Report

2020 Impact Fee Study

The Economics of Land Use

Prepared for:
City of Littleton, Colorado

Prepared by:
Economic & Planning Systems, Inc.

EPS #203103

March 24, 2021

Economic & Planning Systems, Inc.
730 17th Street, Suite 630
Denver, CO 80202-3511
303 623 3557 tel
303 623 9049 fax

Denver
Los Angeles
Oakland
Sacramento

www.epsys.com

Table of Contents

1. Summary and Updated Impact Fees 1
   - Introduction 1
   - Updated Impact Fees 1
   - Legal Standards for Impact Fees 4
2. Methodology 7
   - Impact Fee Methodologies 7
   - Level of Service Definition 8
   - Cost Allocations by Land Use Type 8
   - Service Population 9
   - Existing Land Use 11
   - Household Size 12
3. Police Impact Fee 13
   - Level of Service Definition 13
   - Impact Fee Calculation 16
4. General Facilities and City Fleet 19
   - General Facilities and General Fleet 19
   - Public Works Fleet Component 25
   - General Facilities and City Fleet Fee 28
5. Library 29
   - Level of Service Definition 29
   - Impact Fee Calculation 30
6. Museum 31
   - Level of Service Definition 31
   - Impact Fee Calculation 33
7. Transportation 35
   - Infrastructure Demand Forecasts 35
   - Project List 38
   - Impact Fee Calculation 41
8. Multimodal Improvements 43
   - Project Descriptions 43
   - Impact Fee Calculation 45

List of Tables

Table 1. Residential Impact Fees....2
Table 2. Nonresidential Impact Fees....2
Table 3. Transportation Impact Fees....3
Table 4. Proportionate Share Methodology (Part 1 of 2)....9
Table 5. Existing Land Use....11
Table 6. Household Size Estimates....12
Table 7. Police Facilities Inventory and Replacement Cost....13
Table 8. Police Vehicle Major Fleet Inventory and Replacement Cost (Part 1 of 2)....14
Table 9. Police Calls for Service by Land Use....16
Table 10. Police Replacement Cost Per Capita and Per Sq. Ft. 17
Table 11. Police Impact Fee Calculation 17
Table 12. General Facilities Replacement Cost....20
Table 13. General Facilities Fleet Inventory and Replacement Cost (Part 1 of 3) 21
Table 14. General Facilities and Fleet Replacement Cost Per Capita and Per Sq. Ft. 24
Table 15. General Facilities Impact Fee Component....24
Table 16. Public Works Fleet Replacement Cost (Part 1 of 2)....25
Table 17. Public Works Fleet Replacement Cost Per Capita and Per Sq. Ft.....27
Table 18. Public Works Fleet Impact Fee Component....28
Table 19. General Facilities and City Fleet Impact Fee....28
Table 20. Library Facilities Inventory and Replacement Cost....29
Table 21. Library Replacement Cost Per Capita....30
Table 22. Library Impact Fee Calculation....30
Table 23. Museum Facilities Inventory and Replacement Cost (Part 1 of 2)....31
Table 24. Museum Replacement Cost Per Capita....33
Table 25. Museum Impact Fee Calculation....34
Table 26. Housing and Nonresidential Land Use Forecast, 2020-2040 36
Table 27. Trip Forecast and Allocation to Growth and Land Use Categories 37
Table 28. Local Transportation Projects (10-Year Timeframe)....39
Table 29. Regional Transportation Projects (20-Year Timeframe)....40

List of Tables (continued)

Table 30. Base Fee Per Trip 41
Table 31. Transportation Impact Fee Calculation 42
Table 32. Multimodal Project List 44
Table 33. Multimodal Projects Impact Fee Calculation 45

List of Appendix Tables

Table A-1. Single Family Detached Impact Fee Comparisons 47
Table A-2. Multifamily Impact Fee Comparisons 48
Table A-3. 10,000 Sq. Ft. Retail Building Impact Fee Comparisons 49
Table A-4. 10,000 Sq. Ft. Office Building Impact Fee Comparisons 50

1. Summary and Updated Impact Fees

Introduction

This report was prepared by Economic & Planning Systems (EPS) for the City of Littleton to update its impact fee calculations. The report documents costs and other supporting data to provide the nexus and proportionality requirements needed to adopt new and revised impact fees to comply with State of Colorado law regarding development charges. The report provides new impact fee calculations for the following fee categories already collected by the City:

- Police
- General facilities and general fleet
- Museum
- Library
- Transportation

The report also includes calculations for a proposed multimodal improvements impact fee. Revenues from this impact fee would be used to fund expansions to the bicycle and pedestrian transportation network, and related projects that improve bicycle and pedestrian safety while expanding automobile capacity, such as grade separated trail and road crossings.

In addition, this report recommends adding the Public Works fleet to the level of service that impact fees are calculated on. The replacement cost of the Public Works fleet is combined with general facilities and general fleet into a General Facilities and City Fleet impact fee.

Updated Impact Fees

This report provides calculations of the maximum fees supported by this nexus and proportionality analysis that the City may charge. The law allows City Council to adopt the full fees determined in this report, or to adopt lower fees for a variety of policy reasons determined to be in the interest of the City. The proposed maximum residential impact fees are shown below in **Table 1**; nonresidential impact fees are shown in **Table 2**. Transportation fees vary according to the trip generation factors for each land use type as shown in **Table 3** and explained further in Chapter 8.

Table 1. Residential Impact Fees

Description	Recommended Impact Fee	% Change From Current	Current Fees
RESIDENTIAL (per Unit)			
Single Family			
Transportation	$2,241.15	113.6%	$1,049.00
Multimodal Improvements	$1,060.62	N/A	N/A
Museum	$903.99	50.2%	$602.00
Library	$686.29	20.8%	$568.00
Police	$370.81	-7.1%	$399.00
General Facilities & City Fleet	$1,925.29	1.1%	$1,904.00
Total	**$7,188.15**	**59.0%**	**$4,522.00**
Multiple Dwelling Unit			
Transportation	$1,737.84	65.7%	$1,049.00
Multimodal Improvements	$695.96	N/A	N/A
Museum	$593.18	-1.5%	$602.00
Library	$450.33	-20.7%	$568.00
Police	$243.32	-39.0%	$399.00
General Facilities & City Fleet	$1,263.34	-33.6%	$1,904.00
Total	**$4,983.97**	**10.2%**	**$4,522.00**

Note: Figures in this summary table are rounded to the nearest $0.01 from calculations carried out to multiple decimal places and may vary slightly from tables in the body of this report.
Source: Economic & Planning Systems

Table 2. Nonresidential Impact Fees

Non-Residential Impact Fees	Per Sq. Ft.
Transportation: See Transportation Fee Schedule	---
Multimodal Improvements	$0.91
Museum	$0.00
Library	$0.00
Police	$0.36
General Facilities & City Fleet	$1.62
Total not including Transportation	**$2.89**

Note: Figures in this summary table are rounded to the nearest $0.01 from calculations carried out to multiple decimal places and may vary slightly from tables in the body of this report.
Source: Economic & Planning Systems

For transportation, the recommended residential impact fee is the maximum fee calculated on a cost per new trip of $237.41. For nonresidential development, the recommended fee per trip has been reduced to $94.96 to support recommended policies of encouraging nonresidential development in appropriate areas of the community to enhance the tax base. The corresponding fees per square foot are based on this cost per new trip multiplied by the trip generation rate for the land use category as explained further in Chapter 7. This cost-per-trip-fee structure is more proportional to the traffic impacts of different development types than the current flat fee per square foot, as shown.

Table 3. Transportation Impact Fees

Description		Recommended Impact Fee	% Change from Current	Current Fee
Residential Cost per Trip		**$237.41**		
Residential		Per Unit		Per Unit
Single Family	Single Family Detached Housing (210)	$2,241.15	113.6%	$1,049
Multifamily & Attached	Multifamily Housing (Low-Rise) (220)	$1,737.84	65.7%	$1,049
Non-Residential Cost per Trip		**$94.96**		
Non-Residential		Per Sq. Ft.		Per Sq. Ft.
Auto Dealership	Automobile Sales (New) (ITE 840)	$2.64	1.3%	$2.607
Industrial	General Light Industrial (ITE 110)	$0.47	-82.0%	$2.607
Lodging [1]	*Business Hotel (ITE 312)*	*$1.10*	-57.8%	*$2.607*
Office	**General Office Building (ITE 710)**	**$0.92**	**-64.7%**	**$2.607**
Retail/Commercial	**Shopping Center (ITE 820)**	**$2.80**	**7.4%**	**$2.607**
Warehouse/Storage	Warehousing (ITE 150)	$0.17	-93.5%	$2.607

[1] Converted to a rate per 1,000 square feet as follows: ITE trip generation rate of 5.79 trips per room, divided by 500 sq. ft. per room, multiplied by 1,000 per square feet.
Source: Economic & Planning Systems

If there are other land use types in a development application not shown in this table, the Community Development Director and/or the City Engineer can determine of the most appropriate trip generation rate and land use category to apply to the development, which would be multiplied by the residential or nonresidential fee per trip.

Legal Standards for Impact Fees

Impact fees can be charged by local governments on new development to pay for capital facilities needed to serve growth. The State of Colorado has adopted a standard with the adoption of Senate Bill 15, codified as Section 29-20-104 and 104.5 of the Colorado Revised Statutes following a Colorado Supreme Court decision.

The Colorado Supreme Court ruled in Krupp v. Breckenridge Sanitation District (1999) that the District could assess an impact fee based on a set of development characteristics that reflect the general performance of a proposed use, rather than the specific conditions of an individual proposal. While traditional exactions are determined on an individual basis and applied on a case-by-case basis, an "impact fee" is calculated based on the impact of all new development and the same fee is shared to all new development in a particular class."[1] The finding of the Court distinguishes impact fees, as a legislatively adopted program applicable to a broad class of property owners, from traditional exactions, which are discretionary actions applicable to a single project or property owner.

In 2001, the State Legislature provided specific authority in adopting Senate Bill 15 that "provides that a local government may impose an impact fee or other similar development charge to fund expenditures by such local government on capital facilities needed to serve new development." The bill amended Title 29 of the Colorado statutes that govern both municipalities and counties and defines "local government" to include a county, home rule, or statutory city, city, or territorial charter city.

The law requires local governments to "quantify the reasonable impacts of proposed development on existing capital facilities and establish the impact fee or development charge at a level no greater than necessary to defray such impacts directly related to proposed development." The standard that must be met within the State of Colorado requires mitigation to be "directly related" to impacts.

Impact Fee Requirements

- **Capital Facilities** – Fees may not be used for operations or maintenance. Fees must be spent on capital facilities, which have been further defined as directly related to a government service, with an estimated useful life of at least five years and that are required based on the charter or a general policy.
- **Existing Deficiencies** – Fees are formally collected to mitigate impacts from growth and cannot be used to address existing deficiencies. In the analysis used to establish an impact fee program, the evaluation must distinguish between the impacts of growth and the needs of existing development.
- **Capital Maintenance** – Major "capital maintenance" projects are not typically eligible to be funded with impact fees unless it can be shown that the project

[1] Colorado Municipal League, *Paying for Growth*, Carolynne C. White, 2002.

increases the capacity of the community to accommodate growth. In that case, only the growth-serving element of the project is eligible to be funded with impact fees.

- **Credits** – In the event a developer must construct off-site infrastructure in conjunction with his or her project, the local government must provide credits against impact fees for the same infrastructure, provided that the necessary infrastructure serves the larger community. Credits may not apply if a developer is required to construct such a project as a condition of approval due to the direct impact on the capital facility created by the project. Credits are handled on a case-by-case basis.
- **Timing** – The City must hold revenues in accounts dedicated for the specific use. Funds must be expended within a reasonable period or returned to the developer. The State enabling legislation does not specify the maximum length of time to be used as a "reasonable period." This has been generally accepted or interpreted to be a 10 year time period.
- **Accounting Practices** – The City must adopt stringent accounting practices as specified in the State enabling legislation. Funds generated by impact fees may not be commingled with any other funds.
- **Affordable Housing** – The law allows impact fees on affordable housing "as defined by the community" to be waived.

THIS PAGE

2. Methodology

This chapter describes general impact fee calculation techniques, the methodology used to calculate new impact fees, and important estimates and factors used in the calculations.

Impact Fee Methodologies

There are several methods that can be used to calculate impact fees. The two most common techniques are the Plan-Based Method and the Incremental Expansion Method. The method chosen needs to be appropriate for the local circumstances as described below. Colorado law does not specify the methodology to be used; these methods are commonly used in Colorado and in other states.

Plan-Based Method

This method uses a community's long-range comprehensive plan, capital improvement plan, or other adopted plan identifying capital facilities and infrastructure needed to serve growth. Projects identified in these plans are costed out and included in the fee program. A growth projection is made over the time period for which the defined projects are needed or planned to be built. The fee calculation is essentially the cost of the planned project(s) divided by the forecasted amount of growth.

This method is best used when detailed capital project planning has been done, as is the case with the City's 2019 Transportation Master Plan. The Plan-Based Method was used to calculate the Transportation and Multimodal Improvement impact fees.

Incremental Expansion Method

In cases where detailed capital planning studies are not available or when growth is slower, the Incremental Expansion Method is appropriate. This method is also called the "level of service" or "imbedded capital investment" method. The 2019 Impact Fee Update (BBC Research) also used the imbedded capital investment method. This technique answers the question:

> *What should each new unit (increment) of development pay to maintain the City's current level of service?*

This approach takes a snapshot of the current level of service in the city and converts it typically to a per capita, per dwelling unit, or per square foot value. The current level of service is defined as the inventory of the City's existing facilities

and capital assets, and the cost to replicate that level of service (replacement cost or asset value) as the city grows. The asset inventory or value is then converted to a cost per capita, per dwelling unit, or per nonresidential square foot that is the basis for the fee. An example is the current square footage of facilities and their replacement cost per capita, or the number of police vehicles and their replacement cost per capita.

The Incremental Expansion Method was used in this study to calculate impact fees for Police, General Facilities, Museum, and Library.

Level of Service Definition

Using the Incremental Expansion Method, this study defines the level of service (LOS) as the replacement cost of the existing facilities and major equipment in the City in 2020. The fee calculations document the current inventories of urban and special use parks, recreation facilities, libraries, police and fire facilities, general government/ municipal facilities, and major fleet/equipment. The LOS is converted to a cost or value per capita that is used to calculate the impact fees for each major dwelling unit type classification using a household size conversion factor, and a cost per nonresidential square foot.

Cost Allocations by Land Use Type

Many City services and related capital facilities are provided for residential and commercial (nonresidential) development. To ensure that impact fees are proportional to the impact by type of land use, it is necessary to allocate the level of service or facility costs to residential and nonresidential development. For all general facilities, public works facilities, library, public works fleet, and multimodal facilities, the City's service is used to allocate costs as described in the next section. The museum is allocated to residential development only based on the percentage of local visitors to the facility.

For police, incident volume by land use category was used to allocate costs to residential and nonresidential development. For transportation, costs are allocated from a forecast of vehicle trips generated by residential and nonresidential land uses.

Service Population

In order to allocate specific costs to residential and commercial uses, this analysis uses a Proportionate Share methodology. This methodology allocates service demand to residential and nonresidential space on a per resident or per employee basis. The Proportionate Share methodology derives the demand for City services, proportional to the various segments comprised of City residents and employees over a typical 24-hour period. It provides a basis for computing the cost per service for a given population across a number of City functions. The specific steps and assumptions used to allocate service demand are outlined below in **Table 4**.

Table 4. Proportionate Share Methodology (Part 1 of 2)

Residential Land Use Service Demand	
Non-Working Residents	
Total Population	**49,643**
Less: Working Residents	23,757
Non-Working Residents	**25,886**
Daily Hourly Service Demand	20 Hours
Non-Resident Service Demand	**517,727 Hours**
Out Commuter Residents	
Total Population	**49,643**
Less: Non-Working Residents	25,886
Working Residents	**23,757**
Live/Work Residents	11.5% of total
Less: Live Work Residents	2,732
Out Commuter Residents	**21,025**
Daily Hourly Service Demand	14 Hours
Out Commuter Service Demand	**294,345 Hours**
Live/Work Residents	
Total Population	**49,643**
Less: Non-Working Residents	25,886
Working Residents	**23,757**
Out Commuter Residents	88.5% of total
Less: Out Commuter Residents	21,025
Live/Work Residents	**2,732**
Daily Hourly Service Demand	14 Hours
Live/Work Service Demand	**38,248 Hours**
TOTAL RESIDENTIAL SERVICE DEMAND	**850,320 Hours**
	68.6% of Total

Table 3. Proportionate Share Methodology (Part 2 of 2)

Commercial Land Use Service Demand	
Non-Working Residents	
Total Population	**49,643**
Less: Working Residents	23,757
Non-Working Residents	**25,886**
Daily Hourly Service Demand	4 Hours
Non-Resident Service Demand	**103,545 Hours**
In Commuter Employees	
Total Jobs	**30,221**
Multiple Job Holders	5.60% of total
Less: Multiple Job Holders	1,692
Total Employment	**28,529**
Live/Work Employees	8.2% of total
Less: Live Work Employees	**2,339**
In Commuter Employees	**26,189**
Daily Hourly Service Demand	10 Hours
Out Commuter Service Demand	**261,893 Hours**
Live/Work Employees	
Total Jobs	**30,221**
Multiple Job Holders	5.60%
Less: Multiple Job Holders	1,692
Total Employment	**28,529**
In Commuter Employees	91.8% of total
Less: In Commuter Employees	26,189
Live/Work Employees	**2,339**
Daily Hourly Service Demand	10 Hours
Out Commuter Service Demand	**23,393 Hours**
TOTAL EMPLOYMENT SERVICE DEMAND	**388,832 Hours**
	31.4% of Total

Existing Land Use

Estimates of existing land use are used for forecasting vehicle trips for the transportation impact fees. The total nonresidential square footage in Littleton is also used to calculate the nonresidential impact fees for all fee categories except transportation. As shown in **Table 5**, the City has an estimated 21,148 housing units as reported by the State Demographer (Department of Local Affairs). The distribution of homes by unit type were estimated from the American Community Survey 5-year averages for Littleton. Nonresidential land use data was compiled by City of Littleton GIS staff and EPS from Arapahoe, Jefferson, and Douglas County Assessor tax parcel databases. As shown, there are an estimated 10.3 million square feet of nonresidential development in Littleton.

Table 5. Existing Land Use

Land Use Type	Units or Sq. Ft.	Source
Residential		
Single-Family	10,441	ACS % X DOLA
Multi-Family & Attached	10,267	ACS % X DOLA
Mobile Home & Other	440	ACS % X DOLA
Total Units	**21,148**	DOLA
Non-Residential Sq. Ft.	**10,298,897**	

Source: Economic & Planning Systems

Household Size

All residential impact fees except transportation begin with a per capita calculation. In order to convert the impact fee to a fee per housing unit consistent with the City's building code, the average household size for single family detached and multiple family dwelling units are used. The City's code defines multifamily dwelling units as a building structurally divided into two (2) or more separate dwelling units. For multiple dwelling units, the average household size for single family attached and multifamily units was calculated from the U.S. Census Public Use Microsample data (PUMS) for PUMS area 820 which aligns closely with the City's boundary. The average household size is estimated at 2.60 for single family units and 1.71 for multiple dwelling units as shown in **Table 6**.

Table 6. Household Size Estimates

Unit Type	Average
Single Family Detached	2.60
Multiple Dwelling	1.71

Source: Economic & Planning Systems analysis of US Census Public Use Microsample Data (2019 1-Year Sample)

3. Police Impact Fee

This chapter documents the level of service, replacement cost estimates, cost allocations, and other calculations used to update to the Police Impact Fee. The Department consists of two divisions; Patrol, and Investigations/Support Services, and is responsible for public safety in the community as well as the safe flow of traffic in and through the community. The department accomplishes this by focusing on the core functions of Patrol and Investigations/Support Services. The Patrol Division oversees all emergency responses and non-emergency calls 24 hours a day, seven days a week in the City of Littleton. Each patrol team comprising of officers, a corporal, and a sergeant, patrol the streets of the city to protect neighborhoods and businesses from criminal activity and to address quality of life issues.

The Investigations Division investigates all felony crimes committed in the City of Littleton. The division is staffed with detectives, a sergeant and a commander. The division is further supplemented by lab technicians who process all major crime scenes and are responsible for all items of evidence and property until the courts determine a resolution.

Level of Service Definition

The total replacement cost of Police Department facilities is estimated at $6.1 million, as shown in **Table 7**. This value is attributed to the Police Administration/ Operations building and contents. The total area of this facility is estimated at 16,000 square feet which translates to a total value of $378 per square foot.

Table 7. Police Facilities Inventory and Replacement Cost

Description	Replacement Value [1]	% of Total
Police	**$6,050,478**	**100%**
Police Administration/Operations (building)	$4,943,744	82%
Police Administration/Operations (contents)	$867,895	14%
Service Center Armored Car, Comm Veh & Police storage Building #4 (Bldg)	$231,800	4%
Service Center Armored Car, Comm Veh & Police storage Building #4 (contents)	$7,039	0%
Total Building Area	16,000	
Per SF	$378	

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

The Police Department has 68 items of fleet and equipment in its LOS, summarized in **Table 8**. These primarily include various vehicles necessary for the department to maintain its LOS. The total replacement cost of these items is $5.1 million, which includes both the replacement cost of the vehicle and the cost of the patrol and safety equipment needed to put each vehicle into service.

Table 8. Police Vehicle Major Fleet Inventory and Replacement Cost (Part 1 of 2)

Description	Replacement Cost [1]	Equipment	Total
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2015 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2015 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2014 FORD ESCAPE	$39,190	$0	$39,190
2013 FORD F1504X4 EC	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$0	$62,430
2015 JEEP GRAND CHEROKEE	$62,430	$0	$62,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2014 FORD EXPEDITION	$62,430	$15,000	$77,430
2018 CHEVROLET IMPALA	$39,190	$0	$39,190
2016 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2016 FORD EXPEDITION	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2020 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2013 FORD FUSION HYBRID	$41,530	$0	$41,530
2008 CHEVROLET EQUINOX	$41,530	$0	$41,530
2014 FORD ESCAPE	$41,530	$0	$41,530
2014 FORD ESCAPE	$41,530	$0	$41,530
2008 CHEVROLET EQUINOX	$41,530	$0	$41,530
2015 FORD INTERCEPTOR SED	$41,530	$15,000	$56,530
2015 FORD INTERCEPTOR SED	$41,530	$15,000	$56,530
2016 FORD EDGE	$41,530	$0	$41,530
2016 FORD EDGE	$41,530	$0	$41,530
2016 JEEP LATITUDE	$41,530	$0	$41,530
2016 JEEP LATITUDE	$41,530	$0	$41,530
2020 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2014 POLARIS RNGR800	$27,750	$0	$27,750
2020 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430

[1] 2020 Estimate

Source: City of Littleton; Economic & Planning Systems

Table 7. Police Vehicle Major Fleet Inventory and Replacement Cost (Part 2 of 2)

Description	Replacement Cost [1]	Equipment	Total
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2017 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2016 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2017 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2016 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2016 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2017 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2017 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2012 CHEVROLET CAPRICE	$62,430	$15,000	$77,430
2018 CHEVROLET TRAX	$37,212	$0	$37,212
2019 FORD F550	$427,650	$0	$427,650
2015 FORD INTERCEPTOR SED	$62,430	$15,000	$77,430
2009 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2015 MPH SPD MONITR	$14,740	$0	$14,740
2016 DODGE CHARGER	$62,430	$15,000	$77,430
2016 DODGE CHARGER	$62,430	$15,000	$77,430
2017 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2014 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2014 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2014 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2016 FORD INTERCEPTOR SUV	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2019 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2018 CHEVROLET TAHOE 4X4	$62,430	$15,000	$77,430
2015 PACE AMERICAN OB610SIZ	$4,275	$0	$4,275
2008 FORD E-250	$39,650	$20,000	$59,650
2000 MPH SPD MONITR	$14,740	$0	$14,740
1999 CLASSIC TRAILER	$3,230	$0	$3,230
2004 HAULMARK TS6X10DS2	$3,230	$0	$3,230
2002 FREIGHTLNR MT-55	$420,000	$45,000	$465,000
Total	**$4,337,037**	**$740,000**	**$5,077,037**

[1] 2020 Estimate

Source: City of Littleton; Economic & Planning Systems

Impact Fee Calculation

Cost Allocation

To allocate police services to residential and commercial land uses, EPS used call for service data provided by the City. In 2019, the Police Department had a total of 52,000 calls for service, as shown in **Table 9**. Of these calls, approximately 65 percent were attributed to residential uses and 35 percent were attributed to nonresidential land uses.

Table 9. Police Calls for Service by Land Use

Area	Amount
Total Calls for Service	**52,000**
Total Residential Calls	**33,712**
% of Total	*64.8%*
Total Commercial Calls	**18,288**
% of Total	*35.2%*

Source: City of Littleton; Economic & Planning Systems

Fee Calculation

The next step in the fee calculation is converting the replacement cost to a cost per capita for residential land uses and a cost per square foot for nonresidential land uses. Accounting for the replacement cost of facilities and contents, equipment, and outstanding debt principal amount results in a total replacement value of $10.6 million for the Police Department, as shown in **Table 10**. Based on the call for service methodology outlined above, costs attributed to residential uses are estimated at $6.9 million or $142.52 per resident. Costs attributed to nonresidential uses are estimated at $3.7 million, which equates to an impact fee of $0.36 per square foot.

Table 10. Police Replacement Cost Per Capita and Per Sq. Ft.

Description	Factor	Amount
Replacement Cost		
Facilities and Contents		$6,050,478
Equipment		$5,077,037
Less: Outstanding Debt Principal Amt. [1]	75.0%	-$544,731
Subtotal		**$10,582,784**
Land Use Allocation [2]		
Residential	64.8%	$6,860,900
Non-Residential	35.2%	$3,721,884
Subtotal	**100.0%**	**$10,582,784**
Residential Cost per Capita	48,140	**$142.52**
Non-Residential Cost per Sq. Ft.	10,298,897	**$0.36**

[1] Radio Replacement Capital Lease. 75% attributed to the Police Department and 25% attributed to Public Works.
[2] Residential and non-residential distribution is based on calls for service
Source: City of Littleton; Economic & Planning Systems

At $142.52 per capita, a single family home with an average household size of 2.60 has a maximum police impact fee of $370.81 as shown in **Table 11**. The maximum fee for a multiple dwelling unit is $243.32.

Table 11. Police Impact Fee Calculation

Description	Factor	Impact Fee
Cost per Capita	**$142.52**	
By Unit Type		
Single Family	2.60	$370.81
Multiple Dwelling	1.71	$243.32

Source: Economic & Planning Systems

THIS PAGE

4. General Facilities and City Fleet

Impact fees are also collected to fund facility expansions for general government purposes such as office space for City staff, facilities maintenance buildings, and courts and justice functions. As the City grows, the space needs for these support functions also grows. Impact fees will be used to maintain the current level of service, expressed as the replacement cost of its major facilities. This fee study adds the general facilities fleet public works fleet replacement cost to the level of service to be maintained with impact fees. The City's fleet of vehicles and maintenance equipment is used to maintain roads, parks and public spaces, and buildings.

This Chapter contains two sections addressing the fee components for General Facilities and General Fleet, and Public Works Fleet. At the end of the Chapter, the fee components are combined into a single facilities and City fleet impact fee.

General Facilities and General Fleet

Level of Service Definition

The total replacement cost for the City's general facilities is estimated at $43.1 million, as shown in **Table 12**. The total facility value is based on the City's insurance data and is primarily attributed to the City Center building ($23.0 million), the Courthouse building ($6.9 million), the Service Center building ($4.9 million), and the Fleet Maintenance building ($3.7 million). Based on a total combined building area of just under 173,000 square feet, this translates to a total value of $249 per square foot.

Table 12. General Facilities Replacement Cost

Description	Replacement Value [1]	% of Total
City Center	**$23,027,526**	**53%**
City Center (Building) *	$20,024,100	46%
City Center (Contents) *	$3,003,426	7%
Bemis House	**$372,600**	**1%**
Bemis House - Garage	$34,200	0%
Bemis House - Residence	$338,400	1%
Courthouse	**$6,848,298**	**16%**
Courthouse (Bldg)	$5,916,500	14%
Courthouse (contents)	$931,798	2%
Fleet Maintenance	**$3,686,464**	**9%**
Fleet Maintenance Shop Bldg 5 (building)	$2,703,800	6%
Fleet Maintenance Shop Bldg 5 (contents)	$942,469	2%
Fleet Storage Shed (building)	$22,100	0%
Fleet Storage Shed (contents)	$18,095	0%
Public Service Center	**$2,825,370**	**7%**
Public Service Center - Building #2 (Bldg)	$1,682,400	4%
Public Service Center - Building #2 (Contents)	$1,142,970	3%
Service Center	**$4,954,983**	**12%**
Service Center - Building & Grounds Building #3 (Bldg)	$811,600	2%
Service Center - Building & Grounds Building #3 (Contents)	$280,956	1%
Service Center - Fueling Station (building)	$125,500	0%
Service Center - Fueling Station (contents)	$60,750	0%
Service Center - Open/Closed Storage West Side (Bldg)	$269,400	1%
Service Center - Open/Closed Storage West Side (Contents)	$77,940	0%
Service Center - Salt and Sand Storage (building)	$311,600	1%
Service Center - Salt and Sand Storage (contents)	$19,571	0%
Service Center Offices Building #1 (Bldg)	$2,288,200	5%
Service Center Offices Building #1 (Contents)	$709,466	2%
Other	**$1,350,986**	**3%**
South Platte Maintenance Shop (building)	$77,900	0%
South Platte Maintenance Shop (contents)	$3,392	0%
Storage Canopy / Vehicle Storage	$365,600	1%
City Center Pedestrian Bridge	$281,000	1%
Geneva Village Irrigation Pump Vault	$201,600	0%
Jamison Entrance Structure	$278,600	1%
Covered Loading Dock/Canopy - East Side (building)	$138,000	0%
Covered Loading Dock/Canopy - East Side (contents)	$4,894	0%
Total	**$43,066,227**	**100%**
Total Adminstration Building Area	172,949	
Per SF	$249	

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

The City has 79 items of general fleet and equipment in its LOS, summarized in **Table 13** (on following three tables). These primarily include various vehicles and heavy equipment necessary to provide services ranging from Building Maintenance, Engineering, Grounds Maintenance, Garage, Sanitation, and Storm Sewer. The total replacement cost of these items is estimated at $3.4 million.

Table 13. General Facilities Fleet Inventory and Replacement Cost (Part 1 of 3)

Description	Replacement Cost
Garage	**$179,980**
2015 FORD EXPEDITION	$62,430
2003 HYSTER H50XM	$30,420
2009 FORD ESCAPE HYBRID	$34,350
1996 CHEVROLET K3500	$44,600
2003 MILLER NT 250	$4,950
2003 QUINCY QTG-30K13	$3,230
Building Maintenance	**$456,305**
1989 ONAN 15HC-4XR8/45A	$55,000
2012 KOHLER RE2JEQZJE	$75,775
2018 CHEVROLET 1500 4X4	$43,760
2014 FORD INTERCEPTOR SUV	$62,430
2016 FORD F1504X4 EC	$38,000
2018 CHEVROLET 1500 4X4	$45,000
2011 FORD F350 XC	$42,500
2016 FORD TRANSIT	$46,870
2000 HONDA EM5000SXK2A	$5,500
2004 US CARGO USC816TA2	$10,500
2003 JACKSON TRAILER	$3,250
2004 JGL 2032E2	$16,500
2016 GENIE AWP20SAC	$11,220
Engineering	**$188,020**
2008 FORD ESCAPE HYBRID	$34,350
2012 FORD F150 EC	$37,650
2003 FORD F250 EC	$40,720
2018 FORD F1504X4 EC	$37,650
2012 FORD F150 EC	$37,650

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

Table 12. General Facilities Fleet Inventory and Replacement Cost (Part 2 of 3)

Description	Replacement Cost
Grounds Maintenance	**$2,530,125**
2013 CHEVROLET K2500	$57,800
2019 FORD F250 4x4	$68,125
2015 FORD F250 4x4	$37,570
2015 FORD F250	$47,750
2019 FORD F150 4X4	$43,048
2015 FORD F250 4x4	$60,842
2013 CHEVROLET K2500	$57,382
2016 FORD F250 4x4	$49,871
2016 FORD F250 4x4	$49,696
2016 AIR-FLO MSS	$4,708
2015 FORD F250	$40,459
2015 FORD F250	$33,340
2007 FORD F-450	$50,319
2005 FORD F-450	$50,566
2017 FORD TRANSIT	$49,661
2011 FORD F350	$52,122
2016 AIR-FLO PSV-8H	$8,500
2006 SCAG STHM-23CV	$10,612
2015 SCAG TURF TIGER	$14,020
2012 VENTRAC 4200	$27,860
2019 VENTRAC KY400	$7,146
2012 VENTRAC KD482	$1,750
2002 STEINER MOW DECK	$3,465
2002 STEINER EDGER	$945
2002 STEINER SPRAYER	$4,410
2002 STEINER STUMP CUTR	$2,380
2002 STEINER 54'BROOM	$4,130
2006 BUCK TRAILER	$2,723
2017 HONDA FOURTRAXRANCHER	$14,384
2018 ECHO EE 11-14	$2,597
2015 WALKER T30i	$25,134
2002 VERMEER 1400BC	$33,393
2013 SULLAIR 185DPQ CAI4	$21,750
2019 BOBCAT S550	$8,680
2013 BOBCAT SB200	$5,183
2019 TORO Z MASTER 6000	$21,540
2016 TORO Z MASTER 6000	$16,014
2017 TORO Z MASTER 6000	$16,554
2003 SUPERIOR 2PT6M-T	$5,152
2015 SILVER FOX 6.6X14 UTILITY	$6,007
2015 SILVER FOX 6.6X18 LANDSCAP	$7,478
2015 SILVER FOX 6.6X18 LANDSCAP	$7,793
2002 CHEVROLET K1500	$30,107
2008 HONDA EM5000SXK2A	$2,562
2003 FORD F550	$118,063

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

Table 12. General Facilities Fleet Inventory and Replacement Cost (Part 3 of 3)

Description	Replacement Cost
Sanitation	**$1,346,536**
2016 FORD F2504X4 EC	$50,025
2016 FORD F350	$79,778
2019 FORD E-450	$309,739
2020 FORD F-450	$108,261
1992 SDP E-600	$22,876
2018 IHC/VACTOR VA 850	$503,500
1996 IHC 2654 6X4	$269,794
2008 HONDA EM5000SXK2A	$2,562
Storm Sewer	**$41,155**
2020 CHEVROLET 2500	$41,155
Total	**$3,395,585**

[1] 2019 Estimate
Source: City of Littleton; Economic & Planning Systems

General Facilities and Fleet Fee Component

Cost Allocation

EPS utilized the proportionate share methodology to allocate facility, fleet, and equipment replacement costs associated with general facilities (described in greater detail in previous sections of this report). This methodology reflects the demand placed on City services by residential and nonresidential development types and allocates costs proportionally.

Fee Component

The calculation of the facilities and fleet and equipment component accounts for the total replacement costs of $43.1 million, equipment replacement costs of $3.4 million and the outstanding debt principal amount of $990,000, which is attributed to the Courthouse. Outstanding debt is removed because it will be paid with property and sales tax generated by new and existing residents. It would be double charging to include that value in the replacement cost values.

Approximately 68 percent of costs or $30.9 million are attributed to residential uses, while 32 percent or $14.5 million are attributed to commercial uses, as shown in **Table 14**. Based on a total population of 48,140, the total residential cost per capita is estimated at $643.55 per person. Total commercial area is estimated at 10.3 million square feet, which results in a commercial or nonresidential cost of $1.41 per square foot.

Table 14. General Facilities and Fleet Replacement Cost Per Capita and Per Sq. Ft.

Description	Factor	Amount
Replacement Cost		
Facilities and Contents		$43,066,227
Equipment		$3,395,585
Less: Outstanding Debt Principal Amt. (Courthouse)		-$990,000
Subtotal		**$45,471,812**
Land Use Allocation [1]		
Residential	68.1%	$30,980,589
Non-Residential	31.9%	$14,491,223
Subtotal	**100.0%**	**$45,471,812**
Residential Cost per Capita	48,140	**$643.55**
Non-Residential Cost per Sq. Ft.	10,298,897	**$1.41**

[1] Proportionate Share methodology
Source: City of Littleton; Economic & Planning Systems

For a single family home, the fee per unit is estimated at $1,674.42 based on an average household size of 2.60 as shown in **Table 22**. The fee per unit for multiple dwelling units is $1,098.72 per unit based on an average household size of 1.71.

Table 15. General Facilities Impact Fee Component

Description	Factor	Impact Fee
Cost per Capita	**$643.55**	
By Unit Type		
Single Family	2.60	$1,674.42
Multiple Dwelling	1.71	$1,098.72

Source: Economic & Planning Systems

Public Works Fleet Component

This chapter documents the impact fee calculations for City of Littleton's Public Works Fleet. This accounts for vehicles that the Public Works Department has acquired and actively maintains. The majority of these vehicles are necessary for street and traffic maintenance.

Level of Service Definition

The level of service to be maintained with impact fees is defined as the replacement cost of the Public Works fleet. The Public Works Fleet replacement cost is summarized in **Table 16** (on the following two tables). The total replacement cost reflects a range of vehicle types and is estimated $6.9 million.

Table 16. Public Works Fleet Replacement Cost (Part 1 of 2)

Description	Replacement Cost
2013 FORD F1504X4 EC	$35,956
2019 FORD F2504X4 EC	$54,665
2003 FORD F2504X4 EC	$32,533
2006 CHEVROLET 2500	$30,187
2013 FORD F350	$58,582
2007 FORD F-450	$52,179
2002 TANK FUEL	$0
2015 FORD F350 4X4	$70,972
2013 FORD F350	$54,242
2012 NISSAN UD3300	$107,378
2012 NISSAN RA400	$0
2003 IHC 7400 6X4	$196,328
2015 HIWAY 3020XT	$41,664
2019 IHC 7400 4X2	$315,744
2018 WHACKER NEUSON 1550 AW	$0
2015 IHC 5900i	$316,690
2013 IHC 7600	$279,954
2013 IHC 7600	$306,156
2007 IHC 7600	$231,467
2010 HIWAY E3020-14	$43,067
1989 IHC DUMP 6 YDS	$53,648
2017 NAVISTAR 7400 4X2	$267,335
2017 HENKE HXC 2000	$0
2019 IHC HX620	$369,639
2017 NAVISTAR 7400 4X2	$266,113
2017 HENKE HXC 2000	$0

[1] 2020 Estimate

Source: City of Littleton; Economic & Planning Systems

Table 15. Public Works Fleet Replacement Cost (Part 2 of 2)

Description	Replacement Cost
2009 LEE-BOY 8510R	$206,406
2020 IHC HV507	$291,770
2012 MBW AP2000	$2,797
2016 WHACKER NEUSON WP1550AW	$2,835
2000 WAUSAU K-3	$0
2008 ETNYRE MU-600	$51,002
2013 WHACKER NEUSON RD12A	$30,746
1998 BILLY GOAT GRAZOR	$1,050
2007 CRAFCO SUPER 125	$51,286
2009 HOTSY 1.110-567.0	$12,593
2019 SULLAIR 185DPQ KU4F	$30,765
1999 E-Z LIFT 50'	$36,470
2020 BOBCAT S66	$6,773
2017 BOBCAT 24" PLANER	$17,494
2011 BOBCAT SB240	$10,351
2020 BOBCAT BC68	$6,714
2018 IHC 4300	$359,274
2018 TYMCO 600-BAH	$0
2019 IHC 4300	$381,301
2019 TYMCO 600-BAH	$0
2019 IHC 4300	$381,262
2019 TYMCO 600-BAH	$0
2011 ELGIN PELICAN	$229,451
1999 INGERSOLL DD-70	$101,595
2020 CASE 580SN	$158,137
2003 INGERSOLL DD-70	$101,595
2006 JOHN DEERE 624J	$224,949
2000 CAT 143H	$262,448
2002 JOHN DEERE 410G	$124,558
2013 ARTIC SHARK AS-DA1002	$56,168
2015 SILVER FOX 6.6X12 UTILITY	$6,007
2009 FELLING FT-24-T	$25,171
2004 SUPERIOR 2PT6M	$5,166
2014 WANCO WVTM	$20,257
2014 WANCO WVTM	$20,257
2012 PARKER SA8314	$4,153
2012 FORD F350	$61,347
2007 EDCO CPU10FC-20H	$0
2005 RU2 SYSTEMS FAST 800	$8,400
2017 FORD F550 EC	$172,541
2013 TITAN 8950	$10,404
2015 DIAMOND CC3500J	$20,027
2006 CHEVROLET W5500	$58,226
2006 M-B COMPANIES M-B 127P	$216,013
2008 GRACO LL IV	$8,670
2006 JEEP LIBERTY	$33,500
Total	**$6,994,430**

[1] 2020 Estimate

Source: City of Littleton; Economic & Planning Systems

Public Works Fleet Fee Component

Cost Allocation

EPS utilized the proportionate share methodology to allocate Public Works Fleet replacement costs to residential and nonresidential uses. This methodology reflects the demand placed on City services by residential and commercial development types and allocates costs proportionally as explained in Chapter 2.

Public Works Fleet Fee Component

Public Works fleet has a replacement cost of nearly $7.0 million as shown in **Table 17,** but has $181,577 in outstanding debt (radio equipment capital lease) which is deducted from the level of service. Approximately 68 percent of net replacement costs are attributed to residential uses at $4.6 million. Public Works Fleet replacement costs attributed to commercial uses are estimated at 31.9 percent of total net costs at $2.2 million. Based on a total population of 48,140, the residential cost per capita is estimated at $96.42 per person. Total nonresidential development is estimated at 10.3 million square feet, which results in a nonresidential impact fee of $0.21 per square foot.

Table 17. Public Works Fleet Replacement Cost Per Capita and Per Sq. Ft.

Description	Factor	Amount
Replacement Cost		
Equipment		$6,994,430
Less: Outstanding Debt Principal Amt. [1]	25.0%	-$181,577
Subtotal		**$6,812,853**
Land Use Allocation [2]		
Residential	68.1%	$4,641,693
Non-Residential	31.9%	$2,171,160
Subtotal	**100.0%**	**$6,812,853**
Residential Cost per Capita	48,140	**$96.42**
Non-Residential Cost per Sq. Ft.	10,298,897	**$0.21**

[1] Radio Replacement Capital Lease. 75% attributed to the Police Department and 25% attributed to Public Works.

[2] Proportionate Share methodology

Source: City of Littleton; Economic & Planning Systems

The impact fee for a single family home is $250.87 based on an average household size of 2.60, as shown in **Table 18**. The estimated fee per unit for multiple dwelling units is estimated at $164.62 per unit based on an average household size of 1.71.

Table 18. Public Works Fleet Impact Fee Component

Description	Factor	Impact Fee
Cost per Capita	**$96.42**	
By Unit Type		
Single Family	2.60	$250.87
Multiple Dwelling	1.71	$164.62

Source: Economic & Planning Systems

General Facilities and City Fleet Fee

In this section, the impact fee components for general facilities, general fleet, and public works fleet are combined into one impact fee. This impact fee reflects the proportionate share of the cost to maintain the current level of service that new development would pay. As shown in **Table 19**, the total fee for single family detached homes is $1,925 per unit and $1,263 for multiple dwelling units. The total nonresidential impact fee is $1.62 per square foot.

Table 19. General Facilities and City Fleet Impact Fee

Land Use and Fee Component	Impact Fee	
Single Family Detached		
General Facilities & General Fleet	$1,674.42	
Public Works Fleet	$250.87	
Total Impact Fee	**$1,925.29**	***per unit***
Multiple Dwelling Units		
General Facilities & General Fleet	$1,098.72	
Public Works Fleet	$164.62	
Total Impact Fee	**$1,263.34**	***per unit***
Non-Resential		
General Facilities & General Fleet	$1.41	
Public Works Fleet	$0.21	
Total Impact Fee	**$1.62**	***per sq. ft.***

Source: Economic & Planning Systems

5. Library

This chapter documents the impact fee calculations for City of Littleton's Edwin A. Bemis Public Library. The Bemis Public Library is responsible for meeting the informational, educational, recreational, and cultural needs of Littleton citizens. The library provides services that range from the acquisition of library materials in a variety of formats, access to online resources via the Internet, circulation and reference services, interlibrary loan activities, delivery service to the homebound, creative programs and activities for all age groups, and participation in the Colorado Library Card Program.

Level of Service Definition

The total replacement cost of Library facilities is estimated at $12.7 million, as shown in **Table 20**. Approximately $7.2 million of the total facility is attributed to the building, while $5.4 million is attributed to the building's contents. The area of facility is estimated at 36,195 square feet, which translates to a total value of $351 per square foot.

Table 20. Library Facilities Inventory and Replacement Cost

Description	Replacement Value [1]	% of Total
Library	**$12,697,979**	**100%**
Library (building)	$7,235,300	57%
Library (contents)	$5,440,239	43%
Literature storage (building)	$14,900	0%
Literature storage (contents)	$7,540	0%
Total Building Area	36,195	
Value per SF	$351	

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

Impact Fee Calculation

Cost Allocation

One hundred percent of the services provided by the Library have been allocated to residential development. This reflects the fact that the vast majority of visitors to the Library are city residents and is the most direct nexus between the services provided by the Library and the cost of those services.

Fee Calculation

Based on the estimated total population in the City of 48,140 and a total Library replacement cost of $12.7 million, the residential cost per capita for the Library is estimated at $263.77, as shown in **Table 21**.

Table 21. Library Replacement Cost Per Capita

Description	Factor	Amount
Replacement Cost		
Facilities and Contents		$12,697,979
Less: Outstanding Debt Principal Amt.		$0
Subtotal		**$12,697,979**
Land Use Allocation		
Residential	100.0%	$12,697,979
Non-Residential	0.0%	$0
Subtotal	**100.0%**	**$12,697,979**
Residential Cost per Capita	48,140	**$263.77**
Non-Residential Cost per Sq. Ft.	10,298,897	**$0.00**

Source: City of Littleton; Economic & Planning Systems

For a single family home, the impact fee per unit is $686.29 based on an average household size of 2.60 as shown in **Table 22**. Based on an average household size of 1.71 persons per household, the impact fee per unit for multiple dwelling units is calculated at $450.33.

Table 22. Library Impact Fee Calculation

Description	Factor	Impact Fee
Cost per Capita	**$263.77**	
By Unit Type		
Single Family	2.60	$686.29
Multiple Dwelling	1.71	$450.33

Source: Economic & Planning Systems

6. Museum

This chapter documents the impact fee calculations for City of Littleton's Museum. The Littleton Museum is located on 40 acres adjacent to Ketring Lake and includes three exhibition galleries, a children's interactive gallery, research center, lecture hall, and two 19th-century living history farm sites.

Level of Service Definition

The Museum facility replacement cost and additional Museum related costs, such as the Art's Collection Center, the Depot Arts Center, the Fine Arts Collection, are shown in **Table 23** on the following two pages. The total replacement cost of all Museum related facilities is estimated at $30.9 million (second half of table).

Table 23. Museum Facilities Inventory and Replacement Cost (Part 1 of 2)

Description	Replacement Value [1]	% of Total
Museum	**$10,250,764**	**33%**
Museum (building)	$8,475,000	27%
Museum (contents)	$376,987	1%
Museum - 1860's Corncrib	$17,000	0%
Museum - 1860's Log Bridge	$24,500	0%
Museum - 1860's Outhouse	$5,566	0%
Museum - 1890's Chicken House	$18,400	0%
Museum - 1890's Corncrib	$6,200	0%
Museum - 1890's Outhouse	$8,971	0%
Museum - 1960's Pig Sty	$35,200	0%
Museum - Barn	$155,800	1%
Museum - Bemis House (building)	$167,800	1%
Museum - Bemis House (contents)	$21,318	0%
Museum - Blacksmith House (building)	$85,900	0%
Museum - Blacksmith House (content)	$9,787	0%
Museum - Farm Barn	$88,500	0%
Museum - Gazebo (building)	$42,000	0%
Museum - Gazebo (contents)	$13,865	0%
Museum - Horse Shed	$19,700	0%
Museum - Icehouse/Barn	$76,800	0%
Museum - Interperators Den (building)	$260,300	1%
Museum - Interperators Den (contents)	$107,132	0%
Museum - McBroom Loghouse (building)	$93,400	0%
Museum - McBroom Loghouse (contents)	$4,076	0%
Museum - School House (building)	$38,800	0%
Museum - School House (contents)	$4,162	0%
Museum - Sheep House	$62,900	0%
Museum - Tool Shed	$24,500	0%
Museum - Windmill	$6,200	0%
Museum Total	**$10,250,764**	**33%**
Total Building Area	31,850	
Per SF	$322	

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

Table 21. Museum Facilities Inventory and Replacement Cost (Part 2 of 2)

Description	Replacement Value [1]	% of Total
Arts Collection Center	**$2,629,805**	**9%**
Arts Collection Center - Gray Elephant (building)	$1,976,900	6%
Arts Collection Center - Gray Elephant (contents)	$652,905	2%
Caretaker Residence	**$400,398**	**1%**
Caretaker Residence (building)	$367,500	1%
Caretaker Residence (contents)	$32,898	0%
Den Shed	**$34,946**	**0%**
Den Shed (building)	$4,787	0%
Den Shed (contents)	$30,159	0%
Depot Arts Center	**$268,398**	**1%**
Depot Arts Center - Outhouse (building)	$11,100	0%
Depot Arts Center - Outhouse (contents)	$2,447	0%
Depot Arts Center (Building)	$232,700	1%
Depot Arts Center (Contents)	$22,151	0%
Greenhouse	**$10,208**	**0%**
Greenhouse (building)	$8,700	0%
Greenhouse (contents)	$1,508	0%
Town Hall Arts Center	**$4,287,665**	**14%**
Town Hall Arts Center - Theater (building)	$4,021,200	13%
Town Hall Arts Center - Theater (contents)	$266,465	1%
Other	**$789,577**	**3%**
Animal Care Shelter	$37,000	0%
Horse Barn	$352,500	1%
Pump House - Exhibition	$1,898	0%
Railroad Car/Caboose	$42,600	0%
Schoolhouse Outhouse	$1,479	0%
World War II Memorial	$163,300	1%
Exhibition Bridge	$56,100	0%
Greenhorn Grove Fishing Dock	$91,400	0%
Chicken Coop/Equipment (1860's)	$43,300	0%
Fine Arts Collection	**$12,218,850**	**40%**
Estimate of Value	$12,218,850	40%
Total	**$30,922,783**	**100%**

[1] 2019 Estimate

Source: City of Littleton; Economic & Planning Systems

Impact Fee Calculation

Cost Allocation

All of the services provided by the Museum are allocated to residential land uses. However, because the Museum serves a wider regional audience, only a portion of total costs are attributed to City residents and included in the impact fee level of service. Previously collected survey data indicate that 42 percent of facility visitors are non-Littleton residents. As a result, this analysis only accounts for the share of museum patronage that is made up of city residents (58 percent or $16.7 million of the replacement cost estimate).

Fee Calculation

Net replacement cost for the Museum is estimated at $28.8 million, which reflects a total replacement cost of $30.9 million and an outstanding debt principal balance of $2.085 million, as shown in **Table 24**. Based on the population in the City of 48,140, the residential cost per capita for the Museum is estimated at $347.44.

Table 24. Museum Replacement Cost Per Capita

Description	Factor	Amount
Replacement Cost		
Facilities and Contents		$30,922,783
Equipment		$0
Less: Outstanding Debt Principal Amt.		-$2,085,000
Subtotal		**$28,837,783**
Local Allocation [1]	58.0%	**$16,725,914**
Land Use Allocation		
Residential	100.0%	$16,725,914
Non-Residential	0.0%	$0
Subtotal	**100.0%**	**$16,725,914**
Residential Cost per Capita	48,140	**$347.44**
Non-Residential Cost per Sq. Ft.	10,298,897	**$0.00**

[1] Survey data gathered by the City indicate that 42 percent of facility visitors are non-Littleton residents ad 58 percent of visitors are Littleton residents.

Source: City of Littleton; Economic & Planning Systems

The resulting impact fee for a single family home is $903.99 based on an average household size of 2.60, as shown in **Table 22**. The fee per unit for multiple dwelling units is estimated at $593.18 per unit based on an average household size of 1.71.

Table 25. Museum Impact Fee Calculation

Description	Factor	Impact Fee
Cost per Capita	**$347.44**	
By Unit Type		
Single Family	2.60	$903.99
Multiple Dwelling	1.71	$593.18

Source: Economic & Planning Systems

7. Transportation

Transportation impact fees are calculated using a Plan-Based Method, incorporating a forecast of trips by land use type and a project list from the 2019 Transportation Master Plan (TMP). The transportation impact fee is comprised of two components:

- **Local Projects –** Local projects in the TMP are generally projects on the major arterial and collector roads in Littleton that are likely to have a significant portion of the costs paid by the City and are largely the City's responsibility. These projects are planned over a 10-year time horizon, and the impact fee is calculated on 10 years of forecasted growth.
- **Regional Projects –** These are larger more complex and more costly projects involving partnerships with CDOT and other jurisdictions, such as the Santa Fe and Bowles intersection reconstruction. Due to the cost, complexity, and time it takes to get approvals and inclusion in the DRCOG Transportation Improvement Plan (TIP), impact fees for these projects are evaluated over a 20-year time period. Some projects are anticipated in the next 5 to 10 years.

Infrastructure Demand Forecasts

A forecast of new vehicle trips is needed for the plan-based method, as the transportation impact fee is expressed as a cost per new trip. The trip forecast begins with a housing unit, population, and nonresidential square feet which also is used for the Multimodal Improvements Fee described in Chapter 8.

In **Table 26**, the population, housing, and nonresidential square feet forecast is shown. A household and housing growth rate of 0.70 percent per year was derived from the Denver Regional Council of Governments (DRCOG) 2040 forecasts used in the Fiscal Sustainability Study prepared by EPS (2019-2020). The nonresidential square footage growth rate of 58,285 square feet per year reflects the past 10 years of market share capture in Littleton. Housing units are forecasted to increase by 1,539 through 2030 and by 3,188 from 2020 through 2040. Nonresidential building square feet are forecasted to grow by 582,850 square feet through 2020 and 1.17 million square feet through 2040.

As shown in **Table 27**, weighted average trip generation rates (daily trip ends) are applied to housing units (trips per unit) and nonresidential development (trips per 1,000 sq. ft.) to forecast new vehicle trips. The total 2020 and 2040 trips shown represent trips from existing and new residents. For impact fees, we must estimate the proportion of trips generated only by new development. This is done by dividing the new trips in each horizon year by the total trips in that horizon year. As shown, the percentage of 2030 trips that are attributed to growth is 6.05 percent (22,445 divided by 371,005) and 11.62 percent in 2040 (45,814 divided by 394,374).

Table 26. Housing and Nonresidential Land Use Forecast, 2020-2040

Description	2019	Factors	2020	2030	2040	2020-2030 Total	2020-2030 Ann. #	2020-2030 Ann. %	2020-2040 Total	2020-2040 Ann. #	2020-2040 Ann. %
Housing Units [1]	21,148	0.70%	21,296	22,835	24,484	**1,539**	154	0.70%	**3,188**	159	0.70%
Population	48,140	2.28 pop. per unit	48,477	51,979	55,735	3,502	350	0.70%	7,258	363	0.70%
Non-Residential Sq. Ft.	10,298,897	58,285 sqft/yr.	10,357,182	10,940,032	11,522,882	**582,850**	58,285	0.55%	**1,165,700**	58,285	0.53%
Jobs [2]	30,221	341 sq. ft./job	30,392	32,102	33,813						
In-Commuting Employees (Non-Residents)		91.8%	27,900	29,470	31,040						
In-Commuter Employee Impact											
Growth Allocation											
Population 2020-2030				6.74%							
Non-Residential Sq. Ft. 2020-2030				5.33%							

[1] Growth rate for households and housing units assumed to be equivalent

[2] Mid-range forecast, Fiscal Sustainability Study, EPS 2020

Source: Economic & Planning Systems

Table 27. Trip Forecast and Allocation to Growth and Land Use Categories

Description	Trip Generation	2020	2030	2040	2020-2030 (10 Years) Total	2020-2030 (10 Years) Ann. #	2020-2030 (10 Years) Ann. %	2020-2040 (20 Years) Total	2020-2040 (20 Years) Ann. #	2020-2040 (20 Years) Ann. %
ADT										
Residential										
Housing Units [1]		21,296	22,835	24,484	**1,539**	154	0.70%	**3,188**	159	0.70%
Trips	8.32	177,149	189,947	203,670	**12,798**	1,280	0.70%	**26,521**	1,326	0.70%
Non-Residential										
Non-Residential Sq. Ft.		10,357,182	10,940,032	11,522,882	**582,850**	58,285	0.55%	**1,165,700**	58,285	0.53%
Trips	16.55	171,412	181,058	190,704	**9,646**	965	0.55%	**19,292**	965	0.53%
Land Use Allocation										
Residential New Trips					**12,798**			**26,521**		
Non-Residential New Trips					**9,646**			**19,292**		
Total New Trips					**22,445**			**45,814**		
Allocation to Growth										
Total Trips			**371,005**	**394,374**						
% New Trips (Allocated to Growth)			**6.05%**	**11.62%**						

[1] Growth rate for households and housing units assumed to be equivalent

Source: Economic & Planning Systems

Project List

Local Projects

The local project list included in the impact fee calculations is shown below in **Table 28**. This list of projects originates in the 2019 TMP. The TMP project list was reviewed by EPS and City staff, and projects that address existing deficiencies or are not growth related were removed. Next, staff and EPS estimated the share of costs expected to be borne by the City, net of any external grant funding or already committed funds. The impact fee share of local projects is $23.8 million, as shown.

Regional Projects

EPS and City staff went through the same process in evaluating which regional projects to include in the impact fee program. Key regional transportation projects include the Santa Fe and Bowles interchange ($150 million) and Santa Fe and Mineral interchange reconstruction projects ($75 million). Rough order of magnitude costs from the TMP were used. As shown in **Table 29**, the regional projects total $365.6 million in costs but are estimated to have a local share of 20 percent for most projects. The other costs would come from state, federal, and regional funds, and partnerships with surrounding jurisdictions. The resulting costs to be included in the impact fee program are $68.3 million.

Table 28. Local Transportation Projects (10-Year Timeframe)

ID	TMP Page	Project Type	Corridor	Intersection or Segment	Existing Condition	Project Description	Project Cost	Local or Impact Fee Share	Impact Fee Costs
37	140	Auto Capacity	Santa Fe Dr	Dad Clark Gulch	No signal	Traffic signal	$300,000	100%	$300,000
38	140	Auto Capacity	Mineral Ave	Santa Fe to Jackass Hill Rd	Four-lane roadway	Widen to six lanes and reconstruct sidewalks under RR crossings	$2,000,000	100%	$2,000,000
5	138	Auto Operations and Safety	Belleview Ave	Federal Blvd	Traffic Signal	Intersection operation and safety improvements	$1,000,000	100%	$1,000,000
7	138	Auto Operations and Safety	Belleview Ave	Santa Fe Dr Interchange	Single-Point Urban Interchange	Intersection operation and safety improvements	$1,000,000	100%	$1,000,000
8	138	Auto Operations and Safety	Bowles Ave	Federal Blvd	Traffic Signal	Intersection operation and safety improvements	$4,300,000	100%	$4,300,000
9	138	Auto Operations and Safety	Bowles Ave	Platte Canyon Rd/Lowell Blvd	Traffic Signal	Intersection operation and safety improvements. Local share of CDOT project and potential cost overruns	$100,000	100%	$100,000
10	138	Auto Operations and Safety	Broadway	Arapahoe Rd	Traffic Signal	Intersection operation and safety improvements	$1,000,000	100%	$1,000,000
11	139	Auto Operations and Safety	Broadway	Dry Creek Rd	Traffic Signal	Intersection operation and safety improvements	$500,000	100%	$500,000
12	139	Auto Operations and Safety	Broadway	Jamison Ave	Traffic Signal	Intersection operation and safety improvements	$500,000	100%	$500,000
13	139	Auto Operations and Safety	Broadway	Littleton Blvd	Traffic Signal	Intersection operation and safety improvements	$1,500,000	10%	$150,000
14	139	Auto Operations and Safety	Broadway	Mineral Ave	Traffic Signal	Intersection operation and safety improvements	$1,000,000	10%	$100,000
15	139	Auto Operations and Safety	Lowell Blvd	Berry Ave	Traffic Signal	Intersection operation and safety improvements	$1,000,000	100%	$1,000,000
16	139	Auto Operations and Safety	Mineral Ave	Platte Canyon Rd	Traffic Signal	Intersection operation and safety improvements. Local share of CDOT project and potential cost overruns	$100,000	100%	$100,000
17	139	Auto Operations and Safety	Prince St	Church Ave	Traffic Signal	Intersection operation and safety improvements	$770,000	20%	$154,000
18	139	Auto Operations and Safety	Mineral Ave	Jackass Hill Rd	Traffic Signal	Intersection operation and safety improvements; pedestrian and bicycle focus	$2,000,000	20%	$400,000
19	139	Auto Operations and Safety	Littleton Blvd	Main St/Alamo Ave	Yield Control	Roundabout	$2,000,000	100%	$2,000,000
20	139	Auto Operations and Safety	Prentice Ave	Delaware St	2-Way Stop	Roundabout	$300,000	100%	$300,000
21	139	Auto Operations and Safety	Prentice Ave	Huron St	2-Way Stop	Roundabout	$300,000	100%	$300,000
22	139	Auto Operations and Safety	Prince St	Centennial Dr	2-Way Stop	Roundabout	$1,500,000	100%	$1,500,000
23	139	Auto Operations and Safety	Ridge Rd	Apache St	3-Way Stop	Roundabout	$1,000,000	100%	$1,000,000
24	139	Auto Operations and Safety	Ridge Rd	Elati St	4-Way Stop	Roundabout	$1,000,000	100%	$1,000,000
25	139	Auto Operations and Safety	Ridge Rd	Gallup St	4-Way Stop	Roundabout	$1,000,000	100%	$1,000,000
26	140	Auto Operations and Safety	Ridge Rd	Prince St	4-Way Stop	Roundabout	$1,000,000	100%	$1,000,000
27	140	Auto Operations and Safety	Ridge Rd	Windermere St	4-Way Stop	Roundabout	$1,000,000	100%	$1,000,000
28	140	Auto Operations and Safety	Santa Fe Dr	Prince St	Traffic Signal	Signal timing and phasing, advanced detection and geometry, NB Left	$1,000,000	10%	$100,000
29	140	Auto Operations and Safety	Santa Fe Dr	Aspen Grove Way	Traffic Signal	Signal timing and phasing, advanced detection and geometry	$100,000	100%	$100,000
30	140	Auto Operations and Safety	Santa Fe Dr	Bowles Ave	Traffic Signal	Signal timing and phasing, advanced detection and geometry	$100,000	100%	$100,000
33	140	Auto Operations and Safety	Broadway	Southern portion of Broadway Corridor (7 out of 17 signals remaining and not included in 2020 project)	Varies	V2I and ITS	$2,000,000	40%	$800,000
34	140	Auto Operations and Safety	Santa Fe Dr	Corridor-Wide	Varies	V2I and ITS	$1,000,000	100%	$1,000,000
							$30,370,000		**$23,804,000**

Source: Economic & Planning Systems

Table 29. Regional Transportation Projects (20-Year Timeframe)

Corridor	Intersection or Segment	Existing Condition	Project Description	Project Cost	Local or Impact Fee Share	Impact Fee Costs
Santa Fe Dr	Bowles Avenue	Traffic Signal	Reconfigure into grade separated interchange	$150,000,000	20%	$30,000,000
Santa Fe Dr	Mineral Avenue	Traffic Signal	Reconfigure into grade separated interchange	$75,000,000	20%	$15,000,000
Santa Fe Dr	Bowles Avenue	Traffic Signal	Alternative intersection configuration	$15,000,000	20%	$3,000,000
Santa Fe Dr	Mineral Avenue	Traffic Signal	Alternative intersection configuration (SW and NW quadrant roads). $19.0M project less with $375,00 from impact fees	$18,625,000	20%	$3,725,000
Santa Fe Dr	Corridor Wide (Excluding ROW)	No connection	Access Preservation	$8,000,000	20%	$1,600,000
County Line Rd	Santa Fe Dr to Broadway	Varies	Widening	$20,000,000	20%	$4,000,000
County Line Rd	Broadway to University Ave	Varies	Widening. $20.0M project: 50% Federal, 50% local among three jurisdictions. Littleton's share is 5%.	$20,000,000	5%	$1,000,000
Santa Fe Dr	Corridor-Wide	Varies	Widening	$50,000,000	20%	$10,000,000
Total				**$356,625,000**		**$68,325,000**

Source: Economic & Planning Systems

Impact Fee Calculation

The transportation impact fee calculation is comprised of three steps:

- Compile costs and estimate the local share
- Allocate the costs and local share to new development
- Calculate a growth-related base fee per new trip
- Multiply the new cost per trip by the average daily trip generation rates for each land use type to calculate the impact fee.

In **Table 30**, the base fee per trip is calculated for the 10-year local project CIP and the 20-year regional project CIP. For the 10-year projects, the total impact fee costs are $23.8 million, and 6.05 percent are attributed to new development. Dividing project list cost after the allocation to growth of $1.4 million by the 22,445 new trips equates to a fee per new trip of $64.16.

The base fee per trip for the 20-year regional projects is calculated the same way, except that there are 45,814 new trips. As shown, the 20-year regional project base impact fee is $173.25 per new trip for nonresidential development.

The total base fee per trip comprised of the 10- and 20-year projects is compiled in **Table 30** and totals $237.41 per new trip.

Table 30. Base Fee Per Trip

Description	Factors	Calculation
10-YEAR PROJECTS		
10 Year CIP Project Cost		$23,804,000
Growth Allocation	6.05%	$1,440,064
New Trips 2020-2030		22,445
Fee Per Trip		$64.16
20-YEAR PROJECTS		
20 Year CIP Project Cost		$68,325,000
Growth Allocation	11.62%	$7,937,205
New Trips		45,814
Fee Per Trip		$173.25
Total Fee per Trip		**$237.41**

Source: Economic & Planning Systems

The impact fee for residential development is shown below as the cost per new trip multiplied by the average daily trip generation rates from the ITE Manual, 10th Edition.

For nonresidential development, the actual fee to be adopted by City Council is recommended to be adjusted down. The City relies on sales tax revenues and property tax revenues from the higher assessment ratios of nonresidential development compared to residential development. Therefore, a 60 percent reduction was applied to the nonresidential transportation fee.

The nonresidential impact fee is calculated by multiplying the policy adjusted fee per trip of $94.96 by the average daily trip generation rate, as shown in **Table 31**. The impact fee for several common land uses is shown below.

If there are other land use types in a development application, the Community Development Director and/or the City Engineer can determine of the most appropriate trip generation rate and land use category to apply to the development.

Table 31. Transportation Impact Fee Calculation

Description	ADT Trip Generation		Maximum Impact Fee	Current Fee	Proposed Policy Adjustment	
Residential Cost per Trip			**$237.41**		**0.0%**	**$237.41**
Residential		Primary Trip Factor	Per Unit	Per Unit		Per Unit
Single Family	9.44	1.00	$2,241.15	$1,049		$2,241.15
Multifamily & Attached	7.32	1.00	$1,737.84	$1,049		$1,737.84
Non-Residential Cost per Trip			**$237.41**		**-60.0%**	**$94.96**
Non-Residential	Per 1,000 Sq. Ft.	Primary Trip Factor	Per Sq. Ft.	Per Sq. Ft.		Per Sq. Ft.
Auto Dealership	27.84	1.00	$6.61	$2.607		$2.64
Industrial	5.00	1.00	$1.19	$2.607		$0.47
Lodging	*11.58*	1.00	*$2.75*	*$2.607*		$1.10
Office	**9.74**	**1.00**	**$2.31**	**$2.607**		**$0.92**
Retail/Commercial	**46.12**	**0.64**	**$7.01**	**$2.607**		**$2.80**
Warehouse/Storage	1.74	1.00	$0.41	$2.607		$0.17

[1] Converted to a rate per 1,000 square feet as follows: ITE trip generation rate of 5.79 trips per room, divided by 500 sq. ft.
Source: Economic & Planning Systems

8. Multimodal Improvements

The 2019 TMP included many multimodal transportation project recommendations designed to increase non-vehicular transportation options and capacity in Littleton. The City does not collect impact fees now for these types of projects. This chapter presents impact fee calculations for a new proposed multimodal project impact fee.

The Plan-Based Method was used to calculate this impact fee, using the TMP and the growth forecasts presented in Chapter 7.

Project Descriptions

The list of multimodal projects proposed to be funded with impact fees is shown in **Table 32**. There are two main types of projects included that add capacity to the City's transportation system: shared use paths and grade separated crossings and other crossing improvements.

- **Shared Use Paths –** These are protected transportation facilities for pedestrians, bicycles, and other non-automobile modes of transportation. These types of facilities increase transportation capacity for non-automobile modes and increase vehicle capacity on roads through reducing vehicle trips. They also help to complete the transportation network in Littleton as identified in the TMP.
- **Grade Separated Crossings –** Grade separated crossings replace crosswalk or traffic-signaled trail crossing on major roadways with a dedicated grade separated crossing for non-vehicular travel. These facilities add capacity to roadways by increasing signal green time and reducing stop time for traffic when trail users need to cross a road.

Multimodal project costs total $31.1 million, as shown, and are considered over a 10-year planning horizon.

Table 32. Multimodal Project List

TMP Page	Corridor	Intersection or Segment	Existing Condition	Project Description	Project Cost	Local or Impact Fee Share	Impact Fee Costs
142	Broadway	High Line Canal Trail south of Arapahoe Rd to Ridge Road	None	Shared use path	$200,000	100%	$200,000
142	Broadway	Bannock St to Caley Ave	None	Shared use path	$100,000	100%	$100,000
142	Belleview Ave	Irving St to City Limits	None	Shared use path	$1,500,000	100%	$1,500,000
142	Mineral Ave	Broadway to E Dry Creek Rd	Shared lane	Shared use path	$500,000	100%	$500,000
142	Broadway	Jamison Ave to City Limits	None	Shared use path	$500,000	100%	$500,000
144	Broadway	High Line Canal Trail (S of Arapahoe Rd)	Cross traffic does not stop	Grade-separated	$3,000,000	100%	$3,000,000
144	Mineral Ave	Peninsula Dr/ High Line Canal Trail	Traffic signal	Grade-separated	$3,000,000	100%	$3,000,000
144	Rio Grande St	Slaughterhouse Gulch Trail	None	Grade-separated	$5,000,000	100%	$5,000,000
144	Santa Fe Dr	Slaughterhouse Gulch Trail	None	Grade-separated	$6,000,000	100%	$6,000,000
144	Santa Fe Dr	Dad Clark Gulch	Bridge (no connection)	Grade-separated	$6,000,000	100%	$6,000,000
145	Broadway	Lee Gulch	Cross traffic does not stop	Grade-separated	$5,000,000	100%	$5,000,000
146	Mineral Ave	Wolff St to Polo Ridge Dr	Path	Trail crossing improvements	$300,000	100%	$300,000
					$31,100,000		**$31,100,000**

Source: Economic & Planning Systems

Impact Fee Calculation

The $31.1 million in project costs need to be allocated to new development and to residential and nonresidential land use types. The allocation by land use type was made using the Proportionate Share method presented in Chapter 2, as multimodal facilities will have different trip travel characteristics than automobiles.

The residential allocation is 68.1 percent of the cost as shown in **Table 33**, and new residential development will comprise an estimated 6.74 percent of the facility demand from 2020 through 2030 from the population, housing, and nonresidential space forecast presented earlier in **Table 26**. The base residential impact fee per capita is therefore $407.64. After multiplying by the household size for each unit type, the resulting impact fees are $1,060.62 for single family detached units and $695.96 for multiple dwellings.

For nonresidential development, 31.9 percent of the cost is allocated from the Proportionate Share method. Nonresidential growth will comprise 5.33 percent of the facility demand from 2020 through 2030, with 582,850 square feet of nonresidential growth forecasted. The resulting impact fee is $0.91 per square foot of nonresidential development.

Table 33. Multimodal Projects Impact Fee Calculation

Description	Factors	All Projects Calculation
10-Year Impact Fee Costs		$31,100,000
Residential Allocation		
10-Year CIP Costs		$31,100,000
Growth Allocation 2020-2030	6.74%	$2,095,480
Residential Allocation	68.1%	$1,427,680
New Population 2020-2030		3,502
Base Residential Fee per Capita		**$407.64**
Residential Impact Fee		
Single Family Detached	**2.60**	**$1,060.62**
Multiple Dwelling	**1.71**	**$695.96**
Non-Residential Allocation		
10-Year CIP Costs		$31,100,000
Growth Allocation 2020-2030	5.33%	$1,656,909
Non-Residential Allocation	31.9%	$528,033
New Sq. Ft. 2020-2030		582,850
Impact Fee per Sq. Ft.		**$0.91**

Source: Economic & Planning Systems

APPENDIX:
Front Range Impact Fee Comparisons

Table A-1. Single Family Detached Impact Fee Comparisons

Community	Fire	Police	Parks & Rec (Per Unit)	Museum	Library	Facilities & Fleet	Multi-Modal	Transpor-tation	Impact Fees	Water	Sewer	Tap Total	Total
Littleton - Maximum	N/A	$371	N/A	$903.99	$686.29	$1,925	$1,061	$2,241	$7,188	$9,140	$5,000	$14,140	**$21,328**
Littleton - Proposed	N/A	$371	N/A	$903.99	$686.29	$1,925	$1,061	$2,241	$7,188	$9,140	$5,000	$14,140	**$21,328**
Littleton Current [1]	N/A	$399	N/A	$602.00	$568.00	$1,904	N/A	$1,049	$4,522	$9,140	$5,000	$14,140	**$18,662**
With Impact Fees													
Aurora	$968	$1,029	$872	N/A	N/A	N/A	N/A	N/A	$2,869	$9,857	$9,100	$18,957	**$21,826**
Brighton [2]	N/A	N/A	$1,780	N/A	N/A	N/A	N/A	$1,700	$3,480	$13,354	$9,130	$22,484	**$25,964**
Castle Rock	$1,150	$574	$7,133	N/A	N/A	$375	N/A	$8,699	$17,931	$22,534	$4,023	$26,557	**$44,488**
Commerce City	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$1,181	$1,181	$15,238	$4,340	$19,578	**$20,759**
Parker (Excise Tax)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$10,178	$29,630	$5,040	$34,670	**$44,848**
Centennial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$1,287	$1,287	N/A	N/A	$7,690	**$8,977**
Westminster	$209	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$209	$15,753	$6,082	$21,835	**$22,044**
Average	**$776**	**$667**	**$3,262**			**$1,140**		**$2,783**	**$5,207**	**$16,501**	**$6,102**	**$20,739**	$25,946
Tap Fees													
Arvada	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$0	$19,720	$6,129	$25,849	**$25,849**
Lakewood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$0	$5,300	N/A	$5,300	**$5,300**
Wheat Ridge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$0	$6,000	N/A	$6,000	**$6,000**
Average	---	---	---	---	---	---	---	---	**$0**	**$10,340**	**$6,129**	**$12,383**	$12,383

[1] Tap fees reflect in-city limit values

[2] Park impact fee includes Community and Neighborhood Park Fees

Source: Economic & Planning Systems

Table A-2. Multifamily Impact Fee Comparisons

Description	Fire	Police	Parks & Rec	Museum	Library	Facilities & Fleet	Multi-Modal	Transporta-tion	Impact Fees	Water	Sewer	Tap Total	Total
Littleton - Maximum	N/A	$243	N/A	$593.18	$450.33	$1,263	$696	$1,738	$4,984	$2,978	$5,000	$7,978	**$12,962**
Littleton - Proposed	N/A	$243	N/A	$593.18	$450.33	$1,263	$696	$1,738	$4,984	$2,978	$5,000	$7,978	**$12,962**
Littleton Current [1]	N/A	$399	N/A	$602.00	$568.00	$1,904	N/A	$1,049	$4,522	$2,978	$5,000	$7,978	**$12,500**
With Impact Fees													
Aurora	$699	$743	$629			N/A	N/A	N/A	$2,071	$9,760	$10,666	$20,426	**$22,497**
Brighton [2]	N/A	N/A	$1,780			N/A	N/A	$1,700	$3,480	$8,065	$11,410	$19,475	**$22,955**
Castle Rock	$756	$377	$4,688			$247	N/A	$6,711	$12,779	$22,534	$4,023	$26,557	**$39,336**
Commerce City	N/A	N/A	N/A			N/A	N/A	$726	$726	$7,619	$8,680	$22,760	**$23,486**
Parker (Excise Tax)	N/A	N/A	N/A			N/A	N/A	N/A	$5,567	$29,630	$5,040	$34,670	**$40,237**
Westminster [3]	$209	N/A	N/A			N/A	N/A	N/A	$209	$10,590	$1,226	$11,816	**$12,025**
Average	**$555**	**$506**	**$2,366**			**$1,076**		**$2,547**	**$4,193**	**$13,025**	**$6,578**	**$20,526**	$24,719
Tap Fees													
Arvada	N/A	N/A	N/A			N/A	N/A	N/A	$0	$9,863	$1,105	$10,968	**$10,968**
Centennial	N/A	N/A	N/A			N/A	N/A	N/A	$0	N/A	N/A	$22,760	**$22,760**
Lakewood	N/A	N/A	N/A			N/A	N/A	N/A	$0	$5,300	N/A	$5,300	**$5,300**
Wheat Ridge	N/A	N/A	N/A			N/A	N/A	N/A	$0	$1,400	N/A	$1,400	**$1,400**
Average	---	---	---			---	---	---	**$0**	**$5,521**	**$1,105**	**$10,107**	$10,107

[1] Tap fees reflect in-city limit values

[2] Park impact fee includes Community and Neighborhood Park Fees

[3] Tap fees assume two bedrooms per unit

Source: Economic & Planning Systems

Table A-3. 10,000 Sq. Ft. Retail Building Impact Fee Comparisons

Description	Fire	Police	Parks & Rec	Facilities & Fleet	Multi-Modal	Transporta-tion	Impact Fees	Water	Sewer	Tap Total	Total
Littleton - Maximum	N/A	$3,614	N/A	$16,179	$9,060	$70,076	$98,928	$26,840	$10,000	$36,840	**$135,768**
Littleton - Proposed	N/A	$3,613.87	N/A	$16,178.80	$9,060	$28,000	$56,852	$26,840	$10,000	$36,840	**$93,692**
Littleton Current [1]	$0	$2,100	N/A	$10,100	N/A	$26,070	$38,270	$26,840	$10,000	$36,840	**$75,110**
With Impact Fees											
Brighton	N/A	N/A	N/A	N/A	N/A	$6,500	$6,500	$22,257	$31,835	$54,092	**$60,592**
Castle Rock	$2,160	$1,080	N/A	$510	N/A	$17,550	$21,300	$37,640	$6,718	$44,358	**$65,658**
Commerce City	N/A	N/A	N/A	N/A	N/A	$44,710	$44,710	$73,142	$20,832	$22,760	**$67,470**
Parker (Excise Tax)	N/A	N/A	N/A	N/A	N/A	N/A	$2,500	$59,260	$10,080	$69,340	**$71,840**
Westminster	$209	N/A	N/A	N/A	N/A	N/A	$209	$44,672	$32,687	$77,359	**$77,568**
Average	**$790**	**$1,590**		**$5,305**		**$23,708**	**$18,915**	**$43,969**	**$18,692**	**$50,792**	**$69,706**
Tap Fees											
Arvada	N/A	N/A	N/A	N/A	N/A	N/A	$0	$37,110	$25,788	$62,898	**$62,898**
Aurora	N/A	N/A	N/A	N/A	N/A	N/A	$0	$39,729	$37,584	$77,313	**$77,313**
Centennial	N/A	N/A	N/A	N/A	N/A	N/A	$0	N/A	N/A	$22,760	**$22,760**
Lakewood	N/A	N/A	N/A	N/A	N/A	N/A	$0	$8,500	N/A	$8,500	**$8,500**
Wheat Ridge	N/A	N/A	N/A	N/A	N/A	N/A	$0	$15,000	N/A	$15,000	**$15,000**
Average							**$0**	**$25,085**	**$31,686**	**$37,294**	**$37,294**

[1] Tap fees reflect in-city limit values

Source: Economic & Planning Systems

Table A-4. 10,000 Sq. Ft. Office Building Impact Fee Comparisons

Description	Fire	Police	Parks & Rec	Facilities & Fleet	Multi-Modal	Transportation	Impact Fees	Water	Sewer	Tap Total	Total
Littleton - Maximum	N/A	$3,614	N/A	$16,179	$9,060	$23,124	$51,976	$26,840	$10,000	$36,840	**$88,816**
Littleton - Proposed	N/A	$3,614	N/A	$16,179	$9,060	$9,200	$38,052	$26,840	$10,000	$36,840	**$74,892**
Littleton Current [1]	N/A	$2,100	N/A	$10,100	N/A	$26,070	$38,270	$26,840	$10,000	$36,840	**$75,110**
With Impact Fees											
Brighton	N/A	N/A	N/A	N/A	N/A	$9,800	$9,800	$22,257	$31,835	$54,092	**$63,892**
Castle Rock	$2,230	$390	N/A	$730	N/A	$16,020	$19,370	$37,640	$6,718	$44,358	**$63,728**
Commerce City	N/A	N/A	N/A	N/A	N/A	$17,410	$17,410	$73,142	$20,832	$22,760	**$40,170**
Parker (Excise Tax)	N/A	N/A	N/A	N/A	N/A	N/A	$2,500	$59,260	$10,080	$69,340	**$71,840**
Westminster	$209	N/A	N/A	N/A	N/A	N/A	$209	$44,672	$32,687	$77,359	**$77,568**
Average	**$1,220**	**$1,245**		**$5,415**		**$17,325**	**$14,593**	**$43,969**	**$18,692**	**$50,792**	**$65,385**
Tap Fees											
Arvada	N/A	N/A	N/A	N/A	N/A	N/A	$0	$37,110	$25,788	$62,898	**$62,898**
Aurora	N/A	N/A	N/A	N/A	N/A	N/A	$0	$39,729	$37,584	$77,313	**$77,313**
Centennial	N/A	N/A	N/A	N/A	N/A	N/A	$0	N/A	N/A	$22,760	**$22,760**
Lakewood	N/A	N/A	N/A	N/A	N/A	N/A	$0	$8,500	N/A	$8,500	**$8,500**
Wheat Ridge	N/A	N/A	N/A	N/A	N/A	N/A	$0	$15,000	N/A	$15,000	**$15,000**
Average							**$0**	**$25,085**	**$31,686**	**$37,294**	**$37,294**

[1] Tap fees reflect in-city limit values

Source: Economic & Planning Systems