

**ORDINANCE NO. 2025-006**

**ADOPTING AN IMPACT FEE ORDINANCE  
AND SETTING IMPACT FEES FOR THE CITY OF  
EAGLEVILLE, TENNESSEE  
(With Attachment A)**

**Whereas**, Article II, Section 2.1 (15) of the Eagleville City Charter gives the following power to the City of Eagleville to: Establish, open, relocate, vacate, alter, widen, extend, grade, improve, repair, construct, reconstruct, maintain, light, sprinkle, and clean public highways, streets, boulevards, parkways, sidewalks, alleys, parks, public grounds, public facilities, libraries, squares, wharves, bridges, viaducts, subways, tunnels, sewers and drains within or without the corporate limits, assess fees for the use of or impact upon such property and facilities, and regulate the use thereof within the corporate limits, and property may be taken and appropriated therefor under Tennessee Code Annotated §§ 7-31-107 - 7-31-111 and 29-16-203, or in such other manner as may be provided by general law; and,

**Whereas**, the City of Eagleville engaged in the services of TischlerBise, a well-respected and knowledgeable firm to complete an Impact Fee Report; and,

**Whereas**, the City of Eagleville has observed all methodologies prescribed in the TischlerBise report; and

**Whereas**, the City of Eagleville finds it to be in the City's best interest to adopt an Impact Fee Ordinance and Impact Fee Schedule that sets development impact fees to be imposed on new development to offset the cost of public capital improvements for Fire, Parks and Police services, and,

**NOW THEREFORE, BE IT ORDAINED** by the City of Eagleville, Tennessee City Council that the Eagleville Code of Ordinances, also known as the Municipal Code, is hereby amended to add Ordinance 2025-006:

**Section 1.01 Title**

This Chapter shall be known and cited as "Eagleville TN Impact Fees Chapter."

**Section 1.02 Purpose**

This Chapter is intended to assure the provision of adequate public facilities to serve new development in the City by requiring each development to pay a share of the cost of improvements necessitated by such new development. Impact fees are additional and supplemental to, and not in substitution of any other requirements imposed by the City on the development of land or the issuance of a building permit or certificate of occupancy.

## Section 1.03 Impact Fee Schedule

- A. Residential Uses: Impact fees for residential development will be assessed per dwelling unit, based on the type of unit: single family and multi family. For these purposes, duplexes and multi-family will be counted as the same.
1. Single Family: a dwelling principally used, designed, or adapted for use by a single household.
  2. Duplex: a building principally used, designed or adapted for used by two households, the living quarters of each of which are completely separate.
  3. Multi-Family: a dwelling principally used, designed or adapted for use as occupancy by three or more households each of which has separate living quarters.
- B. Nonresidential Uses: Impact fees for nonresidential will be assessed per square foot of floor area (Gross Floor Area as defined by the Eagleville Zoning Ordinance), according to five general types of development: Industrial, Warehouse, Commercial, Office and other Service and Institutional.
1. Commercial: Establishments primarily selling merchandise, eating/drinking places and entertainment uses. By way of example, Commercial uses include shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, and movie theaters.
  2. Industrial: Establishments primarily engaged in the production, transportation, or storage of goods. By way of example, Industrial includes manufacturing plants, distribution warehouses, trucking companies, utility substations, power generation facilities, and telecommunication buildings.
  3. Institutional: Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, Institutional includes schools, universities, churches, daycare facilities, hospitals, and government buildings.
  4. Office: Establishments providing management, administrative, professional, or business services. By way of example, Office includes banks, business offices, medical offices, and veterinarian clinics.

### C. Fees

The allocation of impact fees collected shall be assigned to various components identified in the Impact Fee Report as shown in Attachment A.

Residential Fees shall be assessed per unit as follows:

	Fire	Parks	Police	Total
1. Single Family	\$6,300	\$3,657	\$1,011	\$10,968
2. Multi-Family	\$2,840	\$1,649	\$ 456	\$ 4,945

Nonresidential Fees shall be assessed per 1000 square feet (gross floor area) as follows:

	Fire	Parks	Police	Total
1. Industrial	\$1,110	\$0	\$ 144	\$1,254
2. Warehouse	\$ 768	\$0	\$ 100	\$ 868
3. Commercial	\$5,566	\$0	\$ 724	\$6,290
4. Office/Other Service	\$2,470	\$0	\$ 321	\$2,792
5. Institutional	\$3,398	\$0	\$ 442	\$3,839

#### **1.04 Collection of Impact Fees**

The impact fee due for a new development shall be collected at the time of issuance of the building permit. No building permit shall be issued until the impact fee is collected.

#### **1.05 Establishment of Accounts**

The City's Finance Department shall establish an account or accounting system for each service area for each category of capital facility for which the impact fee is imposed. Each impact fee collected within the service area shall be deposited into such account or accounting system as to have a correct fund for each service. IE Fire, Parks and Police.

Interest earned on the account into which impact fees are deposited shall be considered funds of the account and shall be used solely for the purposes authorized.

The City's Finance Department shall establish adequate accounting controls to ensure that impact fees disbursed from the account are utilized solely for the purposes authorized. The Finance Department shall maintain financial records for impact fees, which shall show the source and disbursement of all fees collected in or expended from each service area.

#### **1.06 Exemptions**

The City of Eagleville holds the right to waive any impact fees for developments for which the City believes such uses serve a broad public purpose, or when the City believes the public benefit of the development will outweigh the benefit of collecting the impact fee. Examples of such uses for consideration of being waived are: institutional uses such as public schools, religious facilities, and governmental facilities.

#### **1.07 Other**

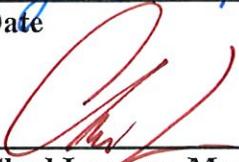
1. Additions to any nonresidential buildings shall only pay for the additional square feet.
2. If a demolition has occurred, the developer shall pay the difference in square feet from the old structure to the new structure.
3. Additions to residential units shall not be levied an impact fee, regardless if impact fee was paid or not.

4. A commercial business that is projected to generate significant additional local sales taxes to the City during the first two years of operation may have the required impact fee reduced by an equivalent amount subject to submission of financial documentation from the business on projected taxable sales to support the reduction. Any reduction shall be subject to consideration and approval by the City Council.

Be it Ordained by the City of Eagleville, Tennessee that this Ordinance shall become effective on July 11, 2025, in accordance with the Charter of the City of Eagleville, Tennessee, and the public welfare demanding it.

Approved and adopted by the City of Eagleville, Tennessee, Mayor and the Eagleville Councilmembers.

June 26, 2025  
Date

  
Chad Leeman, Mayor Tennessee

APPROVED AS TO FORM:

Date  
  
Stephen Aymett, City Attorney

Attest: Christina Rivas  
Christina Rivas, City Recorder

June 26, 2025  
Date of Public Hearing

1st Reading May 22, 2025

2nd Reading June 26, 2025

ORDINANCE 2025-006 ATTACHMENT A

# Impact Fee Report

Prepared for:  
**Eagleville, Tennessee**

**May 21, 2025**



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## EXECUTIVE SUMMARY

In 2024, the City of Eagleville retained TischlerBise to analyze the impacts of future development on capital facilities and to calculate impact fees based on that analysis. Through interviews and discussions with staff, TischlerBise developed the proposed impact fees discussed in this report. Impact fees are collected from new construction at the time a building permit is issued and used to construct system improvements needed to accommodate future development. An impact fee represents future development's proportionate share of capital facility needs. Impact fees do have limitations and should not be regarded as the total solution for infrastructure funding needs. Rather, they are one component of a comprehensive portfolio to ensure provision of adequate public facilities needed to serve future development. In contrast to general taxes, impact fees may not be used for operations, maintenance, replacement of infrastructure, or correcting existing deficiencies.

The City of Eagleville has experienced considerable residential development in recent years, and this growth is expected to continue in the future. As a result, Eagleville must plan for future infrastructure improvements if existing levels of service are to be maintained. This report includes the following infrastructure categories:

- Fire
- Parks
- Police

## TENNESSEE LEGAL FRAMEWORK

While the State of Tennessee does not have specific authorizing legislation for impact fees, the State does grant the power for municipalities with a mayor-aldermanic charter to impose impact fees on new development. As a Private Act charter city, the City of Eagleville may:

"Establish, open, relocate, vacate, alter, widen, extend, grade, improve, repair, construct, reconstruct, maintain, light, sprinkle and clean public highways, streets, boulevards, parkways, sidewalks, alleys, parks, public grounds, public facilities, libraries and squares, wharves, bridges, viaducts, subways, tunnels, sewers and drains within or without the corporate limits, regulate their use within the corporate limits, assess fees for the use of or impact upon such property and facilities, and take and appropriate property therefor under § 7-31-107 -- 7-31-111 and § 29-16-203, or any other manner provided by general laws." (Tenn. Code Ann. § 6-2-201 (15))

## GENERAL LEGAL FRAMEWORK

Both state and federal courts have recognized the imposition of impact fees as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. Land use regulations, development exactions, and impact fees are subject to the Fifth Amendment prohibition on taking private property for public use without just compensation. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of impact fees, that interest is in the protection of public health, safety, and welfare by ensuring development is not detrimental to the quality of essential public services. The means to this end are also

important, requiring both procedural and substantive due process. The process followed to receive community input (i.e., stakeholder meetings, work sessions, and public hearings) provides opportunities for comments and refinements to the impact fees.

There is little federal case law specifically dealing with impact fees, although other rulings on other types of exactions (e.g., land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an “essential nexus” between the exaction and the interest being protected (see *Nollan v. California Coastal Commission*, 1987). In a more recent case (*Dolan v. City of Tigard, OR*, 1994), the Court ruled that an exaction must also be “roughly proportional” to the burden created by development. However, the *Dolan* decision appeared to set a higher standard of review for mandatory dedications of land than for monetary exactions such as impact fees.

There are three reasonable relationship requirements for impact fees that are closely related to “rational nexus,” or “reasonable relationship” requirements enunciated by a number of state courts. Although the term “dual rational nexus” is often used to characterize the standard by which courts evaluate the validity of impact fees under the U.S. Constitution, we prefer a more rigorous formulation that recognizes three elements: “need,” “benefit,” and “proportionality.” The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. Individual elements of the nexus standard are discussed further in the following paragraphs.

All new development in a community creates additional demands on some, or all, public facilities provided by local government. If the capacity of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Impact fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to impact fees. In this study, the impact of development on infrastructure needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific capital facilities, based on applicable level-of-service standards.

The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate impact fees for various types of facilities and categories of development. The demand for capital facilities is measured in terms of relevant and measurable attributes of development (e.g., a typical housing unit’s average weekday vehicle trips).

A sufficient benefit relationship requires that impact fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Impact fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the state enabling legislation requires that facilities funded with fee revenues be available *exclusively* to development paying the fees. In other words, benefit may extend to a general area including multiple real estate developments. Procedures for the earmarking and expenditure

of fee revenues are discussed near the end of this study. All of these procedural as well as substantive issues are intended to ensure that new development benefits from the impact fees they are required to pay. The authority and procedures to implement impact fees is separate from and complementary to the authority to require improvements as part of subdivision or zoning review.

As documented in this report, the City of Eagleville has complied with applicable legal precedents. Impact fees are proportionate and reasonably related to the capital improvement demands of new development. Specific costs have been identified using local data and current dollars. With input from City staff, TischlerBise identified demand indicators for each type of infrastructure and calculated proportionate share factors to allocate costs by type of development. This report documents the formulas and input variables used to calculate the impact fees for each type of public facility. Impact fee methodologies also identify the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

## GENERAL METHODOLOGIES

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There are three general methodologies for calculating impact fees. The choice of a particular methodology depends primarily on the timing of infrastructure construction (past, concurrent, or future) and service characteristics of the facility type being addressed. Each methodology has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss three basic methodologies for calculating impact fees and how those methodologies can be applied.

### Cost Recovery (Past Improvements)

The rationale for recouping, often called cost recovery, is that future development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which future development will benefit. This methodology is often used for utility systems that must provide adequate capacity before future development can take place. **The police facilities and fire fees listed in this report are calculated using a cost recovery methodology.**

### Incremental Expansion (Concurrent Improvements)

The incremental expansion methodology documents current level-of-service (LOS) standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no deficiencies or surplus capacity in existing infrastructure, and future development is paying only its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate future development. An incremental expansion cost methodology is best suited for public facilities that will be expanded in regular increments to keep pace with development. **The police vehicles and park fees listed in this report are calculated using an incremental expansion methodology.**

### Plan-Based (Future Improvements)

The plan-based methodology allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), or (2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning period (marginal cost).

### CONCEPTUAL IMPACT FEE CALCULATION

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In contrast to project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or the entire jurisdiction (referred to as system improvements). The first step is to determine an appropriate demand indicator for each infrastructure category. The demand indicator measures the number of demand units for each unit of development. For example, an appropriate indicator of the demand for park facilities is population growth, and the increase in population can be estimated from the average number of residents per housing unit. The second step in the impact fee formula is to determine infrastructure units per demand unit, typically called level-of-service (LOS) standards. In keeping with the parks example, a common LOS standard is park amenities per resident. The third step in the impact fee formula is the cost of various infrastructure units. To complete the parks example, this part of the formula would establish the cost for purchasing and/or constructing new park amenities.

### CREDITS

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Regardless of the methodology, a consideration of credits is integral to the development of a legally defensible impact fee. There are two types of credits that should be addressed in impact fee studies and ordinances. The first is a revenue credit due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the impact fee. This type of credit is integrated into the fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the development fee program. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

### IMPACT FEE SCHEDULE

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Impact fees for residential development will be assessed per dwelling unit, based on the type of unit. Nonresidential impact fees will be assessed per square foot of floor area, according to four general types of development. The fees shown in Figures 2 represent the maximum allowable impact fees – the proposed impact fees fund 100 percent of growth-related infrastructure. Eagleville may adopt impact fees that are less than the amounts shown; however, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements and/or a decrease in Eagleville's LOS standards. All costs in the impact fee study are in current dollars with no assumed inflation rate over time. If cost estimates change significantly over time, impact fees should be recalculated.

A note on rounding: Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using one-, two-, and three-digit places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

### SUMMARY OF MAXIMUM SUPPORTABLE IMPACT FEES

**Figure 1: Summary of Maximum Supportable Impact Fees**

Residential Development		Fees per Unit		
Development Type	Fire	Parks	Police	Total
Single Family	\$6,300	\$3,657	\$1,011	<b>\$10,968</b>
Multi-Family	\$2,840	\$1,649	\$456	<b>\$4,945</b>

Nonresidential Development		Fees per 1,000 Square Feet		
Development Type	Fire	Parks	Police	Total
Industrial	\$1,110	\$0	\$144	<b>\$1,254</b>
Warehouse	\$768	\$0	\$100	<b>\$868</b>
Commercial	\$5,566	\$0	\$724	<b>\$6,290</b>
Office & Other Service	\$2,470	\$0	\$321	<b>\$2,792</b>
Institutional	\$3,398	\$0	\$442	<b>\$3,839</b>

### FEE COMPARISON

Figure 2 below compares Eagleville’s maximum supportable single family impact fees with other nearby Tennessee jurisdictions. All applicable fee categories are considered for each jurisdiction, including those not subject to implementation in Eagleville. As shown in Figure 2, the total proposed fee of \$10,971 is slightly above the state median.

**Figure 2: Summary of Maximum Supportable Single Family Impact Fees**

Municipality	County	Parks	Police	Fire/EMS	General Gov	Water/Sewer	Transportation	Schools*	Other	Total
Portland	Robertson	\$1,194	\$631	\$1,444	\$0	\$0	\$0	\$0	\$0	\$3,269
Murphreesboro	Rutherford	\$3,881	\$1,230	\$0	\$0	\$0	\$2,395	\$0	\$0	\$3,625
White House	Sumner	\$1,189	\$846	\$558	\$0	\$0	\$1,147	\$0	\$0	\$3,740
La Vergne	Rutherford	\$1,307	\$561	\$213	\$0	\$0	\$4,752	\$0	\$1,000	\$7,833
Brentwood	Williamson	\$0	\$0	\$0	\$0	\$615	\$1,230	\$8,033	\$0	\$9,878
<b>Eagleville (Proposed)</b>	<b>Rutherford</b>	<b>\$3,657</b>	<b>\$1,011</b>	<b>\$6,300</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>\$10,968</b>
Hendersonville**	Sumner	\$0	\$671	\$1,198	\$0	\$0	\$10,836	\$0	\$0	\$12,705
Nolensville	Williamson	\$0	\$0	\$500	\$0	\$0	\$5,928	\$8,033	\$0	\$14,461
Smyrna	Rutherford	\$4,283	\$235	\$790	\$2,147	\$3,127	\$3,670	\$0	\$1,577	\$15,829
Franklin	williamson	\$2,411	\$563	\$572	\$424	\$3,219	\$834	\$8,033	\$1,996	\$18,052

\*Rutherford and Sumner Counties are currently in negotiations with the state to implement countywide school impact fee ordinances, but have not yet received approval. Instead, both counties have adequate school facilities taxes of \$1.50 per square foot of residential floor area. For a 2,000 SF single family home, the total school facility tax is \$3,000 annually.

\*\*Indicates proposed impact fees that are under consideration, but have not yet been adopted.

## FIRE IMPACT FEES

### METHODOLOGY

The Fire impact fee includes components for Fire facilities, land, and vehicles/apparatus. Fire impact fees use the **cost recovery methodology** for each impact fee component. Costs are allocated to both residential and nonresidential development using different demand indicators for each type of development.

### PROPORTIONATE SHARE

TischlerBise recommends functional population to allocate the cost of fire infrastructure to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population," by accounting for people living and working in a jurisdiction, but also considers commuting patterns and time spent at home and at nonresidential locations. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. It describes geographic patterns of jobs by their employment locations and residential locations as well as the connections between the two locations. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states.

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents employed in Eagleville are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents employed outside Eagleville are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2021 functional population data, the residential allocation is 76 percent, and the nonresidential allocation is 24 percent.

Figure F2: Functional Population

Demand Units in 2021				
			Demand Hours/Day	Person Hours
<b>Residential</b>				
Population	878			
Residents Not Working	505		20	10,098
Employed Residents	373			
Residents Employed in Eagleville	12	14		168
Residents Employed outside Eagleville	361	14		5,054
				Residential Subtotal 15,320
				<b>Residential Share 76%</b>
<b>Nonresidential</b>				
Residents Not Working	505		4	2,020
Jobs Located in Eagleville	280			
Residents Employed in Eagleville	12	10		120
Non-Resident Workers (Inflow Commuters)	268	10		2,680
				Nonresidential Subtotal 4,820
				<b>Nonresidential Share 24%</b>
				Total 20,140

Source: U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics.

## SERVICE UNITS

Residential impact fees are calculated on a per capita basis, then converted to an appropriate amount for each type of housing unit based on the number of persons per housing unit (PPHU). As shown in Figure F3, the current PPHU factors are 2.95 persons per single-family unit and 1.33 persons per multi-family unit. These factors are based on the U.S. Census Bureau’s 2018-2022 American Community Survey 5-year estimates (further discussed in Appendix A).

Nonresidential Fire impact fees are calculated on a per vehicle trip basis, then converted to an appropriate amount for each type of nonresidential development based on the number of vehicle trip ends generated per 1,000 square feet of floor area. Trip generation rates are used because vehicle trips are highest for retail developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for fire and emergency medical services from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, public safety development fees would be disproportionately high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, fire development fees would be disproportionately high for industrial development.

A trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip ends for nonresidential development are calculated per thousand square feet and require an adjustment factor to avoid double counting each trip at both the origin and destination points. These factors are defined in *Trip Generation, 11<sup>th</sup> Edition*, published in 2021 by the Institute of Transportation Engineers (further discussed in Appendix A).

**Figure F3: Service Units**

Development Type	Persons per Housing Unit <sup>1</sup>
Single Family	2.95
Multi-Family	1.33

Development Type	Avg Wkdy Veh Trip Ends <sup>1</sup>	Trip Rate Adjustment	Average Weekday Vehicle Trips
Industrial	4.87	50%	2.44
Warehouse	3.37	50%	1.69
Commercial	37.01	33%	12.21
Office & Other Service	10.84	50%	5.42
Institutional	22.59	33%	7.45
Hotel (per room)	7.99	50%	4.00

1. See Land Use Assumptions

## FIRE FACILITIES – COST RECOVERY

Eagleville officials believe its recently completed fire station has sufficient capacity to serve a significant portion of new development, requiring minimal future expansion. Therefore, TischlerBise used a 15-year cost recovery methodology for this analysis. As shown in Figure F4, Eagleville’s existing fire station totals 8,600 square feet. Functional population provides the proportionate share of demand for fire facilities from residential and nonresidential development. To calculate the level of service, the proportionate square footages for residential and nonresidential development are divided by the 2040 projected population and nonresidential vehicle trips, respectively. Eagleville’s planned level of service in 2040 for residential development is 2.4717 square feet per person (8,600 square feet X 76 percent residential share / 2,644 persons). The nonresidential level of service is 0.5139 square feet per trip (8,600 square feet X 24 percent nonresidential share / 4,016 vehicle trips).

Eagleville’s existing 8,600 square foot fire station was constructed for a cost of \$5,008,160, or \$582 per square foot. To calculate the net capital cost, the level of service is applied to the average cost per square foot. The capital cost is therefore \$1,439.39 per person (2.4717 square feet per person X \$582 per square foot) and \$299.28 per nonresidential trip (0.5139 square feet per trip X \$582 per square foot).

**Figure F4: Fire Facilities Level of Service**

Description	Square Feet
Station 1	8,600
Total	8,600

Cost Allocation Factors	
Station Cost	\$5,008,160
Station Square Feet	8,600
Cost per Square Foot	\$582

Level-of-Service (LOS) Standards	
Total Square Feet	8,600
Residential	
Residential Share	76%
2040 Population	2,644
Square Feet per Person	2.4717
Cost per Person	\$1,439.39
Nonresidential	
Nonresidential Share	24%
2040 Vehicle Trips	4,016
Square Feet per Vehicle Trip	0.5139
Cost per Vehicle Trip	\$299.28

## FIRE APPARATUS – COST RECOVERY

Eagleville officials believe its current inventory of fire apparatus is adequate to serve a portion of new development, requiring minimal need for future expansion. Therefore, TischlerBise used a 15-year cost recovery methodology for this analysis. As shown in Figure F5, Eagleville’s existing fleet includes 8 vehicles. Functional population provides the proportionate share of demand for fire apparatus for residential and nonresidential development. To calculate the level of service, the proportionate square footages for residential and nonresidential development are divided by the 2040 projected population and nonresidential vehicle trips, respectively. Eagleville’s planned level of service in 2040 for residential development is 0.0023 units per person (8 apparatus X 76 percent residential share / 2,644 persons). The nonresidential level of service is 0.0005 units per nonresidential trip (8 apparatus X 24 percent nonresidential share / 4,016 trips).

Based on the City’s \$5,620,000 investment in vehicles/apparatus, the average replacement cost is \$702,500 per unit. For fire apparatus, the cost is \$1,615.24 per person (0.0023 units per person X \$702,500 per unit) and \$335.84 per nonresidential trip (0.0005 units per trip X \$702,500 per unit).

**Figure F5: Fire Apparatus Level of Service**

Description	Unit Cost
Rescue Engine/Pumper	\$1,200,000
Rescue Engine/Pumper	\$1,200,000
55' Aerial Truck/Ladder Pumper	\$2,220,000
Brush Truck/Quick Attack	\$275,000
Rehab/Rescue Ambulance	\$400,000
Ford Expedition	\$60,000
Dodge RAM	\$85,000
Fire Safety Trailer	\$180,000
<b>Total</b>	<b>\$5,620,000</b>

Cost Allocation Factors	
Cost per Unit	\$702,500

Level-of-Service (LOS) Standards	
Existing Units	8
Residential	
Residential Share	76%
2040 Population	2,644
Units per Person	0.0023
<b>Cost per Person</b>	<b>\$1,615.24</b>
Nonresidential	
Nonresidential Share	24%
2040 Vehicle Trips	4,016
Units per Vehicle Trip	0.0005
<b>Cost per Vehicle Trip</b>	<b>\$335.84</b>

## PRINCIPAL PAYMENT CREDIT

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To prevent double payment by new development for existing fire facilities and apparatus, a credit for debt service payments must be included in the fee calculation. The credit applies to the principal amount only because future development will contribute to future principal payments on the remaining debt through taxes. A credit is not necessary for future interest payments because the analysis excludes interest costs from the impact fee calculation. The credit effectively reduces the net capital cost per demand unit and therefore the net overall fee.

Using three loans from the United States Department of Agriculture (USDA), the City of Eagleville was able to finance construction of its fire station and a new police station. 85% of the total loan proceeds were spent on land acquisition and construction of the fire station. The first loan was for \$3,777,800 and carries a 40-year term and a 2.13% interest rate. The second loan was for \$722,200 and carries a 36-year term and a 2.13% interest rate. The third loan was for \$2,009,679 and carries a 40-year term and a 3.63% interest rate. The City began making payments on the loans in January 2025.

The credit is calculated by allocating the principal payments to residential and nonresidential development using the functional population factors shown in Figure F1. To account for the time value of money, the analysis calculates the net present value (NPV) of future principal payments. The first loan has an NPV of \$682.49 per person and \$403.37 per vehicle trip. The second loan has an NPV of \$143.37 per person and \$84.30 per vehicle trip. The third loan has an NPV of \$255.27 per person and \$49.90 per vehicle trip. See Figure F6, F7, and F8.

As shown in Figure F9, the total credit values are multiplied by 85% to determine the fire station's proportionate share of the funds. Adding the resulting values yields a total principal credit of \$918.96 per person ( $\$580.11 + \$121.86 + \$216.98$ ) and \$179.36 per vehicle trip ( $\$113.38 + \$23.56 + \$42.41$ )

Figure F6: Debt Principal Credit Calculation – USDA Loan 1 (\$3,777,800)

USDA Loan 1 - Debt Principal Payment Schedule							
Original Loan Amount: \$3,777,800		Term: 40 Years		Interest Rate: 2.13%			
Year	Annual Principal Payment	Residential Share (76%)	Population	Debt Cost per Capita	Nonresidential Share (24%)	Nonres. Vehicle Trips	Debt Cost per Trip End
2025	\$60,898.75	\$46,283	1,290	\$35.87	\$14,616	2,971	\$4.92
2026	\$62,192.85	\$47,267	1,381	\$34.24	\$14,926	3,031	\$4.92
2027	\$63,514.45	\$48,271	1,471	\$32.82	\$15,243	3,092	\$4.93
2028	\$64,864.45	\$49,297	1,561	\$31.58	\$15,567	3,155	\$4.93
2029	\$66,242.49	\$50,344	1,651	\$30.49	\$15,898	3,219	\$4.94
2030	\$67,650.14	\$51,414	1,742	\$29.52	\$16,236	3,284	\$4.94
2031	\$69,087.71	\$52,507	1,832	\$28.66	\$16,581	3,350	\$4.95
2032	\$70,555.82	\$53,622	1,922	\$27.90	\$16,933	3,418	\$4.95
2033	\$72,055.13	\$54,762	2,012	\$27.21	\$17,293	3,488	\$4.96
2034	\$73,586.31	\$55,926	2,103	\$26.60	\$17,661	3,558	\$4.96
2035	\$75,150.02	\$57,114	2,193	\$26.04	\$18,036	3,631	\$4.97
2036	\$76,746.95	\$58,328	2,283	\$25.55	\$18,419	3,705	\$4.97
2037	\$78,377.83	\$59,567	2,374	\$25.10	\$18,811	3,780	\$4.98
2038	\$80,043.35	\$60,833	2,464	\$24.69	\$19,210	3,857	\$4.98
2039	\$81,744.28	\$62,126	2,554	\$24.32	\$19,619	3,936	\$4.98
2040	\$83,481.34	\$63,446	2,644	\$23.99	\$20,036	4,016	\$4.99
2041	\$85,255.32	\$64,794	2,735	\$23.69	\$20,461	4,098	\$4.99
2042	\$87,067.00	\$66,171	2,825	\$23.42	\$20,896	4,182	\$5.00
2043	\$88,917.17	\$67,577	2,915	\$23.18	\$21,340	4,268	\$5.00
2044	\$90,806.66	\$69,013	3,005	\$22.96	\$21,794	4,355	\$5.00
2045	\$92,736.30	\$70,480	3,096	\$22.77	\$22,257	4,445	\$5.01
2046	\$94,706.95	\$71,977	3,186	\$22.59	\$22,730	4,536	\$5.01
2047	\$96,719.47	\$73,507	3,276	\$22.44	\$23,213	4,629	\$5.01
2048	\$98,774.76	\$75,069	3,366	\$22.30	\$23,706	4,724	\$5.02
2049	\$100,873.72	\$76,664	3,457	\$22.18	\$24,210	4,822	\$5.02
2050	\$103,017.29	\$78,293	3,547	\$22.07	\$24,724	4,921	\$5.02
2051	\$105,206.41	\$79,957	3,637	\$21.98	\$25,250	5,022	\$5.03
2052	\$107,442.04	\$81,656	3,728	\$21.91	\$25,786	5,126	\$5.03
2053	\$109,725.19	\$83,391	3,818	\$21.84	\$26,334	5,232	\$5.03
2054	\$112,056.85	\$85,163	3,908	\$21.79	\$26,894	5,340	\$5.04
2055	\$114,438.05	\$86,973	3,998	\$21.75	\$27,465	5,451	\$5.04
2056	\$116,869.86	\$88,821	4,089	\$21.72	\$28,049	5,564	\$5.04
2057	\$119,353.35	\$90,709	4,179	\$21.71	\$28,645	5,679	\$5.04
2058	\$121,889.61	\$92,636	4,269	\$21.70	\$29,254	5,797	\$5.05
2059	\$124,479.76	\$94,605	4,359	\$21.70	\$29,875	5,917	\$5.05
2060	\$127,124.96	\$96,615	4,450	\$21.71	\$30,510	6,040	\$5.05
2061	\$129,826.36	\$98,668	4,540	\$21.73	\$31,158	6,165	\$5.05
2062	\$132,585.17	\$100,765	4,630	\$21.76	\$31,820	6,294	\$5.06
2063	\$135,402.61	\$102,906	4,721	\$21.80	\$32,497	6,425	\$5.06
2064	\$136,333.61	\$103,614	4,811	\$21.54	\$32,720	6,559	\$4.99

Discount Rate		2.13%		2.13%
Net Present Value	Per Person	\$682.49	Per Trip	\$133.39

**Figure F7: Debt Principal Credit Calculation – USDA Loan 2 (\$722,200)**

USDA Loan 2 - Debt Principal Payment Schedule							
Original Loan Amount:		\$722,200		Term:		36 Years	
				Interest Rate:		2.13%	
Year	Annual Principal Payment	Residential Share (76%)	Population	Debt Cost per Capita	Nonresidential Share (24%)	Nonres. Vehicle Trips	Debt Cost per Trip End
2025	\$13,563.25	\$10,308	1,290	\$7.99	\$3,255	2,971	\$1.10
2026	\$13,851.47	\$10,527	1,381	\$7.63	\$3,324	3,031	\$1.10
2027	\$14,145.81	\$10,751	1,471	\$7.31	\$3,395	3,092	\$1.10
2028	\$14,446.41	\$10,979	1,561	\$7.03	\$3,467	3,155	\$1.10
2029	\$14,753.40	\$11,213	1,651	\$6.79	\$3,541	3,219	\$1.10
2030	\$15,066.91	\$11,451	1,742	\$6.57	\$3,616	3,284	\$1.10
2031	\$15,387.08	\$11,694	1,832	\$6.38	\$3,693	3,350	\$1.10
2032	\$15,714.05	\$11,943	1,922	\$6.21	\$3,771	3,418	\$1.10
2033	\$16,047.98	\$12,196	2,012	\$6.06	\$3,852	3,488	\$1.10
2034	\$16,389.00	\$12,456	2,103	\$5.92	\$3,933	3,558	\$1.11
2035	\$16,737.26	\$12,720	2,193	\$5.80	\$4,017	3,631	\$1.11
2036	\$17,092.93	\$12,991	2,283	\$5.69	\$4,102	3,705	\$1.11
2037	\$17,456.16	\$13,267	2,374	\$5.59	\$4,189	3,780	\$1.11
2038	\$17,827.10	\$13,549	2,464	\$5.50	\$4,279	3,857	\$1.11
2039	\$18,205.92	\$13,836	2,554	\$5.42	\$4,369	3,936	\$1.11
2040	\$18,592.80	\$14,131	2,644	\$5.34	\$4,462	4,016	\$1.11
2041	\$18,987.90	\$14,431	2,735	\$5.28	\$4,557	4,098	\$1.11
2042	\$19,391.39	\$14,737	2,825	\$5.22	\$4,654	4,182	\$1.11
2043	\$19,803.46	\$15,051	2,915	\$5.16	\$4,753	4,268	\$1.11
2044	\$20,224.28	\$15,370	3,005	\$5.11	\$4,854	4,355	\$1.11
2045	\$20,654.05	\$15,697	3,096	\$5.07	\$4,957	4,445	\$1.12
2046	\$21,092.95	\$16,031	3,186	\$5.03	\$5,062	4,536	\$1.12
2047	\$21,541.17	\$16,371	3,276	\$5.00	\$5,170	4,629	\$1.12
2048	\$21,998.92	\$16,719	3,366	\$4.97	\$5,280	4,724	\$1.12
2049	\$22,466.40	\$17,074	3,457	\$4.94	\$5,392	4,822	\$1.12
2050	\$22,943.81	\$17,437	3,547	\$4.92	\$5,507	4,921	\$1.12
2051	\$23,341.36	\$17,739	3,637	\$4.88	\$5,602	5,022	\$1.12
2052	\$23,929.28	\$18,186	3,728	\$4.88	\$5,743	5,126	\$1.12
2053	\$24,437.78	\$18,573	3,818	\$4.86	\$5,865	5,232	\$1.12
2054	\$24,957.08	\$18,967	3,908	\$4.85	\$5,990	5,340	\$1.12
2055	\$25,487.42	\$19,370	3,998	\$4.84	\$6,117	5,451	\$1.12
2056	\$26,029.03	\$19,782	4,089	\$4.84	\$6,247	5,564	\$1.12
2057	\$26,582.14	\$20,202	4,179	\$4.83	\$6,380	5,679	\$1.12
2058	\$27,147.01	\$20,632	4,269	\$4.83	\$6,515	5,797	\$1.12
2059	\$27,723.89	\$21,070	4,359	\$4.83	\$6,654	5,917	\$1.12
2060	\$28,093.16	\$21,351	4,450	\$4.80	\$6,742	6,040	\$1.12
<b>Total</b>		<b>\$548,804</b>			<b>\$173,306</b>		

<b>Discount Rate</b>		<b>2.13%</b>		<b>2.13%</b>
<b>Net Present Value</b>	Per Person	<b>\$143.37</b>	Per Trip	<b>\$27.72</b>

**Figure F8: Debt Principal Credit Calculation – USDA Loan 3 (\$2,009,769)**

USDA Loan 3 - Debt Principal Payment Schedule								
Original Loan Amount:		\$2,009,769	Term:		36 Years	Interest Rate:		3.63%
Year	Annual Principal Payment	Residential Share (76%)	Population	Debt Cost per Capita	Nonresidential Share (24%)	Nonres. Vehicle Trips	Debt Cost per Trip End	
2025	\$23,091.00	\$17,549	1,290	\$13.60	\$5,542	2,971	\$1.87	
2026	\$23,928.05	\$18,185	1,381	\$13.17	\$5,743	3,031	\$1.89	
2027	\$24,795.44	\$18,845	1,471	\$12.81	\$5,951	3,092	\$1.92	
2028	\$25,694.28	\$19,528	1,561	\$12.51	\$6,167	3,155	\$1.95	
2029	\$26,625.69	\$20,236	1,651	\$12.25	\$6,390	3,219	\$1.99	
2030	\$27,590.87	\$20,969	1,742	\$12.04	\$6,622	3,284	\$2.02	
2031	\$28,591.04	\$21,729	1,832	\$11.86	\$6,862	3,350	\$2.05	
2032	\$29,627.47	\$22,517	1,922	\$11.71	\$7,111	3,418	\$2.08	
2033	\$30,701.46	\$23,333	2,012	\$11.59	\$7,368	3,488	\$2.11	
2034	\$31,814.39	\$24,179	2,103	\$11.50	\$7,635	3,558	\$2.15	
2035	\$32,967.66	\$25,055	2,193	\$11.43	\$7,912	3,631	\$2.18	
2036	\$34,162.74	\$25,964	2,283	\$11.37	\$8,199	3,705	\$2.21	
2037	\$35,401.14	\$26,905	2,374	\$11.34	\$8,496	3,780	\$2.25	
2038	\$36,684.43	\$27,880	2,464	\$11.32	\$8,804	3,857	\$2.28	
2039	\$38,014.24	\$28,891	2,554	\$11.31	\$9,123	3,936	\$2.32	
2040	\$39,392.26	\$29,938	2,644	\$11.32	\$9,454	4,016	\$2.35	
2041	\$40,820.23	\$31,023	2,735	\$11.34	\$9,797	4,098	\$2.39	
2042	\$42,299.96	\$32,148	2,825	\$11.38	\$10,152	4,182	\$2.43	
2043	\$43,833.34	\$33,313	2,915	\$11.43	\$10,520	4,268	\$2.46	
2044	\$45,422.29	\$34,521	3,005	\$11.49	\$10,901	4,355	\$2.50	
2045	\$47,068.85	\$35,772	3,096	\$11.56	\$11,297	4,445	\$2.54	
2046	\$48,775.10	\$37,069	3,186	\$11.64	\$11,706	4,536	\$2.58	
2047	\$50,543.20	\$38,413	3,276	\$11.72	\$12,130	4,629	\$2.62	
2048	\$52,375.39	\$39,805	3,366	\$11.82	\$12,570	4,724	\$2.66	
2049	\$54,273.99	\$41,248	3,457	\$11.93	\$13,026	4,822	\$2.70	
2050	\$56,241.43	\$42,743	3,547	\$12.05	\$13,498	4,921	\$2.74	
2051	\$58,280.18	\$44,293	3,637	\$12.18	\$13,987	5,022	\$2.78	
2052	\$60,392.84	\$45,899	3,728	\$12.31	\$14,494	5,126	\$2.83	
2053	\$62,582.08	\$47,562	3,818	\$12.46	\$15,020	5,232	\$2.87	
2054	\$64,850.68	\$49,287	3,908	\$12.61	\$15,564	5,340	\$2.91	
2055	\$67,201.51	\$51,073	3,998	\$12.77	\$16,128	5,451	\$2.96	
2056	\$69,637.57	\$52,925	4,089	\$12.94	\$16,713	5,564	\$3.00	
2057	\$72,161.93	\$54,843	4,179	\$13.12	\$17,319	5,679	\$3.05	
2058	\$74,777.80	\$56,831	4,269	\$13.31	\$17,947	5,797	\$3.10	
2059	\$77,488.49	\$58,891	4,359	\$13.51	\$18,597	5,917	\$3.14	
2060	\$80,297.45	\$61,026	4,450	\$13.71	\$19,271	6,040	\$3.19	
2061	\$83,198.23	\$63,231	4,540	\$13.93	\$19,968	6,165	\$3.24	
2062	\$86,224.53	\$65,531	4,630	\$14.15	\$20,694	6,294	\$3.29	
2063	\$89,350.17	\$67,906	4,721	\$14.39	\$21,444	6,425	\$3.34	
2064	\$92,589.12	\$70,368	4,811	\$14.63	\$22,221	6,559	\$3.39	

<b>Discount Rate</b>		<b>3.63%</b>		<b>3.63%</b>
<b>Net Present Value</b>	Per Person	<b>\$255.27</b>	Per Trip	<b>\$49.90</b>

Figure F9: Debt Principal Credit Summary – Fire Station

Loan Amount	Credit Per Person	Fire Share (85%)
\$3,777,800	\$682.49	\$580.11
\$722,200	\$143.37	\$121.86
\$2,009,769	\$255.27	\$216.98
<b>\$6,509,769</b>	<b>\$1,081.13</b>	<b>\$918.96</b>

Loan Amount	Per Trip	Fire Share (85%)
\$3,777,800	\$133.39	\$113.38
\$722,200	\$27.72	\$23.56
\$2,009,769	\$49.90	\$42.41
<b>\$6,509,769</b>	<b>\$211.01</b>	<b>\$179.36</b>

### MAXIMUM ALLOWABLE FIRE IMPACT FEES

Infrastructure components and cost factors used to calculate maximum allowable Fire impact fees are summarized in Figure F10. Factoring in debt principal credits, the residential cost per person is \$2,135.67 and the nonresidential cost per vehicle trip is \$455.76.

Maximum allowable Fire impact fees for residential development are assessed according to the number of persons per housing unit. For a single-family unit, the fee of \$6,300 is calculated by multiplying the cost per person (\$2,135.67) by the number of persons per housing unit (2.95).

Maximum allowable Fire impact fees for nonresidential development are assessed according to the number of trips per 1,000 square feet of floor area. For industrial development, the fee of \$1,110 per 1,000 square feet is calculated by multiplying the cost per vehicle trip (\$455.76) by the vehicle trip generation rate (2.44).

Figure F10: Maximum Allowable Fire Impact Fees

Fee Component	Cost per Person	Cost per Vehicle Trip
Fire Facilities	\$1,439.39	\$299.28
Fire Apparatus	\$1,615.24	\$335.84
Debt Principal Credit	(\$918.96)	(\$179.36)
Total	\$2,135.67	\$455.76

Residential Development	Fees per Unit	
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees
Single Family	2.95	\$6,300
Multi-Family	1.33	\$2,840

Nonresidential Development	Fees per 1,000 Square Feet	
Development Type	Trips per 1,000 Sq Ft <sup>1</sup>	Proposed Fees
Industrial	2.44	\$1,110
Warehouse	1.69	\$768
Commercial	12.21	\$5,566
Office & Other Service	5.42	\$2,470
Institutional	7.45	\$3,398

1. See Land Use Assumptions

## PROJECTED FIRE IMPACT FEE REVENUE

Revenue projections assume implementation of the maximum allowable Fire impact fees and that development over the next fifteen years is consistent with the development projections in Appendix A. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue. As shown in Figure F11, the City will recoup \$3.18 million in revenue from its \$10.6 million investment in Fire infrastructure over the next fifteen years.

**Figure F11: Projected Fire Impact Fee Revenue**

Fee Component	Growth Share	Existing Share	Total
Fire Facilities	\$2,261,738	\$2,746,422	\$5,008,160
Fire Apparatus	\$4,956,697	\$663,303	\$5,620,000
<b>Total</b>	<b>\$7,218,435</b>	<b>\$3,409,725</b>	<b>\$10,628,160</b>

		Single Family \$6,300 per unit	Multi-Family \$2,840 per unit	Industrial \$1,110 per KSF	Commercial \$5,566 per KSF	Office / Service \$2,470 per KSF	Institutional \$3,398 per KSF
Year		Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF
Base	2025	437	12	115	68	20	109
Year 1	2026	467	12	116	70	20	111
Year 2	2027	498	12	117	72	20	112
Year 3	2028	528	12	118	73	21	114
Year 4	2029	559	12	119	75	21	116
Year 5	2030	590	12	121	77	21	118
Year 6	2031	620	12	122	79	22	120
Year 7	2032	651	12	123	81	22	122
Year 8	2033	681	12	124	82	23	124
Year 9	2034	712	12	126	84	23	126
Year 10	2035	743	12	127	86	23	128
Year 11	2036	773	12	128	88	24	130
Year 12	2037	804	12	129	90	24	132
Year 13	2038	834	12	131	93	25	135
Year 14	2039	865	12	132	95	25	137
Year 15	2040	896	12	133	97	26	139
15-Year Increase		459	0	19	29	6	31
Projected Revenue		\$2,891,798	\$0	\$20,688	\$158,905	\$14,514	\$103,673

Projected Fee Revenue	\$3,189,578
Existing Development Share	\$7,438,582
Total City Expenditure	\$10,628,160

## PARKS IMPACT FEES

### METHODOLOGY

The Parks impact fee includes components for park land and improvements. Parks impact fees use the **incremental expansion methodology**. Costs are allocated only to residential development using different demand indicators for each type of development.

### PROPORTIONATE SHARE

TischlerBise recommends allocating 100 percent of the cost of parks infrastructure to residential development since nonresidential development generates negligible demand for parks infrastructure.

### SERVICE UNITS

Residential impact fees are calculated on a per capita basis, then converted to an appropriate amount for each type of housing unit based on the number of persons per housing unit (PPHU). As shown in Figure PR1, the current PPHU factors are 2.95 persons per single-family unit and 1.33 persons per multi-family unit. These factors are based on the U.S. Census Bureau's 2018-2022 American Community Survey 5-year estimates (further discussed in Appendix A).

**Figure PR1: Service Units**

Development Type	Persons per Housing Unit <sup>1</sup>
Single Family	2.95
Multi-Family	1.33

## PARK LAND – INCREMENTAL EXPANSION

As shown below in Figure PR2, the City of Eagleville has one existing park totaling 13.4 acres. The City of Eagleville plans to purchase additional park land to serve future development. The analysis allocates 100 percent of demand for park land to residential development. Eagleville’s existing level of service is 0.0104 acres per person (13.4 acres / 1,290 persons).

The cost of an acre of land is estimated at \$15,000 based on information provided by the City. For park land, the cost is \$155.78 per person (0.0104 acres per person X \$15,000 per acre).

**Figure PR2: Park Land Level of Service**

Description	Acres
Eagleville City Park	13.4
<b>Total</b>	<b>13.4</b>

Cost Allocation Factors	
Cost per Acre	\$15,000

Level-of-Service (LOS) Standards	
Existing Acres	13.4
Residential	
Residential Share	100%
2025 Population	1,290
Acres per Person	0.0104
<b>Cost per Person</b>	<b>\$155.78</b>

Source: City of Eagleville, Tennessee

## PARK IMPROVEMENTS – INCREMENTAL EXPANSION

The City of Eagleville plans to expand its current inventory of 232 park improvements to serve future development. The analysis allocates 100 percent of demand for park improvements to residential development. Eagleville’s existing level of service is 0.1798 improvements per person (232 improvements/ 1,290 persons).

Based on the total insurance replacement cost of \$1,398,606 for Eagleville’s existing 232 park improvements, the average replacement cost is \$6,028 per improvement. As shown in Figure PR3, the park improvement cost is \$1,083.96 per person (0.1798 improvements per person X \$6,028 per improvement).

**Figure PR3: Park Improvements Level of Service**

Description	Improvements	Unit Cost	Replacement Cost
Ball Fields*	3	\$156,239	\$468,717
Picnic Shelters	1	\$29,205	\$29,205
Playgrounds	1	\$168,236	\$168,236
Walking Trail	1	\$15,000	\$15,000
Press Box/Restrooms/Concession	1	\$307,500	\$307,500
Parking Spaces	215	\$1,500	\$322,500
Bleachers	6	\$3,333	\$20,000
Gazebo	1	\$9,227	\$9,227
Flag Pole & Picnic Tables	1	\$11,196	\$11,196
Park Signage	1	\$44,151	\$44,151
Storage Building	1	\$2,874	\$2,874
<b>Total</b>	<b>232</b>	<b>\$6,028</b>	<b>\$1,398,606</b>

\*Includes field lights, scoreboards, dugouts, and fencing

Cost Allocation Factors	
Cost per Improvement	\$6,028

Level-of-Service (LOS) Standards	
Existing Improvements	232
Residential	
Residential Share	100%
2025 Population	1,290
Improvements per Person	0.1798
Cost per Person	\$1,083.96

Source: City of Eagleville, Tennessee

## PROJECTED GROWTH-RELATED DEMAND FOR PARK LAND

To accommodate projected development over the next ten years, Eagleville will acquire additional park land as development occurs. Figure PR4 demonstrates growth-related demand for park improvements. Eagleville’s population is projected to increase by 903 persons by 2035. Using the 2025 LOS, future residential development will demand approximately 9.4 additional park acres (903 additional persons X 0.0104 acres per person). Based on demand for 9.4 park acres and a cost of \$15,000 per acre, the growth-related expenditure on park land is \$159,374.

**Figure PR4: Growth-Related Demand for Park Land**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Park Land	0.0104 Acres	per Person	\$17,000

Demand for Park Land		
Year	Population	Acres
2025	1,290	13.4
2026	1,381	14.3
2027	1,471	15.3
2028	1,561	16.2
2029	1,651	17.1
2030	1,742	18.1
2031	1,832	19.0
2032	1,922	20.0
2033	2,012	20.9
2034	2,103	21.8
2035	2,193	22.8
10-Yr Increase	903	9.4

Growth-Related Expenditures	\$159,374
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## PROJECTED GROWTH-RELATED DEMAND FOR PARK IMPROVEMENTS

To accommodate projected development over the next ten years, Eagleville will construct additional park improvements as development occurs. Figure PR5 demonstrates growth-related demand for park improvements. Eagleville’s population is projected to increase by 903 persons by 2035. Using the 2025 LOS, future residential development will demand approximately 162.3 additional park improvements (903 additional persons X 0.1798 improvements per person). Based on demand for 164.4 park improvements and an average cost of \$6,028 per improvement, the growth-related expenditure on park improvements is \$978,494.

**Figure PR5: Growth-Related Demand for Park Improvements**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Park Improvements	0.1798 Improvements	per Person	\$6,028

Demand for Park Improvements		
Year	Population	Total Improvements
2025	1,290	232.0
2026	1,381	248.2
2027	1,471	264.5
2028	1,561	280.7
2029	1,651	296.9
2030	1,742	313.2
2031	1,832	329.4
2032	1,922	345.6
2033	2,012	361.8
2034	2,103	378.1
2035	2,193	394.3
10-Yr Increase	903	162.3

Growth-Related Expenditures	\$978,494
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## MAXIMUM ALLOWABLE PARKS IMPACT FEES

Infrastructure components and cost factors used to calculate maximum allowable Parks impact fees are summarized in Figure PR6. Residential fees are calculated using a cost of \$1,239.75 per person multiplied by the number of persons per housing unit. For a single-family unit, the fee is \$3,657 (\$1,239.75 per person x 2.95 persons per housing unit)

**Figure PR6: Maximum Allowable Parks Impact Fees**

Fee Component	Cost per Person
Park Improvements	\$1,083.96
Land	\$155.78
<b>Total</b>	<b>\$1,239.75</b>

Residential Development	Fees per Unit	
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees
Single Family	2.95	\$3,657
Multi-Family	1.33	\$1,649

1. See Land Use Assumptions

## PROJECTED PARKS IMPACT FEE REVENUE

Revenue projections assume implementation of the maximum allowable Parks impact fees and that development over the next ten years is consistent with the development projections in Appendix A. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue. All growth is assumed to be single family; this analysis projects no growth in multifamily units. As shown in Figure PR7, projected fee revenue equals \$1,119,118, or 98.3% of the total projected expenditure.

Figure PR7: Projected Parks Impact fee Revenue

Fee Component	Growth Share	Total
Park Improvements	\$978,494	\$978,494
Land	\$159,374	\$159,374
<b>Total</b>	<b>\$1,137,868</b>	<b>\$1,137,868</b>

		Single Family \$3,657 per unit	Multi-Family \$1,649 per unit
Year		Hsg Unit	Hsg Unit
Base	2025	437	12
Year 1	2026	467	12
Year 2	2027	498	12
Year 3	2028	528	12
Year 4	2029	559	12
Year 5	2030	590	12
Year 6	2031	620	12
Year 7	2032	651	12
Year 8	2033	681	12
Year 9	2034	712	12
Year 10	2035	743	12
10-Year Increase		306	0
Projected Revenue		\$1,119,118	\$0

Projected Fee Revenue	\$1,119,118
Total Expenditures	\$1,137,868
Existing Development Share	\$18,750

## POLICE IMPACT FEES

### METHODOLOGY

The Police impact fee includes components for police facilities and police vehicles. Police impact fees use a **cost recovery methodology** for Police facilities and an **incremental expansion methodology** for Police vehicles. Costs are allocated to both residential and nonresidential development using different demand indicators for each type of development.

### PROPORTIONATE SHARE

TischlerBise recommends functional population to allocate the cost of police infrastructure to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population," by accounting for people living and working in a jurisdiction, but also considers commuting patterns and time spent at home and at nonresidential locations. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states.

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents employed in Eagleville are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents employed outside Eagleville are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2021 functional population data (the latest available), the residential allocation is 76 percent, and the nonresidential allocation is 24 percent for police facilities and vehicles. For animal control facilities and vehicles, 100 percent of costs are allocated towards residential development.

**Figure P1: Functional Population**

Demand Units in 2021				
			Demand Hours/Day	Person Hours
<b>Residential</b>				
Population	878			
Residents Not Working	505		20	10,098
Employed Residents	373			
Residents Employed in Eagleville	12	14		168
Residents Employed outside Eagleville	361	14		5,054
				Residential Subtotal 15,320
				<b>Residential Share 76%</b>
<b>Nonresidential</b>				
Residents Not Working	505		4	2,020
Jobs Located in Eagleville	280			
Residents Employed in Eagleville	12	10		120
Non-Resident Workers (Inflow Commuters)	268	10		2,680
				Nonresidential Subtotal 4,820
				<b>Nonresidential Share 24%</b>
				Total 20,140

Source: U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics.

## SERVICE UNITS

Residential impact fees are calculated on a per capita basis, then converted to an appropriate amount for each type of housing unit based on the number of persons per housing unit (PPHU). As shown in Figure P2, the current PPHU factors are 2.95 persons per single-family unit and 1.33 persons per multi-family unit. These factors are based on the U.S. Census Bureau’s 2018-2022 American Community Survey 5-year estimates (further discussed in Appendix A).

Nonresidential Police impact fees are calculated on a per vehicle trip basis, then converted to an appropriate amount for each type of nonresidential development based on the number of vehicle trip ends generated per 1,000 square feet of floor area. Trip generation rates are used because vehicle trips are highest for retail developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Police services from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, Police development fees would be disproportionately high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, Police development fees would be disproportionately high for industrial development.

A trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip ends for nonresidential development are calculated per thousand square feet and require an adjustment factor to avoid double counting each trip at both the origin and destination points. These factors are defined in *Trip Generation, 11<sup>th</sup> Edition*, published in 2021 by the Institute of Transportation Engineers (further discussed in Appendix A).

**Figure P2: Service Units**

Development Type	Persons per Housing Unit <sup>1</sup>
Single Family	2.95
Multi-Family	1.33

Development Type	Avg Wkdy Veh Trip Ends <sup>1</sup>	Trip Rate Adjustment	Average Weekday Vehicle Trips
Industrial	4.87	50%	2.44
Warehouse	3.37	50%	1.69
Commercial	37.01	33%	12.21
Office & Other Service	10.84	50%	5.42
Institutional	22.59	33%	7.45
Hotel (per room)	7.99	50%	4.00

1. See Land Use Assumptions

## POLICE FACILITIES – COST RECOVERY

Eagleville officials believe its recently completed police station has sufficient capacity to serve a significant portion of new development, requiring minimal future expansion. TischlerBise therefore used a cost recovery methodology to analyze demand for police facilities over a 15-year period. As shown in Figure P3, Eagleville’s existing police facilities total 2,250 square feet. Functional population provides the proportionate share of demand for police facilities from residential and nonresidential development. To calculate the level of service, the proportionate share of square footage allocated to residential and nonresidential development are divided by the projected 2040 population and nonresidential vehicle trips, respectively. Thus, the planned level of service for residential development is 0.6467 square feet per person (2,250 square feet X 76 percent residential share / 2,644 persons) and the nonresidential level of service is 0.1345 square feet per vehicle trip (2,250 square feet X 24 percent nonresidential share / 4,016 vehicle trips).

According to data provided by City officials, Eagleville’s current police station was completed in 2020 at a cost of \$474 per square foot. By applying the level of service to the cost per square foot, the cost per person and per vehicle trip is calculated. The residential cost per person is \$306.84 (0.6467 square feet per person x \$474 per square foot) and the nonresidential cost per vehicle trip is \$63.80 (0.1345 square feet per vehicle trip x \$474 per square foot).

**Figure P3: Police Facilities Level of Service**

Description	Square Feet
Police Station	2,250

Cost Allocation Factors	
Facility Cost	\$1,067,610
Facility Square Feet	2,250
Cost per Square Foot	\$474

Level-of-Service (LOS) Standards	
Residential	
Residential Share	76%
2040 Population	2,644
Square Feet per Person	0.6467
Cost per Person	\$306.84
Nonresidential	
Nonresidential Share	24%
2040 Vehicle Trips	4,016
Square Feet per Vehicle Trip	0.1345
Cost per Vehicle Trip	\$63.80

Source: City of Eagleville, Tennessee

## POLICE VEHICLES – INCREMENTAL EXPANSION

Eagleville plans to purchase additional police vehicles to serve future development. As shown in Figure P4, Eagleville’s existing fleet includes 6 police vehicles with an average replacement cost of \$55,996 per vehicle. Functional population provides the proportionate share of demand for police vehicles from residential and nonresidential development. Eagleville’s existing level of service for residential development is 0.0035 police units per person (6 police vehicles X 76 percent residential share / 1,290 persons) and nonresidential level of service is 0.0005 police units per vehicle trip (6 police vehicles X 24 percent nonresidential share / 2,971 vehicle trips).

Based on cost estimates, the average cost is \$55,996 per police unit. For police vehicles, the cost is \$197.90 per person (0.0035 police units per person X \$55,996 per unit) and \$26.60 per vehicle trip (0.0005 police units per vehicle trip X 55,996 per unit).

**Figure P4: Police Vehicles Level of Service**

Description	Units	Cost Per Unit	Total Replacement Cost
Patrol Vehicles (Charger)	1	\$39,592	\$39,592
Patrol SUV	3	\$66,860	\$200,580
Trucks	1	\$78,210	\$78,210
Equipment Trailer	1	\$17,595	\$17,595
<b>Total</b>	<b>6</b>	<b>\$55,996</b>	<b>\$335,977</b>

Cost Allocation Factors	
Cost per Unit	\$55,996

Level-of-Service (LOS) Standards	
Existing Units	6
<b>Residential</b>	
Residential Share	76%
2025 Population	1,290
Units per Person	0.0035
<b>Cost per Person</b>	<b>\$197.90</b>
<b>Nonresidential</b>	
Nonresidential Share	24%
2025 Vehicle Trips	2,971
Units per Vehicle Trip	0.0005
<b>Cost per Vehicle Trip</b>	<b>\$27.14</b>

Source: City of Eagleville, Tennessee

## PROJECTED DEMAND FOR GROWTH-RELATED POLICE VEHICLES

Eagleville plans to serve new growth over the next 10 years by maximizing capacity of its existing vehicle fleet. Figure P5 demonstrates growth-related demand for police vehicles.

Shown in Figure P5, Eagleville’s population is projected to increase by 903 persons and 659 nonresidential vehicle trips by 2035. Using the 2025 LOS, future residential development will demand approximately 3.2 Police vehicles (903 additional persons X 0.0035 units per person), and future nonresidential development will demand approximately 0.3 additional police vehicles (659 additional vehicle trips X 0.0005 units per vehicle trip). In total, 3.5 vehicles will be allocated to serve new development. Based on demand for 3.5 additional Police vehicles and an average cost of \$55,996 per unit, the growth-related expenditure on Police vehicles is \$196,539.

**Figure P5: Growth-Related Demand for Police Vehicles**

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Vehicles	0.0035 Units	per Person	\$55,996
	0.0005 Units	per Vehicle Trip	

Demand for Police Vehicles						
Year	Population	Vehicle Trips	Units			Total
			Residential	Nonresidential		
Base	2025	1,290	2,971	4.6	1.4	6.0
Year 1	2026	1,381	3,031	4.9	1.5	6.3
Year 2	2027	1,471	3,092	5.2	1.5	6.7
Year 3	2028	1,561	3,155	5.5	1.5	7.0
Year 4	2029	1,651	3,219	5.8	1.6	7.4
Year 5	2030	1,742	3,284	6.2	1.6	7.7
Year 6	2031	1,832	3,350	6.5	1.6	8.1
Year 7	2032	1,922	3,418	6.8	1.7	8.4
Year 8	2033	2,012	3,488	7.1	1.7	8.8
Year 9	2034	2,103	3,558	7.4	1.7	9.2
Year 10	2035	2,193	3,631	7.8	1.8	9.5
10-Yr Increase		903	659	3.2	0.3	3.5

Growth-Related Expenditures	\$178,643	\$17,896	\$196,539
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## PRINCIPAL PAYMENT CREDIT

To prevent double payment by new development for existing fire facilities and apparatus, a credit for debt service payments must be included in the fee calculation. The credit applies to the principal amount only because future development will contribute to future principal payments on the remaining debt through taxes. A credit is not necessary for future interest payments because the analysis excludes interest costs from the impact fee calculation. The credit effectively reduces the net capital cost per demand unit and therefore the net overall fee.

Using three loans from the United States Department of Agriculture (USDA), the City of Eagleville was able to finance construction of its fire station and a new police station located within a renovated former bank building. 15 percent of the total loan proceeds were spent on property acquisition and construction of the police station. The first loan was for \$3,777,800 and carries a 40-year term and a 2.13% interest rate. The second loan was for \$722,200 and carries a 36-year term and a 2.13% interest rate. The third loan was for \$2,009,679 and carries a 40-year term and a 3.63% interest rate. The City began making payments on the loans in January 2025.

The credit is calculated by allocating the principal payments to residential and nonresidential development using the functional population factors shown in Figure F1. To account for the time value of money, the analysis calculates the net present value (NPV) of future principal payments. The first loan has an NPV of \$682.49 per person and \$403.37 per vehicle trip. The second loan has an NPV of \$143.37 per person and \$84.30 per vehicle trip. The third loan has an NPV of \$255.27 per person and \$49.90 per vehicle trip. See Figure P6, P7, and P8.

As shown in Figure P9, the total credit values are multiplied by 15% to determine the police station's proportionate share of the funds. Adding the resulting values yields a total principal credit of \$162.17 per person ( $\$102.37 + \$21.51 + \$38.29$ ) and \$31.65 per vehicle trip ( $\$20.01 + \$4.16 + \$7.48$ ).

**Figure P6: Debt Principal Credit Calculation – USDA Loan 1 (\$3,777,800)**

USDA Loan 1 - Debt Principal Payment Schedule							
Original Loan Amount: \$3,777,800		Term: 40 Years		Interest Rate: 2.13%			
Year	Annual Principal Payment	Residential Share (76%)	Population	Debt Cost per Capita	Nonresidential Share (24%)	Nonres. Vehicle Trips	Debt Cost per Trip End
2025	\$60,898.75	\$46,283	1,290	\$35.87	\$14,616	2,971	\$4.92
2026	\$62,192.85	\$47,267	1,381	\$34.24	\$14,926	3,031	\$4.92
2027	\$63,514.45	\$48,271	1,471	\$32.82	\$15,243	3,092	\$4.93
2028	\$64,864.45	\$49,297	1,561	\$31.58	\$15,567	3,155	\$4.93
2029	\$66,242.49	\$50,344	1,651	\$30.49	\$15,898	3,219	\$4.94
2030	\$67,650.14	\$51,414	1,742	\$29.52	\$16,236	3,284	\$4.94
2031	\$69,087.71	\$52,507	1,832	\$28.66	\$16,581	3,350	\$4.95
2032	\$70,555.82	\$53,622	1,922	\$27.90	\$16,933	3,418	\$4.95
2033	\$72,055.13	\$54,762	2,012	\$27.21	\$17,293	3,488	\$4.96
2034	\$73,586.31	\$55,926	2,103	\$26.60	\$17,661	3,558	\$4.96
2035	\$75,150.02	\$57,114	2,193	\$26.04	\$18,036	3,631	\$4.97
2036	\$76,746.95	\$58,328	2,283	\$25.55	\$18,419	3,705	\$4.97
2037	\$78,377.83	\$59,567	2,374	\$25.10	\$18,811	3,780	\$4.98
2038	\$80,043.35	\$60,833	2,464	\$24.69	\$19,210	3,857	\$4.98
2039	\$81,744.28	\$62,126	2,554	\$24.32	\$19,619	3,936	\$4.98
2040	\$83,481.34	\$63,446	2,644	\$23.99	\$20,036	4,016	\$4.99
2041	\$85,255.32	\$64,794	2,735	\$23.69	\$20,461	4,098	\$4.99
2042	\$87,067.00	\$66,171	2,825	\$23.42	\$20,896	4,182	\$5.00
2043	\$88,917.17	\$67,577	2,915	\$23.18	\$21,340	4,268	\$5.00
2044	\$90,806.66	\$69,013	3,005	\$22.96	\$21,794	4,355	\$5.00
2045	\$92,736.30	\$70,480	3,096	\$22.77	\$22,257	4,445	\$5.01
2046	\$94,706.95	\$71,977	3,186	\$22.59	\$22,730	4,536	\$5.01
2047	\$96,719.47	\$73,507	3,276	\$22.44	\$23,213	4,629	\$5.01
2048	\$98,774.76	\$75,069	3,366	\$22.30	\$23,706	4,724	\$5.02
2049	\$100,873.72	\$76,664	3,457	\$22.18	\$24,210	4,822	\$5.02
2050	\$103,017.29	\$78,293	3,547	\$22.07	\$24,724	4,921	\$5.02
2051	\$105,206.41	\$79,957	3,637	\$21.98	\$25,250	5,022	\$5.03
2052	\$107,442.04	\$81,656	3,728	\$21.91	\$25,786	5,126	\$5.03
2053	\$109,725.19	\$83,391	3,818	\$21.84	\$26,334	5,232	\$5.03
2054	\$112,056.85	\$85,163	3,908	\$21.79	\$26,894	5,340	\$5.04
2055	\$114,438.05	\$86,973	3,998	\$21.75	\$27,465	5,451	\$5.04
2056	\$116,869.86	\$88,821	4,089	\$21.72	\$28,049	5,564	\$5.04
2057	\$119,353.35	\$90,709	4,179	\$21.71	\$28,645	5,679	\$5.04
2058	\$121,889.61	\$92,636	4,269	\$21.70	\$29,254	5,797	\$5.05
2059	\$124,479.76	\$94,605	4,359	\$21.70	\$29,875	5,917	\$5.05
2060	\$127,124.96	\$96,615	4,450	\$21.71	\$30,510	6,040	\$5.05
2061	\$129,826.36	\$98,668	4,540	\$21.73	\$31,158	6,165	\$5.05
2062	\$132,585.17	\$100,765	4,630	\$21.76	\$31,820	6,294	\$5.06
2063	\$135,402.61	\$102,906	4,721	\$21.80	\$32,497	6,425	\$5.06
2064	\$136,333.61	\$103,614	4,811	\$21.54	\$32,720	6,559	\$4.99

<b>Discount Rate</b>		<b>2.13%</b>		<b>2.13%</b>
<b>Net Present Value</b>	Per Person	<b>\$682.49</b>	Per Trip	<b>\$133.39</b>

Figure P7: Debt Principal Credit Calculation – USDA Loan 2 (\$722,200)

USDA Loan 2 - Debt Principal Payment Schedule							
Original Loan Amount: \$722,200		Term: 36 Years		Interest Rate: 2.13%			
Year	Annual Principal Payment	Residential Share (76%)	Population	Debt Cost per Capita	Nonresidential Share (24%)	Nonres. Vehicle Trips	Debt Cost per Trip End
2025	\$13,563.25	\$10,308	1,290	\$7.99	\$3,255	2,971	\$1.10
2026	\$13,851.47	\$10,527	1,381	\$7.63	\$3,324	3,031	\$1.10
2027	\$14,145.81	\$10,751	1,471	\$7.31	\$3,395	3,092	\$1.10
2028	\$14,446.41	\$10,979	1,561	\$7.03	\$3,467	3,155	\$1.10
2029	\$14,753.40	\$11,213	1,651	\$6.79	\$3,541	3,219	\$1.10
2030	\$15,066.91	\$11,451	1,742	\$6.57	\$3,616	3,284	\$1.10
2031	\$15,387.08	\$11,694	1,832	\$6.38	\$3,693	3,350	\$1.10
2032	\$15,714.05	\$11,943	1,922	\$6.21	\$3,771	3,418	\$1.10
2033	\$16,047.98	\$12,196	2,012	\$6.06	\$3,852	3,488	\$1.10
2034	\$16,389.00	\$12,456	2,103	\$5.92	\$3,933	3,558	\$1.11
2035	\$16,737.26	\$12,720	2,193	\$5.80	\$4,017	3,631	\$1.11
2036	\$17,092.93	\$12,991	2,283	\$5.69	\$4,102	3,705	\$1.11
2037	\$17,456.16	\$13,267	2,374	\$5.59	\$4,189	3,780	\$1.11
2038	\$17,827.10	\$13,549	2,464	\$5.50	\$4,279	3,857	\$1.11
2039	\$18,205.92	\$13,836	2,554	\$5.42	\$4,369	3,936	\$1.11
2040	\$18,592.80	\$14,131	2,644	\$5.34	\$4,462	4,016	\$1.11
2041	\$18,987.90	\$14,431	2,735	\$5.28	\$4,557	4,098	\$1.11
2042	\$19,391.39	\$14,737	2,825	\$5.22	\$4,654	4,182	\$1.11
2043	\$19,803.46	\$15,051	2,915	\$5.16	\$4,753	4,268	\$1.11
2044	\$20,224.28	\$15,370	3,005	\$5.11	\$4,854	4,355	\$1.11
2045	\$20,654.05	\$15,697	3,096	\$5.07	\$4,957	4,445	\$1.12
2046	\$21,092.95	\$16,031	3,186	\$5.03	\$5,062	4,536	\$1.12
2047	\$21,541.17	\$16,371	3,276	\$5.00	\$5,170	4,629	\$1.12
2048	\$21,998.92	\$16,719	3,366	\$4.97	\$5,280	4,724	\$1.12
2049	\$22,466.40	\$17,074	3,457	\$4.94	\$5,392	4,822	\$1.12
2050	\$22,943.81	\$17,437	3,547	\$4.92	\$5,507	4,921	\$1.12
2051	\$23,341.36	\$17,739	3,637	\$4.88	\$5,602	5,022	\$1.12
2052	\$23,929.28	\$18,186	3,728	\$4.88	\$5,743	5,126	\$1.12
2053	\$24,437.78	\$18,573	3,818	\$4.86	\$5,865	5,232	\$1.12
2054	\$24,957.08	\$18,967	3,908	\$4.85	\$5,990	5,340	\$1.12
2055	\$25,487.42	\$19,370	3,998	\$4.84	\$6,117	5,451	\$1.12
2056	\$26,029.03	\$19,782	4,089	\$4.84	\$6,247	5,564	\$1.12
2057	\$26,582.14	\$20,202	4,179	\$4.83	\$6,380	5,679	\$1.12
2058	\$27,147.01	\$20,632	4,269	\$4.83	\$6,515	5,797	\$1.12
2059	\$27,723.89	\$21,070	4,359	\$4.83	\$6,654	5,917	\$1.12
2060	\$28,093.16	\$21,351	4,450	\$4.80	\$6,742	6,040	\$1.12
<b>Total</b>		<b>\$548,804</b>			<b>\$173,306</b>		

<b>Discount Rate</b>		<b>2.13%</b>		<b>2.13%</b>
<b>Net Present Value</b>	Per Person	<b>\$143.37</b>	Per Trip	<b>\$27.72</b>

**Figure P8: Debt Principal Credit Calculation – USDA Loan 3 (\$2,009,769)**

USDA Loan 3 - Debt Principal Payment Schedule								
Original Loan Amount:		\$2,009,769	Term:		36 Years	Interest Rate:		3.63%
Year	Annual Principal Payment	Residential Share (76%)	Population	Debt Cost per Capita	Nonresidential Share (24%)	Nonres. Vehicle Trips	Debt Cost per Trip End	
2025	\$23,091.00	\$17,549	1,290	\$13.60	\$5,542	2,971	\$1.87	
2026	\$23,928.05	\$18,185	1,381	\$13.17	\$5,743	3,031	\$1.89	
2027	\$24,795.44	\$18,845	1,471	\$12.81	\$5,951	3,092	\$1.92	
2028	\$25,694.28	\$19,528	1,561	\$12.51	\$6,167	3,155	\$1.95	
2029	\$26,625.69	\$20,236	1,651	\$12.25	\$6,390	3,219	\$1.99	
2030	\$27,590.87	\$20,969	1,742	\$12.04	\$6,622	3,284	\$2.02	
2031	\$28,591.04	\$21,729	1,832	\$11.86	\$6,862	3,350	\$2.05	
2032	\$29,627.47	\$22,517	1,922	\$11.71	\$7,111	3,418	\$2.08	
2033	\$30,701.46	\$23,333	2,012	\$11.59	\$7,368	3,488	\$2.11	
2034	\$31,814.39	\$24,179	2,103	\$11.50	\$7,635	3,558	\$2.15	
2035	\$32,967.66	\$25,055	2,193	\$11.43	\$7,912	3,631	\$2.18	
2036	\$34,162.74	\$25,964	2,283	\$11.37	\$8,199	3,705	\$2.21	
2037	\$35,401.14	\$26,905	2,374	\$11.34	\$8,496	3,780	\$2.25	
2038	\$36,684.43	\$27,880	2,464	\$11.32	\$8,804	3,857	\$2.28	
2039	\$38,014.24	\$28,891	2,554	\$11.31	\$9,123	3,936	\$2.32	
2040	\$39,392.26	\$29,938	2,644	\$11.32	\$9,454	4,016	\$2.35	
2041	\$40,820.23	\$31,023	2,735	\$11.34	\$9,797	4,098	\$2.39	
2042	\$42,299.96	\$32,148	2,825	\$11.38	\$10,152	4,182	\$2.43	
2043	\$43,833.34	\$33,313	2,915	\$11.43	\$10,520	4,268	\$2.46	
2044	\$45,422.29	\$34,521	3,005	\$11.49	\$10,901	4,355	\$2.50	
2045	\$47,068.85	\$35,772	3,096	\$11.56	\$11,297	4,445	\$2.54	
2046	\$48,775.10	\$37,069	3,186	\$11.64	\$11,706	4,536	\$2.58	
2047	\$50,543.20	\$38,413	3,276	\$11.72	\$12,130	4,629	\$2.62	
2048	\$52,375.39	\$39,805	3,366	\$11.82	\$12,570	4,724	\$2.66	
2049	\$54,273.99	\$41,248	3,457	\$11.93	\$13,026	4,822	\$2.70	
2050	\$56,241.43	\$42,743	3,547	\$12.05	\$13,498	4,921	\$2.74	
2051	\$58,280.18	\$44,293	3,637	\$12.18	\$13,987	5,022	\$2.78	
2052	\$60,392.84	\$45,899	3,728	\$12.31	\$14,494	5,126	\$2.83	
2053	\$62,582.08	\$47,562	3,818	\$12.46	\$15,020	5,232	\$2.87	
2054	\$64,850.68	\$49,287	3,908	\$12.61	\$15,564	5,340	\$2.91	
2055	\$67,201.51	\$51,073	3,998	\$12.77	\$16,128	5,451	\$2.96	
2056	\$69,637.57	\$52,925	4,089	\$12.94	\$16,713	5,564	\$3.00	
2057	\$72,161.93	\$54,843	4,179	\$13.12	\$17,319	5,679	\$3.05	
2058	\$74,777.80	\$56,831	4,269	\$13.31	\$17,947	5,797	\$3.10	
2059	\$77,488.49	\$58,891	4,359	\$13.51	\$18,597	5,917	\$3.14	
2060	\$80,297.45	\$61,026	4,450	\$13.71	\$19,271	6,040	\$3.19	
2061	\$83,198.23	\$63,231	4,540	\$13.93	\$19,968	6,165	\$3.24	
2062	\$86,224.53	\$65,531	4,630	\$14.15	\$20,694	6,294	\$3.29	
2063	\$89,350.17	\$67,906	4,721	\$14.39	\$21,444	6,425	\$3.34	
2064	\$92,589.12	\$70,368	4,811	\$14.63	\$22,221	6,559	\$3.39	

<b>Discount Rate</b>		<b>3.63%</b>		<b>3.63%</b>
<b>Net Present Value</b>	Per Person	<b>\$255.27</b>	Per Trip	<b>\$49.90</b>

Figure P9: Debt Principal Credit Summary – Police Station

Loan Amount	Credit Per Person	Police Share (15%)
\$3,777,800	\$682.49	\$102.37
\$722,200	\$143.37	\$21.51
\$2,009,769	\$255.27	\$38.29
<b>\$6,509,769</b>	<b>\$1,081.13</b>	<b>\$162.17</b>

Loan Amount	Per Trip	Police Share (15%)
\$3,777,800	\$133.39	\$20.01
\$722,200	\$27.72	\$4.16
\$2,009,769	\$49.90	\$7.48
<b>\$6,509,769</b>	<b>\$211.01</b>	<b>\$31.65</b>

### MAXIMUM ALLOWABLE POLICE IMPACT FEES

Infrastructure components and cost factors used to calculate maximum allowable Police impact fees are summarized in the upper portion of Figure P10. Residential fees are calculated by multiplying the cost per person (\$342.57) by the average number of persons per housing unit. For example, the fee for a single family unit is \$1,011 (\$342.57 per person x 2.95 persons per housing unit).

Nonresidential fees are calculated by multiplying the cost per vehicle trip (\$59.28) by the average number of vehicle trips per 1,000 square feet of floor area. For example, the fee per 1,000 square feet of industrial floor area is \$144 (\$59.28 per vehicle trip x 2.44 average weekday vehicle trips per 1,000 square feet).

Figure P10: Maximum Allowable Police Impact Fees

Fee Component	Cost per Person	Cost per Trip
Police Facilities	\$306.84	\$63.80
Police Vehicles	\$197.90	\$27.14
Debt Principal Credit	(\$162.17)	(\$31.65)
Total	\$342.57	\$59.28

Residential Development	Fees per Unit	
Development Type	Persons per Housing Unit <sup>1</sup>	Proposed Fees
Single Family	2.95	\$1,011
Multi-Family	1.33	\$456

Nonresidential Development	Fees per 1,000 Square Feet	
Development Type	Average Wkdy Vehicle Trips <sup>1</sup>	Proposed Fees
Industrial	2.44	\$144
Warehouse	1.69	\$100
Commercial	12.21	\$724
Office & Other Service	5.42	\$321
Institutional	7.45	\$442

1. See Land Use Assumptions

## PROJECTED POLICE IMPACT FEE REVENUE

Revenue projections assume implementation of the maximum allowable Police impact fees and that development over the next 10 years is consistent with the development projections in Appendix A. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue. As shown in Figure P11, impact fees are expected to generate \$333,771 over the analysis period.

**Figure P11: Projected Police Impact Fee Revenue**

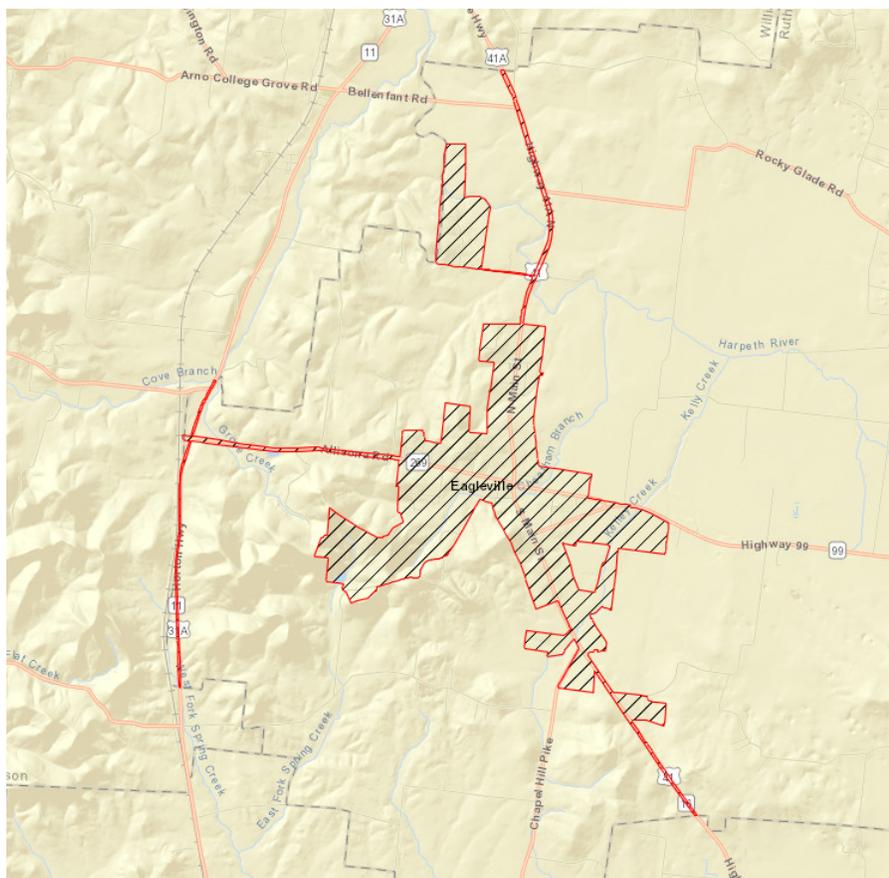
		Single Family \$1,011 per unit	Multi-Family \$456 per unit	Industrial \$144 per KSF	Commercial \$724 per KSF	Office & Other \$321 per KSF	Institutional \$442 per KSF
Year		Hsg Unit	Hsg Unit	KSF	KSF	KSF	KSF
Base	2025	437	12	115	68	20	109
Year 1	2026	467	12	116	70	20	111
Year 2	2027	498	12	117	72	20	112
Year 3	2028	528	12	118	73	21	114
Year 4	2029	559	12	119	75	21	116
Year 5	2030	590	12	121	77	21	118
Year 6	2031	620	12	122	79	22	120
Year 7	2032	651	12	123	81	22	122
Year 8	2033	681	12	124	82	23	124
Year 9	2034	712	12	126	84	23	126
Year 10	2035	743	12	127	86	23	128
10-Year Increase		306	0	12	18	4	19
Projected Revenue		\$309,238	\$0	\$1,749	\$12,966	\$1,203	\$8,615
<b>Projected Fee Revenue</b>							<b>\$333,771</b>

## APPENDIX A: LAND USE ASSUMPTIONS

The City of Eagleville retained TischlerBise to prepare this study to analyze the impacts of development on the City's capital facilities and to calculate development impact fees based on that analysis. The population, housing unit, and job projections contained in this document provide the foundation for the development impact fee study. To evaluate the demand for growth-related infrastructure from various types of development, TischlerBise prepared documentation on jobs and floor area by type of nonresidential development, average weekday vehicle trip generation rates, and demand indicators by type of housing unit. These metrics are the service units and demand indicators used in the development impact fee study.

Development impact fees are based on the need for growth-related improvements, and they must be proportionate by type of land use. The demographic data and development projections are used to demonstrate proportionality and anticipate the need for future infrastructure. Development impact fee studies typically look out five to ten years, with the expectation that fees will be updated every three to five years. The estimates and projections of residential and nonresidential development in this Land Use Assumptions document are for areas within the boundaries of Eagleville, Tennessee. The map below illustrates the areas within the Eagleville Development Impact Fee Service Area.

**Figure A1: Development Impact Fee Service Area Map**



## SUMMARY OF GROWTH INDICATORS

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Key development projections for the Eagleville development impact fee study include housing units and nonresidential floor area. TischlerBise estimates population and housing units using US Census data. For nonresidential development, the base year employment estimate is calculated based on Esri Business Analyst. To project future employment by industry sector, the analysis uses housing unit growth estimates to create a population to jobs factor. To estimate nonresidential floor area, TischlerBise applies square feet per employee factors published by the Institute of Transportation Engineers (ITE) to the employment projections. The projections contained in this document provide the foundation for the Development Impact Fee Study.

These projections are used to estimate development impact fee revenue and to indicate the anticipated need for growth-related infrastructure. The goal is to have reasonable projections without being overly concerned with precision. Because development impact fee methods are designed to reduce sensitivity to development projections in the determination of the proportionate-share fee amounts, if actual development is slower than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, Eagleville will receive more fee revenue but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

During the next 15 years, TischlerBise projects an average annual increase of 31 housing units per year. During the same time period, TischlerBise projects an average increase of 84,000 square feet of nonresidential floor area per year.

## RESIDENTIAL DEVELOPMENT

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Current estimates and future projections of residential development are detailed in this section including population and housing units by type.

### Recent Residential Construction

Development impact fees require an analysis of current levels of service. For residential development, current levels of service are determined using estimates of population and housing units. According to data received from City's planning office, the City is expected to annex, plat and permit an additional 339 housing units over the next 10 years.

### Persons Per Housing Unit

According to the U.S. Census Bureau, a household is a housing unit occupied by year-round residents. Development impact fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPH is used in the fee calculations, the development impact fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that Eagleville impose development impact fees for residential development according to the number of persons per housing unit.

Occupancy calculations require data on population and the types of units by structure. The 2010 census did not obtain detailed information using a “long-form” questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has limitations due to sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses, which share a common sidewall, but are constructed on an individual parcel of land). For development impact fees in Eagleville, detached stick-built units, attached units, and mobile home units are included in the “Single-Family” category. The second residential category includes duplexes and all other structures with two or more units on an individual parcel of land. This is referred to as the “Multi-Family” category. (Note: housing unit estimates from ACS will not equal decennial census counts of units. These data are used only to derive the custom PPHU factors for each type of unit).

Figure A2 below shows the ACS 2022 5-Year Estimates for Eagleville. Single-family units averaged 2.95 persons per housing unit (966 persons / 327 housing units) and multi-family units had an average of 1.33 persons per housing unit (16 persons / 12 housing units). In 2022 total housing units in Eagleville averaged 2.90 persons per housing unit.

**Figure A2: Persons per Housing Unit by Type of Housing**

Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single-Family Units <sup>1</sup>	966	313	3.09	327	<b>2.95</b>	96.5%	4.30%
Multi-Family Units <sup>2</sup>	16	12	1.33	12	<b>1.33</b>	3.5%	0.00%
<b>Total</b>	<b>982</b>	<b>325</b>	<b>3.02</b>	<b>339</b>	<b>2.90</b>	<b>100.0%</b>	<b>4.10%</b>

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates

1. Includes detached, attached (i.e. townhouses), and mobile home units.
2. Includes dwellings in structures with two or more units.

### Residential Estimates

This analysis projects housing units based on building permit data provided by Eagleville staff. By applying the building permit data shown below in Figure A4 to 2022 US Census estimates, TischlerBise estimates the 2025 housing stock includes 437 units. The analysis converts housing units to population using the occupancy factors shown in Figure A2. The 2025 population estimate is 1,290 persons.

### Residential Projections

Over the next 10 years, Eagleville is expected to see an annual increase of 31 housing units per year, all of them single family homes. To project future population, the analysis converts housing units to population using the occupancy factors shown in Figure A2. For this study, it is assumed that the housing unit size will remain constant. TischlerBise projects a 15-year increase of 459 housing units and 1,354 persons (459 single-family units X 2.95 persons per housing unit per housing unit).

Figure A4: Residential Development Projections

	5- Year Increments >>								
	2025	2026	2027	2028	2029	2030	2035	2040	15-Year Increase
	Base Year	1	2	3	4	5	10	15	
Population	1,290	1,381	1,471	1,561	1,651	1,742	2,193	2,644	1,354
Annual Increase	90	90	90	90	90	90	89	89	
Housing Units	437	467	498	528	559	590	743	896	459
Annual Increase	31	31	31	31	31	31	31	31	

## NONRESIDENTIAL DEVELOPMENT

Current estimates and future projections of nonresidential development are detailed in this section including jobs and nonresidential floor area.

### Nonresidential Floor Area Ratios

TischlerBise uses 2021 Institute of Transportation Engineers (ITE) data to estimate nonresidential floor area. As shown in Figure A5, the prototype for industrial development is Manufacturing (ITE 140) with an average of 528 square feet per employee. Commercial development uses Shopping Center (ITE 820) with 471 square feet per employee. Office & other services uses General Office (ITE 710) with an average of 307 square feet per employee. Finally, institutional uses Government Office (ITE 730) with an average of 330 square feet per employee.

Figure A5: Institute of Transportation Engineers, Employee and Building Area Ratios

ITE Code	Land Use / Size	Demand Unit	Square Feet Per Emp
110	Light Industrial	1,000 Sq Ft	637
130	Industrial Park	1,000 Sq Ft	864
140	Manufacturing	1,000 Sq Ft	528
150	Warehousing	1,000 Sq Ft	2,953
254	Assisted Living	bed	na
310	Hotel	room	na
520	Elementary School	student	na
530	High School	student	na
540	Community College	student	na
565	Day Care	student	na
610	Hospital	1,000 Sq Ft	350
620	Nursing Home	bed	na
710	General Office (average size)	1,000 Sq Ft	307
715	Single Tenant Office	1,000 Sq Ft	295
720	Medical-Dental Office	1,000 Sq Ft	250
730	Government Office	1,000 Sq Ft	330
750	Office Park	1,000 Sq Ft	320
820	Shopping Center (average size)	1,000 Sq Ft	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

### Employment and Floor Area Estimates

Based on estimates obtained from Esri Business Analyst, there were 744 jobs in Eagleville in 2024. Applying the square feet per employee factors shown in Figure A5 to the 2024 employment estimates results in a 2024 nonresidential floor area estimate of 306,663 square feet.

**Figure A6: Estimated Employment and Nonresidential Floor Area**

Nonresidential Category	2024 Jobs <sup>1</sup>	Percent of Total Jobs	Square Feet per Job <sup>2</sup>	2024 Estimated Floor Area <sup>3</sup>	Jobs per 1,000 Sq. Ft. <sup>2</sup>
Industrial <sup>4</sup>	215	29%	528	113,520	1.89
Commercial <sup>5</sup>	142	19%	471	66,882	2.12
Office & Other Service <sup>6</sup>	63	8%	307	19,341	3.26
Institutional <sup>7</sup>	324	44%	330	106,920	3.03
<b>Total</b>	<b>744</b>	<b>100%</b>		<b>306,663</b>	<b>2.43</b>

1. ESRI Business Analyst Employment Data (2024).
2. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).
3. TischlerBise calculation (2024 jobs X square feet per job).
4. Major sectors are Manufacturing and Wholesale Trade.
5. Major sectors are Retail, Accommodation and Food Services.
6. Major sector is Administration & Support.

### Employment and Floor Area Projections

To derive base year employment and project future job growth, TischlerBise used the 2024 employment data from ESRI Business Analyst shown in Figure A6 and then applied projected annual growth rates by sector for Rutherford County provided by the Greater Nashville Metropolitan Planning Organization (MPO). See Figure A7.

**Figure A7: Employment Annual Growth Rate by Sector (MPO)**

Sector	Rutherford County				Eagleville		Compounded Annual Growth Rate (CAGR)
	2017 MPO		2045 MPO		2024 ESRI		
Industrial	51,878	30.3%	68,723	25.3%	215	28.9%	<b>1.01%</b>
Commercial	33,013	19.3%	63,280	23.3%	142	19.1%	<b>2.35%</b>
Office & Other	65,598	38.3%	106,827	39.3%	63	8.5%	<b>1.76%</b>
Institutional	21,008	12.3%	33,341	12.3%	324	43.5%	<b>1.66%</b>
<b>Total</b>	<b>171,497</b>		<b>272,170</b>		<b>744</b>		

This analysis assumes that job growth in Eagleville will mirror growth rates by sector in greater Rutherford County. TischlerBise converted employment to floor area using employment density (square feet per employee) factors from ITE. As shown in Figure A8, Eagleville is expected to see an increase of 208 jobs and approximately 84,000 additional square feet of nonresidential development over the next 15 years.

**Figure A8: Nonresidential Development Projections**

	5-Year Increments>>>								15-Year Increase
	2025 Base Year	2026 1	2027 2	2028 3	2029 4	2030 5	2035 10	2040 15	
<b>Jobs</b>									
Industrial	217	219	222	224	226	228	240	252	35
Commercial	145	149	152	156	159	163	183	206	61
Office & Other Service	64	65	66	68	69	70	76	83	19
Institutional	329	335	340	346	352	358	388	422	92
<b>Total</b>	<b>756</b>	<b>768</b>	<b>781</b>	<b>793</b>	<b>806</b>	<b>819</b>	<b>888</b>	<b>964</b>	<b>208</b>
<b>Floor Area (KSF)</b>									
Industrial	115	116	117	118	119	121	127	133	19
Commercial	68	70	72	73	75	77	86	97	29
Office & Other Service	20	20	20	21	21	21	23	26	6
Institutional	109	111	112	114	116	118	128	139	31
<b>Total</b>	<b>311</b>	<b>316</b>	<b>321</b>	<b>327</b>	<b>332</b>	<b>337</b>	<b>365</b>	<b>395</b>	<b>84</b>

**Nonresidential Vehicle Trip Projections**

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Manufacturing (ITE 140) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for commercial development is Shopping Center (ITE 820) which generates 37.01 average weekday vehicle trip ends per 1,000 square feet of floor area. For office & other services development, the proxy is General Office (ITE 710), and it generates 10.84 average weekday vehicle trip ends per 1,000 square feet of floor area. For institutional development, the proxy is Government Office (ITE 610), and it generates 22.59 average weekday vehicle trip ends per 1,000 square feet of floor area. See Figure A9.

**Trip Rate Adjustments**

To calculate the development impact fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. Figure A9 shows the trip adjustment factor and adjusted average weekday vehicle trip ends for each type of nonresidential land use.

**Figure A9: Average Weekday Vehicle Trip Ends by Land Use**

Development Type	Development Unit	ITE Code	Weekday Trips KSF	Trip Adj	Adjust AWVTE
Industrial	KSF	140	4.87	50%	2.44
Commercial	KSF	820	37.01	33%	12.21
Office & Other Service	KSF	710	10.84	50%	5.42
Institutional	KSF	730	22.59	33%	7.45

## FUNCTIONAL POPULATION

TischlerBise recommends functional population to allocate the cost of certain facilities to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population," which accounts for people living and working in a jurisdiction, but also considers commuting patterns and time spent at home and at nonresidential locations. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states.

Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in Eagleville are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside Eagleville are assigned 14 hours to residential development, and inflow commuters are assigned 10 hours to nonresidential development. Based on 2021 data for Eagleville (the latest data available), residential development accounts for 76 percent of functional population and nonresidential development accounts for the remaining 24 percent of functional population. See Figure A10.

**Figure A10: Functional Population**

Demand Units in 2021				
			Demand Hours/Day	Person Hours
<b>Residential</b>	Population	878		
	Residents Not Working	505	20	10,098
	Employed Residents	373		
	Residents Employed in Eagleville	12	14	168
	Residents Employed outside Eagleville	361	14	5,054
	<b>Residential Subtotal</b>			<b>15,320</b>
			<b>Residential Share</b>	<b>76%</b>
<b>Nonresidential</b>	Residents Not Working	505	4	2,020
	Jobs Located in Eagleville	280		
	Residents Employed in Eagleville	12	10	120
	Non-Resident Workers (Inflow Commuters)	268	10	2,680
	<b>Nonresidential Subtotal</b>			<b>4,820</b>
			<b>Nonresidential Share</b>	<b>24%</b>
	<b>Total</b>			<b>20,140</b>

Source: U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics.

## DEVELOPMENT PROJECTIONS

Figure A11 summarizes development projections used in the Development Impact Fee Study. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands.

**Figure A11: Development Projections Summary**

Eagleville, Tennessee	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	15 - Year Increase
	Base Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
<b>Population [1]</b>	<b>1,290</b>	<b>1,381</b>	<b>1,471</b>	<b>1,561</b>	<b>1,651</b>	<b>1,742</b>	<b>1,832</b>	<b>1,922</b>	<b>2,012</b>	<b>2,103</b>	<b>2,193</b>	<b>2,283</b>	<b>2,374</b>	<b>2,464</b>	<b>2,554</b>	<b>2,644</b>	<b>1,354</b>
<b>Housing Units [2]</b>	<b>437</b>	<b>467</b>	<b>498</b>	<b>528</b>	<b>559</b>	<b>590</b>	<b>620</b>	<b>651</b>	<b>681</b>	<b>712</b>	<b>743</b>	<b>773</b>	<b>804</b>	<b>834</b>	<b>865</b>	<b>896</b>	<b>459</b>
<b>Employment</b>																	
Industrial	217	219	222	224	226	228	231	233	235	238	240	243	245	247	250	252	35
Commercial	145	149	152	156	159	163	167	171	175	179	183	188	192	197	201	206	61
Office & Other Service	64	65	66	68	69	70	71	72	74	75	76	78	79	80	82	83	19
Institutional	329	335	340	346	352	358	364	370	376	382	388	395	401	408	415	422	92
<b>Total Employment [3]</b>	<b>756</b>	<b>768</b>	<b>781</b>	<b>793</b>	<b>806</b>	<b>819</b>	<b>833</b>	<b>846</b>	<b>860</b>	<b>874</b>	<b>888</b>	<b>903</b>	<b>918</b>	<b>933</b>	<b>948</b>	<b>964</b>	<b>208</b>
<b>Nonres. Floor Area (x1,000)</b>																	
Industrial	115	116	117	118	119	121	122	123	124	126	127	128	129	131	132	133	19
Commercial	68	70	72	73	75	77	79	81	82	84	86	88	90	93	95	97	29
Office & Other Service	20	20	20	21	21	21	22	22	23	23	23	24	24	25	25	26	6
Institutional	109	111	112	114	116	118	120	122	124	126	128	130	132	135	137	139	31
<b>Total Nonres. Floor Area [4]</b>	<b>311</b>	<b>316</b>	<b>321</b>	<b>327</b>	<b>332</b>	<b>337</b>	<b>342</b>	<b>348</b>	<b>353</b>	<b>359</b>	<b>365</b>	<b>371</b>	<b>377</b>	<b>383</b>	<b>389</b>	<b>395</b>	<b>84</b>
<b>Nonres. Vehicle Trips (x1000)</b>																	
Industrial	279	282	285	288	291	294	297	300	303	306	309	312	315	318	321	325	45
Commercial	1,775	1,817	1,860	1,903	1,948	1,994	2,041	2,089	2,138	2,188	2,239	2,292	2,346	2,401	2,458	2,515	740
Office & Other Service	107	109	110	112	114	116	118	121	123	125	127	129	131	134	136	139	32
Institutional	810	824	837	851	866	880	895	909	925	940	956	972	988	1,004	1,021	1,038	227
<b>Total Nonres. Vehicle Trips [5]</b>	<b>2,971</b>	<b>3,031</b>	<b>3,092</b>	<b>3,155</b>	<b>3,219</b>	<b>3,284</b>	<b>3,350</b>	<b>3,418</b>	<b>3,488</b>	<b>3,558</b>	<b>3,631</b>	<b>3,705</b>	<b>3,780</b>	<b>3,857</b>	<b>3,936</b>	<b>4,016</b>	<b>1,045</b>

[1] TischlerBise calculation based number of housing units multiplied by persons per housing unit factor from 2017-2022 ACS 5-year average

[2] TischlerBise calculation based on average annual growth rate in units added to previous year's total

[3] Source: Average compounded annual growth rates, Greater Nashville Metropolitan Council (GNMC) 2045 Regional Transportation Plan

[4] Source: Number of jobs x Square foot per employee factors from International Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* (2021)

[5] Source: Floor Area (square footage) x adjusted vehicle trip generation factors from International Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* (2021)

## APPENDIX B: LAND USE DEFINITIONS

### RESIDENTIAL DEVELOPMENT

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. The City of Eagleville will collect impact fees from all new residential units. One-time impact fees are determined by site capacity (i.e., number of residential units).

#### Single-Family Units:

1. Single-family detached is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has open space on all four sides.
2. Single-family attached (townhouse) is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In townhouses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

#### Multi-Family Units:

1. 2+ units (duplexes and apartments) are units in structures containing two or more housing units, further categorized as units in structures with “2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments.”

### NONRESIDENTIAL DEVELOPMENT

The proposed general nonresidential development categories (defined below) can be used for all new construction within the City of Eagleville. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

**Commercial:** Establishments primarily selling merchandise, eating/drinking places, and entertainment uses. By way of example, *Commercial* includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, and movie theaters.

**Industrial:** Establishments primarily engaged in the production, transportation, or storage of goods. By way of example, *Industrial* includes manufacturing plants, distribution warehouses, trucking companies, utility substations, power generation facilities, and telecommunications buildings.

**Institutional:** Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, *Institutional* includes schools, universities, churches, daycare facilities, hospitals, and government buildings.

**Warehouse:** A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas.

**Office:** Establishments providing management, administrative, professional, or business services. By way of example, *Office* includes banks, business offices, medical offices, and veterinarian clinics.