs57
Figure 46. Fire Storage Facility Level of Service Standards and Cost Factors58
Figure 47. Fire Apparatus Inventory and Costs59
Figure 48. Fire Station Land Inventory and Costs60
Credit Evaluation60
Residential Impact Fees for Fire Facilities and Apparatus.....61
Figure 49. Fire Input Factors and Maximum Supportable Residential Impact Fee Schedule61
Figure 50. Fire Fee Comparison (Residential): Current Cost per Person to Updated Cost per Person.....62
Nonresidential Impact Fees for Fire Facilities and Apparatus.....63
Figure 51. Fire Input Factors and Maximum Supportable Nonresidential Impact Fee Schedule63
Figure 52. Fire Fee Comparison (Nonresidential): Current Cost per Employee to Updated Cost per Employee64
Projected Revenue65
Figure 53. Projected Fire Impact Fee Revenue.....65
IMPLEMENTATION AND ADMINISTRATION.....66
Credits and Reimbursements66
Collection and Expenditure Zones.....67
APPENDIX A. DEMOGRAPHIC DATA69

Executive Summary

The City of Boulder retained TischlerBise to prepare an Impact Fee Study for various infrastructure categories. This report updates the Development Impact Fee Study prepared in 2009 and adopted by the City of Boulder in 2010.

Impact fees are one-time payments used to fund system improvements needed to accommodate development. This report documents the data, methodology, and results of the impact fee calculations. The methods used to calculate impact fees in this study are intended to satisfy all legal requirements governing such fees, including provisions of the U. S. Constitution and the Colorado Development Impact Fee Act. The following infrastructure categories have been developed with methodologies that meet the requirements to be adopted as impact fees.

- Library
- Parks and Recreation
- Human Services
- Municipal Facilities
- Police
- Fire

Impact Fee Summary

As documented in this report, impact fees for the City of Boulder are proportionate and reasonably related to the capital facility service demands of new development. The written analysis of each impact fee methodology, establish that impact fees are necessary to achieve an equitable allocation of costs in comparison to the benefits received. Impact fee methodologies also identify the extent to which newly developed properties are entitled to various types of credits to avoid potential double payment of capital costs. An impact fee represents new growth's proportionate share of capital facility needs. By law, impact fees can only be used for *capital* improvements, not operating or maintenance costs. Furthermore, impact fee revenues can only be used for capital improvements that expand capacity.

Impact fees are subject to legal standards, which require fulfillment of three key elements: need, benefit, and proportionality.

- First, to justify a fee for public facilities, it must be demonstrated that new development will create a **need** for capital improvements.
- Second, new development must derive a **benefit** from the payment of the fees (i.e., in the form of public facilities constructed within a reasonable timeframe).
- Third, the fee paid by a particular type of development should not exceed its **proportionate** share of the capital cost for system improvements.

TischlerBise documented appropriate demand indicators by type of development. Specific capital costs have been identified using local data and costs. This report includes summary tables indicating the specific factors used to derive the impact fees. These factors are referred to as level of service, or infrastructure standards.

Methodologies and Approach

There are three basic *methods* used to calculate impact fees.

- The **incremental expansion method** documents the current level of service for each type of public facility, in both quantitative and qualitative measures. The intent is to use revenue collected to expand or provide additional facilities, as needed to accommodate new development, based on the current cost to provide capital improvements.
- The **plan-based method** is commonly used for public facilities that have adopted plans or engineering studies to guide capital improvements, such as utility systems.
- A third approach, known as the **cost recovery method**, is based on the rationale that new development is paying for its share of the useful life and remaining unused capacity of an existing facility.

A summary is provided in Figure 1 showing the methodologies, infrastructure components, and allocations used to calculate impact fees for the City of Boulder.

Figure 1. Summary of Proposed Fee Methods and Infrastructure Components

Fee Category	Components	Methodology	Cost Allocation
Library	<ul style="list-style-type: none"> ▪ Facilities ▪ Collection Materials 	<ul style="list-style-type: none"> ▪ Incremental ▪ Incremental 	100% Residential
Parks and Recreation	<ul style="list-style-type: none"> ▪ Outdoor Park Improvements ▪ Recreation Facilities and Pools ▪ Parks and Rec Admin & Support Facilities 	<ul style="list-style-type: none"> ▪ Incremental ▪ Incremental ▪ Incremental 	100% Residential
Human Services	<ul style="list-style-type: none"> ▪ Human Services Facilities 	<ul style="list-style-type: none"> ▪ Incremental 	100% Residential
Municipal Facilities	<ul style="list-style-type: none"> ▪ Office Buildings ▪ Land ▪ Municipal Court 	<ul style="list-style-type: none"> ▪ Incremental ▪ Cost Recovery ▪ Plan-Based 	Functional Population
Police	<ul style="list-style-type: none"> ▪ Station Space ▪ Communications Infrastructure 	<ul style="list-style-type: none"> ▪ Incremental ▪ Incremental 	Functional Population
Fire	<ul style="list-style-type: none"> ▪ Station Space ▪ Storage Facility ▪ Apparatus ▪ Land 	<ul style="list-style-type: none"> ▪ Incremental ▪ Plan-Based ▪ Incremental ▪ Incremental 	Calls for Service

Credits

A general requirement common to impact fee methodologies is the evaluation of *credits*. Two types of credits should be considered, **future revenue credits** and **site-specific credits**. Revenue credits may be necessary to avoid potential double payment situations arising from a one-time impact fee plus the payment of other revenues (e.g., property taxes) that may also fund growth-related capital improvements. Because new development may provide front-end funding of infrastructure, there is a potential for double payment of capital costs due to future payments on debt for public facilities. This type of credit is not necessary for any of the impact fees calculated herein.

The second type of credit is a **site-specific credit** for system improvements that have been included in the impact fee calculations. Policies and procedures related to site-specific credits for system improvements should be addressed in the ordinance that establishes the development fees. However, the general concept is that developers may be eligible for site-specific credits only if they provide system improvements that have been included in the impact fee calculations. Project

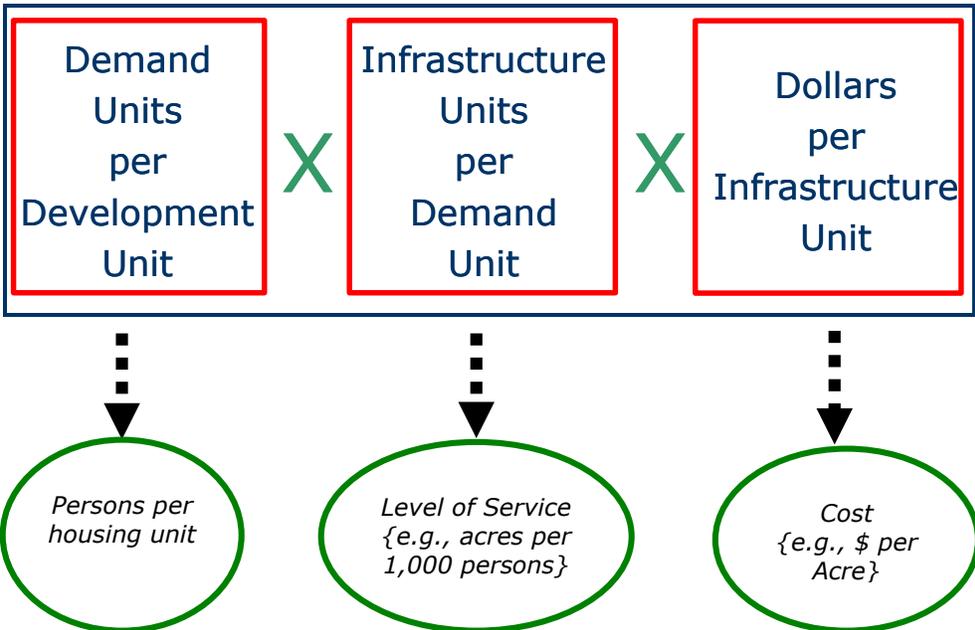
improvements normally required as part of the development approval process are not eligible for credits against impact fees.

Generic Impact Fee Calculation

In contrast to development exactions, which are typically referred to as project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or the entire jurisdiction (often referred to as “system-level” improvements). The basic steps in a generic impact fee formula are illustrated in Figure 2. The first step (see the left box) is to determine an appropriate demand indicator, or service unit, for the particular type of infrastructure. The demand/service indicator measures the number of demand or service units for each unit of development.

For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per occupied housing unit. The second step in the generic impact fee formula is shown in the middle box below. Infrastructure units per demand unit are typically called Level-Of-Service (LOS) standards. In keeping with the park example, a common LOS standard is park acreage per thousand people. The third step in the generic impact fee formula, as illustrated in the right box, is the cost of various infrastructure units. To complete the park example, this part of the formula would establish the cost per acre for land acquisition and/or development.

Figure 2. Generic Impact Fee Formula



Maximum Allowable Impact Fees by Type of Land Use

The impact fees calculated for the City of Boulder represent the highest amount feasible for each type of applicable land use, or *maximum allowable* amounts, which represents new growth's proportionate share of the cost for the appropriate capital facilities. Figure 3 provides the schedule of *maximum allowable impact fees* by type of land use. For residential impact, fees will be imposed according to square feet of finished floor area. For nonresidential development, fees will be assessed per square feet of floor area or unique demand indicators such as the number of rooms in a hotel. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures and/or a decrease in the City's level of service standards.

Figure 3. Summary of DRAFT Maximum Allowable Impact Fees

RESIDENTIAL IMPACT FEES		MAXIMUM ALLOWABLE IMPACT FEES Per Development Unit						
Square Feet	Development Unit	Library	Parks & Recreation	Human Services	Municipal Facilities	Police	Fire	TOTAL
800 or less	Dwelling Unit	\$424	\$2,656	\$81	\$287	\$216	\$193	\$3,857
801 to 1200	Dwelling Unit	\$653	\$4,086	\$126	\$442	\$333	\$297	\$5,937
1201 to 1600	Dwelling Unit	\$794	\$4,971	\$153	\$538	\$405	\$361	\$7,222
1601 to 2200	Dwelling Unit	\$914	\$5,720	\$176	\$619	\$466	\$415	\$8,310
2201 or more	Dwelling Unit	\$1,027	\$6,424	\$198	\$696	\$523	\$466	\$9,334

NONRESIDENTIAL IMPACT FEES		MAXIMUM ALLOWABLE IMPACT FEES Per Development Unit						
Land Use	Development Unit	Library	Parks & Recreation	Human Services	Municipal Facilities	Police	Fire	TOTAL
Retail / Restaurant / Service	Square Feet of Floor Area	\$0	\$0	\$0	\$0.43	\$0.71	\$0.61	\$1.75
Office	Square Feet of Floor Area	\$0	\$0	\$0	\$0.61	\$0.28	\$0.87	\$1.76
Light Industrial	Square Feet of Floor Area	\$0	\$0	\$0	\$0.39	\$0.17	\$0.56	\$1.12
Warehousing	Square Feet of Floor Area	\$0	\$0	\$0	\$0.15	\$0.09	\$0.22	\$0.46
Institutional^	Square Feet of Floor Area	\$0	\$0	\$0	\$0.13	\$0.23	\$0.19	\$0.55
Hospital	Square Feet of Floor Area	\$0	\$0	\$0	\$0.50	\$0.33	\$0.71	\$1.54
Nursing Home/Assisted Living	Bed	\$0	\$0	\$0	\$144.00	\$69.00	\$204.00	\$417.00
Nursing Home/Assisted Living*	Square Feet of Floor Area	\$0	\$0	\$0	\$0.36	\$0.17	\$0.13	\$0.66
Lodging	Room	\$0	\$0	\$0	\$98.00	\$208.00	\$139.00	\$445.00
Lodging**	Square Feet of Floor Area	\$0	\$0	\$0	\$0.16	\$0.34	\$0.06	\$0.56

* For illustration and comparison with per square foot impact fees, assumes an average of 400 sq. ft. per bed

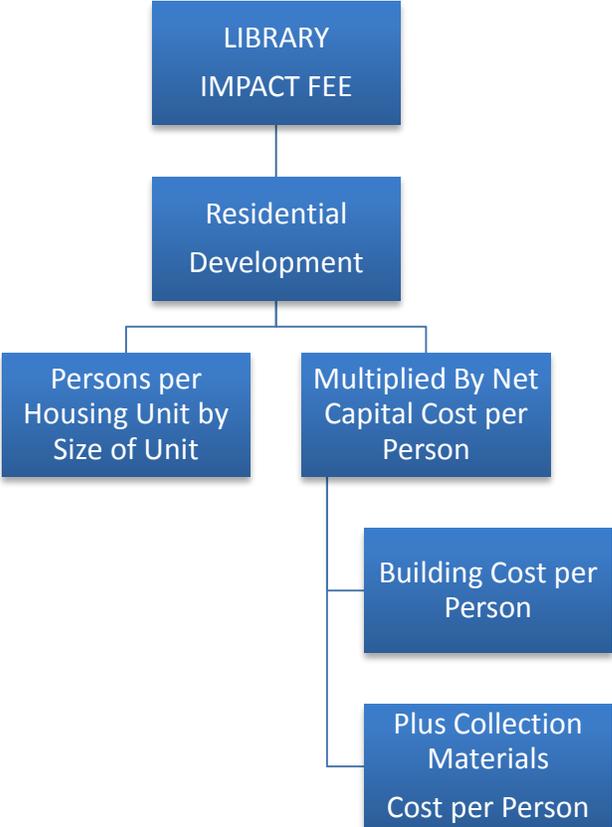
** For illustration and comparison with per square foot impact fees, assumes an average of 600 sq. ft. per room

Library Impact Fees

Methodology

The Library impact fee calculation uses the incremental expansion methodology. Components of the Library fee include costs for Library buildings and materials included in the Library’s collections. The Library system current consists of a Main Library and four branch locations. It is anticipated that the City will expand facilities in the future to serve growth to maintain current levels of service. An incremental approach is also used for collection materials. All costs are allocated 100 percent to residential development. Figure 4 diagrams the general methodology used to calculate the Library Impact Fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the impact fee components. The impact fee is derived from the product of persons per housing unit (by type of unit) multiplied by the net capital cost per person. The boxes in the next level down indicate detail on the components included in the fee.

Figure 4. Library Impact Fee Methodology Chart



Library Level of Service Standards and Costs

Library Buildings Incremental Cost Component

The City of Boulder Library System consists of a Main Library and four branch locations. Total library system square footage totals 109,123 square feet. As noted above, the City anticipates expanding the Library System in the future to serve new growth. Therefore an incremental methodology is used where current levels of service and current cost per capita are used.

Figure 5 provides levels of service and costs for the City of Boulder Library System. Current replacement costs for buildings (including contents, equipment, and miscellaneous improvements) are from the City of Boulder 2015 property schedule. To reflect total replacement costs for Library facilities, 30 percent is added to the construction cost to reflect “soft” costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). According to information provided by the City, the Library System has replacement value of \$27,149,229 reflecting facilities owned by the City. The replacement cost per square foot is \$269 resulting in a cost per person of \$280 (1.04 sq. ft. per person x \$269 = \$280).

Figure 5. Library Buildings Level of Service Standards and Cost Factors

Facility Name	Location	Current Square Feet	Current Replacement Cost (Building Costs)*	Current Replacement Cost (Soft Costs)**	Total Costs	Cost/SF***
Main Library	1001 Arapahoe Ave.	84,760	\$18,191,871	\$5,457,561	\$23,649,433	\$279
Meadows Branch	4800 Baseline Road	7,812	leased	na	na	na
Reynolds Branch	3595 Table Mesa Drive	10,371	\$1,732,088	\$519,626	\$2,251,714	\$217
Carnegie Branch	1125 Pine	5,610	\$960,063	\$288,019	\$1,248,082	\$222
North Boulder Corner Branch	4600 Broadway	570	leased	na	na	na
TOTAL		109,123	\$20,884,022	\$6,265,207	\$27,149,229	
TOTAL City Owned		100,741	\$20,884,022	\$6,265,207	\$27,149,229	\$269

Cost per Square Foot=> **\$269**

BASED ON TOTAL SPACE (CITY OWNED AND LEASED)	
Total Square Feet	109,123
Population in 2015	104,808
Square Feet per Person	1.04
Total Cost per Sq. Ft.	\$269
Cost per Person	\$280

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015).

** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.

*** Average cost per square foot is average of City owned facilities.

Sources: City of Boulder Property Schedule, 2015; City of Boulder Facilities and Asset Management.

Library Collection Materials Incremental Expansion

The Library System’s collection includes adult and juvenile books, electronic/audio books, music CDs, DVDs, periodicals, and an eBook Database. The total number of current units is 522,815 with a total replacement value of approximately \$8.7 million. Based on the current estimated City population of 104,808, this equates to a level of service of \$83 per person. Figure 6 provides detail on the current inventory and average unit costs for each type of material. Unit costs were provided to TischlerBise by City staff.

Figure 6. Library Collection Materials Level of Service Standards

Type of Material	# of units	Unit Price	Current Value
Books	487,221	\$16	\$7,795,536
Audio Books	8,225	\$40	\$329,000
Music CDs	9,575	\$16	\$153,200
DVDs	17,474	\$22	\$384,428
Periodicals: magazines	320	\$60	\$19,200
Periodicals: newspapers	33	\$460	\$15,180
eBook Database	1	\$195,938	\$195,938
TOTAL	522,815		\$8,681,364

Total Units	522,815
Total Cost	\$8,681,364
Population in 2015	104,808
Units per Person	4.99
Cost per Person	\$83

Source: City of Boulder Library Department.

Credit Evaluation

The City does not have any outstanding debt for Library facilities, therefore a credit is not necessary.

Library Input Factors and Maximum Supportable Impact Fees

Infrastructure standards used to calculate the Library impact fees are shown in the boxed area at the top of Figure 7. Impact fees for Libraries are based on household sizes for all types of units by square footage per unit. Level of service standards are based on costs per person for Library buildings and collection materials as described in the previous sections and summarized below. Each cost component of the impact fee is shown as a cost per person.

The bottom portion of Figure 7 shows maximum supportable impact fees for Libraries. The amounts are calculated by multiplying the persons per housing unit for each size of housing unit by the net capital cost per person.

For example, the impact fee for a dwelling unit of 800 square feet or less is calculated by multiplying the persons per housing unit of 1.17 by the net capital cost of \$363 for an impact fee amount of \$424 per unit. (Detail on number of persons by square feet of finished floor area is provided in the Appendix.)

Figure 7. Library Input Factors and Maximum Supportable Impact Fees

<i>Level Of Service</i>	<i>Factors</i>
Building Cost	<i>Per Person</i> \$280
Collection Cost	\$83
Debt Service Credit	\$0
Net Capital Cost	\$363

DRAFT [03.25.16]			
<i>Square Feet</i>	<i>Development Unit</i>	<i>Persons per Housing Unit</i>	<i>Impact Fee per Housing Unit</i>
<i>(finished floor area)</i>		<i>All Housing Unit Types</i>	<i>All Housing Unit Types</i>
<i>Residential (by square feet of finished living space)*</i>			
800 or less	Dwelling Unit	1.17	\$424
801 to 1200	Dwelling Unit	1.80	\$653
1201 to 1600	Dwelling Unit	2.19	\$794
1601 to 2200	Dwelling Unit	2.52	\$914
2201 or more	Dwelling Unit	2.83	\$1,027

* Square feet increments available using the formula:

$y = 1.0418 \ln(x) - 5.4937$, where "x" = square feet and "y" = persons per housing unit.

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per person** compared to the **current cost per person** from the current City of Boulder Impact Fee schedule for the Library category. It should be noted that the current cost per person shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has applied in its annual updates.¹ Figure 8 compares the draft calculated cost to the current schedule for the Library category.

Figure 8. Library Fee Comparison: Current Cost per Person to Updated Cost per Person

	DRAFT Preliminary Calculated [03.25.16] Cost per Person	Current City of Boulder Impact Fee Cost per Person[^]	Increase / Decrease
Library	\$363	\$215	\$148

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹ The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Projected Revenue

The revenue projection shown in Figure 9 is calculated based on the preliminary calculated 2016 Library Impact Fee and the development projections described in the land use assumptions (TischlerBise 03/25/16). To the extent the rate of development either accelerates or slows down, there will be a corresponding change in Impact Fee revenue and the timing of the need for capital improvements.

Figure 9. Projected Library Impact Fee Revenue

		<i>Residential</i>
	<i>Fee (Wtd Avg)</i>	\$776 per housing unit
	<i>Year</i>	<i>Housing Units</i>
Base	2015	45,740
Year 1	2016	46,012
Year 2	2017	46,288
Year 3	2018	46,566
Year 4	2019	46,846
Year 5	2020	47,127
Year 6	2021	47,409
Year 7	2022	47,694
Year 8	2023	47,980
Year 9	2024	48,268
Year 10	2025	48,557
	<i>Ten-Yr Increase</i>	2,817
	Projected Revenue =>	\$2,186,294

Parks and Recreation Impact Fees

Methodology

The City of Boulder Parks and Recreation Impact Fee is derived using an incremental expansion methodology. Parks and Recreation impact fees should only be assessed on residential development. Three main components are included in the fee calculation: Outdoor Park Improvements, Recreation Facilities and Pools, and Administrative/Support Facilities. Outdoor Park Improvements include facilities that are community-level facilities serving the entire city, including larger Neighborhood Parks with athletic fields or other improvements that draw users throughout Boulder. Also included in the Outdoor Park Improvement component are Community Parks and Recreation Facilities both of which serve a citywide service area.

Additional land for parks is not included in the impact fee calculation because the City has an inventory of parkland on which it intends to make improvements with impact fees.² According to the *2014 Boulder Parks and Recreation Department Master Plan*, “the community is well poised to meet future needs” [for parkland] and that “it is anticipated that there will not be any additional requirements to acquire new lands.”³ However, it is assumed that BRPD will develop existing undeveloped park lands to balance recreation needs and “maintaining a balance of developed and natural areas in urban parks.”⁴

A second major component included in the fee calculation is Recreation Facilities and Pools. The City’s Recreation facilities serve a citywide population and the City expects to expand those types of facilities as well. The third and final component is Parks and Recreation Administrative / Support Facilities.

All facility costs are allocated 100 percent to residential development. Smaller-scale recreation amenities are excluded because they serve more limited areas, which would require implementation of multiple service areas and are not recommended due to higher administrative costs and limited revenue generated by sub-areas.

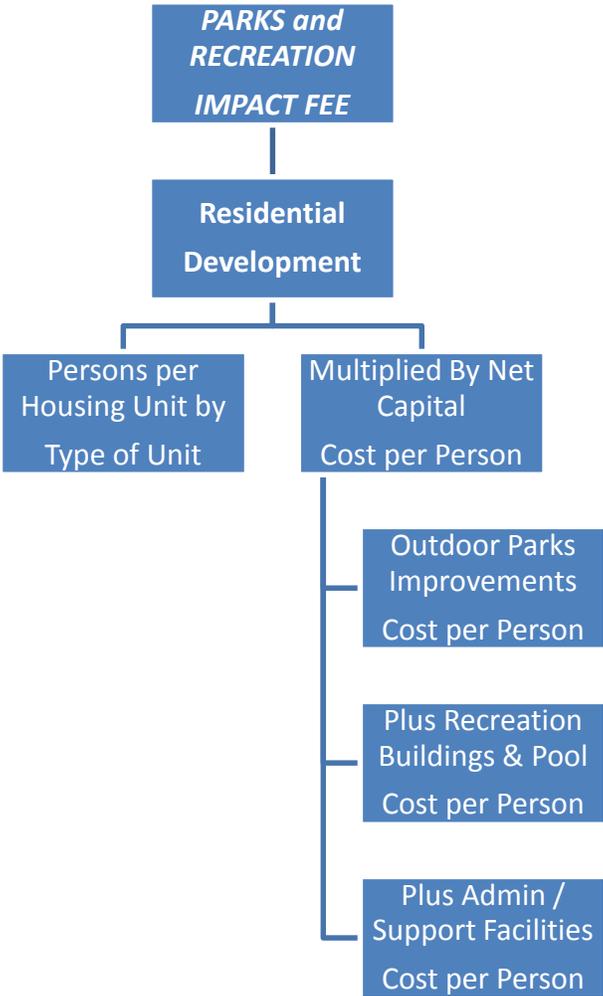
² The City of Boulder current collects a Parkland Development Excise Tax (DET). An update to the Parkland DET will be analyzed as part of this overall scope of work with the analysis issued separately.

³ Boulder Parks and Recreation Department Master Plan, p. 42.

⁴ Ibid.

Figure 10 diagrams the general methodology used to calculate the Parks and Recreation Impact Fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the impact fee components. The impact fee is derived from the product of persons per housing unit (by type) multiplied by the net capital cost per person. The boxes in the next level down indicate detail on the components.

Figure 10. Parks and Recreation Impact Fee Methodology Chart



Parks & Recreation Level of Service Standards and Costs

Outdoor Park Improvements

The Outdoor Park component of the Parks and Recreation impact fees are based on the City's current inventory of existing citywide parks. The demand base for the City's park facilities is population. Levels of service are based on the current amount of infrastructure provided for the existing population. Outdoor Park Improvements include facilities that are community-level facilities serving the entire City, such as Recreation Facilities, Community, and larger Neighborhood Parks with athletic fields or other recreational amenities that draw from a citywide service area.

The Park impact fee component is based on the incremental expansion methodology, consistent with the City's plans to make improvements to undeveloped parks. Natural lands and smaller more limited neighborhood parks are excluded from the impact fees. Figure 13 provides an inventory of Outdoor Park improvements with current unit prices.

Park improvements have an average total cost of approximately \$309,000 per acre. On a per capita basis, park improvements cost \$1,669 for each additional resident in Boulder. City staff provided unit prices for each type of improvement. Miscellaneous costs equal \$250,000 per acre (included in the \$309,074 per acre cost), which include such items as lighting, paving (parking lots, sidewalks), site work, irrigation, and landscaping.

Figure 11. Outdoor Park Improvements Level of Service Standards and Cost Factors

Site	Park Type	Total Acres	City Owned Improved Acres	Baseball Fields		Softball Fields		Multi-Use Fields			Courts					Other Amenities				
				Premier	General	Premier	General	Premier	Turf Fields	General	Tennis Courts	Sand Volleyball	Basketball	Handball	Roller SportRink	Picnic Shelters	Restrooms	Playgrounds	Dog Parks	
Arapahoe Ridge Park*	Neighborhood Park	7.6	7.6		1.0							2.0					1		1	
Aurora 7 Park*	Neighborhood Park	7.9	7.9		3.0															
Chautauqua	Neighborhood Park	12.5	12.5									1.0					1	1	1	
Crestview	Neighborhood Park	7.8	7.8														1		1	
Eaton	Neighborhood Park	25.3	0.3														1			
Elks	Neighborhood Park	8.6	8.6														1		1	
Howard Heuston Park	Neighborhood Park	7.6	7.6											1.0					1	1
Martin	Neighborhood Park	9.6	9.6		1.0					1.0		2.0					1	1	1	
North Boulder	Neighborhood Park	13.4	13.4		2.0					1.0				1.0			1	1	1	
Park East	Neighborhood Park	4.5	4.5											1.0			1		1	
Scott Carpenter	Neighborhood Park	18.9	18.9	1.0											1	1	1	1		
Tantra Park	Neighborhood Park	21.7	21.7							1.0							1		1	
Tom Watson Park**	Neighborhood Park	31.4	31.4		4.0					1.0	4.0	2.0	1.0	1.0			1	1	1	
East Boulder Community Park	Community Park	53.6	40.6						2.0	1.0	5.0	4.0	2.0	4.0			5	1	1	2
East Boulder Community Center	Recreation Facilities	3.0	3.0																	
Foothills Community Park	Community Park	65.7	46.7							3.0				1.0		2	8	1	3	3
North Boulder Recreation Center	Recreation Facilities	1.5	1.5																	
Harlow Platts Community Park	Community Park	51.3	38.3							1.0	4.0	4.0				1	2	1	1	
South Boulder Recreation Center	Recreation Facilities	0.6	0.6							1.0										
Valmont City Park South	City Park	83.1	40.0							1.0										
Valmont City Park North	City Park	47.0	45.0																	
Boulder Reservoir Regional Park	Recreation Facilities	116.0	116.0														4	1	1	2
East Mapleton Ballfields	Recreation Facilities	8.3	8.3				3.0						15.0				1	1	1	
Gerald Stazio	Recreation Facilities	42.8	30.0				7.0										1	2	1	
Pleasantview Fields	Recreation Facilities	53.8	43.0					10.0									2	1		
Spruce Pool	Recreation Facilities	1.2	1.2															1		
Subtotal Neighborhood Parks		176.8	151.8																	
Subtotal Community Parks		170.6	125.6																	
Subtotal City Parks		130.1	85.0																	
Subtotal Recreation Facilities		227.2	203.6																	
TOTALS		704.7	566.0	1.0	11.0	10.0	0.0	10.0	2.0	11.0	18.0	25.0	7.0	5.0	4.0	35.0	15.0	19.0	8.0	

Unit Price ==>	\$250,000	\$810,880	\$222,600	\$810,880	\$810,880	\$426,250	\$1,535,000	\$185,250	\$70,000	\$10,000	\$45,000	\$30,000	\$55,000	\$80,000	\$150,000	\$193,500	\$222,000
Total Value ==>	\$141,500,000	\$810,880	\$2,448,600	\$8,108,800	\$0	\$4,262,500	\$3,070,000	\$2,037,750	\$1,260,000	\$250,000	\$315,000	\$150,000	\$220,000	\$2,800,000	\$2,250,000	\$3,676,500	\$1,776,000

TOTAL AMENITY VALUE	\$33,436,030
AMENITY VALUE PER ACRE	\$59,074

SUMMARY			
Population in 2015	104,808		
		Total	Improved
Acres***		704.7	566.0
Level of Service: Acres per 1,000 Population		6.7	5.4
Value of Improvements/Assets	\$33,436,030		
Other Site Improvements****	\$141,500,000		
Total Improvements	\$174,936,030		
Cost per Improved Acre	\$309,074		
Cost per Capita	\$1,669		

* Owned by City but jointly used with Boulder Valley School District

** Not owned by the City; City has a 99-year lease on it and therefore included in current level of service.

*** Does not reflect total Park inventory; reflects only those types of parks that include system-level improvements on which the development impact fees are based

**** Estimated @ \$250,000 per acre for design, permitting, and construction (other than amenities).

Recreation Buildings and Pools

The Recreation Buildings and Pools component of the Parks and Recreation impact fee is based on the current square footage and current value of recreational facilities serving the City. As shown in Figure 12, total square footage for the City’s recreational facilities is 182,509 square feet. The incremental expansion approach is used as the City plans to maintain the current level of service to accommodate new development.

Current replacement costs for buildings (including contents, equipment, and miscellaneous improvements) are from the City of Boulder 2015 property schedule and City of Boulder Facility Study (for specified properties). To reflect total replacement costs for Recreation Buildings and Pools, 30 percent is added to the building cost from the property schedule to reflect “soft” costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). Total estimated current value of these facilities is approximately \$57 million, or \$543 for each additional resident in Boulder.

Figure 12. Recreation Buildings and Pools Level of Service Standards and Cost Factors

Facility Name	Address	Current Square Feet	Year Built	Year Upgraded	Current Replacement Cost (Building Costs)*	Contents \$*	Misc \$*	Current Replacement Cost (Soft Costs)**	Total Costs***	Cost/SF
Salberg Studio	19TH & ELDER	4,054	1974, 1976	2001	\$464,486	\$28,676		\$139,346	\$632,507	\$156
South Boulder Recreation Center	1350 GILLASPIE	35,603	1973	1998	total value*** =====>				\$9,376,617	\$263
North Boulder Recreation Center	3170 BROADWAY	62,166	2002	na	total value*** =====>				\$21,337,047	\$343
East Boulder Community Ctr (77% of total)^	5660 SIOUX DR	42,417	1991	na	total value*** =====>				\$14,558,654	\$343
Pottery Lab	1010 AURORA	2,565	1924	2001	\$296,535	\$18,434	\$0	\$88,961	\$403,930	\$157
Spruce Pool Bath House/Filter	2102 Spruce Street	1,810	1961		\$298,098	\$0	\$0	\$89,429	\$387,527	\$214
Boulder Reservoir (all bldgs)	5151 NORTH 51ST	9,742	1971, 1984, 1986	na	total value*** =====>				\$3,014,557	\$309
Scott Carpenter Pool	30th & Arapahoe	10,550	1963		\$3,113,704			\$934,111	\$4,047,815	\$384
Spruce Pool	2040 21ST STREET	6,466	2001		\$1,269,708			\$380,912	\$1,650,620	\$255
Scott Carpenter Athletic Facilities	30TH & ARAPAHOE	7,136	1963, 1995, 2002	na	\$1,032,097	\$53,255	\$103,500	\$309,629	\$1,498,481	\$210
TOTALS		182,509			\$6,474,628	\$100,365	\$103,500	\$1,942,388	\$56,907,757	\$312

Total Square Feet	182,509
Population in 2015	104,808
Square Feet per Person	1.74
Total Cost per Sq. Ft.	\$312
Cost per Person	\$543

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015).

** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.

*** Source for properties with values included only in this column: Farnsworth Group/BUILDER, City of Boulder Facility Study (via City of Boulder Parks and Recreation)

^ Facility also houses Senior Center; square footage and value shown is for Recreation Center portion.

Parks and Recreation Administration and Support Facilities

Also included in the fee calculation is a component for Administrative and Support Facilities based on the current square footage and current value of facilities serving the City. As shown in Figure 13, total square footage for the City’s Parks and Recreation support facilities is 68,325 square feet. The incremental expansion approach is used as the City plans to maintain the current level of service to accommodate new development.

Current replacement costs for buildings (including contents, equipment, and miscellaneous improvements) are from the City of Boulder 2015 property schedule. To reflect total replacement costs for Parks and Recreation Administrative and Support Facilities, 30 percent is added to the construction cost to reflect “soft” costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). Total estimated current value of these facilities is approximately \$6.1 million, or \$58 for each additional resident in Boulder.

Figure 13. Administrative and Support Facilities Level of Service Standards and Cost Factors

Facility Name	Address	Current Square Feet	Year Built	Year Upgraded	Current Replacement Cost (Building Costs)*	Contents \$	Misc \$	Current Replacement Cost (Soft Costs)**	Total Costs	Cost/SF***
Iris Center	3198 BROADWAY	16,372	1957	2003	\$1,774,157	\$98,950	\$25,000	\$532,247	\$2,430,354	\$148
Park Operations Building	5200 PEARL ST	10,073	1989	na	\$941,422	\$74,761		\$282,427	\$1,298,611	\$129
Tantra Park Maintenance Shop	585 TANTRA DR	3,062	1984	na	\$242,918	\$37,893		\$72,875	\$353,686	\$116
Stazio Ballfields Maintenance Shop	2445 Stazio Drive	5,150	1997	na	\$356,808	\$0		\$107,042	\$463,850	\$90
Scott Carpenter Athletics Office	30TH & ARAPAHOE	1,052	1963	2003	\$134,137	\$0	\$0	\$40,241	\$174,378	\$166
Valmont Storage Building	5325 Valmont	30,434	1965	na	\$785,595	\$0		\$235,679	\$1,021,274	\$34
Foothills Maintenance Facility	800 Cherry Ave.	2,182	2000	na	\$301,955	\$0	\$0	\$90,587	\$392,542	\$180
TOTALS		68,325			\$4,536,992	\$211,604	\$25,000	\$1,361,098	\$6,134,695	\$90

Total Square Feet	68,325
Population in 2015	104,808
Square Feet per Person	0.65
Total Cost per Sq. Ft.	\$90
Cost per Person	\$58

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015).
** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.

Credit Evaluation

The City does not have any outstanding debt for Parks and Recreation facilities that will be retired with property taxes, therefore a credit is not necessary.

Parks and Recreation Input Factors and Maximum Supportable Impact Fees

Infrastructure standards used to calculate the Parks and Recreation impact fees are shown in the boxed area at the top of Figure 14. Impact fees for Parks and Recreation are based on household sizes for all types of units by square footage per unit. Level of service standards are based on costs per person for Parks and Recreation Facilities as described in the previous sections and summarized below. Each cost component of the impact fee is shown as a cost per person.

The bottom portion of Figure 14 shows maximum supportable impact fees for Parks and Recreation. The amounts are calculated by multiplying the persons per housing unit for each size of housing unit by the net capital cost per person.

For example, the impact fee for a dwelling unit of 800 square feet or less is calculated by multiplying the persons per housing unit of 1.17 by the net capital cost of \$2,270 for an impact fee amount of \$2,656 per unit. (Detail on number of persons by square feet of finished floor area is provided in the Appendix.)

Figure 14. Parks and Recreation Input Factors and Maximum Supportable Impact Fees

<i>Level Of Service</i>	<i>Factors</i>	
		<i>Per Person</i>
Outdoor Park Improvements		\$1,669
Recreation Buildings & Pools		\$543
Park Offices and Support Facilities		\$58
Debt Service Credit		\$0
Net Capital Cost		\$2,270

RESIDENTIAL IMPACT FEES			DRAFT [03.25.16]
<i>Square Feet</i>	<i>Development Unit</i>	<i>Persons per Housing Unit</i>	<i>Impact Fee per Housing Unit</i>
<i>(finished floor area)</i>		<i>All Housing Unit Types</i>	<i>All Housing Unit Types</i>
<i>Residential (by square feet of finished living space)*</i>			
800 or less	Dwelling Unit	1.17	\$2,656
801 to 1200	Dwelling Unit	1.80	\$4,086
1201 to 1600	Dwelling Unit	2.19	\$4,971
1601 to 2200	Dwelling Unit	2.52	\$5,720
2201 or more	Dwelling Unit	2.83	\$6,424

* Square feet increments available using the formula:
 $y = 1.0418 \ln(x) - 5.4937$, where "x" = square feet and "y" = persons per housing unit.

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per person** compared to the **current cost per person** from the current City of Boulder Impact Fee schedule for the Parks and Recreation category. It should be noted that the current cost per person shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has applied in its annual updates.⁵ Figure 15 compares the draft calculated cost to the current schedule for the Parks and Recreation category.

⁵ The annual increases are as follows:

Figure 15. Parks and Recreation Fee Comparison: Current Cost per Person to Updated Cost per Person

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Person</i>	Current City of Boulder Impact Fee Cost per Person [^]	Increase / Decrease
Parks and Recreation	\$2,270	\$1,474	\$796

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Projected Revenue

The revenue projection shown in Figure 16 is calculated based on the preliminary calculated 2016 Parks and Recreation Impact Fee and the development projections described in the land use assumptions (TischlerBise 03/25/16). To the extent the rate of development either accelerates or slows down, there will be a corresponding change in Impact Fee revenue and the timing of the need for capital improvements.

Figure 16. Projected Parks and Recreation Impact Fee Revenue

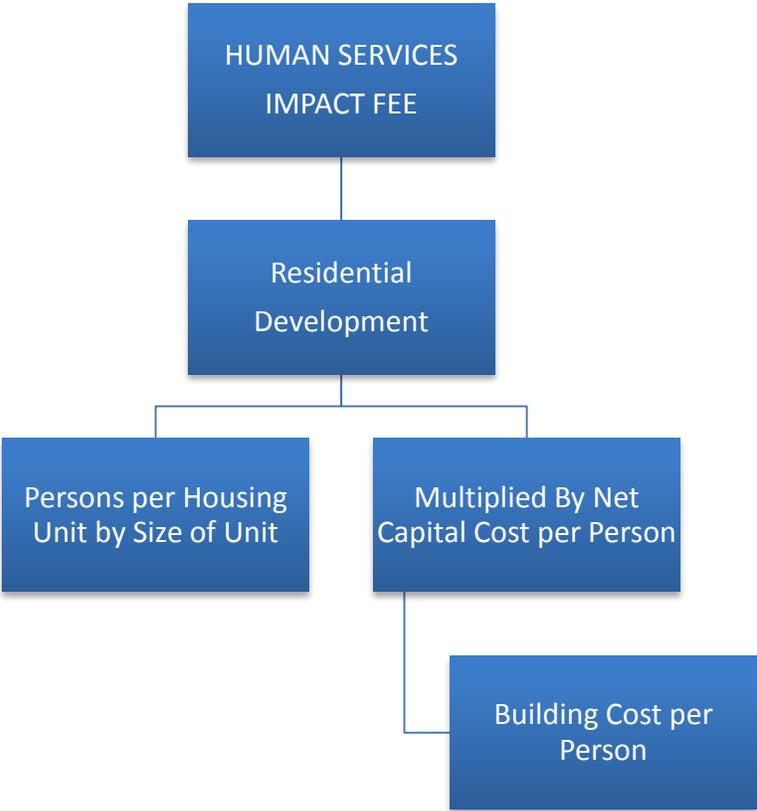
		<i>Residential</i>	
		<i>Fee (Wtd Avg)</i>	\$4,858
		per housing unit	
<i>Year</i>		<i>Housing Units</i>	
Base	2015	45,740	
Year 1	2016	46,012	
Year 2	2017	46,288	
Year 3	2018	46,566	
Year 4	2019	46,846	
Year 5	2020	47,127	
Year 6	2021	47,409	
Year 7	2022	47,694	
Year 8	2023	47,980	
Year 9	2024	48,268	
Year 10	2025	48,557	
<i>Ten-Yr Increase</i>		2,817	
Projected Revenue =>		\$13,686,874	

Human Services Impact Fees

Methodology

The Human Services impact fee calculation uses the incremental expansion methodology. Components of the Human Services fee include costs for Senior Centers and the Children, Youth and Family Center. All costs are allocated 100 percent to residential development. Figure 17 diagrams the general methodology used to calculate the Human Services Impact Fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the impact fee components. The impact fee is derived from the product of persons per housing unit by size of housing unit multiplied by the net capital cost per person. The boxes in the next level down indicate detail on the components included in the fee.

Figure 17. Human Services Impact Fee Methodology Chart



Human Services Level of Service Standards and Costs

The incremental expansion methodology is used to calculate the Human Services impact fee. The first step of the analysis determines the current level of service (LOS) being provided to existing development. The second step involves determining the cost per person to provide the current LOS.

Figure 18 lists the current inventory of Human Services space in the City of Boulder. As shown, the City currently has Human Services space totaling 34,073 square feet. The current value for Human Services buildings and contents is from the City’s 2015 Property Schedule. To reflect total replacement costs for Human Services facilities, 30 percent is added to the building cost to reflect “soft” costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). Total replacement costs for current facilities are estimated at \$7.2 million, or \$211 per square foot. To derive the cost per demand unit, the current level of service of .33 square feet per person is multiplied by the replacement cost per square foot of \$211, for a cost per demand unit of \$70 per person.

Figure 18. Human Services Level of Service Standards and Cost Factors

Facility	Location	Current Square Feet*	Current Replacement Cost (Hard Costs)*	Current Replacement Cost (Soft Costs)**	Total Costs	Cost/SF
West Senior Center	909 Arapahoe	16,188	\$2,494,628	\$748,388	\$3,243,016	\$200
Children, Youth & Family Center	2160 Spruce	5,215	\$846,048	\$253,814	\$1,099,862	\$211
East Senior Center (23%)	5660 Sioux Drive	12,670	\$2,192,671	\$657,801	\$2,850,473	\$225
TOTAL		34,073	\$5,533,347	\$1,660,004	\$7,193,351	\$211

Cost per Square Foot=> **\$211**

Total Square Feet	34,073
Population in 2015	104,808
Square Feet per Person	0.33
Total Cost	\$211
Cost per Person	\$70

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015).

** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.

Sources: City of Boulder Property Schedule, 2015; City of Boulder Facilities and Asset Management.

Credit Evaluation

The City does not have any outstanding debt for Human Service facilities, therefore a credit is not necessary.

Human Facilities Input Factors and Maximum Supportable Impact Fees

Infrastructure standards used to calculate the Human Services impact fees are shown in the boxed area at the top of Figure 19. Impact fees for Human Services are based on household sizes for all types of units by square footage per unit. Level of service standards are based on costs per person for Human Services buildings as described in the previous sections and summarized below. Each cost component of the impact fee is shown as a cost per person.

The bottom portion of Figure 19 shows maximum supportable impact fees for Human Services. The amounts are calculated by multiplying the persons per housing unit for each size of housing unit by the net capital cost per person.

For example, the impact fee for a dwelling unit of 800 square feet or less is calculated by multiplying the persons per housing unit of 1.17 by the net capital cost of \$70 for an impact fee amount of \$81 per unit. (Detail on number of persons by square feet of finished floor area is provided in the Appendix.)

Figure 19. Human Services Input Factors and Maximum Supportable Impact Fees

<i>Level Of Service</i>		<i>Factors</i>	
		<i>Per Person</i>	
Human Services Buildings		\$70	
Debt Service Cost		\$0	
Net Capital Cost		\$70	

DRAFT [03.25.16]			
<i>Square Feet</i>	<i>Development Unit</i>	<i>Persons per Housing Unit</i>	<i>Impact Fee per Housing Unit</i>
<i>(finished floor area)</i>		<i>All Housing Unit Types</i>	<i>All Housing Unit Types</i>
<i>Residential (by square feet of finished living space)</i>			
800 or less	Dwelling Unit	1.17	\$81
801 to 1200	Dwelling Unit	1.80	\$126
1201 to 1600	Dwelling Unit	2.19	\$153
1601 to 2200	Dwelling Unit	2.52	\$176
2201 or more	Dwelling Unit	2.83	\$198

* Square feet increments available using the formula:

$$y = 1.0418 \ln(x) - 5.4937, \text{ where "x" = square feet and "y" = persons per housing unit.}$$

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per person** compared to the **current cost per person** from the current City of Boulder Impact Fee schedule for the Human Services category. It should be noted that the current cost per person shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has applied in its annual updates.⁶ Figure 20 compares the draft calculated cost to the current schedule for the Human Services category.

Figure 20. Human Services Fee Comparison: Current Cost per Person to Updated Cost per Person

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Person</i>	Current City of Boulder Impact Fee Cost per Person [^]	Increase / Decrease
Human Services	\$70	\$70	\$0

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

⁶ The annual increases are as follows:

Fiscal Year	% Increase
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Projected Revenue

The revenue projection shown in Figure 21 is calculated based on the preliminary calculated 2016 Human Services Impact Fee and the development projections described in the land use assumptions (TischlerBise 03/25/16). To the extent the rate of development either accelerates or slows down, there will be a corresponding change in Impact Fee revenue and the timing of the need for capital improvements.

Figure 21. Projected Human Services Impact Fee Revenue

		<i>Residential</i>
	<i>Fee (Wtd Avg)</i>	\$149 per housing unit
	<i>Year</i>	<i>Housing Units</i>
Base	2015	45,740
Year 1	2016	46,012
Year 2	2017	46,288
Year 3	2018	46,566
Year 4	2019	46,846
Year 5	2020	47,127
Year 6	2021	47,409
Year 7	2022	47,694
Year 8	2023	47,980
Year 9	2024	48,268
Year 10	2025	48,557
	<i>Ten-Yr Increase</i>	2,817
	Projected Revenue =>	\$419,791

Municipal Facilities Impact Fees

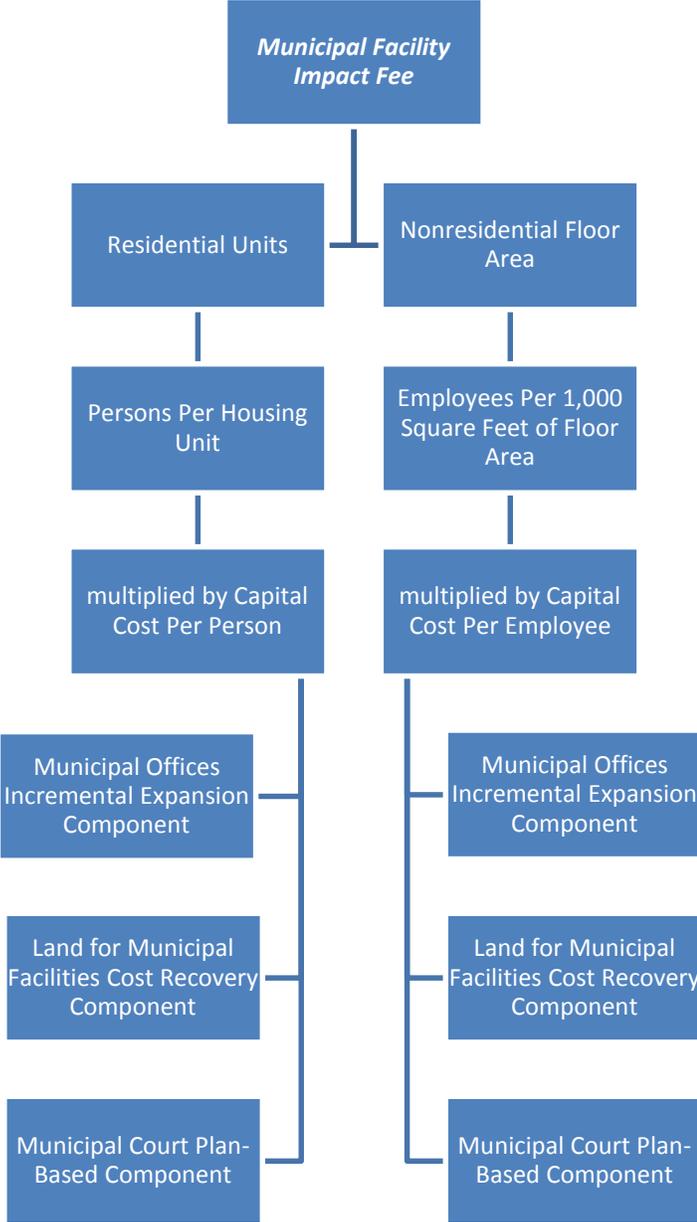
Methodology

The Municipal Facilities impact fees use all three methodologies

- Municipal Facility office buildings: Incremental expansion approach to allow for future expansion in City office space for general government purposes to accommodate growth.
- Land for Municipal Facilities: Cost recovery approach to capture growth's share of the cost of acquiring the Boulder Community Hospital site for use for future Municipal Facilities.
- Municipal Court Facility: Plan-based approach to capture growth's share of future facility.

As illustrated in Figure 22, capital costs are allocated to both residential and nonresidential development. Residential factors are calculated on a per person basis, and converted to an impact fee amount per housing unit using average persons per housing unit by size of the housing unit. Nonresidential development fees are based on a capital cost per employee, where such costs are typically multiplied by the number of employees per square foot of nonresidential floor area (or other appropriate development unit).

Figure 22. Municipal Facilities Impact Fee Methodology Chart



Proportionate Share Factors

The proportionate share factors shown in Figure 23 are used to allocate capital costs to residential and nonresidential development.

Functional population is similar to what the U.S. Census Bureau calls "daytime population" by accounting for people living and working in a jurisdiction. In addition to the Boulder-specific data, TischlerBise has relied on extensive public and private sector input to establish reasonable "weighting factors" to account for time spent at either residential or nonresidential development. These weighting factors are shown below with grey shading.

The functional population analysis starts with 2015 estimates of jobs and population in Boulder (see yellow highlighting), as documented in the draft Land Use Assumptions (TischlerBise 03/25/16). According to the *2013 Transportation Master Plan (TMP) State of the System* report (see page 3-13), approximately 10 percent of Boulder jobs are self-employed persons. The remaining 90 percent of jobs require "journey-to-work" travel. The 2014 Boulder Valley Employee Survey indicates Boulder residents held 38 percent of these jobs, with persons living outside of Boulder holding the remaining 62 percent of journey-to-work jobs. The functional population analysis assumes all workers spend ten hours per weekday (annualized average) at nonresidential locations.

Residents who work in Boulder are assigned 10 hours to nonresidential development (discussed above) and 14 hours to residential development. Residents who work outside Boulder are assigned 14 hours to residential development. Jobs held by non-residents are assigned 10 hours to nonresidential development. Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages) to account for time spent shopping, eating out, and other social/recreational activities.

Based on Boulder's 2015 functional population analysis, the cost allocation for residential development is 60 percent, while nonresidential development accounts for 40 percent of the demand for municipal facility infrastructure.

Figure 23. Proportionate Share Factors for Municipal Facilities Impact Fees

Boulder Functional Population Analysis					
<i>Service Units in 2015</i>					
				<i>Demand Hours/Day</i>	<i>Person Hours</i>
Nonresidential					
	Jobs Located in City*	98,510			
	10% Self-employed	9,851		10	98,510
	Jobs Requiring Journey-To-Work	88,659			
	Jobs Held By Residents**	38%	33,690	10	336,900
	Jobs Held By Non-residents**	62%	54,969	10	549,690
	Non-working Residents	51,054		4	204,216
					Nonresidential Subtotal 1,189,316
					Nonresidential Share => 40%
Residential					
	Population*	104,808			
	Non-working Residents	51,054		20	1,021,080
	Resident Workers	53,754			
	81% Residents Working in City (includes self-employed)***		43,541	14	609,574
	19% Residents Working Outside City**:	10,213		14	142,982
					Residential Subtotal 1,773,636
					Residential Share => 60%
					TOTAL 2,962,952

* Boulder Land Use Assumptions, TischlerBise 03/25/16.
 ** Percentages from 2014 Boulder Valley Employee Survey, Table 36, Question 32.
 *** Percentages from 2014 Boulder Community Household Survey, Table 112, Question

Municipal Facilities Level of Service Standards and Costs

Municipal Facility Office Buildings Component

The incremental expansion methodology is used to calculate the Office Building component of the Municipal Facilities impact fee. The first step of the analysis determines the current Level of Service (LOS) being provided to existing development. The second step involves determining the cost per person and job to provide this LOS.

Figure 24 lists the current inventory of municipal government space in the City of Boulder. As shown, the City currently utilizes municipal facilities space totaling 108,319 square feet, including space that is owned and leased by the City of Boulder. Of that amount, 72,890 square feet is owned by the City.

Level of service (square feet per demand unit) is calculated by multiplying total square footage by proportionate share then dividing by applicable demand units. For Municipal Facilities, levels of service are:

- Residential: 108,319 sq. ft. x 60% proportionate share / 104,808 population = .62 sq. ft. per capita
- Nonresidential: 108,319 sq. ft. x 40% proportionate share / 98,510 jobs = .44 sq. ft. per job

The current value for general government buildings and contents is from the City’s 2015 Property Schedule. To reflect total replacement costs for general Municipal Facilities, 30 percent is added to the construction cost to reflect “soft” costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). According to information provided by the City, Municipal Facility space has a replacement value of approximately \$21 million, reflecting facilities owned by the City. The replacement cost per square foot is \$284 resulting in a cost per person of \$175 (.62 sq. ft. per person x \$284 = \$175) and a cost per job of \$124 (.44 sq. ft. per job x \$284 = \$124).

Figure 24. Municipal Facilities Office Buildings Level of Service Standards and Cost Factors

Building	Location	Current Square Feet*	Current Replacement Cost (Hard Costs)*	Current Replacement Cost (Soft Costs)**	Total Cost	Cost/SF***
Municipal Building	1777 Broadway	23,657	\$5,701,947	\$1,710,584	\$7,412,531	\$313
Atrium	1300 Canyon Blvd	12,392	\$2,446,604	\$733,981	\$3,180,585	\$257
Park Central	1739 Broadway	20,910	\$4,920,672	\$1,476,202	\$6,396,874	\$306
New Britain	1101 Arapahoe Ave	13,851	\$2,438,570	\$731,571	\$3,170,141	\$229
Center Green Lease	3065 Center Green	31,000	leased	na	na	na
Risk Management	1301 Arapahoe Ave	2,080	\$393,392	\$118,018	\$511,410	\$246
1720 Building LLC	1720 14th Street	4,429	leased	na	na	na
TOTAL		108,319	\$15,901,185	\$4,770,356	\$20,671,541	
TOTAL City Owned		72,890	\$15,901,185	\$4,770,356	\$20,671,541	\$284

Cost per Square Foot=> \$284

BASED ON TOTAL SPACE (CITY OWNED AND LEASED)

	Proportionate Share	2015 Demand Units	LOS: Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	60%	104,808 Population	0.62	\$175
Nonresidential	40%	98,510 Jobs	0.44	\$124

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015).
 ** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.
 *** Average cost per square foot is average of City owned facilities.

Sources: City of Boulder Property Schedule, 2015; City of Boulder Facilities and Asset Management.

Land Component

The cost recovery methodology is used to calculate the Land component of the Municipal Facilities impact fee. The first step of the analysis determines the Level of Service (LOS) to be provided to existing and future development. The second step involves determining the cost per person and job to provide this LOS.

The City of Boulder recently acquired the 8.8 acre Boulder Community Hospital site. The entire purchase was \$41 million of which \$15.2 million was the land value. This component is included to account for future land needs for Municipal Facilities.

A summary of the cost of the land purchase is provided below:

Figure 25. Boulder Community Hospital Land Purchase Details

<i>Address</i>	<i>Acct</i>	<i>Acres</i>	<i>Total Cost</i>	<i>Cost per Acre</i>
1100 Balsam	R0602588	6.76	\$7,506,300	\$1,110,399
1155 Alpine Ave	R0116926	0.66	\$360,000	\$545,455
2655 Broadway	R0000500	0.69	\$2,478,200	\$3,591,594
1136 Alpine Ave	R0000925	0.48	\$2,506,300	\$5,221,458
1135 North Street	R0008544	0.12	\$1,162,000	\$9,683,333
1125 North Street	R0000927	0.12	\$1,165,000	\$9,708,333
TOTAL		8.83	\$15,177,800	\$1,718,890

Sources: Boulder County Assessor, Online Property Search (data accessed by TischlerBise on Feb. 14, 2016).

Per City Facilities and Asset Management, the City needs less than the full 8.83 acres of the site for future facility needs and anticipates retaining 50 percent of each of the Balsam and Broadway parcels. Therefore, the above figure is adjusted to reflect this anticipated plan and is shown in Figure 26. Because this is a **plan-based approach where the land purchased today has excess capacity to serve growth in the future**, the demand base used in the calculation is population and employment in the **year 2040**. This reflects the period of time for which the purchased land is anticipated to serve.

Level of service (acre per demand unit) is calculated by multiplying total acres by proportionate share then dividing by applicable demand units (population and jobs in the year 2040). For Municipal Facilities, levels of service are:

- Residential: 5.11 acres x 60% proportionate share / 123,000 population * 1,000 = .025 acres per 1,000 persons
- Nonresidential: 5.11 acres. x 40% proportionate share / 117,010 jobs * 1,000 = .017 acres per 1,000 jobs

The 5.11 acres has a cost of \$10.2 million, reflecting an average cost per acre of almost \$2 million. The cost per person is \$50 (.025 acre per 1,000 persons x \$1,995,211 = \$50) and a cost per job of \$34 (.017 acres per 1,000 jobs x \$1,995,211 = \$34).

Figure 26. Municipal Facilities Land Level of Service Standards and Cost Factors

Address	Acct	Acres	Total Cost	Cost per Acre
1100 Balsam*	R0602588	3.38	\$3,753,150	\$1,110,399
1155 Alpine Ave	R0116926	0.66	\$360,000	\$545,455
2655 Broadway*	R0000500	0.35	\$1,239,100	\$3,591,594
1136 Alpine Ave	R0000925	0.48	\$2,506,300	\$5,221,458
1135 North Street	R0008544	0.12	\$1,162,000	\$9,683,333
1125 North Street	R0000927	0.12	\$1,165,000	\$9,708,333
TOTAL		5.11	\$10,185,550	\$1,995,211

* Per the City, it is assumed the City will retain 50 percent of the property for facility needs; therefore 50 percent of acreage and value are included.
 Sources: City of Boulder Facilities and Asset Management; Boulder County Assessor, Online Property Search (data accessed by TischlerBise on Feb. 14, 2016).

Site Acquisition	Acres	Total Cost	Cost per Acre
Boulder Community Hospital Site	5.11	\$10,185,550	\$1,995,211

	Proportionate Share	2040 Projected Demand Units	LOS: Acres per 1,000 Demand Units	Cost per Demand Unit
Residential	60%	123,000 Population	0.025	\$50
Nonresidential	40%	117,010 Jobs	0.017	\$34

Source: Boulder County Assessor, Online Property Search (data accessed by TischlerBise on Feb. 14, 2016).

Municipal Court Component

The plan-based methodology is used to calculate the Municipal Court component of the Municipal Facilities impact fee. The first step of the analysis determines the Level of Service (LOS) to be provided to existing and future development. The second step involves determining the cost per person and job to provide this LOS.

The City of Boulder currently leases space from Boulder County for its Municipal Court space (7,587 square feet).⁷ The City conducted a space needs assessment for the court that identified the need for 12,000 square feet of Municipal Court space.⁸

Figure 27 summarizes the Municipal Court component level of service. Level of service (square feet per demand unit) is calculated by multiplying total square feet by proportionate share then dividing by applicable demand units. **The Municipal Court space needs analysis considered future growth therefore, the demand base used is population and jobs in the year 2040.** For Municipal Facilities, levels of service are:

- Residential: 12,000 sq. ft. x 60% proportionate share / 123,000 population = .06 sq. ft. per person
- Nonresidential: 12,000 sq. ft. x 40% proportionate share / 117,010 jobs = .04 sq. ft. per job

The planned cost is estimated at \$4.2 million, reflecting an average cost per square foot of \$350. The cost per person is \$21 (.06 sq. ft. x \$350 = \$21) and a cost per job of \$14 (.04 sq. ft. x \$350 = \$14).

Figure 27. Municipal Court Level of Service Standards and Cost Factors

Project	Square Feet	Cost/SF	Total Cost
Municipal Court Facility (planned)	12,000	\$350	\$4,200,000

	Proportionate Share	2040 Projected Demand Units	LOS: Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	60%	123,000 Population	0.06	\$21
Nonresidential	40%	117,010 Jobs	0.04	\$14

Sources: Trestle Strategy Group, "Space Needs Assessment of City of Boulder's Municipal Court (Draft)," May 11, 2015; City of Boulder Facilities and Asset Management.

⁷ Per City Facilities and Asset Management, Boulder County has expressed its desire to discontinue the lease with the City of Boulder within 3 to 5 years thus requiring the City to provide space for the Municipal Court.

⁸ Trestle Strategy Group, "Space Needs Assessment of City of Boulder's Municipal Court (Draft)," May 11, 2015.

Credit Evaluation

The City does not have any outstanding property tax-backed debt for municipal facility improvements included in the incremental expansion portion of the Impact Fee calculation, therefore no credit is included.

For the purchase of the Boulder Community Hospital site, the City issued debt (Certificates of Participation) for the full amount of the property (\$41 million). The City has entered into a *Lease Purchase Agreement* with the Boulder Municipal Property Authority (BMPA). BMPA will lease the Leased Property back to the City pursuant to the terms of the Lease Purchase Agreement. The City will (subject to annual appropriation) make Base Rental payments to BMPA **from any legally available revenues of the City**. The Base Rental payments will be held by the Trustee and used to pay debt service on the 2015 Certificates.⁹

The land component of the Municipal Facilities Impact Fee reflects new growth's share of the cost for the property. Therefore other City revenues will be used to cover existing development's share of the cost and no credit is necessary.¹⁰

⁹ "City of Boulder, Boulder Municipal Property Authority Agenda Item," September 15, 2015, p. 3. Emphasis added.

¹⁰ However, it is noted that if the City sells land on which current City offices are housed, a credit or offset will need to be included in the calculation.

Residential Impact Fees for Municipal Facilities

Figure 28 provides the schedule of residential impact fees by finished floor area for residential development. Capital cost per person, multiplied by persons per housing unit by size of housing unit, yields the residential impact fee schedule for municipal facilities.

Figure 28. Municipal Facilities Input Factors and Maximum Supportable Residential Impact Fee Schedule

<i>Level Of Service</i>		<i>Factors</i>	
			<i>Per Person</i>
	Municipal Facilities Building Cost		\$175
	Land Cost		\$50
	Municipal Court Cost		\$21
	Debt Service Cost		\$0
	Net Capital Cost		\$246

RESIDENTIAL IMPACT FEES			DRAFT [03.25.16]
<i>Square Feet</i>	<i>Development Unit</i>	<i>Persons per Housing Unit</i>	<i>Impact Fee per Housing Unit</i>
<i>(finished floor area)</i>		<i>All Housing Unit Types</i>	<i>All Housing Unit Types</i>
Residential (by square feet of finished living space)*			
800 or less	Dwelling Unit	1.17	\$287
801 to 1200	Dwelling Unit	1.80	\$442
1201 to 1600	Dwelling Unit	2.19	\$538
1601 to 2200	Dwelling Unit	2.52	\$619
2201 or more	Dwelling Unit	2.83	\$696

* Square feet increments available using the formula:
 $y = 1.0418 \ln(x) - 5.4937$, where "x" = square feet and "y" = persons per housing unit.

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per person** compared to the **current cost per person** from the current City of Boulder Impact Fee schedule for the residential component of the Municipal Facilities category. It should be noted that the current cost per person shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has applied in its annual updates.¹¹ Figure 20 compares the draft calculated cost to the current schedule for the residential component of the Municipal Facilities category.

Figure 29. Municipal Facilities Fee Comparison (Residential): Current Cost per Person to Updated Cost per Person

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Person</i>	Current City of Boulder Impact Fee Cost per Person [^]	Increase / Decrease
Municipal Facilities	\$246	\$131	\$115

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹¹ The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Nonresidential Impact Fees for Municipal Facilities

Figure 30 shows the schedule of maximum allowable impact fees for nonresidential development. For nonresidential land uses, such as a retail establishment, the number of employees per square feet (.00251) is multiplied by the capital cost per employee (\$172), for an impact fee of \$0.43 per square foot.

Figure 30. Municipal Facility Input Factors and Maximum Supportable Nonresidential Impact Fee Schedule

Level Of Service	Factors	
		<u>Per Employee</u>
Municipal Facilities Building Cost		\$124
Land Cost		\$34
Municipal Court Cost		\$14
Debt Service Cost		\$0
Net Capital Cost		\$172

NONRESIDENTIAL IMPACT FEES			DRAFT [03.25.16]
<i>Nonresidential Land Use</i>	<i>Development Unit</i>	<i>Jobs per Development Unit</i>	<i>Impact Fee per Development Unit</i>
Retail / Restaurant / Service	Square Feet of Floor Area	0.00251	\$0.43
Office	Square Feet of Floor Area	0.00359	\$0.61
Light Industrial	Square Feet of Floor Area	0.00231	\$0.39
Warehousing	Square Feet of Floor Area	0.00092	\$0.15
Institutional	Square Feet of Floor Area	0.00081	\$0.13
Hospital	Square Feet of Floor Area	0.00294	\$0.50
Nursing Home/Assisted Living	Bed	0.84	\$144.00
<i>Nursing Home/Assisted Living*</i>	<i>Square Feet of Floor Area</i>	<i>0.0021</i>	<i>\$0.36</i>
Lodging	Room	0.57	\$98.00
<i>Lodging**</i>	<i>Square Feet of Floor Area</i>	<i>0.00095</i>	<i>\$0.16</i>

* For illustration and comparison with per square foot impact fees, assumes an average of 400 sq. ft. per bed

* For illustration and comparison with per square foot impact fees, assumes an average of 600 sq. ft. per room

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per employee** compared to the **current cost per employee** from the current City of Boulder Impact Fee schedule for the nonresidential component of the Municipal Facilities category. It should be noted that the current cost per employee shown below is calculated based on the adopted amount in 2010 and

escalated per the annual increases the City has applied in its annual updates.¹² Figure 20 compares the draft calculated cost to the current schedule for the nonresidential component of the Municipal Facilities category.

Figure 31. Municipal Facilities Fee Comparison (Nonresidential): Current Cost per Employee to Updated Cost per Employee

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Employee</i>	Current City of Boulder Impact Fee Cost per Employee [^]	Increase / Decrease
Municipal Facilities	\$172	\$54	\$118

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹² The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Projected Revenue

The revenue projection shown in Figure 32 is calculated based on the preliminary calculated 2016 Municipal Facilities Impact Fee and the development projections described in the land use assumptions (TischlerBise 3/25/16). To the extent the rate of development either accelerates or slows down, there will be a corresponding change in Impact Fee revenue and the timing of the need for capital improvements.

Figure 32. Projected Municipal Facilities Impact Fee Revenue

		<i>Residential</i>	<i>Industrial</i>	<i>Retail</i>	<i>Office and Other Services</i>
<i>Fee (Wtd Avg)</i>		\$526	\$0.39	\$0.43	\$0.61
		per housing unit	per sq. ft.	per sq. ft.	per sq. ft.
<i>Year</i>		<i>Housing Units</i>	<i>Square Feet</i>	<i>Square Feet</i>	<i>Square Feet</i>
Base	2015	45,740	13,576,996	8,565,611	14,848,416
Year 1	2016	46,012	13,670,663	8,624,414	14,950,360
Year 2	2017	46,288	13,765,405	8,683,890	15,053,473
Year 3	2018	46,566	13,860,809	8,743,783	15,157,308
Year 4	2019	46,846	13,956,881	8,804,095	15,261,869
Year 5	2020	47,127	14,053,626	8,864,830	15,367,162
Year 6	2021	47,409	14,151,048	8,925,989	15,473,193
Year 7	2022	47,694	14,249,152	8,987,577	15,579,965
Year 8	2023	47,980	14,347,942	9,049,596	15,687,486
Year 9	2024	48,268	14,447,424	9,112,049	15,795,758
Year 10	2025	48,557	14,547,603	9,174,939	15,904,789
<i>Ten-Yr Increase</i>		2,817	970,607	609,328	1,056,373
<i>Projected Revenue =></i>		\$1,481,946	\$378,537	\$262,011	\$644,387
					Total Projected Revenue => \$2,766,882

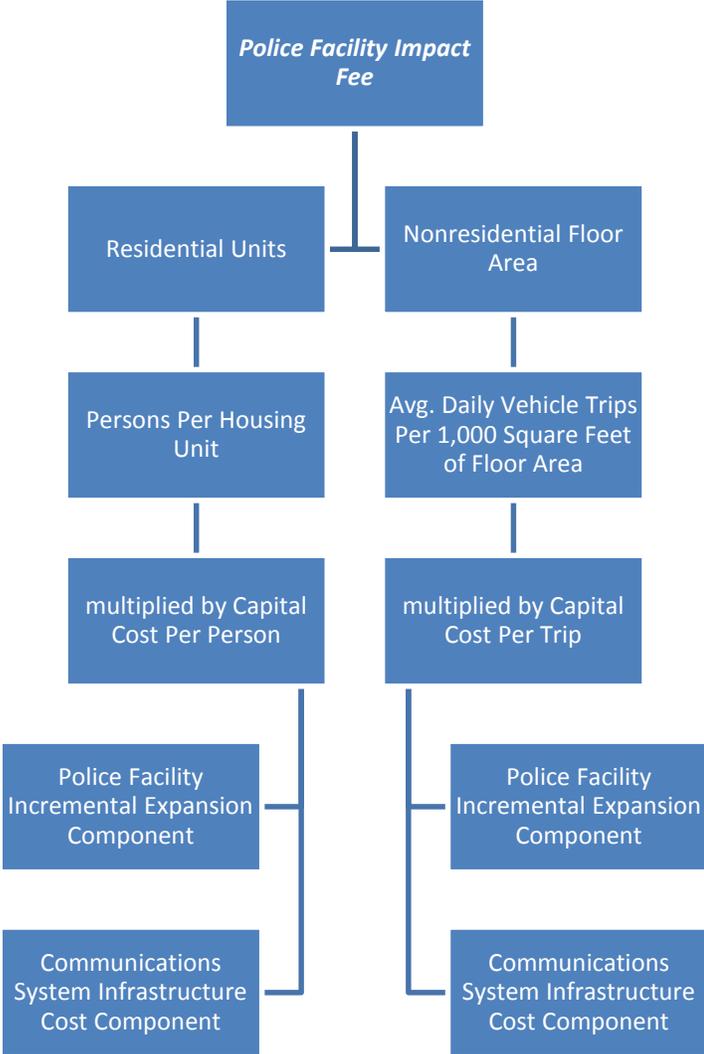
Police Impact Fees

Methodology

The Police impact fee is calculated using an incremental expansion methodology. Because the Colorado State Impact Fee Act requires that infrastructure included in the fee calculation have a useful life of over 5 years, police cars are not eligible for impact fee funding.

As shown in Figure 33, the Police impact fee uses different demand indicators for residential and nonresidential development. Residential impact fees are calculated on a per capita basis and then converted to a proportionate fee amount by type of housing, based on the number of persons by size of housing unit. For nonresidential impact fees, TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for Police facilities. Trip generation rates are used for nonresidential development because vehicle trips are highest for commercial developments, such as shopping centers, and lowest for industrial/warehouse development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Police services from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, Police impact fees would be too high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, Police impact fees would be too high for industrial development.

Figure 33. Police Facilities Impact Fee Methodology Chart



Proportionate Share Factors

The proportionate share factors shown in Figure 34 are used to allocate capital costs to residential and nonresidential development.

Functional population is similar to what the U.S. Census Bureau calls "daytime population" by accounting for people living and working in a jurisdiction. In addition to the Boulder-specific data, TischlerBise has relied on extensive public and private sector input to establish reasonable "weighting factors" to account for time spent at either residential or nonresidential development. These weighting factors are shown below with grey shading.

The functional population analysis starts with 2015 estimates of jobs and population in Boulder (see yellow highlighting), as documented in the draft Land Use Assumptions (TischlerBise 03/25/16). According to the *2013 Transportation Master Plan (TMP) State of the System* report (see page 3-13), approximately 10 percent of Boulder jobs are self-employed persons. The remaining 90 percent of jobs require "journey-to-work" travel. The 2014 Boulder Valley Employee Survey indicates Boulder residents held 38 percent of these jobs, with persons living outside of Boulder holding the remaining 62 percent of journey-to-work jobs. The functional population analysis assumes all workers spend ten hours per weekday (annualized average) at nonresidential locations.

Residents who work in Boulder are assigned 10 hours to nonresidential development (discussed above) and 14 hours to residential development. Residents who work outside Boulder are assigned 14 hours to residential development. Jobs held by non-residents are assigned 10 hours to nonresidential development. Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages) to account for time spent shopping, eating out, and other social/recreational activities.

Based on Boulder's 2015 functional population analysis, the cost allocation for residential development is 60 percent, while nonresidential development accounts for 40 percent of the demand for municipal facility infrastructure.

Figure 34. Proportionate Share Factors for Police Impact Fees

Boulder Functional Population Analysis				Demand Hours/Day	Person Hours
Service Units in 2015					
Nonresidential					
	Jobs Located in City*	98,510			
	10% Self-employed	9,851		10	98,510
	Jobs Requiring Journey-To-Work	88,659			
	Jobs Held By Residents**	38%	33,690	10	336,900
	Jobs Held By Non-residents**	62%	54,969 <= 56% of jobs	10	549,690
	Non-working Residents	51,054		4	204,216
					Nonresidential Subtotal 1,189,316
					Nonresidential Share => 40%
Residential					
	Population*	104,808			
	Non-working Residents	51,054		20	1,021,080
	Resident Workers	53,754			
	81% Residents Working in City (includes self-employed)***		43,541 <= 44% of jobs	14	609,574
	19% Residents Working Outside City**	10,213		14	142,982
					Residential Subtotal 1,773,636
					Residential Share => 60%
					TOTAL 2,962,952

* Boulder Land Use Assumptions, TischlerBise 03/25/16.
 ** Percentages from 2014 Boulder Valley Employee Survey, Table 36, Question 32.
 *** Percentages from 2014 Boulder Community Household Survey, Table 112, Question

Police Facilities Level of Service Standards and Costs

Police Buildings

The Police impact fee is calculated using the incremental expansion methodology for both Police station space and Communications System Infrastructure. The first step of the analysis determines the current LOS being provided to existing development. The second step involves determining the cost per person and per nonresidential vehicle trip to provide this LOS.

The top portion of Figure 35 lists the current inventory of Police space in the City of Boulder.

As shown, the City currently utilizes Police facility space totaling 95,749 square feet, including space that is owned and leased by the City of Boulder. Of that amount, 93,849 square feet is owned by the City.

Level of service (square feet per demand unit) is calculated by multiplying total square footage by proportionate share then dividing by applicable demand units. For Police Facilities, levels of service are:

- Residential: 95,749 sq. ft. x 60% proportionate share / 104,808 population = .55 sq. ft. per capita
- Nonresidential: 95,749 sq. ft. x 40% proportionate share / 249,903 vehicle trips = .15 sq. ft. per trip

The current value for Police buildings and contents are from the City’s 2015 Property Schedule and the Trestle *Public Safety Space Needs Assessment*. To reflect total replacement costs for general Police space, 30 percent is added to the construction cost to reflect “soft” costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). According to information provided by the City, current Police facility space has a replacement value of approximately \$30 million, reflecting facilities owned by the City. The average replacement cost per square foot is \$317 resulting in a cost per person of \$184 (.55 sq. ft. per person x \$317 = \$174) and a cost per nonresidential trip of \$48 (.15 sq. ft. per trip x \$317 = \$48).

Figure 35. Police Facilities Level of Service Standards and Cost Factors

Facility	Location	Current Square Feet	Current Replacement Cost (Hard Costs)*	Current Replacement Cost (Soft Costs)**	Total Costs	Cost/SF
Headquarters	Public Safety Building/1805 E. 33rd St	72,986	\$17,881,570	\$7,663,530	\$25,545,100	\$350
Training Ctr / Firing Range Addition	Public Safety Building/1805 E. 33rd St	16,000	\$2,714,216	\$814,265	\$3,528,481	\$221
Police Storage (only building cost)	Storage/1805 E. 33rd St	4,763	\$461,693	\$138,508	\$600,201	\$126
Downtown Mall Annex	Downtown	850	leased	na	na	na
University Hill Annex	13th Street	450	leased	na	na	na
Bomb Disposal and Storage	N. 26th Street	100	\$41,174	\$12,352	\$53,526	\$535
San Juan del Centro Annex	Vailmont Rd	600	leased	na	na	na
TOTAL		95,749	\$21,098,653	\$8,628,655	\$29,727,308	
TOTAL City Owned***		93,849	\$21,098,653	\$8,628,655	\$29,727,308	\$317

Cost per Square Foot=> \$317

BASED ON TOTAL SPACE (CITY OWNED AND LEASED)

	Proportionate Share	2015 Demand Units	LOS: Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	60%	104,808 persons	0.55	\$174
Nonresidential	40%	249,903 nonres trips	0.15	\$48

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015) except for Headquarters with replacement cost from City of Boulder Public Safety Building Preliminary Space Needs Assessment, 9/11/14," Trestle Strategy Group.

** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.

*** Average cost per square foot is average of City owned facilities.

Sources: City of Boulder Property Schedule, 2015; City of Boulder Facilities and Asset Management; Trestle Strategy Group.

Communications System Infrastructure

For Communications System Infrastructure, an incremental based methodology is used and is based on current levels of service for current towers and equipment with useful life longer than 5 years. It should be noted that the City is embarking on a comprehensive radio infrastructure study. **Once that is complete, a plan-based methodology could be employed to reflect the needs for current and future growth.**

Based on the current value of \$1.9 million and proportionate share factors from above, the per capita cost is \$11 and the cost per trip is \$3.

Figure 36. Police Communications Infrastructure Level of Service Standards and Cost Factors

Facility	Location	Current Value
GUNBARREL Radio Shack Twr/Ant	Gunbarrel Hill	\$127,192
Chautauqua Radio Shack Twr/Ant	Chautauqua	\$149,525
Radio/Communications Equipment	Citywide	\$1,610,475
TOTAL		\$1,887,192

	Proportionate Share	2015 Demand Units	Cost per Demand Unit
Residential	60%	104,808 persons	\$11
Nonresidential	40%	249,903 nonres trips	\$3

* Source: City Property Schedule (2015); City of Boulder Police Department

Credit Evaluation

At present, the City of Boulder does not have any outstanding property-tax backed bonded debt related to the construction of Police facilities. Therefore, a credit for existing bond financing is not applicable to this impact fee.

Residential Impact Fees for Police Facilities

Figure 37 provides the schedule of Police residential impact fees by finished floor area for residential development. Capital cost per person, multiplied by persons per housing unit by size of housing unit, yields the residential impact fee schedule for Police facilities.

Figure 37. Police Input Factors and Maximum Supportable Residential Impact Fee Schedule

Level Of Service

Police Buildings Cost
Communications Infrastructure Cost
Debt Service Cost
Net Capital Cost

Factors

	Per Person
Police Buildings Cost	\$174
Communications Infrastructure Cost	\$11
Debt Service Cost	\$0
Net Capital Cost	\$185

RESIDENTIAL IMPACT FEES			DRAFT [03.25.16]
Square Feet	Development Unit	Persons per Housing Unit	Impact Fee per Housing Unit
(finished floor area)		All Housing Unit Types	All Housing Unit Types
Residential (by square feet of finished living space)*			
800 or less	Dwelling Unit	1.17	\$216
801 to 1200	Dwelling Unit	1.80	\$333
1201 to 1600	Dwelling Unit	2.19	\$405
1601 to 2200	Dwelling Unit	2.52	\$466
2201 or more	Dwelling Unit	2.83	\$523

* Square feet increments available using the formula:
 $y = 1.0418 \ln(x) - 5.4937$, where "x" = square feet and "y" = persons per housing unit.

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per person** compared to the **current cost per person** from the current City of Boulder Impact Fee schedule for the residential component of the Police category. It should be noted that the current cost per person shown below is calculated based on the adopted amount in 2010 and escalated per the annual

increases the City has applied in its annual updates.¹³ Figure 38 compares the draft calculated cost to the current schedule for the residential component of the Police category.

Figure 38. Police Fee Comparison (Residential): Current Cost per Person to Updated Cost per Person

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Person</i>	Current City of Boulder Impact Fee Cost per Person [^]	Increase / Decrease
Police	\$185	\$138	\$47

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹³ The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Nonresidential Impact Fees for Police Facilities

Figure 39 shows the schedule of maximum allowable impact fees for nonresidential development. For nonresidential land uses, such as a retail establishment, the number of trips per square feet (.04270 x 33%) is multiplied by the capital cost per trip (\$51), for an impact fee of \$0.71 per square foot.

Figure 39. Police Input Factors and Maximum Supportable Nonresidential Impact Fee Schedule

Level Of Service

Police Buildings Cost
 Communications Infrastructure Cost
 Debt Service Cost
 Net Capital Cost

Factors

	<i>Per Trip</i>
Police Buildings Cost	\$48
Communications Infrastructure Cost	\$3
Debt Service Cost	\$0
Net Capital Cost	\$51

NONRESIDENTIAL IMPACT FEES				DRAFT [03.25.16]
<i>Nonresidential Land Use</i>	<i>Development Unit</i>	<i>Vehicle Trip Rate per Demand Unit</i>	<i>Trip Adjustment Factors</i>	<i>Impact Fee per Development Unit</i>
Retail / Restaurant / Service	Square Feet of Floor Area	0.04270	33%	\$0.71
Office	Square Feet of Floor Area	0.01103	50%	\$0.28
Light Industrial	Square Feet of Floor Area	0.00697	50%	\$0.17
Warehousing	Square Feet of Floor Area	0.00356	50%	\$0.09
Institutional [^]	Square Feet of Floor Area	0.01403	33%	\$0.23
Hospital	Square Feet of Floor Area	0.01322	50%	\$0.33
Nursing Home/Assisted Living	Bed	2.74	50%	\$69
<i>Nursing Home/Assisted Living*</i>	<i>Square Feet of Floor Area</i>	<i>0.00685</i>	<i>50%</i>	<i>\$0.17</i>
Lodging	Room	8.17	50%	\$208
<i>Lodging**</i>	<i>Square Feet of Floor Area</i>	<i>0.013616667</i>	<i>50%</i>	<i>\$0.34</i>

* For illustration and comparison with per square foot impact fees, assumes an average of 400 sq. ft. per bed

** For illustration and comparison with per square foot impact fees, assumes an average of 600 sq. ft. per room

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per trip** compared to the **current cost per trip** from the current City of Boulder Impact Fee schedule for the nonresidential component of the Police category. It should be noted that the current cost per trip shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has

applied in its annual updates.¹⁴ Figure 40 compares the draft calculated cost to the current schedule for the nonresidential component of the Police category.

Figure 40. Police Facilities Fee Comparison (Nonresidential): Current Cost per Trip to Updated Cost per Trip

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Trip</i>	Current City of Boulder Impact Fee Cost per Trip [^]	Increase / Decrease
Police	\$51	\$19	\$32

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹⁴ The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Projected Revenue

The revenue projection shown in Figure 41 is calculated based on the preliminary calculated 2016 Police Facilities Impact Fee and the development projections described in the land use assumptions (TischlerBise 03/25/16). To the extent the rate of development either accelerates or slows down, there will be a corresponding change in Impact Fee revenue and the timing of the need for capital improvements.

Figure 41. Projected Police Facilities Impact Fee Revenue

		<i>Residential</i>	<i>Industrial</i>	<i>Retail</i>	<i>Office and Other Services</i>
<i>Fee (Wtd Avg)</i>		\$395	\$0.17	\$0.71	\$0.28
		per housing unit	per sq. ft.	per sq. ft.	per sq. ft.
<i>Year</i>		<i>Housing Units</i>	<i>Square Feet</i>	<i>Square Feet</i>	<i>Square Feet</i>
Base	2015	45,740	13,576,996	8,565,611	14,848,416
Year 1	2016	46,012	13,670,663	8,624,414	14,950,360
Year 2	2017	46,288	13,765,405	8,683,890	15,053,473
Year 3	2018	46,566	13,860,809	8,743,783	15,157,308
Year 4	2019	46,846	13,956,881	8,804,095	15,261,869
Year 5	2020	47,127	14,053,626	8,864,830	15,367,162
Year 6	2021	47,409	14,151,048	8,925,989	15,473,193
Year 7	2022	47,694	14,249,152	8,987,577	15,579,965
Year 8	2023	47,980	14,347,942	9,049,596	15,687,486
Year 9	2024	48,268	14,447,424	9,112,049	15,795,758
Year 10	2025	48,557	14,547,603	9,174,939	15,904,789
<i>Ten-Yr Increase</i>		2,817	970,607	609,328	1,056,373
<i>Projected Revenue =></i>		\$1,112,869	\$165,003	\$432,623	\$295,784
			<i>Total Projected Revenue =></i>		\$2,006,279

Fire Impact Fees

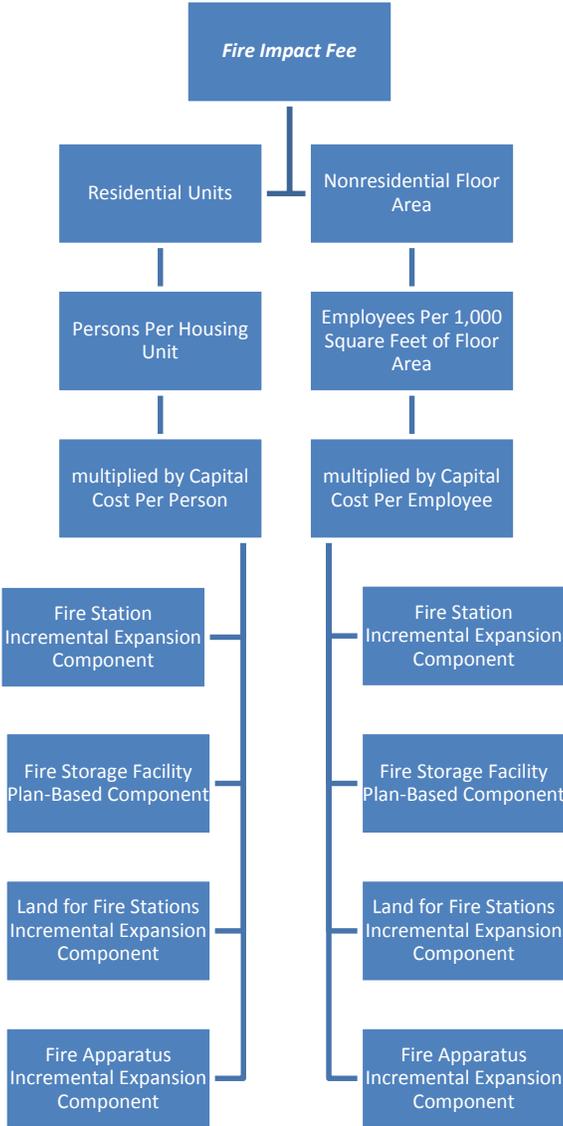
The City of Boulder Fire impact fee is based on the incremental expansion cost of Fire Services facilities, Fire apparatus, and land for future Fire stations. The City has identified future needs for new Fire Stations and expansion and relocations of existing Fire Stations in the following recently completed studies: *Space Needs Assessment for Fire Station 3 and Administration Building*¹⁵ and *Boulder Fire Rescue Station Location Report*.¹⁶ While the *FY2016-2021 City Capital Improvement Plan* identifies future Fire-Rescue projects, specific projects are not yet programmed in the CIP. Therefore, an incremental approach is recommended as this methodology will allow for the greatest flexibility for the City to expand and/or build new Fire facilities in the next few years. Due to requirement of the Colorado Impact Fee Act that capital facilities have useful lives of over five years, only heavy apparatus (e.g., engines, rescue trucks) is included. Also included is a separate land component, which is delineated from Station levels of service and costs and reflects a change from the previous Impact Fee Study.

The demand for Fire infrastructure is a function of both residential and nonresidential growth. To allocate demand for infrastructure, two main approaches can be used: The calls for service approach and the functional population approach. The calls for service approach uses local data on Fire/EMS calls for service to different land use types to establish the relationship between the demand for facilities and the type of development. Calls for service data is available from the City of Boulder Fire Department and is used to allocate costs to residential and nonresidential development.

¹⁵ Trestle Strategy Group, “Space Needs Assessment of Boulder Fire-Rescue Department’s Fire Station 3 and Administration Building (Draft),” March 17, 2015.

¹⁶ City of Boulder, “Boulder Fire Rescue Station Location Report,” March 2015.

Figure 42. Fire Impact Fee Methodology Chart



Proportionate Share Factors

To determine demand for Fire services and facilities, calls for service to residential and nonresidential land uses are used. Boulder Fire Department provided data on Fire call incidents by land use for calendar year 2014. TischlerBise used this call data to determine the proportionate share factors shown in Figure 43. This data indicated that the City responded to 9,753 calls to known land uses. Of those known uses, 42 percent were to residential land uses and 58 percent to nonresidential land uses.

Figure 43. Fire Proportionate Share Factors

	TOTAL	Nonresidential	Residential	Unknown
No Property Use Reported	30			30
000 Property Use, Other	33			33
100 Assembly	906	906		
200 Educational	322	322		
300 Health Care, Detention & Correction	985	985		
400 Residential	3,896		3,896	
449 Hotel/Motel, Commercial	126	126		
500 Mercantile, Business	1,171	1,171		
600 Industrial, Utility, Defense, Agriculture, Mining	58	58		
700 Manufacturing, Processing	41	41		
800 Storage	72	72		
881 Parking Garage (detached residential)	1		1	
899 residential or self-storage	1		1	
900 Outside or Special Property Nonres	1,941	1,941		
962 Residential street, road or residential driveway	233		233	
None	41			41
Undetermined	53			53
TOTALS	9,910	5,622	4,131	157

		% by Land Use
Residential	4,131	42%
Nonresidential	5,622	58%
Total to Known Land Uses	9,753	100%
Unknown	157	
Grand Total	9,910	

Source: City of Boulder Fire Department, Property Use Report (01/01/2014 - 12/31/2014); TischlerBise analysis.

Fire Level of Service Standards and Costs

Fire Service Facilities Incremental Expansion Cost Component

As discussed above, the Fire impact fees are derived using the incremental expansion approach for buildings and land, based on the current 2015 level of service. As shown in Figure 44, the City of Boulder has eight fire stations, headquarters, and a training center.

As shown, the City currently utilizes Fire Station and Office space totaling 79,318 square feet, including space that is owned and leased by the City of Boulder. Of that amount, 73,318 square feet is owned by the City.

Level of service (square feet per demand unit) is calculated by multiplying total square footage by proportionate share then dividing by applicable demand units. For Fire Facilities, levels of service are:

- Residential: $79,318 \text{ sq. ft.} \times 42\% \text{ proportionate share} / 104,808 \text{ population} = .32 \text{ sq. ft. per capita}$
- Nonresidential: $79,318 \text{ sq. ft.} \times 58\% \text{ proportionate share} / 98,510 \text{ jobs} = .47 \text{ sq. ft. per job}$

The current value for Fire buildings and contents (not apparatus) is from the City's 2015 Property Schedule. To reflect total replacement costs for Fire Facilities, 30 percent is added to the construction cost to reflect "soft" costs for predevelopment, site improvements, and other non-construction costs (per City of Boulder Facilities and Asset Management (FAM)). According to information provided by the City, Fire Facility space has a replacement value of approximately \$17.5 million, reflecting facilities owned by the City. The replacement cost per square foot is \$238 resulting in a cost per person of \$76 ($.32 \text{ sq. ft. per person} \times \$238 = \$76$) and a cost per job of \$112 ($.47 \text{ sq. ft. per job} \times \$238 = \$112$).

Figure 44. Fire Station Inventory and Costs

Facility	Location	Current Square Feet	Current Replacement Cost (Hard Costs)*	Current Replacement Cost (Soft Costs)**	Total Costs	Cost/SF
Station 1	2441 13th Street	7,941	\$1,439,036	\$431,711	\$1,870,747	\$236
Station 2	2225 Baseline	4,752	\$708,697	\$212,609	\$921,306	\$194
Station 3	1585 30th Street	6,160	\$802,289	\$240,687	\$1,042,976	\$169
Station 4	4100 Darley	3,498	\$521,797	\$156,539	\$678,336	\$194
Station 5	4365 19th Street	3,716	\$690,071	\$207,021	\$897,092	\$241
Station 6	5145 N 63rd Street	3,435	\$616,464	\$184,939	\$801,403	\$233
Station 7	1380 55th Street	5,081	\$979,907	\$293,972	\$1,273,879	\$251
Station 8	6055 Reservoir Road	11,268	\$3,425,000	\$1,027,500	\$4,452,500	\$395
Fire Headquarters	Center Green Offices	6,000	leased	na	na	na
Training Center	6055 Reservoir Road	27,467	\$4,254,538	\$1,276,361	\$5,530,899	\$201
TOTAL		79,318	\$13,437,799	\$4,031,340	\$17,469,139	\$220
TOTAL City Owned***		73,318	\$13,437,799	\$4,031,340	\$17,469,139	\$238

Cost per Square Foot=> \$238

	Proportionate Share	2015 Demand Units	LOS: Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	42%	104,808 persons	0.32	\$76
Nonresidential	58%	98,510 jobs	0.47	\$112

* Building, contents, equipment, miscellaneous improvements (City of Boulder Property Schedule, 2015).

** Soft costs estimated at 30 percent of construction costs per City of Boulder Facilities and Asset Management.

*** Average cost per square foot is average of City owned facilities.

Sources: City of Boulder Property Schedule, 2015; City of Boulder Facilities and Asset Management.

Fire Storage Facility Plan-Based Component

The Fire Department has indicated a current and future need for vehicle/apparatus storage, which is separate from the level of service provided in current Fire Station inventory. This facility is identified as a priority in the *2012 Fire-Rescue Master Plan Update* and the *Space Needs Assessment of Fire Station 3 and Administration Building*.¹⁷ The storage facility is currently identified in the CIP as an unfunded project as part of Fire Station 3/Administration.

The current assumption is that the storage facility will be separate from a new and/or relocated Fire Station 3 to allow for cost effective space utilization. Current planning estimates for facility specifications and costs are shown below in Figure 45. It should be noted that land costs are included in the estimate below however it is not known at this time whether a land purchase will be necessary for this facility.

Figure 45. Fire Storage Facility Level of Service Standards and Cost Factors

Project	Square Feet	Building Cost*	Land Cost*	Total Cost*
Fire Apparatus and Equipment Storage Facility (planned)	10,000	\$900,000	\$1,000,000	\$1,900,000

Cost per Square Foot=> \$190

	Proportionate Share	2040 Demand Units	LOS: Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	42%	123,000 persons	0.03	\$6
Nonresidential	58%	117,010 jobs	0.05	\$10

* Planning estimates only. Construction costs estimated at \$850,000-\$1 million; 1 acre of land at \$1 million per acre.
Sources: City of Boulder Fire Rescue.

¹⁷ Trestle Strategy Group, "Space Needs Assessment of Boulder Fire-Rescue Department's Fire Station 3 and Administration Building (Draft)," March 17, 2015.

Fire Apparatus Incremental Expansion Component

The Fire impact fees also use an incremental expansion approach for Fire apparatus, based on the current 2015 level of service. Current replacement costs for the City's inventory of Fire apparatus (with a minimum 5-year useful life) are shown in Figure 46 and were provided by the City. As shown in Figure 46, the estimated current value totals approximately \$9.8 million.

Figure 46. Fire Apparatus Inventory and Costs

Item	Units	\$/Unit	Current Value
Fire Engines (Pumpers)	7	\$600,000	\$4,200,000
Fire Engines (Telesquirts)	3	\$850,000	\$2,550,000
Ladder Truck	1	\$1,200,000	\$1,200,000
Rescue Truck	2	\$250,000	\$500,000
Wild-Land Truck (Type 6)	3	\$200,000	\$600,000
Wild-Land Truck (Type 3)	2	\$350,000	\$700,000
TOTAL	18	\$541,667	\$9,750,000

	Proportionate Share	2015 Demand Units	LOS: Sq. Ft. per 1,000 Demand Units	Cost per Demand Unit
Residential	42%	104,808 persons	0.07	\$39
Nonresidential	58%	98,510 jobs	0.11	\$57

Source: City of Boulder Fire Department

Fire Station Land Incremental Expansion Component

The Fire impact fees also use an incremental expansion approach for Fire Station land, based on the current 2015 level of service. It is anticipated the City will need to purchase land for future Fire Station needs. Current levels of service and costs for the City’s inventory of Fire Station land are shown in Figure 47. Land values reflect current appraised values for each property. For Fire Station 8 and the Training Center, the City owns substantially more land than is needed for the Fire facilities on the site. Therefore, the amount shown is pro-rated to reflect an average site size based on the building square footage. As shown in Figure 47, the estimated current value of the land inventory is \$10.3 million, which reflects an average cost per acre of \$1.09 million.

Figure 47. Fire Station Land Inventory and Costs

Facility	Location	Current Acres	Current Value*	Value/Acre
Station 1	2441 13th Street	0.47	\$800,000	\$1,702,128
Station 2	2225 Baseline	0.29	\$871,200	\$3,004,138
Station 3	1585 30th	0.97	\$1,045,400	\$1,077,732
Station 4	4100 Darley	0.17	\$370,300	\$2,178,235
Station 5	4365 19th Street	0.54	\$457,400	\$847,037
Station 6	5145 N 63rd Street	0.99	\$638,300	\$644,747
Station 7	1380 55th Street	1.01	\$659,100	\$652,574
Station 8**	6055 Reservoir Road	1.45	\$1,577,546	\$1,090,473
Fire Headquarters	Center Green Offices	leased	leased	na
Training Center**	6055 Reservoir Road	3.53	\$3,845,444	\$1,090,473
TOTAL		9.41	\$10,264,690	\$1,090,473

Cost per Acre=> \$1,090,473

	Proportionate Share	2015 Demand Units	LOS: Sq. Ft. per Demand Unit	Cost per Demand Unit
Residential	42%	104,808 persons	0.04	\$44
Nonresidential	58%	98,510 jobs	0.06	\$65

* Boulder County Assessor, Online Property Search (data accessed by TischlerBise on Feb. 14, 2016).

** Station 8 and Training Center are on a total of 114 acres of City owned land. The acres identified are pro-rated for the facility size based on average Fire Station square feet per acre (floor area ratio). Value is estimated based on the weighted average for Stations 1-7 (\$1.09 million per acre).

Credit Evaluation

At present, the City of Boulder does not have any outstanding property-tax backed bonded debt related to the construction of Fire facilities. Therefore, a credit for existing bond financing is not applicable to this impact fee.

Residential Impact Fees for Fire Facilities and Apparatus

Figure 48 provides the schedule of Fire impact fees by finished floor area for residential development. Capital cost per person, multiplied by persons per housing unit by size of housing unit, yields the residential impact fee schedule for Fire facilities.

Figure 48. Fire Input Factors and Maximum Supportable Residential Impact Fee Schedule

<i>Level Of Service</i>		<i>Factors</i>
		<u>Per Person</u>
	Fire Station Cost	\$76
	Fire Storage Facility Cost	\$6
	Fire Apparatus Cost	\$39
	Fire Station Land Cost	\$44
	Debt Service Cost	\$0
Net Capital Cost	\$165	

RESIDENTIAL IMPACT FEES			DRAFT [03.25.16]
Square Feet	Development Unit	Persons per Housing Unit	Impact Fee per Housing Unit
<i>(finished floor area)</i>		<i>All Housing Unit Types</i>	<i>All Housing Unit Types</i>
<i>Residential (by square feet of finished living space)*</i>			
800 or less	Dwelling Unit	1.17	\$193
801 to 1200	Dwelling Unit	1.80	\$297
1201 to 1600	Dwelling Unit	2.19	\$361
1601 to 2200	Dwelling Unit	2.52	\$415
2201 or more	Dwelling Unit	2.83	\$466

* Square feet increments available using the formula:
 $y = 1.0418 \ln(x) - 5.4937$, where "x" = square feet and "y" = persons per housing unit.

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per person** compared to the **current cost per person** from the current City of Boulder Impact Fee schedule for the residential component of the Fire category. It should be noted that the current cost per person shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has applied in its annual updates.¹⁸ Figure 49 compares the draft calculated cost to the current schedule for the residential component of the Fire category.

Figure 49. Fire Fee Comparison (Residential): Current Cost per Person to Updated Cost per Person

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Person</i>	Current City of Boulder Impact Fee Cost per Person [^]	Increase / Decrease
Fire	\$165	\$102	\$63

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹⁸ The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Nonresidential Impact Fees for Fire Facilities and Apparatus

Figure 50 shows the schedule of maximum allowable Fire impact fees for nonresidential development. For nonresidential land uses, such as a retail establishment, the number of employees per square feet (.00251) is multiplied by the capital cost per employee (\$244), for an impact fee of \$0.61 per square foot.

Figure 50. Fire Input Factors and Maximum Supportable Nonresidential Impact Fee Schedule

Level Of Service		Factors	
			<u>Per Employee</u>
	Fire Station Cost		\$112
			\$10
	Fire Apparatus Cost		\$57
	Fire Station Land Cost		\$65
	Debt Service Cost		\$0
	Net Capital Cost		\$244

NONRESIDENTIAL IMPACT FEES			DRAFT [03.25.16]
Nonresidential Land Use	Development Unit	Jobs per Development Unit	Impact Fee per Development Unit
Retail / Restaurant / Service	Square Feet of Floor Area	0.00251	\$0.61
Office	Square Feet of Floor Area	0.00359	\$0.87
Light Industrial	Square Feet of Floor Area	0.00231	\$0.56
Warehousing	Square Feet of Floor Area	0.00092	\$0.22
Institutional	Square Feet of Floor Area	0.00081	\$0.19
Hospital	Square Feet of Floor Area	0.00294	\$0.71
Nursing Home/Assisted Living	Bed	0.84	\$204.00
Nursing Home/Assisted Living*	Square Feet of Floor Area	0.0021	\$0.13
Lodging	Room	0.57	\$139.00
Lodging**	Square Feet of Floor Area	0.00095	\$0.06

* For illustration and comparison with per square foot impact fees, assumes an average of 400 sq. ft. per bed

* For illustration and comparison with per square foot impact fees, assumes an average of 600 sq. ft. per room

Comparison to Current Impact Fees

Because the proposed land use categories have changed from the current City of Boulder Impact Fee schedule, the figure below provides a comparison of the **draft calculated cost per employee** compared to the **current cost per employee** from the current City of Boulder Impact Fee schedule for the nonresidential component of the Fire category. It should be noted that the current cost per

employee shown below is calculated based on the adopted amount in 2010 and escalated per the annual increases the City has applied in its annual updates.¹⁹ Figure 51 compares the draft calculated cost to the current schedule for the nonresidential component of the Fire category.

Figure 51. Fire Fee Comparison (Nonresidential): Current Cost per Employee to Updated Cost per Employee

	<i>DRAFT Preliminary Calculated [03.25.16] Cost per Employee</i>	Current City of Boulder Impact Fee Cost per Employee[^]	Increase / Decrease
Fire	\$244	\$143	\$101

[^] Cost as originally adopted in 2010 and inflated to current dollars (FY2016) using annual percentage increases per City of Boulder.

¹⁹ The annual increases are as follows:

<i>Fiscal Year</i>	<i>% Increase</i>
2011	0.0%
2012	0.0%
2013	4.7%
2014	1.8%
2015	3.2%
2016	2.0%

Projected Revenue

The revenue projection shown in Figure 52 is calculated based on the preliminary calculated 2016 Fire Impact Fee and the development projections described in the land use assumptions (TischlerBise 03/25/16). To the extent the rate of development either accelerates or slows down, there will be a corresponding change in Impact Fee revenue and the timing of the need for capital improvements.

Figure 52. Projected Fire Impact Fee Revenue

		<i>Residential</i>	<i>Industrial</i>	<i>Retail</i>	<i>Office and Other Services</i>
<i>Fee (Wtd Avg)</i>		\$353	\$0.56	\$0.61	\$0.87
		per housing unit	per sq. ft.	per sq. ft.	per sq. ft.
<i>Year</i>		<i>Housing Units</i>	<i>Square Feet</i>	<i>Square Feet</i>	<i>Square Feet</i>
Base	2015	45,740	13,576,996	8,565,611	14,848,416
Year 1	2016	46,012	13,670,663	8,624,414	14,950,360
Year 2	2017	46,288	13,765,405	8,683,890	15,053,473
Year 3	2018	46,566	13,860,809	8,743,783	15,157,308
Year 4	2019	46,846	13,956,881	8,804,095	15,261,869
Year 5	2020	47,127	14,053,626	8,864,830	15,367,162
Year 6	2021	47,409	14,151,048	8,925,989	15,473,193
Year 7	2022	47,694	14,249,152	8,987,577	15,579,965
Year 8	2023	47,980	14,347,942	9,049,596	15,687,486
Year 9	2024	48,268	14,447,424	9,112,049	15,795,758
Year 10	2025	48,557	14,547,603	9,174,939	15,904,789
<i>Ten-Yr Increase</i>		2,817	970,607	609,328	1,056,373
<i>Projected Revenue =></i>		\$994,538	\$543,540	\$371,690	\$919,044
					Total Projected Revenue => \$2,828,812

Implementation and Administration

All costs in the impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the recommended annual evaluation and update of impact fees. One approach is to adjust for inflation in construction costs by means of an index specific to construction as opposed to the consumer price index (CPI), which is more general in nature. TischlerBise recommends using the Marshall Swift Valuation Service or Engineering News Record (ENR), which provides comparative cost multipliers for various geographies and types of construction. The multipliers can be applied against the calculated impact fee. If cost estimates change significantly the City should redo the fee calculations.

There are certain accounting procedures that should be followed by the City. For example, monies received should be placed in a separate fund and accounted for separately and may only be used for the purposes authorized in the impact fee ordinance. Interest earned on monies in the separate fund should be credited to the fund.

Credits and Reimbursements

Future Revenue Credits

There are three basic approaches used to calculate impact fees and each is linked to different credit methodology. The first major type of impact fee method is a cost recovery approach. This method is used for facilities that have adequate capacity to accommodate new development for at least a five to six year time frame. The rationale for the cost recovery is that new development is paying for its share of the useful life or remaining capacity of the existing facility. When using a cost recovery method, it is important to determine whether new development has already contributed toward the cost of existing public facilities. This type of credit is not necessary as new growth will pay its share of debt incurred for land purchased for Municipal Facilities through the impact fees.

A second basic approach used to calculate impact fees is the incremental expansion cost method. This method documents current factors and is best suited for public facilities that will be expanded incrementally in the future. Because new development will provide front-end funding of infrastructure, there is a potential for double payment of capital costs due to future principal payments on existing debt for public facilities. A credit is not necessary for interest payments if

interest costs are not included in the impact fees. This type of credit is not necessary for any of the impact fees calculated herein as there is no outstanding debt for capacity expansions.

A third basic approach used to calculate impact fees is the plan-based method. This method is based on future capital improvements needed to accommodate new development. The plan-based method may be used for public facilities that have commonly accepted service delivery factors to determine the need for future projects or the jurisdiction plans to significantly increase the current level of service standards. If a plan-based approach is used to derive impact fees, the credit evaluations should focus on future dedicated revenues that will fund growth-related capital improvements. This type of credit is not necessary for the fees calculated herein.

Site-Specific Credits

If a developer constructs a system improvement that was included in the fee calculations, it will be necessary to either reimburse the developer or provide a credit against the fees in the area benefiting from the system improvement. Project improvements normally required as part of the development approval process are not eligible for credits or offsets against impact fees. Specific policies and procedures related to site-specific credits or developer reimbursements for system improvements should be addressed in the ordinance that establishes the City's fees.

Based on TischlerBise's experience, it is better for the City to establish a reimbursement agreement with the developer that constructs a system improvement rather than provide a credit off of the fee. The latter is often more difficult to administer because it creates unique fees for specific geographic areas. The reimbursement agreement should be limited to a payback period of no more than ten years and the City should not pay interest on the outstanding balance. The developer must provide sufficient documentation of the actual cost incurred for the system improvement. The City of Boulder should only agree to pay the lesser of the actual construction cost or the estimated cost used in the impact fee analysis. If the City pays more than the cost used in the fee analysis, there will be insufficient fee revenue. Reimbursement agreements should only obligate the City to reimburse developers annually according to actual fee collections from the benefiting area.

Collection and Expenditure Zones

The reasonableness of impact fees is determined in part by their relationship to the local government's burden to provide necessary public facilities. The need to show a benefit usually requires communities to evaluate collection and expenditure zones for public facilities that have

distinct geographic service areas. Consideration of zones will enable the City to show that developments paying fees are benefiting from the provision of additional capital improvements.

TischlerBise recommends a citywide fee for all impact fee calculated herein. All improvements covered under the impact fee program are derived based on citywide demand and will have a citywide benefit.

Appendix A. Demographic Data

[Land use memo to be attached to final report]