

Draft Report

Impact Fee Nexus Study: Proposed Castle Rock 2019 Impact Fee Program

The Economics of Land Use



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Town of Castle Rock

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1. Background and Executive Summary

Purpose

This Report was prepared by Economic & Planning Systems (EPS) for the Town of Castle Rock to calculate new impact fees for a proposed 2019 impact fee program. The report documents costs and other supporting data to provide the nexus and proportionality requirements needed to adopt impact fees to comply with State of Colorado law regarding development charges. The report provides impact fee calculations for Parks and Recreation, Fire and Emergency Medical Services, Police, Municipal Facilities, and Transportation.

Supportable Fees

This Report provides the legally supportable fees that the Town of Castle Rock may charge based on the analysis of the costs of growth expected over the 2019 to 2030 time period. State law allows the Town 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 Town. However if the Town lowers fees for one land use category, for example commercial development, it may not raise fees for residential development to make up the difference.

Table 1 shows the supportable fees that could be adopted for residential development at a total of \$16,957.60 per dwelling unit for a home 2,500 up to and including 2,999 square feet, the average sized home built since 2010. With the exception of Transportation, the fees are graduated by the size of the home. Transportation fees are calculated as a flat fee per home.

Table 1. Supportable Residential Impact Fees

Land Use	Size Range	Fee per Dwelling Unit					Total
		Parks & Recreation	Municipal Facilities	Fire	Police	Transportation	
Multifamily	All Sizes	\$4,420.71	\$233.09	\$721.34	\$356.39	\$6,354.02	\$12,085.55
(Average Size)	Single Family < 2,000	\$4,986.12	\$262.90	\$813.60	\$401.98	\$8,236.89	\$14,701.48
	2,000-2,499	\$6,158.71	\$324.72	\$1,004.93	\$496.51	\$8,236.89	\$16,221.76
	2,500-2,999	\$6,726.26	\$354.65	\$1,097.54	\$542.26	\$8,236.89	\$16,957.60
	3,000-3,499	\$7,116.78	\$375.24	\$1,161.26	\$573.75	\$8,236.89	\$17,463.92
	3,500-3,999	\$7,926.82	\$417.95	\$1,293.44	\$639.05	\$8,236.89	\$18,514.15
	4,000-4,499	\$8,628.51	\$454.95	\$1,407.94	\$695.62	\$8,236.89	\$19,423.90
	4,500-4,999	\$9,247.44	\$487.58	\$1,508.93	\$745.52	\$8,236.89	\$20,226.36
	5,000 +	\$9,801.10	\$516.77	\$1,599.27	\$790.15	\$8,236.89	\$20,944.18

Source: Town of Castle Rock; Economic & Planning Systems

The supportable commercial impact fees determined in this Report are shown in **Table 2**. A proposed change to the 2019 to 2030 fee program is the addition of assisted living to the commercial fee schedule for Fire and Transportation because of the impact of assisted living on these Town services.

Table 2. Supportable Commercial Impact Fees

Land Use	Unit	Parks & Recreation	Municipal Facilities	Fire	Police	Transportation	Total
Retail, General Commercial	1,000 Sq. Ft.	\$0.00	\$104.18	\$322.40	\$159.29	\$17,367.92	\$17,953.79
Office	1,000 Sq. Ft.	\$0.00	\$156.27	\$483.61	\$238.94	\$10,227.97	\$11,106.78
Industrial	1,000 Sq. Ft.	\$0.00	\$52.09	\$161.20	\$79.65	\$5,186.36	\$5,479.30
Warehouse	1,000 Sq. Ft.	\$0.00	\$5.21	\$16.12	\$7.96	\$1,622.22	\$1,651.51
Mini Warehouse (Self Storage)	1,000 Sq. Ft.	\$0.00	\$4.01	\$12.40	\$6.13	\$1,084.02	\$1,106.56
Hotel	1,000 Sq. Ft.	\$0.00	\$41.67	\$128.96	\$63.72	\$3,928.19	\$4,162.54
	Room	\$0.00	\$20.84	\$64.48	\$31.86	\$1,964.10	\$2,081.27
Assisted Living/Nursing Home	1,000 Sq. Ft.	\$0.00	\$0.00	\$322.40	\$0.00	\$2,446.00	\$2,768.40
	Bed	\$0.00	\$0.00	\$128.96	\$0.00	\$978.40	\$1,107.36

Source: Town of Castle Rock; Economic & Planning Systems

Legal Standards for Impact Fees

Impact fees are commonly charged by local governments on new development to help pay for capital facilities needed to serve growth. The U.S. Supreme Court has established a dual test for land use exactions, commonly referenced as “Nollan and Dolan”, two separate Supreme Court decisions which require a “rational nexus” and “rough proportionality” (respectively) between the proposed land use and the charge or exaction levied to mitigate the impacts. The State of Colorado has adopted a slightly different standard with the adoption of Senate Bill 15, following a Colorado Supreme Court decision addressing the issue.

In 1999, the Colorado Supreme Court ruled in *Krupp v. Breckenridge Sanitation District* 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, town, territorial charter city, city, or county. In 2016, the Colorado Legislature passed House Bill 1088, the Public Service Fairness Act, which specifically authorized Title 32 Fire Protection Districts to levy impact fees.²

Senate Bill 15 states that local governments must “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.” Rather than using the nexus and rough proportionality tests related to Nollan/Dolan, the standard that must be met within the State of Colorado requires mitigation to be “directly related” to impacts. This test has been used consistently to establish impact fee programs and has not been legally challenged to date.

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

² C.R.S. 29-1-203.5

The standards set forth in Senate Bill 15 further stipulate that the program be:

- Legislatively adopted,
- Applicable to a broad class of property, and
- Intended to defray projected impacts on capital facilities caused by development.

SB-15 Impact Fee Elements

- **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 which 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.
- **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.
- **Timing** – The Town 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.” Because different types of improvements can vary in their size and cost, a “reasonable period” represents different lengths of time that correspond to the complexity of the improvement. For example, a park can be built incrementally and the planning and engineering required is relatively simple. Alternatively, highway interchange involves a significant level of planning and engineering over many years.
- **Accounting Practices** – The Town 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.

Process for Calculating Impact Fees

Within the framework described above, EPS has calculated the proposed 2019 impact fees following the general process outlined below:

- **Growth Forecasts** – Estimate the amount of population, housing, and job growth over the 11 year 2019 to 2030 fee program time period.
- **Facility Needs** – Identify new facility requirements needed to serve new development from Town planning documents, capital budgets, and interviews with senior staff for each fee category.
- **Costs** – Estimate the cost of new facilities from multiple sources including recent bids, recent similar projects, and supplemental case study research.
- **Apportionment of Costs** – Apportion capital costs between existing and new development, based on their nexus to growth measured in terms of per-capita, per-service population, or other similar factors.
- **Supportable Fee Calculation** – Estimate the legally supportable fee from the costs that are directly related to the improvements divided by the amount of growth over the 2019 to 2030 time period.

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2. Growth Projections and Methodology

This chapter documents key baseline information, estimates, and assumptions used in the development of the proposed 2019 impact fees. It contains three major sections covering the Growth Projections and the derivation of person-occupancy factors for commercial and residential development; Occupancy Factors used to differentiate the fees based on the relative impact of each land use type according to its occupancy and use; and Methodologies used to calculate fees.

All calculations in this analysis were prepared using a spreadsheet application (Microsoft Excel) which takes calculations to several decimal places. The figures displayed incorporate rounding and the reader may not be able to reproduce the calculations exactly in all cases.

2019 to 2030 Growth Projections

Impact fees need to be based on a consistent set of growth projections. EPS prepared growth projections for an 11-year time period from 2019 to 2030. The 2030 project list contained within the adopted 2017 Transportation Master Plan (TMP) is the basis for many of the projects proposed to be included in the transportation component of the 2019 Fee Program. As such, 2030 was selected as the horizon year for the fee program. The growth rates in the TMP determine travel demand and project needs to 2030. The household and job growth rates in the TMP are applied to updated base year 2019 numbers to develop the 2019 to 2030 growth forecast used in the impact fee calculations.

In addition, the adopted 2017 Comprehensive Plan is based on an estimated population of 90,000 by 2030. EPS's 2030 population projection using the growth rates from the TMP is 90,059 which is approximately equal to the Comprehensive Plan's figure of 90,000 in 2030.

2030 Population

The starting point for the 2019 to 2030 projection is the most recent 2017 population estimate of 62,276 from the U.S. Census Intercensal Population Estimates program. From this figure, the number of households is calculated using the ratio of population to households of 2.87 derived from the 2016 American Community Survey 5-Year estimates. Total population includes the household population living in housing units plus the group quarters population living in convalescent homes, dorms, jails/prisons, or other group housing. A household is a group of people related or unrelated living in an occupied dwelling unit. The resulting 2017 household estimate is 21,696, as shown in **Table 3**.

The rate of household growth from the TMP of 745 per year is applied to the 2017 household estimate to yield a 2019 base year household estimate of 23,185. Carrying this forward to 2030 results in a total of 31,375 households and a population of 90,059 in 2030. When households are converted to housing units (households plus 3.4 percent vacancy), there are forecasted to be 32,463 housing units in 2030. The incremental growth in population and housing units is 23,508 and 8,474, as shown. For fees calculated on a per-capita or per-housing unit basis, these two figures become the denominator in those calculations.

Table 3. 2019 to 2030 Population, Household, Housing Unit, and Jobs Projection

Description	Source	2017	TMP Ann. Growth	2019 Fee Program Forecast		2019-2030 Change		
				2019	2030	Total	Ann.	Growth Rate
Households	Calculation	21,696	745/yr	23,185	31,375	8,190	745	2.8%
Population to Household Ratio [1]	2016 ACS	2.87		2.87	2.87	---	---	---
Housing Units [2]	Calculation	22,448		23,989	32,463	8,474	770	2.8%
Population	US Census [3]	62,276		66,550	90,059	23,508	2,137	2.8%
Jobs [4]	QCEW	22,176	650	23,475	30,623	7,147	650	2.4%

[1] Calculated from 2016 American Community Survey 5-Year Estimates

[2] Households plus 3.4% vacancy as reported in 2016 ACS

[3] 2017 US Census Intercensal Population Estimates

[4] 2017 Quarterly Census of Employment and Wages (QCEW) Microdata acquired by ToCR and analyzed by EPS

Source: Economic & Planning Systems

2030 Service Population

Some Town services—particularly public safety (police, fire, and EMS)—serve the residential population and employees in commercial space. Employees may live in town or commute in. The concept of “service population” is a metric that accounts for the full-time resident population and employees who commute to Castle Rock but live elsewhere. Since in-commuters are typically not present for a full 24-hour day, their impact is adjusted downward by 50 percent (a generally accepted adjustment in fiscal impact analysis). To calculate the service population, the adjusted impact of in-commuting employees is added to the resident population, as shown in **Table 4**. The resulting 2019 population service is 74,598 and is forecast to be 100,556 in 2030 which is an increase of 25,958. No deduction is made for residents who commute out, as the Town still provides services such as public safety to residents when they are not at home.

Table 4. Service Population

Service Population	Factors	2019	2030	2019-2030 Change		
				Change	Ann. #	Ann. %
Population	A	66,550	90,059	23,508	2,137	2.8%
Jobs		23,475	30,623			
Employees (adjusted for multiple job holders)	1.10	21,341	27,839			
In-Commuting Employees [1]	0.8	16,095	20,995			
In-Commuting Employee Impact	0.5 B	8,047	10,497	2,450	223	2.4%
Service Population	= A + B	74,598	100,556	25,958	2,360	2.8%

[1] US Census & Bureau of Labor Statistics Longitudinal Employer Householder Dynamics "On The Map"

Source: Economic & Planning Systems

2017 Service Population

For some existing level of service calculations, a 2017 service population figure was needed as Town facility inventory data was closer to 2017. The service population of the Town in 2017 is estimated at 69,878 as shown in **Table 5**.

Table 5. 2017 Castle Rock Service Population

Description	Factors	2017	
Population		62,276	A
Employees			
Jobs		22,176	
Employees	1.10	20,160	
In-Commuting Employees	75.4%	15,204	
In-Commuting Employee Impact	50.0%	7,602	B
Service Population		69,878	= A + B

Source: Economic & Planning Systems

Residential Occupancy Factors

For fees calculated on a per dwelling unit basis, some fees are calibrated by household size, by unit type, or by the number of bedrooms. Large units with larger households have more impact on public facilities than smaller units, which on average have smaller households. In order to correlate household size by home size, three steps were completed.

First, the U.S. Census Public Use Microsample data was queried for the Public Use Microsample Area (PUMA) 00822, which includes the Town of Castle Rock and Douglas County while excluding Highlands Ranch and the Town of Parker. A crosstab query of average household size by number of bedrooms was created, with the resulting household sizes ranging from 1.92 in a two- or fewer bedroom home to 3.74 in a five- or more bedroom home, as shown in **Table 6**.

In order to obtain a statistically significant sample size for multifamily units, three PUMAs were combined: 00821, 00822, and 00823, which comprise most of the urbanized area of Douglas County including Highlands Ranch, Parker, Lone Tree, and Castle Rock. The resulting average household size for multifamily units was calculated to be 1.69, as shown.

Table 6. Average Household Size by Unit Type and Number of Bedrooms

Bedrooms or Unit Type	Sample Size	PUMA	Average Household Size	Avg. Sq. Ft.
Multifamily (5 or More units in structure)	141	00821-23	1.69	N/A
Two or less	63	00822	1.92	2,091
Three	159	00822	2.30	2,298
Four	139	00822	3.14	4,099
Five or more	89	00822	3.74	4,625
Avg. Home Size, Built Since 2010				2,785

Source: Economic & Planning Systems analysis of US Census Public Use Microsample Data and Douglas County Assessor Data.

Second, the Douglas County Assessor tax parcel database was queried and the average home size by number of bedrooms was calculated for homes built in Castle Rock over the past five years. As shown, two-bedroom and smaller homes have an average size of 2,091 square feet on the low end while five- or more bedroom homes have an average size of 4,625 square feet on the high end, as shown above.

Third, a curve fit equation was calculated to interpolate the household size at a range of unit types. For single family homes, an index to the average sized home built since 2010 was calculated. A 2,785 square foot home in Castle Rock has an estimated average household size of 2.57, with an index defined as 1.00. Smaller and larger homes have a larger or smaller household size index, as shown in **Table 7**.

Table 7. Household Size Index by Unit Type and Home Size

Home Size (Sq. Ft.)	Size Range	Household Size	Index to Average
Multifamily		1.69	0.66
Single Family			
2,000	< 2,000	1.90	0.74
2,500	2,000-2,499	2.35	0.92
Average 2,785	2,500-2,999	2.57	1.00
3,000	3,000-3,499	2.72	1.06
3,500	3,500-3,999	3.03	1.18
4,000	4,000-4,499	3.29	1.28
4,500	4,500-4,999	3.53	1.37
5,000	5,000 +	3.74	1.46

Source: Economic & Planning Systems analysis of US Census Public Use Microsample Data and Douglas County Assessor Data.

Commercial Occupancy Factors

Impact fees for commercial development are also calibrated according to their occupancy density. The concept is the same as the residential calibration factors described above. Several data sources were used to develop occupancy factors judged to be appropriate for the Castle Rock real estate market, listed below in **Table 8**. The factors that were reported as gross square feet per occupant were converted to occupants per 1,000 gross square feet.

Employees were adjusted down to account for the fact that approximately 75 percent of the employees who work in Castle Rock commute in from other areas outside the town, as reported by the U.S. Census/Bureau of Labor Statistics LEHD On the Map application. This adjustment is necessary to remove employees who are either already living in Castle Rock or who are captured in a new dwelling unit and a residential impact fee. Assisted living is estimated to have one employee per 500 square feet, plus one resident per bed at 400 square feet per bed.

Table 8. Commercial Occupancy Factors

Land Use	Sq. Ft. per Employee	Employees per 1,000 Sq. Ft.	Adjusted Employees [1]
General Office	333	3.00	1.13
Retail, General	500	2.00	0.75
Industrial	1,000	1.00	0.38
Warehouse	10,000	0.10	0.04
Mini Warehouse (Self Storage)	13,000	0.08	0.03
Hotel [2]	1,250	0.80	0.30
Assisted Living/Nursing Home [3]	500	2.00	0.75

[1] Commuting employees (75%) with an impact of 50% of a resident.

[2] 0.4 employees per room, 500 gross square feet per room.

[3] 0.8 employees per bed, 400 square feet per bed.

Source: 2017 Transportation Master Plan; Economic & Planning Systems

Methodology

The three most common methods to calculate impact fees are the Incremental Expansion, Plan-Based, and Buy-in approaches. The applied approach for each fee category depends on the type of facility for which a fee is being charged, the nature of the impacts, and the data available to demonstrate nexus and proportionality. Each approach establishes the cost of facilities or improvements and allocates the cost by new demand units. "Demand unit" is a generic term for the source generating demand for additional capital facilities or improvements. Typically, demand units are such things as population growth, new residential and non-residential development, or new calls for service. The following provides a summary of each approach:

- **Incremental Expansion Approach** – The incremental expansion method quantifies the costs necessary to maintain a level of service (LOS). The level of service used in most cases in this report is what is provided by the Town. It is common for municipalities to have a higher adopted level of service that is not being met due to funding constraints. The simplest example of an incremental expansion approach is the acreage of public parks per capita being projected forward on forecasted population growth.
- **Plan-Based Approach** – This evaluates projects identified by a community plan or policy that will provide capacity for new growth. This approach requires new development to contribute its share toward a new or expanded facility or improvement. The cost attributed to new growth is distributed over the identified demand units for the forecast time period to produce a cost per demand unit.
- **Buy-in Approach** – This is useful for recovering the costs for facilities or improvements to be constructed with extra capacity to serve future development. It is also useful to defray costs for facilities that have been constructed and will be used by future residents and employers. In that case, future users are "buying in" to an existing system and paying their fair share for the improvements. The original cost of the facility or improvement is typically used as the project cost which is then divided by the total demand units served (including existing and new) to produce a cost per demand unit. In some cases, financing costs are included in a buy-in approach when a facility is built ahead of sufficient accumulated impact fees.

3. Parks and Recreation

This chapter presents impact fee calculations for Parks and Recreation capital needs over the 2019 to 2030 timeframe. The methodology used varies by the type of facility, as described below.

- **Incremental Expansion Approach** – This method was used to forecast public park development, indoor recreation facility, fleet and equipment, maintenance facility, and outdoor pool costs at the current level of service.
- **Buy-In Approach** – For the Miller Activity Center (MAC), the buy-in approach was used to recover the remaining financing costs for the MAC. Approximately 75 percent of the MAC cost remains to be paid with impact fees as this project will continue to serve growth in the community.
- **Nexus Factor** – Levels of service and incremental expansion needs were calculated on a per capita or per 1,000 population basis. The resulting impact fees were calculated per dwelling unit using a household size factor to adjust for the number of people per dwelling unit. No impact fees on commercial development for parks are recommended.

Existing Level of Service

This section documents the existing LOS provided by the Town of Castle Rock in Parks and Recreation including community and neighborhood parks, fleet and equipment, outdoor pools, and indoor recreation space.

The total park inventory in Castle Rock includes regional, community, neighborhood, and pocket parks totaling more than 1,000 acres with 321.20 developed acres, as shown in **Table 9**. The level of service used in the proposed fee program includes community, neighborhood, and regional parks, consistent with the Town's land dedication requirements in its subdivision regulations and the *Parks and Recreation Master Plan* (2015).

Table 9. Parks Inventory

Park Area	Type	Status ^[1]	Total Acres	Developed Acres
Regional Parks				
Rhyolite Regional Park	Regional Parks	Existing	40.00	20.00
Liberty Village Regional Park (undeveloped)	Regional Parks	Undeveloped	189.69	0.00
Philip S. Miller Park	Regional Parks	Existing	300.00	40.00
Douglas County Fairgrounds (Douglas County)	Regional Parks	Not Included	<u>87.00</u>	<u>87.00</u>
Total			616.69	147.00
Community Parks				
Metzler Ranch Community Park	Community Parks	Existing	32.80	32.80
Founders Park	Community Parks	Existing	27.30	27.30
Butterfield Park	Community Parks	Existing	29.90	29.90
Terrain North (future)	Community Parks	Planned	30.00	0.00
Canyons South Community Park (future)	Community Parks	Planned	30.00	0.00
Scott / Walker Community Park (future)	Community Parks	Planned	30.00	0.00
The Lanterns (not yet dedicated)	Community Parks	Planned	<u>40.00</u>	<u>0.00</u>
Total			220.00	90.00
Neighborhood Parks				
Plum Creek Park	Neighborhood Parks	Existing	7.90	0.50
Mitchell Gulch Park	Neighborhood Parks	Existing	38.20	6.00
Centennial Park	Neighborhood Parks	Existing	13.20	13.20
Gemstone Park	Neighborhood Parks	Existing	9.00	9.00
Matney Park	Neighborhood Parks	Existing	10.00	10.00
Castle North Park	Neighborhood Parks	Existing	1.60	1.60
Bison Park	Neighborhood Parks	Existing	12.00	12.00
Castle Highlands Park	Neighborhood Parks	Existing	5.00	1.00
Paintbrush Park	Neighborhood Parks	Existing	20.20	20.20
Wrangler Park	Neighborhood Parks	Existing	9.00	9.00
Meadows Park Filing 18 (undeveloped)	Neighborhood Parks	Undeveloped	5.50	0.00
Castlewood Ranch Park Filing 2	Neighborhood Parks	Undeveloped	10.65	0.00
Castle Oaks South (undeveloped)	Neighborhood Parks	Undeveloped	10.86	0.00
Crystal Valley Ranch Filing 10	Neighborhood Parks	Undeveloped	10.00	0.00
The Oaks (undeveloped)	Neighborhood Parks	Undeveloped	6.00	0.00
Metzler Filing 7 Park (future)	Neighborhood Parks	Planned	10.20	0.00
Scott / Walker Neighborhood Park (future)	Neighborhood Parks	Planned	<u>16.00</u>	<u>0.00</u>
Total			195.31	82.50
Pocket Parks				
Festival Park	Downtown Park	Existing	2.00	0.50
Glovers Park and Community Garden	Pocket Parks	Existing	0.20	0.20
Triangle Park	Pocket Parks	Existing	0.10	0.10
Baldwin Park	Pocket Parks	Existing	<u>0.90</u>	<u>0.90</u>
Total			3.20	1.70
Total			1,035.20	321.20

[1] Undeveloped indicates land acquired/dedicated but no improvements made.

Parks

The Town's adopted LOS is 6.00 acres per 1,000 people for regional and community parks and 2.00 acres per 1,000 people for neighborhood parks, totaling 8.00 acres per 1,000, as shown in **Table 10**. The Town has applied this standard for park land dedication requirements. However, the Town has not been able to deliver this adopted level of service for building park improvements using impact fees due to funding constraints, including adoption of impact fees below the maximum allowable level and level needed to maintain the adopted LOS. Since impact fees cannot be used to remedy past deficiencies, the existing LOS is used in the impact fee calculations. The existing level of service is lower, at 3.73 acres per 1,000 people.

Table 10. Parks Level of Service

Description	Acres	Per 1,000 Population
2017 Population		62,276
Existing Level of Service		
Regional Parks	60.00	0.96
Community Parks	90.00	1.45
Neighborhood Parks	<u>82.50</u>	<u>1.32</u>
Total	232.50	3.73
Adopted Level of Service		
Community Parks		6.00
Neighborhood Parks		<u>2.00</u>
Total Adopted Standard		8.00

Source: Town of Castle Rock

Metropolitan Districts and Homeowners Associations play an important role in providing recreational amenities such as neighborhood pools and pocket parks. **Table 11** shows the existing recreational resources that are managed by these quasi-governmental agencies. These facilities are not included in the level of service provided by the Town but do contribute to residents' quality of life.

Table 11. Metro District and HOA Recreation Resources

Property	Amenities
The Meadows	
The Grange	Community pool and meeting Areas
Pocket Park - 1	Playground
Pocket Park - 2	Playground
Pocket Park - 3	Playground
Pocket Park - 4	Playground
Maher Ranch	Community pool
Diamond Ridge	Tennis Courts
Hazen Moore	Turf area and playground
The Woodlands	Tennis, playground, pavillion
Founders Village	Community pool and meeting Areas
Plum Creek	Community pool and tennis Courts
Crystal Valley Ranch	
Recreation Center	Community Pool, community room, fitness studio
Pocket Park 1	Playground
Pocket Park 2	Playground
Terrain	Community pool
Heckendorf Ranch	Community pool

Source: Town of Castle Rock

Recreation Facilities

The Town has two indoor recreation facilities, the Castle Rock Community Recreation Center (CRCRC), built in 1988, and the MAC completed near the end of 2014. The CRCRC was originally 40,000 square feet and expanded incrementally over time as the town grew. After two expansions, the CRCRC grew to 80,000 square feet in a community of nearly 40,000, equating to a level of service of approximately 2.0 square feet per capita as shown in **Table 12**. Approximately 10 years later, the 65,000 square foot MAC was constructed when the Town was at 52,800 population. This pattern of recreation center expansion and new construction defines a level of service of approximately 2.0 square feet per resident, or one recreation center per 30,000 people.

Table 12. Indoor Recreation Level of Service

Facility	Year	New Sq. Ft.	Total Sq. Ft.	Population	Sq. Ft. per Capita
Original Castle Rock Comm. Rec. Ctr.	1988	40,000	40,000	7,841	5.10
CRCRC Expansion	1992	20,000	60,000	10,365	5.79
CRCRC Expansion	2006	20,000	80,000	39,554	2.02
Miller Activity Center (MAC)	2014	65,000	145,000	52,781	2.75
Miller Activity Center (MAC)	2017	0	145,000	62,276	2.33
Level of Service					2.00

Source: Town of Castle Rock

At a desired level of service of 2.0 square feet per capita, the Town currently exceeds that with a level of service of 2.33 square feet per capita, as shown above. Looking to the 2019 to 2030 fee period, the estimated 2019 population of 66,550 would need 133,101 square feet at this level of service as shown in **Table 13**. The existing inventory of 145,000 square feet therefore exceeds the level of service by 11,899 square feet. This amount is deducted in a later step when the 2019 to 2030 parks costs are projected out.

Table 13. Adjustment for Indoor Recreation Capacity

Description		Calculation	
2019 Population		66,550	Sq. Ft.
Sq. Ft. per Capita Level of Service		2.00	
Required Indoor Recreation Sq. Ft.	A	133,101	Sq. Ft.
Existing Indoor Recreation Sq. Ft. (LOS)	B	145,000	Sq. Ft.
Remaining Capacity in Indoor Recreation	= B - A	11,899	Sq. Ft.

Source: Economic & Planning Systems

With two outdoor swimming pools, the level of service for pools is 0.032 pools per 1,000 people, as shown in **Table 14**.

Table 14. Outdoor Swimming Pool Level of Service

Facility	Population	Pools per 1,000 people
Butterfield Crossing Pool		
Burgess Memorial Pool (Reconstructed 2011)		
Total 2017 - 2 Pools	62,276	0.032

Source: Economic & Planning Systems

Maintenance Facilities and Equipment

The Parks Department will share the new Central Services Facility (maintenance building) with the Facilities Department. The \$5.4 million Central Services Facility is under construction and will be funded as described below:

- 42 percent with Parks Impact Fees;
- 29 Percent with Municipal Services Impact Fees; and
- 29 percent with Building Use Tax from the Long-Term Planning Fund.

Facilities maintenance, which maintains Town buildings and other assets, will occupy approximately 6,190 square feet of the building, equating to 88.58 square feet per 1,000 service population. The Parks Department will occupy 7,565 square feet, or 121.48 square feet per 1,000 residents, as shown in **Table 15**.

Table 15. Central Services Maintenance Facility

Description	Factor	Sq. Ft.	Notes
Central Services Facility		13,755	
Facilities	45.0%	6,190	
Parks	55.0%	<u>7,565</u>	
Total		13,755	
Facilities - per 1,000 Service Population	69,878	88.58	Sq. Ft./1,000 Svc. Pop.
Parks - per 1,000 Population	62,276	121.48	Sq. Ft./1,000 Population

Source: Town of Castle Rock

The expansion of park and recreation facilities and the growth of population, which results in increased utilization of parks, will require additional capital equipment to maintain the new facilities and the increase in wear and tear on existing facilities. The Town owns 39 pieces of parks and recreation related capital equipment, limited in this analysis to units with a replacement cost of \$20,000 or higher. There are 0.626 units of equipment per 1,000 population and an average replacement cost of \$41,868, as shown in **Table 16**.

Table 16. Parks Fleet and Equipment Level of Service

Equipment Category Greater than \$20,000	Average Cost	Number	Cost
Equipment, Off-Road, Light duty, Mowers, Carts, Skid Steers, Plows	\$52,712	4	\$210,848
Equipment, Off-Road, Loaders, Tractors, Graders	51,092	6	306,549
Heavy Equipment Off-Road, Loaders, Tractors, Graders	58,013	4	232,051
SUV, General Purpose, Light Duty	31,525	1	31,525
Trailers Medium, Light	46,350	1	46,350
Trucks, Light Duty	28,674	12	344,092
Trucks, Med Duty	<u>41,950</u>	<u>11</u>	<u>461,449</u>
Total	\$310,315	39	\$1,632,864
Average Replacement Cost per Unit	\$41,868		
Number of Units per 1,000 population		0.626	

Source: Town of Castle Rock, Economic & Planning Systems

Indoor Recreation Costs

Two cost components are included for the indoor recreation component of the impact fee. First is the remaining financing cost for the Miller Activity Center (MAC). Second, is the cost of the incremental expansion of indoor recreation space to maintain the level of service of 2.0 square feet per capita.

The MAC was built in conjunction with Phillip S. Miller Park which had a total cost of \$31.2 million. At the time of construction, the Town had \$11,375,538 in accumulated impact fees. Since the Town did not have sufficient accumulated impact fees to cover all of the growth related portions of the project cost, the Town issued \$9.2 million in certificates of participation (COPs). The COPs will be paid back with impact fees as they are collected each year, in accordance with the amortization schedule. As of 2018, 25.4 percent of the facility cost has been paid, as shown in **Table 17**.

To date, the Town has paid down \$3,620,969, or 25.4 percent, in principal and interest on the COPs. For the 11-year period covered by the impact fee study, \$7,790,517 of impact fees will be used to pay debt service as shown.

Table 17. Miller Activity Center Loan Schedule

Year	Principal	Interest	Total Annual Payment	Percent
2013	\$0	\$81,954	\$81,954	
2014	335,000	373,464	708,463	
2015	340,000	359,963	706,763	
2016	350,000	359,963	709,963	
2017	355,000	352,963	707,963	
2018	360,000	345,863	705,863	
2019	375,000	335,063	710,063	
2020	385,000	323,813	708,813	
2021	400,000	308,413	708,413	
2022	415,000	294,413	709,413	
2023	430,000	277,813	707,813	
2024	450,000	260,613	710,613	
2025	465,000	242,613	707,613	
2026	485,000	222,850	707,850	
2027	505,000	201,025	706,025	
2028	530,000	177,038	707,038	
2029	555,000	151,863	706,863	
2030	585,000	125,500	710,500	
2031	610,000	96,250	706,250	
2032	640,000	65,750	705,750	
2033	<u>675,000</u>	<u>33,750</u>	<u>708,750</u>	
Total	\$9,245,000	\$4,990,937	\$14,242,736	
Paid 2013-2018			\$3,620,969	25.4%
2019-2030 Cost			\$7,790,517	54.7%

Source: Town of Castle Rock

Dividing the remaining financing cost by the forecasted number of dwelling units to be constructed over this time period yields a cost per dwelling unit of \$919.35 over the 2019 to 2030 time period as shown in **Table 18**.

Table 18. Miller Activity Center Remaining Financing Costs

Item	Notes	Cost Factors
2019-2030 Financing Cost		\$7,790,517
New Dwelling Units 2019-2030		8,474
Cost per Dwelling Unit		\$919.35

[1] MAC share of parking and utility costs for Miller Park, plus MAC building.

Source: Town of Castle Rock, Economic & Planning Systems

The cost for the incremental expansion of indoor recreation space was estimated from a survey of recent recreation centers built in suburban communities in Colorado. As shown in **Table 19**, the weighted average cost of these facilities is \$278 per square foot.

Table 19. New Recreation Center Costs

Recreation Center	Location	Sq. Ft.	Cost	Cost/ Sq. Ft.	Year Complete	2019 Cost 3.0% Inflation
Apex Center	Arvada, CO	160,000	\$22,000,000	\$138	2000	\$242
Apex Field House	Arvada, CO	57,000	\$6,300,000	\$111	2012	\$137
Eaton Area Community Center	Eaton, CO	63,500	\$21,400,000	\$337	2017	\$358
Moorhead Recreation Center	Aurora, CO	38,645	\$14,000,000	\$362	2017	\$384
Paul Derda Recreation Center	Broomfield, CO	85,000	\$17,200,000	\$202	2003	\$324
Veterans Memorial Aquatic Center	Thornton, CO	43,570	\$15,000,000	\$344	2010	\$449
Windsor Community Recreation Center	Windsor, CO	80,000	\$15,800,000	\$198	2016	\$216
Miller Activity Center	Castle Rock, CO	65,000	\$14,000,000	\$215	2014	\$249
Weighted Average						\$278

Source: Rec Camp; Economic & Planning Systems

Total Parks Costs

Using the levels of service defined above, the total facility and equipment needs are projected to 2030 in **Table 20**, followed by cost estimates in **Table 21**. Based on estimated growth of 23,508 people from 2019 through 2030, Castle Rock will need to develop 87.8 acres of developed park land to maintain its level of service. It will also need 35,117 square feet of indoor recreation space (after adjusting for capacity), three-fourths of a new outdoor pool, 2,856 square feet of maintenance space, and 14.72 new units of equipment.

Table 20. Parks Incremental Expansion Facilities, 2019 to 2030

	Existing LOS	2019	2030	Change	Unit
Population		66,550	90,059	23,508	Population
Parks					
Regional & Community Parks	2.41 ac./1,000			56.6	
Neighborhood Parks	<u>1.32 ac./1,000</u>			<u>31.1</u>	
Total Acres	3.73 Ac./1,000			87.8	New Acres
Indoor Recreation					
Projection	2.00 sq. ft./person			47,017	Sq. Ft.
Less Existing Capacity				<u>-11,899</u>	Sq. Ft.
Total 2019-2030				35,117	New Sq. Ft.
Outdoor Pools	0.032 pools/1,000 pop.			0.75	New Pools
Maintenance Facility	121.48 sq. ft./1,000 pop.			2,856	New Sq. Ft.
Vehicles and Equipment	0.63 units/1,000 pop.			14.72	New Equip. Units
New Dwelling Units		23,989	32,463	8,474	Dwelling Units

Source: Economic & Planning Systems

The cost to develop 87.8 acres of parks is estimated at \$35.1 million, as shown in **Table 21**. Indoor recreation facility costs are estimated at \$9.8 million, \$2.6 million for swimming pools, \$1.1 million for maintenance space, and \$616,000 for equipment. These costs are combined with the remaining financing costs for the MAC in the next section to arrive at the total costs for the 2019 fee program. The costs per dwelling unit are also shown, with 8,474 dwelling units forecasted over the fee program time horizon.

Table 21. Parks Incremental Expansion Costs, 2019 to 2030

Cost Item	New Amount	Land Cost [1]	Cost/Unit	Total Cost	New Dwelling Units	Cost per Dwelling Unit
Parks Acreage						
Regional & Community Parks	56.6	\$0	\$400,000/ac. [2]	\$22,649,282		
Neighborhood Parks	31.1	\$0	\$400,000/ac. [2]	<u>\$12,457,105</u>		
Total Acres	87.8			\$35,106,386	8,474	\$4,142.86
Indoor Recreation Sq. Ft.	35,117	\$0	\$278/sq. ft.	\$9,762,641	8,474	\$1,152.08
Outdoor Pools	0.75	\$0	\$3,500,000	\$2,642,416	8,474	\$311.83
Maintenance Facility	2,856	\$0	\$378/sq. ft.	\$1,079,616	8,474	\$127.40
Vehicles and Equipment	14.72	---	\$41,868	\$616,387	8,474	\$72.74

[1] Land is contributed by new development through subdivision process. No land cost is included in the fee calculation.

[2] 2018 budget estimates for park development.

Source: Economic & Planning Systems

Parks Fee Calculations

The costs per dwelling unit are totaled in **Table 22** and equate to a supportable fee of \$6,726.26 per dwelling unit for the average sized home. The proposed fees are graduated up and down based on the average household size for each range of home size as larger households will have a greater impact on park and recreation facilities than smaller households.

Table 22. Supportable Parks Fee per Dwelling Unit

Description	Factors			Cost per Dwelling Unit
Community, Neighborhood, and Regional Parks				\$4,142.86
Outdoor Swimming Pools				\$311.83
Indoor Recreation				\$1,152.08
Maintenance Facility				\$127.40
Parks Fleet and Equipment				\$72.74
Miller Activity Center Remaining Financing Costs				<u>\$919.35</u>
Supportable Fee on Avg. Sized Home				\$6,726.26
Single Family Home Size (Sq. Ft.)	Sq. Ft.	HH Size	HH Size Index	Supportable Fee
2,000 or Less	< 2,000	1.90	0.74	\$4,986.12
2,000-2,500	2,000-2,499	2.35	0.92	\$6,158.71
2,500-3,000 (Average)	2,500-2,999	2.57	1.00	\$6,726.26
3,000-3,500	3,000-3,499	2.72	1.06	\$7,116.78
3,500-4,000	3,500-3,999	3.03	1.18	\$7,926.82
4,000-4,500	4,000-4,499	3.29	1.28	\$8,628.51
4,500-5,000	4,500-4,999	3.53	1.37	\$9,247.44
5,000 +	5,000 +	3.74	1.46	\$9,801.10
Multifamily	All Sizes	1.69	0.66	\$4,420.71

Source: Economic & Planning Systems

4. Fire and EMS

This chapter presents impact fee calculations for the Castle Rock Fire Department, which provides fire and emergency medical services (EMS) in the Town and in the Castle Rock Fire Protection District. The Fire Department's service area extends beyond the municipal boundary into the Castle Rock Fire Protection District in unincorporated Douglas County. The impact fee calculations apply only to services provided within the Town of Castle Rock boundary. The Fire Protection District provides additional capital and operating funding from a mill levy that offsets the cost of its service demands.

2030 Capital Costs

The capital costs to be included in the 2019 fee program (2019 to 2030) are summarized below.

Public Safety Training Facility

The Town leased a 5,848 square foot building it used for training for police, fire, and other departments. The Town has grown out of this space and has purchased a new 5,900 square foot building (the same size) to replace the former building. The Town is also constructing an additional 6,086 square foot building to better meet the needs of police, fire, and other departments. However, not all of these costs are included in the fee program as they represent an increase in the level of service.

The training facility component of the proposed fire impact fee is calculated on the level of service represented by the existing 5,848 square foot former training building. This equates to 83.7 square feet per 1,000 service population, as shown in **Table 23**. Using the growth in service population, the space needed to maintain this level of service is estimated at 2,173 square feet, with a cost of \$784,352 or \$361 per square foot as shown. This cost is based on the most recent estimates for the new building expansion (\$2.2 million divided by 6,086 square feet).

Table 23. Public Safety Training Facility

Description	Factors	Current LOS	2019-2030
Existing Level of Svs.			
Existing Training Facility Sq. Ft.		5,848	
Sq. Ft. per 1,000 Service Population	69,878	83.7	
2030 Needs at Current Level of Svc.			
2019-2030 Service Population Growth			25,958
New Sq. Ft.		83.7	2,173
Cost	\$361		\$784,352
Cost Allocation by Department			
Police	40%		\$313,741
Fire	40%		\$313,741
Municipal Facilities	20%		\$156,870
Total	100%		\$784,352

Source: Town of Castle Rock, Economic & Planning Systems

The Town is allocating 40 percent of the cost each to Police and Fire, and 20 percent to Municipal Facilities based on expected utilization. This equates to a cost of \$313,741 allocated to both Fire and Police as shown above, and in the summary of Fire Department costs in **Table 24**.

Table 24. 2019 to 2030 Fire Department Capital Costs

Cost Item	Factors	Building & Apparatus Costs	Personnel Equipment		Total Cost
			# Staff	Cost/Staff	
Fire Dept. Share of Public Safety Training Facility [1]	A	\$313,741			\$313,741
Zone 7 Station (Under Construction)					
Station Building		\$5,480,941	12	\$13,000	\$5,636,941
Quint Truck		1,028,502	0	0	1,028,502
Type 6 Brush Truck		473,479	0	0	473,479
Fire Truck Equipment		<u>300,000</u>	0	0	<u>300,000</u>
Subtotal		\$7,282,922			\$7,438,922
<u>Zone 7 Funding Sources</u>					
Accumulated Impact Fees					\$4,438,922
2017 General Fund Loan					<u>3,000,000</u>
Total Sources					\$7,438,922
<u>Remaining Loan Costs</u>					
Principal and Interest as of 2018 Budget					\$3,253,025
2018 Impact Fee Payments					<u>-\$325,302</u>
Remaining Financing Costs for 2019 Fee Program	B				\$2,927,723
2030 Capital Needs					
<u>Planning Zone 6 or 9</u>					
Station Building		\$5,480,941	12	\$13,000	\$5,636,941
Quint Truck		\$1,028,502	0	\$0	\$1,028,502
Type 6 Brush Truck		\$473,479	0	\$0	\$473,479
Fire Truck Equipment		\$300,000	0	\$0	\$300,000
Subtotal	C	\$7,282,922			\$7,438,922
Additional Medic Unit, Location TBD	D	\$300,000	9	\$13,000	\$417,000
Total 2019 Fee Program Costs	= A + B + C + D				\$11,097,386

[1] 40% Police, 40% Fire, 20% Municipal Facilities

Source: Town of Castle Rock; Economic & Planning Systems

Planning Zone 7 Station

Planning Zone (PZ) 7 is served by Stations 151 (PZ1) and 153 (PZ3). Based on call volume growth in Zone 7 and response time impacts on existing stations, the Town is currently constructing a new station in Zone 7. This station will serve new growth in Zone 7 and elsewhere in the Town as staff re-balance the call load across the system when the new station is complete.

The cost of the Zone 7 station is estimated at \$7.4 million based on current bids, including the building, apparatus, and associated equipment and furnishings. Of this, \$4.4 million has already been set aside with accumulated impact fees, as shown above. However, this is not the cost to be included in the fee program.

Since only \$4.4 million has been funded with impact fees collected, the General Fund made a \$3.0 million loan to the Fire Capital Fund, diverting operating revenues to capital projects. The loan is scheduled to be paid off at the end of 2027 using fire impact fee revenue. The remaining principal and interest payments on this loan in 2019 will be \$2.9 million, also shown in **Table 24**, which are the costs for the Zone 7 Station to be included in the fee program.

New Station in Planning Zone 6 or 9

At least one more station will be needed in the next 11 years either in Zone 6 or Zone 9 depending on the timing of development in these areas. Zone 9 is currently served by Fire Stations 151 (Zone 1) and 154 (Zone 4). However, the increase in calls and expected development in Zone 9 is negatively affecting the response times in Zones 1 and 4. Zone 6 is geographically remote and currently served by Zone 3 (Station 153) and the Franktown Fire (Station 184). The Town expects the costs for these stations to be similar to the costs for the station in Zone 7 under construction, or \$7.4 million in 2018 costs for the building, apparatus, and all associated equipment and staff personal protective equipment (PPE at \$13,000 per position) as shown in **Table 24**.

Additional Medic Unit

An additional medic unit (ambulance) is also needed at a station to be determined. The costs of a new ambulance at \$300,000 and the personal protective equipment for nine positions are included for a total of \$417,000. With this medic unit, the total eligible costs to be funded by impact fees are \$11.2 million for 2019-2013.

Fee Calculations

The growth in the Town's service population (within the municipal boundary) is forecasted to be 25,958 from 2019 through 2030. The growth in the service population is the nexus factor used in the denominator of the impact fee calculation. The \$11.1 million in capital costs equates to a cost of \$427.51 per service population unit, as shown in **Table 17**. This cost per service population is then multiplied by the occupancy factors for residential and commercial development described in Chapter 2 to calculate the impact fees for each land use type.

Table 25. Cost per Unit of New Service

	2019-2030
Service Population Growth	25,958
Total 2030 Costs	\$11,097,386
Cost per New Service Population	\$427.51

Source: Town of Castle Rock; Economic & Planning Systems

As shown in **Table 26**, the supportable fees for commercial space range from \$12.40 per 1,000 square feet for self-storage to \$483.61 per 1,000 square feet for office space and \$322.40 per 1,000 square feet for commercial/retail space. A proposed additional land use category is assisted living and nursing home facilities. The supportable fee for assisted living is calculated at \$322.40 per 1,000 square feet or \$128.96 per bed as shown. Fees for hotels and assisted living could be charged on a per-bed or per-square foot basis and the fee calculation is shown both ways.

Table 26. Commercial Fire Impact Fee Calculation

Occupancy per:		2019 Supportable Fee
Cost per New Service Population	\$427.51	
Office	1.13 1,000 Sq. Ft.	\$483.61 per 1,000 sq. ft.
Commercial/Shopping Center	0.75 1,000 Sq. Ft.	\$322.40 per 1,000 sq. ft.
Industrial	0.38 1,000 Sq. Ft.	\$161.20 per 1,000 sq. ft.
Warehousing	0.04 1,000 Sq. Ft.	\$16.12 per 1,000 sq. ft.
Mini Warehouse (Self Storage)	0.03 1,000 Sq. Ft.	\$12.40 per 1,000 sq. ft.
Hotel [1]	0.30 1,000 Sq. Ft.	\$128.96 per 1,000 sq. ft.
(per room)		\$64.48 per room
Assisted Living/Nursing Home [2]	0.75 1,000 Sq. Ft.	\$322.40 per 1,000 sq. ft.
(per bed)		\$128.96 per bed

Source: Town of Castle Rock; Economic & Planning Systems

[1] 0.4 employees per room, 500 gross square feet per room.

[2] 0.8 employees per bed, 400 square feet per bed.

To calculate the residential impact fee, the cost per new service population unit is multiplied by the average household size for each home type and size range, illustrated in **Table 22**. The supportable fee for multifamily development is \$721.34 per unit. For the average sized single family home (2,785 square feet), the maximum fee is \$1,097.54 per unit. The proposed fees are graduated based on the average household size for each range of home size.

Table 27. Residential Fire Impact Fee Calculation

Cost	Home Size (Sq. Ft.)	Household Size	2019 Supportable Fee
Cost per New Service Population			
\$427.51			
	Multifamily	1.69	\$721.34 per unit
	Single Family < 2,000	1.90	\$813.60 per unit
	2,000-2,499	2.35	\$1,004.93 per unit
	Average 2,500-2,999	2.57	\$1,097.54 per unit
	3,000-3,499	2.72	\$1,161.26 per unit
	3,500-3,999	3.03	\$1,293.44 per unit
	4,000-4,499	3.29	\$1,407.94 per unit
	4,500-4,999	3.53	\$1,508.93 per unit
	5,000 +	3.74	\$1,599.27 per unit

Source: Town of Castle Rock; Economic & Planning Systems

5. Police Department Fees

This chapter presents impact fee calculations for the Castle Rock Police Department. The approaches used vary depending on the cost items proposed to be included in the 2019 fee program, as described below.

- **Vehicles and Staff Equipment** – For vehicles and staff/patrol gear, an incremental approach was applied. This approach estimates the capital costs required to maintain the current level of service.
- **Facilities** – An incremental approach was also used for police office and administrative space needs. A buy-in approach was used to recover the cost of the Public Safety Training Center acquired in 2017 to accommodate a need for more training space. Forty percent of cost of this facility was determined by the Town to be growth-related, and is shared across the Police, Fire, and Municipal Capital funds which are paying the cost of the facility with impact fees.
- **Nexus Factor** – The police level of service (LOS) was calculated on the Town's service population (population plus commuting employees) of 69,878 in 2017. The projected staff and facility needs are based on the forecasted service population as detailed in Chapter 2.

Vehicles and Staff Equipment

A portion of the Police impact fee is the cost of the number of vehicles and staff equipment/patrol gear needed to maintain the current level of service. The first step in this calculation is documenting the level of service for staff and vehicles, and projecting them out to 2030.

As shown in **Table 28**, the Town currently has 96 staff positions in the Police Department, representing a LOS of 1.374 positions per 1,000 service population. In projecting future staffing needed to maintain this level of service, positions were assigned a fixed or variable classification. Fixed positions (i.e., fixed costs) include senior management and some administrative functions. Variable positions are those which provide direct services to the public such as patrol, some investigative and victim support functions, and dispatch.

Table 28. Current Staff Levels by Division

Staff Level	Positions	Vehicles	Vehicles per Position	Positions per 1,000 Svc. Pop.	Fixed or Variable
2017 Service Population				69,878	
Administration					
Chief	1	1	1.00	0.014	Fixed
Administrative Supervisor	1	0	0.00	0.014	Fixed
Sr. Office Assistant	<u>1</u>	<u>0</u>	0.00	<u>0.014</u>	Fixed
Subtotal	3	1		0.043	
Special Operations					
Special Operations Commander	1	1	1.00	0.014	Fixed
Sergeant	1	1	1.00	0.014	Variable
School Marshals	2	2	1.00	0.029	Variable
School Officers	2	2	1.00	0.029	Variable
Traffic Officers	4	4	1.00	0.057	Variable
C.O.P.P.S. [1]	2	2	1.00	0.029	Variable
Animal Control	<u>2</u>	<u>1</u>	0.50	<u>0.029</u>	Variable
Subtotal	14	13		0.200	
Patrol					
Commander	1	1	1.00	0.014	Fixed
Sergeant	6	3	0.50	0.086	Variable
Corporal	6	3	0.50	0.086	Variable
Officer	34	17	0.50	0.487	Variable
K9 Officer	<u>2</u>	<u>1</u>	0.50	<u>0.029</u>	Variable
Subtotal	49	25		0.701	
Investigations					
Commander	1	1	1.00	0.014	Fixed
Sr. Office Assistant	1	0	0.00	0.014	Fixed
Sergeant	1	1	1.00	0.014	Variable
Victims Assistance Coordinator	1	1	1.00	0.014	Variable
Victim Advocate	1	1	1.00	0.014	Variable
Detective	6	6	1.00	0.086	Variable
Impact Unit Officer	1	1	1.00	0.014	Fixed
Property/Evidence Technician	<u>1</u>	<u>1</u>	0.00	<u>0.014</u>	Fixed
Subtotal	13	12		0.186	
Support Services					
Training/Development Sergeant	1	1	1.00	0.014	Fixed
Public Information Officer	1	0	0.00	0.014	Fixed
Communications Manager	1	0	0.00	0.014	Fixed
Dispatch	<u>14</u>	<u>0</u>	0.00	<u>0.200</u>	Variable
Subtotal	17	1		0.243	
Total	96	52	0.54	1.374	

[1] Community Oriented Policing and Problem Solving

Source: Town of Castle Rock; Economic & Planning Systems

Using the current ratios of staff to service population and the fixed/variable assignments, staff positions are projected to 2030 using the forecasted growth in service population. As shown in **Table 29**, 31.2 new staff positions and 16.7 new vehicles are projected through 2030 to maintain the current LOS. As shown, the cost of vehicles is estimated at \$919,420 and \$249,637 for staff equipment.

Table 29. Police Staff and Equipment Forecast by Division

Staff Level	Positions per 1,000 Svc. Pop.	Vehicles per Position	Fixed or Variable	2019-2030 New Positions	2019-2030 New Vehicles	Vehicle Cost \$55,000	Personnel Gear/ Equipment \$8,000
2017 Population	69,878						
2019-2030 Population Growth				25,958			
Administration							
Chief	0.014	1.000	Fixed	0.000	0.000	\$0	\$0
Administrative Supervisor	0.014	0.000	Fixed	0.000	0.000	0	0
Sr. Office Assistant	<u>0.014</u>	0.000	Fixed	<u>0.000</u>	<u>0.000</u>	<u>0</u>	<u>0</u>
Subtotal	0.043			0.000	0.000	0	0
Special Operations							
Special Operations Commander	0.014	1.000	Fixed	0.000	0.000	0	0
Sergeant	0.014	1.000	Variable	0.371	0.371	20,432	2,972
School Marshals	0.029	1.000	Variable	0.743	0.743	40,863	5,944
School Officers	0.029	1.000	Variable	0.743	0.743	40,863	5,944
Traffic Officers	0.057	1.000	Variable	1.486	1.486	81,726	11,887
C.O.P.P.S. [1]	0.029	1.000	Variable	0.743	0.743	40,863	5,944
Animal Control	<u>0.029</u>	0.500	Variable	<u>0.743</u>	<u>0.371</u>	<u>20,432</u>	<u>5,944</u>
Subtotal	0.200			4.829	4.458	245,179	38,634
Patrol							
Commander	0.014	1.000	Fixed	0.000	0.000	0	0
Sergeant	0.086	0.500	Variable	2.229	1.114	61,295	17,831
Corporal	0.086	0.500	Variable	2.229	1.114	61,295	17,831
Officer	0.487	0.500	Variable	12.630	6.315	347,337	101,043
K9 Officer	<u>0.029</u>	0.500	Variable	<u>0.743</u>	<u>0.371</u>	<u>20,432</u>	<u>5,944</u>
Subtotal	0.701			17.831	8.916	490,358	142,649
Investigations							
Commander	0.014	1.000	Fixed	0.000	0.000	0	0
Sr. Office Assistant	0.014	0.000	Fixed	0.000	0.000	0	0
Sergeant	0.014	1.000	Variable	0.371	0.371	20,432	2,972
Victims Assistance Coordinator	0.014	1.000	Variable	0.371	0.371	20,432	2,972
Victim Advocate	0.014	1.000	Variable	0.371	0.371	20,432	2,972
Detective	0.086	1.000	Variable	2.229	2.229	122,589	17,831
Impact Unit Officer	0.014	1.000	Fixed	0.000	0.000	0	0
Property/Evidence Technician	<u>0.014</u>	0.000	Fixed	<u>0.000</u>	<u>0.000</u>	<u>0</u>	<u>0</u>
Subtotal	0.186			3.343	3.343	183,884	26,747
Support Services							
Training/Development Sergeant	0.014	1.000	Fixed	0.000	0.000	0	0
Public Information Officer	0.014	0.000	Fixed	0.000	0.000	0	0
Communications Manager	0.014	0.000	Fixed	0.000	0.000	0	0
Dispatch	<u>0.200</u>	0.000	Variable	<u>5.201</u>	<u>0.000</u>	<u>0</u>	<u>41,606</u>
Subtotal	0.243			5.201	0.000	0	41,606
Total	1.374	0.542		31.205	16.717	\$919,420	\$249,637

[1] Community Oriented Policing and Problem Solving
Source: Town of Castle Rock; Economic & Planning Systems

Police Facilities

Using the staff projection, the amount of new station and administrative space required to house the new positions is estimated. The current Police headquarters occupies 21,400 square feet of the Police Headquarters Building, as shown in **Table 30**. This equates to 223 square feet per position. Projecting this forward on the 31.2 positions forecasted from 2019 through 2030, 6,556 square feet of additional space is needed. A construction cost of \$500 per square foot was used based on costs from five recently constructed and under construction police stations along the I-25 urban corridor listed in **Table 31**. After deducting for the 400 square feet of capacity in the existing building, the cost for new Police facilities space is estimated at approximately \$3.3 million to maintain the current level of service.

Table 30. Police Facilities Costs

Description	Factors	Amount	FTE	Sq. Ft./FTE
Police Headquarters				
Existing Public Safety Building		28,000 Sq. Ft.		
Courts	10%	-2,800 Sq. Ft.		
Police Expansion Space		-2,100 Sq. Ft.		
Evidence Room		<u>-1,700 Sq. Ft.</u>		
Police Occupied Space		21,400 Sq. Ft.	96.00	223
Projected Space Needs		6,956 Sq. Ft.	31.20	223
Surplus Office Space		<u>-400 Sq. Ft.</u>		
Total		6,556 Sq. Ft.		
Estimated Cost	\$500/Sq. Ft.	\$3,278,009		

Source: Economic & Planning Systems

Table 31. Comparable Police Station Costs

Police Department	Sq. Ft.	Cost	\$ / sq. ft.	Year
Englewood, CO	50,000	\$27,000,000	\$540	2019
Northglenn, CO	45,000	\$23,000,000	\$511	2019
Erie, CO	17,000	\$6,200,000	\$365	2015
Colorado Springs Substation	28,000	\$13,800,000	\$493	2019
Thornton Substation	30,000	\$17,000,000	\$567	2018
Weighted Average			\$512	
Rounded			\$500	

Source: Economic & Planning Systems

An additional facility used by Police is a portion of the new Public Safety Training Facility described in Chapter 3, the cost of which equals \$313,741. Total costs are therefore \$5.48 million, or \$211.22 per increment of new service population as shown in **Table 32**.

Table 32. Police Department 2019 to 2030 Costs

Item	Estimated Cost	New Service Population
New Capital Needs		
Police Vehicles	\$919,420	
Police Equipment	\$249,637	
Facilities	<u>\$3,278,009</u>	
Subtotal	\$4,447,066	
Debt on Existing Station		
2018-2030 Principal and Interest Remaining [1]	\$782,257	
2018 Impact Fee Payments	<u>-\$60,174</u>	
Total Cost Remaining, 2019	\$722,083	
Police Share of Public Safety Training Facility [2]	\$313,741	
Total 2019 Fee Program Costs	\$5,482,890	
Cost per New Service Population	\$211.22	25,958

[1] 2033 loan maturity of \$962,779 minus three years of payments at \$60,173 each.

[2] 40% Police, 40% Fire, 20% Municipal Facilities

Source: Economic & Planning Systems

Police Department Fee Calculation

To calculate the Police impact fees, the cost per service population is multiplied by the commercial and residential occupancy factors presented in Chapter 2. As shown in **Table 33**, the supportable fees for commercial development range from \$6.13 per 1,000 square feet for self-storage to \$238.94 for office, and \$159.29 per 1,000 square feet for retail.

Table 33. Commercial Police Impact Fee Calculation

	Cost per New Svc. Population	Occupancy	per:	2019 Supportable Fee
Cost per New Service Population	\$211.22			
General Office		1.13	1,000 Sq. Ft.	\$238.94 per 1,000 sq. ft.
Commercial/Shopping Center		0.75	1,000 Sq. Ft.	\$159.29 per 1,000 sq. ft.
Industrial		0.38	1,000 Sq. Ft.	\$79.65 per 1,000 sq. ft.
Warehouse		0.04	1,000 Sq. Ft.	\$7.96 per 1,000 sq. ft.
Mini Warehouse (Self Storage)		0.03	1,000 Sq. Ft.	\$6.13 per 1,000 sq. ft.
Hotel		0.30	1,000 Sq. Ft.	\$63.72 per 1,000 sq. ft.

Source: Economic & Planning Systems

To calculate the residential impact fee, the cost per new service population unit is multiplied by the average household size for each home type and size range, illustrated in **Table 34**. The supportable fee for multifamily development is \$356.39 per unit. For the average sized single family home the maximum fee is \$542.26 per unit. The proposed fees are graduated up and down based on the average household size for each range of home size.

Table 34. Residential Police Impact Fee Calculation

	Cost per New Svc. Population	Home Size (Sq. Ft.)	Household Size	2019 Supportable Fee
Cost per New Service Population	\$211.22			
		Multifamily	1.69	\$356.39 per unit
		Single Family < 2,000	1.90	\$401.98 per unit
		2,000-2,499	2.35	\$496.51 per unit
		Average 2,500-2,999	2.57	\$542.26 per unit
		3,000-3,499	2.72	\$573.75 per unit
		3,500-3,999	3.03	\$639.05 per unit
		4,000-4,499	3.29	\$695.62 per unit
		4,500-4,999	3.53	\$745.52 per unit
		5,000 +	3.74	\$790.15 per unit

Source: Town of Castle Rock; Economic & Planning Systems

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6. Municipal Facilities

This chapter presents impact fee calculations for Municipal Facilities over the 2019 to 2030 timeframe to be incorporated into a proposed 2019 impact fee program. Different approaches were used depending on the projects and costs to be included in the fee program, as described below.

- **Incremental Expansion Approach** – This method was used to forecast building space needs at the current level of service for general government employees, courts employees, facilities and parks maintenance.
- **Buy-In Approach** – The buy-in approach was used to recover the remaining financing costs for the Public Safety Training Center, as the facility is shared with broader government training functions.
- **Plan-Based Approach** – A plan-based approach was used on the Central Services Facility. This facility is under construction with costs to be paid by impact fees.

Municipal Buildings

This section documents the inventory of municipal buildings and the level of service to be used in the incremental expansion impact fee calculation. The 38,906 square foot Town Hall building is occupied by 65 general government employees, as shown in **Table 35**. However, it includes 12,572 square feet comprised of council chambers and other common areas not occupied by employees for day-to-day operations. This space is expected to be constant as it is not related to growth and is deducted from the total square footage to calculate the number of square feet per employee. Also, the 10,504 square feet occupied by Development Services is removed because Development Services operates within an enterprise fund as opposed to the General Fund departments. With this adjustment, Town Hall houses 1.0 general government employee per 244 square feet in 15,830 square feet of occupied space, as shown. There are 0.93 general government employees per 1,000 service population.

Table 35. Town Hall and General Government Employees

Department	Employees	Sq. Ft.	Notes
Town Hall			
Original Building		24,806	
Expansion		<u>14,100</u>	
Total		38,906	
Less Council Chambers and Common Areas		-12,572	
Less Development Services (Enterprise Fund)		<u>-10,504</u>	
Occupied Space		15,830	
Employees			
Community Relations	4		
Information Technology	20		
Town Attorney's Office	5		
Deputy Town Manager's Office	2		
Town Manager's Office	3		
Human Resources	6		
Town Clerk	2		
Finance (Accounting, Budget)	16		
Finance (Revenue)	<u>7</u>		
Total	65		
Sq. Ft. of Occupied Space per Employee	65	15,830	244 sq. ft./empl.
Employees per 1,000 Service Population	65		0.93 empl. per 1,000 svc. pop.

Source: Town of Castle Rock

Municipal Court functions are housed in the 28,000 square foot Public Safety building shared with the Police Department. The Municipal Court occupies 10 percent of the building, or 2,800 square feet, with 5 employees. As shown in **Table 36**, this equates to 560 square feet per employee and 0.072 employees per 1,000 service population.

Table 36. Municipal Court Building and Employees

Department	Employees	Sq. Ft.	Notes
Municipal Court	5	2,800	560 sq. ft./empl.
Employees per 1,000 Service Population			0.072

Source: Town of Castle Rock

The \$5.4 million Central Services Facility is currently in design and construction and will be funded as described below:

- 42 percent with Parks Impact Fees;
- 29 Percent with Municipal Services Impact Fees; and
- 29 percent with Building Use Tax from the Long-Term Planning Fund.

Facilities Maintenance, which maintains Town buildings and other assets, will occupy approximately 6,190 square feet of the building, equating to 88.58 square feet per 1,000 service population as shown in **Table 37**. The Parks Department will use 7,565 square feet of the new building, equating to 121.48 square feet of space per capita (Town population). Since Parks acreage is based on a per capita standard, the facility needs are also tied to that per capita standard rather than a broader per service population standard.

Table 37. Central Services Facility

Department	Factor	Sq. Ft.
Central Services Facility		13,755
Facilities	45.0%	6,190
Parks	55.0%	<u>7,565</u>
Total		13,755
Facilities - per 1,000 Service Population	69,878	88.58
Parks - per 1,000 Population	62,276	121.48

Source: Town of Castle Rock

Municipal Facilities Space Projection

Using the levels of service ratios defined above, the municipal buildings space needs are projected out to 2030 on the service population forecast presented in Chapter 2. Applying the growth in service population of 25,958 to the square footage and service population ratios results in a projected need for 5,890 square feet of general government space (\$2,173,590), 1,047 square feet of Courts Space (\$386,212), and 2,299 square feet of Facilities maintenance space (\$869,000), as shown in **Table 38**.

Table 38. Facilities Space and Cost Projection

Description	Factors		Calculation
Service Population Growth			25,958
General Government Space			
New General Government Employees	0.93	per 1,000 svc. pop.	24
New General Government Sq. Ft.	244	sq. ft./empl.	5,890
2019-2030 Cost	\$369	per sq. ft.	\$2,173,590
Courts Space			
New Courts Employees	0.072	per 1,000 svc. pop.	1.87
New Courts Sq. Ft.	560	sq. ft./empl.	1,047
2019-2030 Cost	\$369	per sq. ft.	\$386,212
Central Services Space			
Facilities Maintenance	88.58	per 1,000 svc. pop.	2,299
Facilities Cost	\$378	per sq. ft.	\$869,270

Source: Economic & Planning Systems

Public Safety Training Center

One additional cost is included in the Municipal Facilities fee calculation: the portion of the Public Safety Training Facility costs allocated to other general government departments. As described in Chapter 3 (Fire), the cost allocated to Municipal Facilities is \$156,870 as shown in **Table 39**.

Municipal Facilities Fee Calculation

The total costs to be included in the Municipal Facilities impact fee calculation are summarized below in **Table 39**. The \$3.6 million in costs equate to \$138.14 per unit of new service population.

Table 39. Total Municipal Facilities Costs

Description	Amount	Description
Central Services Center (Facilities portion)	\$869,270	To be paid with Impact Fees
Public Safety Training Facility	156,870	Incremental Expansion
General Government Space (Future)	2,173,590	Incremental Expansion
Courts Space (Future)	<u>386,212</u>	Incremental Expansion
Total	\$3,585,943	
2019-2030 Service Population Growth	25,958	
Cost per New Service Population	\$138.14	

Source: Economic & Planning Systems

For commercial space, the impact fees are graduated according to the number of occupants per 1,000 square feet in each land use category. As shown in **Table 40**, commercial impact fees range from \$4.01 per 1,000 square feet for self-storage to \$156.27 per 1,000 square feet for office.

Table 40. Commercial Municipal Facilities Impact Fee Calculation

Occupancy per:		2019 Supportable Fee
Cost per New Service Population	\$138.14	
Office	1.13 1,000 Sq. Ft.	\$156.27 per 1,000 sq. ft.
Commercial/Shopping Center	0.75 1,000 Sq. Ft.	\$104.18 per 1,000 sq. ft.
Industrial	0.38 1,000 Sq. Ft.	\$52.09 per 1,000 sq. ft.
Warehouse	0.04 1,000 Sq. Ft.	\$5.21 per 1,000 sq. ft.
Mini Warehouse (Self Storage)	0.03 1,000 Sq. Ft.	\$4.01 per 1,000 sq. ft.
Hotel	0.30 1,000 Sq. Ft.	\$41.67 per 1,000 sq. ft.

Source: Economic & Planning Systems

To calculate the residential impact fee, the cost per new service population unit is multiplied by the average household size for each home type and size range, illustrated in **Table 41**. The supportable fee for multifamily development is \$233.09 per unit. For the average sized single family home (2,785 square feet), the supportable fee is \$354.65 per unit. The proposed fees are graduated up and down based on the average household size for each range of home size.

Table 41. Residential Municipal Facilities Impact Fee Calculation

Cost	Home Size (Sq. Ft.)	Household Size	2019 Supportable Fee	
Cost per New Service Population	\$138.14			
	Multifamily	1.69	\$233.09	per unit
	Single Family < 2,000	1.90	\$262.90	per unit
	2,000-2,499	2.35	\$324.72	per unit
	Average 2,500-2,999	2.57	\$354.65	per unit
	3,000-3,499	2.72	\$375.24	per unit
	3,500-3,999	3.03	\$417.95	per unit
	4,000-4,499	3.29	\$454.95	per unit
	4,500-4,999	3.53	\$487.58	per unit
	5,000 +	3.74	\$516.77	per unit

Source: Town of Castle Rock; Economic & Planning Systems

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7. Transportation

This chapter presents the impact fee calculations for transportation. The recommended transportation impact fees include four components:

- Roadway System Fee
- Regional Improvement Fee
- Transportation Action Program (TAP) Projects Fee
- Fleet and Facilities Fee

Each of these fee components have been included in prior impact fee studies for Castle Rock, but were shown as a single fee calculation. In this analysis, a separate fee component calculation is provided for each major cost component.

A “consumption-based” approach is used to calculate the **Roadway System Fee** component. This approach charges new development the cost of adding new roadway capacity that it consumes on the Town’s major road system. The method uses the Town’s adopted Transportation Master Plan’s growth-related roadway improvement projects and their estimated costs to develop an average cost to create a new vehicle mile of capacity (VMC). The roadway system requires more than one VMC to accommodate each vehicle mile of travel (VMT); however, a conservative one-to-one ratio is assumed. Therefore, the cost per VMC is multiplied by the estimated VMT generated by a development to calculate the proportionate fee for that development. The consumption-based methodology has been used by the Town in the past and is proposed to be retained for the 2019 fee program.

The **Regional Improvement Fee** and **TAP Projects Fee** components use the plan-based approach. In the plan-based approach, a specific set of improvements is defined and the fee is calculated by dividing the cost of those improvements by the number of service units (typical number of vehicle trips or VMT) expected to be generated by development over a specified time horizon.

The **Fleet and Facilities Fee** is calculated using an incremental expansion approach which calculates the capital costs needed to maintain the current level of service. Fleet and facilities needs are projected on a per service population basis.

Roadway System Fee

This section documents each step in the process leading to the recommended supportable roadway system fee.

Major Street System

The Roadway System Fee is based on a definition of the Town's major street system. The major street system is defined as the major arterials, minor arterials, and state highways defined in the Town's Transportation Master Plan (TMP) prepared in 2017. Interstate 25 is not included in the Town's major street system, but frontage roads and ramps are included. Collector and local streets are not included because construction and improvements to these streets are generally the responsibility of the individual developments that they serve. Individual developer's required capacity improvements on the major street system may be eligible for credits against the development's roadway system fee on a case by case basis.

Capacity Expansion Projects

The roadway improvement projects listed in **Table 42** of the TMP were used as the starting point for the transportation impact fee calculation. TMP projects were included in the transportation impact fee project list based on:

- The major street system defined above.
- Projects listed as being needed by 2022 or by 2030 (not full build projects).
- Projects that have been constructed or are under construction were excluded.

Table 42 lists the TMP projects that were included in the calculation. The top part of the table includes new roads and road widenings and the bottom part includes major intersection improvements. Each improvement entry in the top part of the table includes the location and brief description of the project, the planning level construction cost estimate, length, and existing and future number of lanes of functional classification. Based on this information and the capacity estimates for different roadway classifications contained in the TMP, the additional VMC created by each project is provided in the far-right column of the table.

For major intersection projects shown on the bottom part of **Table 42**, the intersection location, improvement, planning level construction cost estimate, estimated length of added lanes, and estimated added capacity are shown. Cost estimates in the TMP represented 2017 dollars. The costs were inflated by 2 percent to generate 2018 cost estimates based on expected growth in costs from historical trends in CDOT's Colorado Construction Index.

Table 42. Roadway System 2030 Project List

Project ID No.	Horizon	Roadway	Segment / Improvement	New Lanes and Functional Classification	Planning Level Cost Estimate (2017 in TMP)	Planning Level Costs Estimates (2018 = TMP + 2%)	Length (mi)	Existing Number of Lanes	2030 Number of Lanes	Existing Functional Class	2030 Functional Class	Existing Capacity/Lane (v/c = 0.8)	2030 Capacity/Lane (v/c = 0.8)	Existing VMC	2030 VMC	Additional VMC		
2	By 2022	Fifth St	Complete climbing lane and sidepath along south side of street from Gilbert Street to Founders Pkwy	3 lane Major Arterial	\$6,000,000	\$6,120,000	1.52	2	3	Major Arterial	Major Arterial	7,000	7,000	21,280	31,920	10,640		
3	By 2022	Founders Pkwy	Widen from Woodlands Blvd to Crowfoot Valley Rd (Note: widening is part of the Founders Pkwy and Crowfoot Valley Rd intersection improvement project)	6 lane Major Arterial	\$3,500,000	\$3,570,000	0.51	4	6	Highway	Highway	7,000	7,000	14,280	21,420	7,140		
5	By 2022	Plum Creek Pkwy	Widen from Gilbert Street to Ridge Rd	4 lane Major Arterial	\$3,100,000	\$3,162,000	1.51	2	4	Major Arterial	Major Arterial	7,000	7,000	21,140	42,280	21,140		
7	By 2022	Ridge Rd	Widen from Plum Creek Pkwy to Fifth St	4 lane Major Arterial	\$4,000,000	\$4,080,000	1.08	2	4	Major Arterial	Major Arterial	7,000	7,000	15,120	30,240	15,120		
8	By 2022	Wolfensberger Rd	Widen from MAC Entrance (west of Coachline) to Prairie Hawk Dr	4 lane Major Arterial	\$7,600,000	\$7,752,000	1.47	2	4	Major Arterial	Major Arterial	7,000	7,000	20,580	41,160	20,580		
9	By 2030	Plum Creek Pkwy	Widen from Wolfensberger Rd to I-25	4 lane Major Arterial	\$6,330,000	\$6,457,000	1.37	2	4	Major Arterial	Major Arterial	7,000	7,000	19,180	38,360	19,180		
10	By 2030	Pine Canyon/Pioneer Ranch Developments	Build connection from Woodlands Blvd to Front St	4 lane Major Arterial	\$2,608,000	\$2,660,000	0.34	0	4	New Road	Major Arterial	0	7,000	0	9,520	9,520		
12	By 2030	Pine Canyon/Pioneer Ranch Developments	Build Woodlands Blvd Connection	4 lane Major Arterial	\$4,393,000	\$4,481,000	0.57	0	4	New Road	Major Arterial	0	7,000	0	15,960	15,960		
14	By 2030	Prairie Hawk Dr	Realign along Atchison Way and extend from Topeka Way to Plum Creek Pkwy	4 lane Major Arterial	\$6,170,000	\$6,293,000	0.80	2	4	Major Arterial	Major Arterial	7,000	7,000	11,200	22,400	11,200		
15	By 2030	West Frontage Rd	Realign between Town Limits and Plum Creek Pkwy	4 lane Major Arterial	\$25,400,000	\$25,908,000	4.24	2	4	Minor Arterial	Major Arterial	6,000	7,000	50,880	118,720	67,840		
17	By 2030	Crowfoot Valley Rd	Widen from Founders Pkwy to Town Limits	4 lane Major Arterial	\$4,700,000	\$4,794,000	0.82	2	4	Major Arterial	Major Arterial	7,000	7,000	11,480	22,960	11,480		
18	By 2030	SH 86	Widen from Ridge Rd to Enderud Blvd	4 lane Highway	\$2,550,000	\$2,601,000	1.28	2	4	Highway	Highway	7,000	7,000	17,920	35,840	17,920		
19	By 2030	Prairie Hawk Dr	Widen from Melting Snow Dr to Wolfensberger Rd	4 lane Major Arterial	\$2,700,000	\$2,754,000	0.83	2	4	Major Arterial	Major Arterial	7,000	7,000	11,620	23,240	11,620		
21	By 2030	N Meadows Dr	Widen from Meadows Blvd to US 85	4 lane Major Arterial	\$23,900,000	\$24,378,000	1.00	2	4	Major Arterial	Major Arterial	7,000	7,000	14,000	28,000	14,000		
Intersections																		
Project ID No.	Horizon	Roadway	Segment / Improvement		Planning Level Cost Estimate (2017 in TMP)	Planning Level Costs Estimates (2018 = TMP + 2%)	Turn Lane/Roundabout Length (mi)	Estimated Capacity per Lane								Additional VMC		
22	By 2030	East Frontage Rd Intersections,Plum Creerk Pkwy to Crystal Valley Pkwy	Operational Improvements		\$6,030,000	\$6,151,000	1.2	3,500								4,200		
32	By 2022	Founder Pkwy/Allen Dr Intersection	Operational Improvements		\$406,000	\$414,000	0.3	3,500								1,050		
33	By 2022	Founders Pkwy/Crowfoot Valley Rd Intersection	Add eastbound and westbound through lanes, eastbound and southbound left-turn lanes, channelize southbound and westbound right-turn lanes		\$1,540,000	\$1,571,000	Capacity Included with Project 3								Nominal			
34	By 2022	SH 86/Founders Pkwy/ 5th St Intersection	Convert to 3-Lane Roundabout		\$4,000,000	\$4,080,000	0.4	7,000								2,800		
35	By 2022	Wlfensberger Rd/Red Hawk Dr Intersection	Convert to 2-Lane Roundabout		\$1,300,000	\$1,326,000	0.2	7,000								1,400		
36	By 2022	Plum Creek Pkwy/Gilbert St	Convert to 2-Lane Roundabout		\$1,000,000	\$1,020,000	0.2	7,000								1,400		
38	By 2030	Coachline Rd/Foothills Dr	Convert to 2-Lane Roundabout		\$1,300,000	\$1,326,000	0.2	7,000								1,400		
39	By 2030	Prairie Hawk Dr/Wolfensberger Rd Intersection	Add easbound and northbound right-turn lanes		\$400,000	\$408,000	Capacity Included with Project 19								Nominal			
Total Planning Level Cost Estimate					\$118,927,000	\$121,306,000											Additional VMC	265,590
																	Cost per VMC	\$456.74
	Project List:	Source: Transporation Master Plan (TMP)																
		Include Projects on Major Street System = Arterials, State Highways, Frontage Roads (Exclude I-25 and I-25 Interchanges)																
		Include Projects on Major Street System = Arterials, State Highways, Frontage Roads (Exclude I-25 and I-25 Interchanges)																
		Include TMP Recommendations Through 2030 (Exclude 2040/Build-out Projects)																
		Cost estimates based on 2017 TMP costs plus 2% inflation to 2018																

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Cost per VMC

Table 43 shows the calculation of average cost to provide a VMC. Based on the estimated construction costs and additional capacity associated with the 22 applicable TMP projects listed on **Table 42**, it is estimated that the average cost to generate a VMC is \$456.74. This cost per VMC will be applied to developments' VMT generation discussed in the following sections to derive the transportation impact fee.

Table 43. Cost / VMC Calculation

Description	Amount
Total Project Cost	\$121,306,000
Total Additional VMC	265,590
Average Cost per VMC	\$456.74

Source: 2017 TMP, FHU, Economic & Planning Systems

Trip Lengths

The travel model created for the TMP was used to derive an estimate of the 2.13 miles average trip length on the major street system in Castle Rock.

Table 44. Average Trip Length

Measure	Castle Rock TMP Base Year Model
Daily vehicle trips generated to and from Castle Rock zones	181,539 Trips
Vehicle Miles of Travel (VMT) generated by Castle rock trips on major street system	386,251 Miles
Average Trip Length	2.13 miles

Source: 2017 TMP, FHU, Economic & Planning Systems

Trip Generation

The commonly used national standard for estimating vehicle trips generated by different land use types is the *Institute of Transportation Engineers Trip Generation Manual*, 10th Edition, 2017. **Table 45** provides trip generation rates for eight common land use types for which transportation impact fee rates are being developed. For each use, the Trip Generation Manual category is shown and the average daily trips are shown for each development unit. These daily trip rates represent the total number of daily trips estimated to or from the use in a day. “Trip factors” need to be developed to assign trip rates to new development that reflects the relative impact of each land use category on transportation demand. Multiplying the daily trip ends by the trip factor yields the “new trip” rates that are used in fee calculations.

Table 45. Trip Generation Rates

Land Use Type	Trip Generation Rates				
	ITE Code	Unit	Daily Trip Ends	Trip Factor	New Trips
Single Family Residential	210	DU	9.44	0.59	5.56
Multi Family Residential	220	DU	7.32	0.59	4.31
Retail/Shopping Center	820	1,000 sf	37.75	0.32	12.08
Office	710	1,000 sf	9.74	0.73	7.06
Industrial	110	1,000 sf	4.96	0.73	3.60
Warehouse	150	1,000 sf	1.74	0.65	1.13
Mini-Warehouse	151	1,000 sf	1.51	0.50	0.76
Hotel	310	Room	8.36	0.50	4.18
Assisted Living	254	Bed	2.60	0.73	1.89

Source: 2017 TMP, FHU, Economic & Planning Systems

New Trip Factors

Conversion of daily trip ends to new trips used in the fee calculations requires development of two conversion factors.

- Primary Trips** - Most trips that people take represent primary trips—travel from one place to another. Some trips, particularly retail/shopping trips, are not primary trips but rather are pass-by trips made between two primary destinations; for example, stopping at a convenience store on the way from home to work. Based on Trip Generation Manual national data, an estimate of 36 percent of retail/shopping center trips are pass-by trips, thus 64 percent of retail/shopping center trips are estimated to be primary trips.

- Trip End to Trip Conversion** - For trips within Castle Rock, each trip that people take has two ends—an origin and a destination. To avoid double charging for both ends of the same trip, a standard conversion factor of 50 percent is applied to trip ends to obtain the number of unique trips. However, many commuting trips do not have both ends in Castle Rock. Based on U.S. Census and BLS Data (LEHD On the Map), 81 percent of Castle Rock residents commute to jobs outside of the Town and 75 percent of workers in Castle Rock commute in from outside of the Town. **Table 46** shows the derivation of conversion factors for different uses based on this commuting data and estimates of the proportion of trips generated by different uses that are commuter trips.

These two elements are combined in **Table 46** to derive the trip factors used in **Table 45** above.

Table 46. Trip Factors

Land Use Type	Primary Trips	Trip End – Trip Conversion	Trip Factor
Single Family Residential	1.00	$50\% + (22\% \text{ commuting trips} \times 81\% \text{ commuting out of Castle Rock} \times 50\%) =$	0.59
Multi-Family Residential	1.00	$50\% + (22\% \text{ commuting trips} \times 81\% \text{ commuting out of Castle Rock} \times 50\%) =$	0.59
Retail/Shopping Center	0.64	0.50	0.32
Office	1.00	$50\% + (60\% \text{ commuting trips} \times 75\% \text{ commuting in from outside of Castle Rock} \times 50\%) =$	0.73
Industrial	1.00	$50\% + (60\% \text{ commuting trips} \times 75\% \text{ commuting in from outside of Castle Rock} \times 50\%) =$	0.73
Warehouse	1.00	$50\% + (40\% \text{ commuting trips} \times 75\% \text{ commuting in from outside of Castle Rock} \times 50\%) =$	0.65
Hotels	1.00	50%	0.50
Mini Warehouse	1.00	50%	0.50
Assisted Living	1.00	$50\% + (60\% \text{ commuting trips} \times 75\% \text{ commuting in from outside of Castle Rock} \times 50\%) =$	0.73

Source: 2017 TMP, FHU, Economic & Planning Systems

Supportable Roadway System Transportation Fees

Table 47 provides the calculation of transportation fees by land use category based on the combination of the VMT generated by new development multiplied by the average cost to provide a VMC.

Table 47. Roadway System Fee Schedule

Land Use Type	New Trips	Trip Length (Miles)	Service Units (VMT)	Cost Per VMT	Fee
Single Family Residential	5.56	2.13	11.85	\$456.74	\$5,410.15
Multi Family Residential	4.31	2.13	9.19	\$456.74	\$4,195.16
Retail/Shopping Center	12.08	2.13	25.73	\$456.74	\$11,752.10
Office	7.06	2.13	15.04	\$456.74	\$6,869.82
Industrial	3.60	2.13	7.66	\$456.74	\$3,498.39
Warehouse	1.13	2.13	2.41	\$456.74	\$1,100.30
Mini-Warehouse	0.76	2.13	1.61	\$456.74	\$734.51
Hotel	4.18	2.13	8.90	\$456.74	\$4,066.54
Assisted Living	1.89	2.13	4.02	\$456.74	\$1,833.83

Source: 2017 TMP, FHU, Economic & Planning Systems

Regional Improvement Fee

Two larger transportation improvement projects are included in the TMP that are of a more regional nature than the roadway system improvements described above. These projects are treated as Buildout/2040 projects in the fee calculations since they will serve growth for a longer period of time beyond 2030. The 2040 land use and demographic estimates in the TMP were considered buildout estimates, hence the term “2040/Buildout” used in this Report.

I-25/Crystal Valley Parkway Interchange

This interchange has been long planned to provide access to the regional road system via I-25. It is critical to development plans east and west of I-25 and will reduce out-of-direction travel. The estimated construction cost is \$51 million. The Town has defined a local benefit area surrounding the interchange that will be the most direct beneficiaries of the access afforded by the interchange. An interchange evaluation estimated that 78 percent of the vehicles using a Crystal Valley Interchange would begin or end their trips in this local benefit area and the Town has been collecting—and expects to collect—revenue from development in the local benefit area to finance up to that 78 percent share of the interchange cost.

A town-wide Regional Improvement impact fee is recommended to finance the remaining 22 percent of the cost of the Crystal Valley interchange, reflecting the town-wide benefit of the access and relief to other routes that will be afforded by this project. The regional impact fee for this improvement is calculated by dividing the town-wide cost share by the trips generated by anticipated new development to 2040/Buildout.

Founders Parkway/SH 86 Corridor Capacity

The TMP identified a need for significant additional roadway capacity to accommodate the growth anticipated in the area north of downtown Castle Rock on both sides of I-25. The critical impact to the roadway system is expected to be on Founders Parkway including the I-25/Founders/Meadows interchange. The TMP identified the need for a focused study to determine the best set of improvements to accommodate this expected growth, which could include a combination of upgrading Founders Parkway to a 6-lane expressway, reconfiguring the I-25/Founders/Meadows interchange to add capacity, or a new I-25 interchange in the vicinity of Black Feather Trail.

The TMP's Proposed Roadway Improvement Projects (TMP Table 5) includes a project listing "Construct Interchange near Highway 85/Black Feather Trail or other Founders Parkway/SH 86 corridor improvements," with a cost range of \$20 million to \$40 million. A town-wide Regional Improvement impact fee is proposed to finance 50 percent of this improvement, based on the assumption that half of the benefits of the project would be assigned to a local benefit district and the other half would be considered a town-wide benefit. The mid-point of the TMP cost range, \$30 million is used for the total cost, thus the town-wide impact fee cost target is \$15 million. This project is listed in the TMP as a 2040/Buildout project, so the regional impact fee for this improvement is calculated by dividing the town-wide cost share by the anticipated new development to 2040/Buildout.

Service Units

Daily vehicle trips are used as the service unit to derive shares of the Regional Improvement fee. **Table 48** shows the estimated trips generated by new development in the Town for the periods 2019 to 2030 which is applied to the TAP Bond fee component and 2019-2040/Buildout. The TMP was based on a time period starting in 2015, so the number of new trips need to be adjusted proportionally for a 2019 to 2030 time period (44 percent of trips) and a 2019 to buildout time period (84 percent of trips).

Table 48. Pro Rata Adjustment of New Trips

Description	TMP Trips 2015 - Buildout (2040)	Adjustment	2019 - Buildout (2040)	Adjustment	2019 - 2030
New Trips					
Residential	116,704	84.0%	98,031	44.0%	51,350
Commercial	<u>74,367</u>	84.0%	<u>62,468</u>	44.0%	<u>32,721</u>
Total	191,070		160,499		84,071

Source: Town of Castle Rock TMP; Economic & Planning Systems

Costs and Local Share

Table 49 shows the total costs the two regional improvements, costs per new trip, and the town-wide shares of those costs are used to develop supportable town-wide Regional Improvement impact fees. The calculations lead to supportable regional fees per new trip of \$69.91 for Crystal Valley interchange and \$93.46 for the Founders – Black Feather area improvements for a total of \$163.37.

Table 49. Interchange Costs and Local Share

	New Trips	Cost	Cost per Trip	Townwide Share	Fee Per Trip
Crystal Valley 2019-2030	160,499	\$51,000,000	\$317.76	22.0%	\$69.91
Blackfeather/Founders Parkway Improvements	160,499	\$30,000,000	\$186.92	50.0%	\$93.46
Total					\$163.37

Source: Economic & Planning Systems

Supportable Regional Improvement Fees

Table 50 applies the cost per trip to the new trip estimates for various land uses to derive the supportable Regional Improvement Fees for the Crystal Valley interchange and Blackfeather-Founders area improvements.

Table 50. Supportable Regional Improvement Impact Fee

Land Use Type	Unit	New Trips	Supportable Fee
Fee per Trip	\$163.37		
Single Family Residential	DU	5.56	\$908.52
Multi Family Residential	DU	4.31	\$704.49
Retail/Shopping Center	1,000 sf	12.08	\$1,973.51
Office	1,000 sf	7.06	\$1,153.64
Industrial	1,000 sf	3.60	\$587.48
Warehouse	1,000 sf	1.13	\$184.77
Mini-Warehouse	1,000 sf	0.76	\$123.34
Hotel	Room	4.18	\$682.89
Assisted Living	Bed	1.89	\$307.95

Source: Economic & Planning Systems

Transportation Action Plan Projects

The Transportation Action Plan (TAP) is \$124 million in transportation projects with funding from a \$30 million bond issue approved by voters in 2005. Impact fees have been used to pay the debt service on these bonds since they were issued. Of the \$124 million in roadway projects, 30 percent of the cost is being paid with impact fees as shown in **Table 51**. These three projects are included here in a planned-based fee calculation.

- **Southeast Arterial Connection** – New road connecting Ridge Road to Plum Creek Parkway.
- **Southwest Arterial Connection** – Plum Creek Parkway interchange reconstruction, Plum Creek Parkway extension to Coachline Road, and a grade separated railway crossing (bridge).
- **North Meadows Extension** – Connects The Meadows to U.S. 85 and I-25.

For bond underwriting purposes, sales tax is the pledged revenue although the Town is using impact fees to make the debt service payments. If impact fee revenue were to fall short, the Town would have to make up the payments from other revenue sources.

Table 51. Transportation Action Plan Projects and Funding Sources

Project	Funding Source	Percent
Plum Creek/I-25/SWAC		
Building Use Tax	\$6,200,000	21.8%
Other Sources	11,300,000	39.6%
TAP Bonds (Paid with Impact Fees)	<u>11,000,000</u>	<u>38.6%</u>
Total Sources / Cost	\$28,500,000	100.0%
SE Arterial Connection (2 Lanes)		
Building Use Tax	\$3,332,153	52.6%
TAP Bonds (Paid with Impact Fees)	<u>3,000,000</u>	<u>47.4%</u>
Total Sources / Cost	\$6,332,153	100.0%
North Meadows Extension		
CDOT	\$4,600,000	5.2%
Douglas County	10,500,000	11.8%
Developer Contribution	6,310,053	7.1%
Building Use Tax	19,687,505	22.1%
Sales Tax	14,249,879	16.0%
Accumulated Impact Fees	10,482,301	11.8%
Interest Earnings	554,268	0.6%
TAP Bonds (Paid with Impact Fees)	<u>22,640,055</u>	<u>25.4%</u>
Total Sources / Cost	\$89,024,061	100.0%
Total Cost	\$123,856,214	
Total paid with Impact Fees	\$36,640,055	29.6%

Source: Economic & Planning Systems

The TAP bonds consist of two series: 2013 and 2016 debt issuances. By financing these projects, they were able to be built 5 to 10 years earlier than planned. Since these projects continue to serve growth, and there are remaining financing costs, these costs are included in the 2019 to 2030 fee program as a plan-based fee calculation. **Table 52** shows the financing costs allocated to the 2019 to 2030 time period, totaling \$24.8 million or \$294.73 per new trip.

Table 52. Financing Costs

Series 2013				Series 2016				Total Fee Program Cost
Year	Principal	Interest	Total Annual Payment	Year	Principal	Interest	Total Annual Payment	
2013	\$0	\$644,154	\$644,154					
2014	0	871,788	871,788					
2015	0	871,788	871,788					
2016	0	871,788	871,788	2016	\$0	\$110,891	\$110,891	
2017	485,000	868,150	1,353,150	2017	0	296,700	296,700	
2018	490,000	860,838	1,350,838	2018	100,000	295,700	395,700	
2019	500,000	852,163	1,352,163	2019	595,000	285,775	880,775	
2020	510,000	842,063	1,352,063	2020	635,000	267,325	902,325	
2021	515,000	831,169	1,346,169	2021	665,000	244,500	909,500	
2022	525,000	818,813	1,343,813	2022	690,000	217,400	907,400	
2023	550,000	801,250	1,351,250	2023	710,000	193,838	903,838	
2024	570,000	778,850	1,348,850	2024	730,000	174,038	904,038	
2025	595,000	755,550	1,350,550	2025	760,000	145,000	905,000	
2026	620,000	731,250	1,351,250	2026	800,000	106,000	906,000	
2027	645,000	705,950	1,350,950	2027	835,000	65,125	900,125	
2028	670,000	679,650	1,349,650	2028	<u>885,000</u>	<u>22,125</u>	<u>907,125</u>	
2029	1,630,000	625,500	2,255,500		\$7,405,000	\$2,424,417	\$9,829,417	
2030	1,715,000	541,875	2,256,875					
2031	1,800,000	454,000	2,254,000					
2032	1,895,000	361,625	2,256,625					
2033	1,990,000	264,500	2,254,500					
2034	2,095,000	162,375	2,257,375					
2035	<u>2,200,000</u>	<u>55,000</u>	<u>2,255,000</u>					
	\$20,000,000	\$15,250,089	\$35,250,089					
Remaining Financing Cost From 2019 Forward			\$15,752,208				\$9,026,126	\$24,778,334
New Trips 2019 - 2030								84,071
Cost per Trip								\$294.73

Source: Town of Castle Rock

After multiplying the cost per trip by the trip generation factors for each land use type, the supportable fee for the TAP bond component of the fees are calculated in **Table 53**. The resulting fee for a single family home is \$1,639.03 per unit, as shown. Commercial fees range from \$222.52 for mini-warehouse/self-storage to \$3,560.35 for retail per 1,000 square feet.

Table 53. TAP Projects Fee Component

Land Use Type	Unit	New Trips	Cost per Trip	Fee
Single Family Residential	DU	5.56	\$294.73	\$1,639.03
Multi Family Residential	DU	4.31	\$294.73	\$1,270.94
Retail/Shopping Center	1,000 sf	12.08	\$294.73	\$3,560.35
Office	1,000 sf	7.06	\$294.73	\$2,081.24
Industrial	1,000 sf	3.60	\$294.73	\$1,059.85
Warehouse	1,000 sf	1.13	\$294.73	\$333.34
Mini-Warehouse	1,000 sf	0.76	\$294.73	\$222.52
Hotel	Room	4.18	\$294.73	\$1,231.98
Assisted Living	Room	1.89	\$294.73	\$555.57

Source: Economic & Planning Systems

Fleet and Facilities Fee

Public Works maintains a fleet of equipment used for construction and maintenance activities, as well as buildings that house equipment, supplies, and some personnel. The fleet inventory, limited to assets valued at over \$20,000, includes 54 units of equipment totaling \$5.7 million in value, with an average replacement cost of \$105,513 per unit of equipment, as shown in **Table 54**. The new equipment needed to maintain the current level of service is calculated on a service population basis, as maintenance needs will increase with growth on all town-maintained roads including arterials and local roads such as arterials and collectors not covered in the Roadway System Fee. The Town owns 0.773 units of equipment per 1,000 service population, as shown.

Table 54. Public Works Fleet Inventory

Equipment Category Greater than \$20,000	Factors	Average Cost	Number	Total Cost
Equipment, Off-Road, Loaders, Tractors, Graders		\$49,973	7	\$349,809
Heavy Equipment Off-Road, Loaders, Tractors, Graders		156,108	7	1,092,757
SUV, General Purpose, Light Duty		24,850	1	24,850
Sweepers		219,091	3	657,272
Trailers Heavy		50,891	1	50,891
Trailers Medium, Light		29,092	5	145,460
Trucks Heavy Duty, Snow Removal, Construction Dumps		196,938	13	2,560,200
Trucks, Light Duty		28,648	7	200,537
Trucks, Med Duty		<u>61,594</u>	<u>10</u>	<u>615,940</u>
Total		\$105,513	54	\$5,697,716
Average Replacement Cost per Unit		\$105,513		
Fleet Units per 1,000 Service Population	69,878		0.773	

Source: Town of Castle Rock, Economic & Planning Systems

Public Works also maintains several maintenance buildings to house equipment and supplies totaling 16,420 square feet, as shown in **Table 55**. There is also a 22,940 square foot Main Service Center facility. The Service Center is being expanded in 2018 based on a recommendation in the 2015 Facilities Master Plan. The 2018-2022 CIP notes that this project will accommodate the next 10 to 15 years of growth. The Main Service Center is therefore not included in the fee calculation. The remaining storage and modular office buildings have a replacement cost of \$1.9 million, or \$116 per square foot. The level of service for these buildings is 235 square feet per 1,000 service population, as shown.

Table 55. Public Works Facility Inventory

Transportation Buildings	Address	Square Feet	2019 Building Value	Value per Sq. Ft.
Service Center - Salt Storage Building	675 Justice Way	8,624	616,700	\$71.51
Service Center - Warm Storage Building	675 Justice Way	4,500	959,900	\$213.31
Service Center - Cold Storage Building	675 Justice Way	1,856	172,500	\$92.94
Castleton Service Center - Modular Office	4175 Castleton Ct.	<u>1,440</u>	<u>156,300</u>	<u>\$108.54</u>
Total for 2019-2030 Fee Program		16,420	\$1,905,400	\$116.04
Square feet per 1,000 service population	69,878	235		
Other Facilities [1]				
Castleton Service Center - Main Facility	4175 Castleton Ct.	20,510		
Vehicle Storage Building	4175 Castleton Ct.	<u>2,430</u>		
Castleton Service Center Total		22,940	\$3,458,800	\$150.78

[1] Service Center to be expanded in 2018 to accommodate the next 10 to 15 years of growth. Project funded with accumulated fund balance (impact fees).
Source: Town of Castle Rock; Economic & Planning Systems

In **Table 56**, the public works fleet and facility needs from 2019 through 2030 are calculated on the forecasted service population growth. In order to maintain the current level of service, the Town would need to spend \$81.54 per new service population on fleet (\$2.1 million) and \$27.27 (\$708,000) on facilities for a total of \$108.81 per service population, as shown.

Table 56. Fleet and Facility Cost per Service Population

Description	Factors	2019-2030
Service Population Growth		25,958
Fleet		
New Fleet Units	0.773/1,000 svc. pop.	20.06
New Fleet Cost	\$105,513/fleet unit	\$2,116,604
Fleet Cost per New Service Population	25,958	\$81.54
Facilities		
New Facility Needs Sq. Ft.	235 Sq. Ft./1,000 svc. pop.	6,100
New Facility Costs	\$116.04/Sq. Ft.	\$707,824
Facility Cost per New Service Population	25,958	\$27.27
Total		\$108.81

Source: Town of Castle Rock; Economic & Planning Systems

In **Table 57**, the cost per new service population of \$108.81 is multiplied by the occupancy factors for each land use type to arrive at the fee calculation for this fee component. As shown, the single family fee is \$279.34 per dwelling unit. Commercial fees range from \$3.16 per 1,000 square feet for mini warehouses to \$123.08 for office.

Table 57. Fleet and Facility Supportable Fee Component

	Cost per New Svc. Population	Occupancy per:	2019 Supportable Fee
Fleet Facilities Cost per New Service Population	\$81.54 <u>\$27.27</u> \$108.81		
Single Family		2.57 dwelling unit	\$279.34 per dwelling unit
Multifamily		1.69 dwelling unit	\$183.59 per dwelling unit
Office		1.13 1,000 Sq. Ft.	\$123.08 per 1,000 sq. ft.
Commercial/Shopping Center		0.75 1,000 Sq. Ft.	\$82.06 per 1,000 sq. ft.
Industrial		0.38 1,000 Sq. Ft.	\$41.03 per 1,000 sq. ft.
Warehousing		0.04 1,000 Sq. Ft.	\$4.10 per 1,000 sq. ft.
Mini Warehouse (Self Storage)		0.03 1,000 Sq. Ft.	\$3.16 per 1,000 sq. ft.
Hotel		0.30 1,000 Sq. Ft.	\$32.82 per 1,000 sq. ft.
per room @ 500 Sq. Ft./Room			\$16.41 per room
Assisted Living		0.75 1,000 Sq. Ft.	\$82.06 per 1,000 sq. ft.
per bed @ 400 Sq. Ft./Bed			\$32.82 per bed

Source: Town of Castle Rock; Economic & Planning Systems

Transportation Fee Summary

Table 58 provides the total supportable transportation impact fees by land use, combining the Roadway System, Regional Improvements, TAP Projects, and Fleet and Facilities elements. The total supportable single family residential fee is \$8,236.89 and the multifamily residential fee is \$6,354.02. Commercial development fees range from \$978.40 per bed for assisted living units to \$17,367.92 per 1,000 square feet for retail space.

Table 58. Total Supportable Transportation Impact Fees

Land Use Type	Unit	Fee Component				
		Roadway System	Regional Improvements	TAP Bonds	Fleet & Facilities	Total
Single Family Residential	per unit	\$5,410.00	\$908.52	\$1,639.03	\$279.34	\$8,236.89
Multi Family Residential	per unit	\$4,195.00	\$704.49	\$1,270.94	\$183.59	\$6,354.02
Retail/Shopping Center	1,000 sq. ft.	\$11,752.00	\$1,973.51	\$3,560.35	\$82.06	\$17,367.92
Office	1,000 sq. ft.	\$6,870.00	\$1,153.64	\$2,081.24	\$123.08	\$10,227.97
Industrial	1,000 sq. ft.	\$3,498.00	\$587.48	\$1,059.85	\$41.03	\$5,186.36
Warehouse	1,000 sq. ft.	\$1,100.00	\$184.77	\$333.34	\$4.10	\$1,622.22
Mini-Warehouse	1,000 sq. ft.	\$735.00	\$123.34	\$222.52	\$3.16	\$1,084.02
Hotel	Room	\$16.41	\$682.89	\$1,231.98	\$32.82	\$1,964.10
Assisted Living	Bed	\$32.82	\$307.95	\$555.57	\$82.06	\$978.40

Source: Economic & Planning Systems

8. Fee Implementation

The Impact Fee Ordinance allows the Town Council to adopt, by Resolution, a fee schedule consistent with supporting technical analysis and findings provided in this Report. The Resolution approach to setting the fee allows periodic adjustments of the fee amount that may be necessary over time, without amending the enabling Ordinance. A brief summary of the key implementation and administrative elements are provided below.

Applicable Land Uses

The maximum fee levels by land use category are determined in this Impact Fee Nexus Study. The Town may elect to charge less for a variety of reasons and under certain circumstances, as described in the Impact Fee Ordinance. The applicable fees will be published in a 2019 Fee Schedule made available by the Town and updated periodically. All new development that occurs within the town, except as may be specifically exempted by the Impact Fee Ordinance, shall pay the adopted impact fees by land use category at the time of building permit as specified in the Town Fee Schedule.

It is possible that certain projects may not fit neatly into the categories listed in the fee schedule. In cases where such ambiguity exists, the Town's Community Development Director will determine the applicable fees. The Fee Ordinance articulates guidelines for resolving discrepancies and/or disputes.

Fee Escalation

It is recommended that the Town Impact Fee Ordinance allows for an automatic adjustment of the adopted impact fees to keep pace with inflationary increases in construction costs. This allows the fee level to keep pace with inflation without requiring an annual approval process. The Town may choose an inflation index it deems to be most appropriate for Castle Rock, such as the Construction Cost Index (CCI) published by the Engineering News Record (ENR), a source widely used in the construction industry, or a the Colorado Department of Transportation Construction Cost Index for Transportation projects.

Timing, Manner of Payment, Credits, and Reimbursements

The Town Impact Fee Ordinance addresses issues related to the timing and manner of payment for fees including the conditions for fee deferrals, payment plans, credits and reimbursements, exemptions, and related adjustments. As a matter of policy, fee credits or reimbursements will not be considered for projects required to be built or paid for as a condition of development approval even if such project is included in the capital facilities list used to establish these fees.

Internal Loaning of Funds

Loans to the Impact Fee Funds or between Impact Fee Funds may be used from time to time to facilitate the construction of eligible facilities and assure adequate cash flow. Any such loan shall be made in accordance with applicable law, as interpreted by the Town Attorney. The following requirements are also placed on fund loans:

1. Funds may be transferred to and/or between accounts to expedite the construction of critical projects/facilities.
2. A mechanism to repay accounts shall be established.
3. Interest charged on each loan shall be based upon the Local Agency Investment Fund rate in effect at the time of the loan and shall be deposited into the account providing the loan.
4. Inter-fund loan repayments shall take precedence over reimbursements to developers.

Eligible Expenditures

The supportable fees by land use category in the Impact Fee Nexus Study were determined using a number of methodologies as allowed for by State Statute. Impact fees collected can be spent for any capital facilities serving new growth and are not limited to projects used in this Study to calculate supportable fees.

Supplemental Funding

Impact fees may not fund the full amount of all capital costs identified in this Impact Fee Study. As a result, the Town will need to identify funding and pay for improvements related to existing developments and improvements not funded by the Fee Program or any other established funding source. Examples of such sources include the following:

- **General Fund Revenues.** In any given year, the Town may allocate a portion of its General Fund revenues for capital facilities eligible to be paid for by impact fees.
- **Assessments and Special Taxes.** The Town may fund a portion of capital facilities costs using assessments and special taxes. For example, the establishment of a General Improvement District or Local Improvement District would allow the Town to levy a special tax or assessment to pay debt service on bonds to fund construction of capital facilities or to directly fund capital facilities. The Town could also seek voter approval of a special tax through ballot initiative to provide funding for a range of capital improvements.
- **Regional, State or Federal Funds.** The Town might seek and obtain grant of matching funds from Regional, State and Federal sources to help offset the costs of required capital facilities and improvements.
- **Other Grants and Contributions.** A variety of grants or contributions from private donors may be used help fund a number of capital facilities.