CANYON COUNTY BOARD OF COMMISSIONERS

RESOLUTION NO. 26-056

A RESOLUTION OF THE CANYON COUNTY BOARD OF COMMISSIONERS:

- **Making certain Findings;**
- **Approving the following Fire District Capital Improvement Plan:**

  1. ***Middleton Rural Fire District Capital Improvement Plan and Development Impact Fee Study September 15, 2023***

- **Directing the County Clerk; and**
- **Providing an Effective Date.**

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Canyon County:

Section 1: Findings

It is hereby found by the Board of County Commissioners of Canyon County (the "County Commissioners") that:

1.1 Middleton Rural Fire District (the "Fire District") has a duty and responsibility to provide protection of property against fire and the preservation of life, and enforcement of any of the fire codes and other rules that are adopted by the state fire marshal; and

1.2 The Fire District's boundaries include area within the unincorporated area of Canyon County (the "County"), and the Fire District provides fire and emergency services within that area of the County that is within their boundaries; and

1.3 The County is experiencing and is affected by considerable growth and development within unincorporated area that lies within the Fire District; and

1.4 The *Idaho Development Impact Fee Act* (the "Act") codified at Chapter 82 of Title 67 Idaho Code provides for:

- the imposition, collection and expenditure of development impact fees in accordance with the provisions of the Act; and
- the promotion of orderly growth and development by establishing uniform standards by which local governments may require that those who benefit from new growth and development pay a proportionate share of the costs of new public facilities needed to serve new growth and development; and

- minimum standards for the adoption of development impact fee ordinances by governmental entities which are authorized to adopt ordinances; and

- The contents of a capital improvements plan and the process to be followed for the adoption of a capital improvements plan.

1.5 The County is a governmental entity, as defined in the Act at Idaho Code § 67-8203(14) and as provided at Idaho Code § 67-8202(5); and has ordinance authority to adopt a development impact fee ordinance whereas the Fire District does not have ordinance authority and cannot adopt a development impact fee ordinance; and

1.6 The Act provides at Idaho Code § 67-8204A, that the County, when affected by development, has the authority to enter into an intergovernmental agreement with the Fire District for the purpose of agreeing to collect and expend development impact fees for Fire District System Improvements; and

1.7 In anticipation and in consideration of the County Commissioners adopting the Ordinance, which is intended to provide for the collection and expenditure of development impact fees for the Fire Districts: and

1.8 The Fire District Board of Commissioners and the County Commissioners have established, pursuant to Idaho Code § 67-8205, a Development Impact Fee Advisory Committee; and

1.9 The Fire District has retained a qualified professional in the field of public administration, to prepare an impact fee study and capital improvements plan in consultation with their Advisory Committee; and

1.10 The Advisory Committees have submitted to the County Commissioners the following Capital Improvement Plan, prepared in accordance with the requirements of Idaho Code § 67-8208 in consultation with the respective Advisory Committee as provided in Idaho Code §§ 67-8205 and 67-8206(2):

- [Middleton Rural Fire District] *Capital Improvement Plan and Development Impact Fee Study September 15, 2023*

1.11 Prior to the adoption of the Capital Improvements Plan, the County Commissioners, in accordance with Idaho Code § 67-8206(3), have published notice and the Board of Commissioners of Canyon County held a public hearing; and

1.12 The Capital Improvements Plan contains all the necessary contents of a capital improvements plan as provided in the Act by Idaho Code § 67-8208; and

1.13 The County Commissioners has concluded all of its process for the adoption of the Capital Improvements Plan as required in the Act by Idaho Code §§ 67-8205 and 67-8206(3); and

1.14 The County Commissioners have determined that it is in the best interests of the residents, persons and property within the affected area of the unincorporated area of Canyon County and within the boundaries of the Fire District that the above stated Capital Improvements Plan be adopted and approved.

Section 2: Action of approval of Fire District's Capital Improvements Plan

2.1 The County Commissioners do hereby approve the following capital improvement plan:

2. [Middleton Rural Fire District] *Middleton Rural Fire District Capital Improvement Plan and Development Impact Fee Study September 15, 2023* a true and correct copy of which is attached hereto and marked Exhibit 1 and by this reference incorporated herein; and

Section 3: Direction to County Clerk

3.1 The County Clerk is hereby directed to retain this resolution in the official records of the County and to provide a certified copy of this resolution to the Fire Districts' Secretary.

Section 4: Effective Date.

4.1 This Resolution shall be in full force and effect after its passage and approval.

PASSED BY THE CANYON COUNTY BOARD OF COUNTY COMMISSIONERS this 8th day of April, 2026.

By: _____
Leslie Van Beek, *Commissioner*

By: Brad Holton
Brad Holton, *Commissioner*

By: _____
Zach Brooks, *Commissioner*

ATTEST: Jess Urresti

By: _____
Jess Urresti, *County Clerk*

.... Canyon County Board of Commissioners' Resolution No. 26-056

EXHIBIT 1

CAPITAL IMPROVEMENT PLAN

Middleton Rural Fire District Capital Improvement Plan and Development Impact Fee Study September 15, 2023

Capital Improvement Plan and Development Impact Fee Study

Submitted to:

Middleton Rural Fire District

September 15, 2023

Prepared by:

TischlerBise
FISCAL | ECONOMIC | PLANNING

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Exhibit 1

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Development Impact Fee Study
Middleton Rural Fire District

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Executive Summary

The Middleton Rural Fire District ("The Fire District") retained TischlerBise to prepare a Capital Improvement Plan and Development Impact Fee Study in order to meet the new demands generated by new development within the district. This report presents the methodology and calculation used to generate current levels of service and updated maximum supportable impact fees. It is intended to serve as supporting documentation for the evaluation and update of the Fire District's impact fees.

The purpose of this study is to demonstrate the Fire District's compliance with Idaho Statutes as authorized by the Idaho Legislature. Consistent with the authorization, it is the intent of the Fire District to: (Idaho Code 67-8202(1-4))

1. Collect impact fees to ensure that adequate public facilities are available to serve new growth and development;
2. Promote orderly growth and development by establishing uniform standards by which local governments may require that those who benefit from new growth and development pay a proportionate share of the cost of new public facilities needed to serve new growth and development;
3. Establish minimum standards for the adoption of development impact fee ordinances by government entities;
4. Ensure that those who benefit from new growth and development are required to pay no more than their proportionate share of the cost of public facilities needed to serve new growth and development and to prevent duplicate and ad hoc development requirements;

Impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth's fair share of capital facility needs. By law, impact fees can only be used for capital improvements, not operating or maintenance costs. Impact fees are subject to legal standards, which require fulfillment of three key elements: need, benefit and proportionality.

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

TischlerBise evaluated possible methodologies and documented appropriate demand indicators by type of development for the levels of service and fees. Local demographic data and improvement costs were used to identify specific capital costs attributable to growth. This report includes summary tables indicating the specific factors, referred to as level of service standards, used to derive the impact fees.

Fee Methodology

A summary of impact fee components is provided below:

Figure 1. Summary of Impact Fee Methodology

Fee Category	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
Fire	Districtwide	Impact Fee Study		Fire Stations, Fire Apparatuses, and Fire Equipment	Person & Vehicle Trips

Capital Improvement Plan

Below in Figure 2 is the ten-year capital improvement plan the Fire District is anticipating to accommodate future demand. In the Plan, there are facility, fleet, and equipment expansions that are consistent with or below the projected need to serve growth at the current level of service. The capital improvement plan can be updated annually and revised to reflect any shift in demand, market, and costs.

A CIP project to note is the Station #54 improvement. At the moment, the structure is a storage facility that is being improved to an operational fire station. The finished station will be 4,032 square feet and serving existing and future demand. It has been determined that one-third (1,344 square feet) is growth-related.

Figure 2. Growth-Related Capital Improvement Plan

10-Year Capital Improvement Plan	Need	Time Frame (Yrs)	Current Cost	Growth Related Cost
Station #54: Harvey (improving existing structure)	1,344 square feet	1 to 3	$1,000,000	$1,000,000
Station #56: Purple Sage (50% split with Star Fire)	4,196 square feet	7 to 10	$3,000,000	$3,000,000
Station #54 units: Refurb Brush & Engines	2 units	1 to 3	$850,000	$850,000
Station #54 units: New Engine	1 unit	3 to 5	$900,000	$900,000
Station #54 units: New SCBAs	8 units	10	$80,000	$80,000
Station #56 units: New Brush & Engine (50% split with Star Fire)	2 units	7 to 10	$825,000	$825,000
Station #53 units: Replace Water Tender	1 unit	1 to 2	$429,000	$0
Station #53 units: Replace Brush	1 unit	2 to 5	$400,000	$0
Station #53 units: Replace Engine	1 unit	5 to 10	$1,200,000	$0
Station #53: Replace SCBAs	27 units	10	$324,000	$0
Replace Battalion Command (50% split with Star Fire)	1 unit	2 to 3	$70,000	$0
Replace Command 503 Pickup	1 unit	5 to 10	$95,000	$0
		Total	**$9,173,000**	**$6,655,000**

Maximum Supportable Development Impact Fees

Figure 3 provides a schedule of the maximum supportable development impact fees by type of land use for the Fire District. The fees represent the highest supportable amount for each type of applicable land use and represent new growth's fair share of the cost for capital facilities. The Fire District may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

The fees for residential development are to be assessed per housing unit. For nonresidential development, the fees are assessed per square foot of floor area. Nonresidential development categories are consistent with the terminology and definitions contained in the reference book, Trip Generation 11th Edition, published by the Institute of Transportation Engineers. These definitions are provided in Appendix A.

Figure 3. Summary of Maximum Supportable Development Impact Fees

Residential

Housing Type	Persons per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	3.14	$1,481	$849	$632
Multifamily	2.38	$1,123	$849	$274

Nonresidential

Development Type	Vehicle Trips per KSF	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail	14.06	$780	$420	$360
Office	5.42	$300	$420	($120)
Industrial	2.44	$135	$420	($285)
Institutional	9.76	$541	$420	$121

DEVELOPMENT IMPACT FEE FRAMEWORK

IDAHO DEVELOPMENT IMPACT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development fees are calculated for municipalities in Idaho. All requirements of the Idaho Development Impact Fee Act have been met in the supporting documentation prepared by TischlerBise. There are four requirements of the Idaho Act that are not common in the development impact fee enabling legislation of other states. This overview offers further clarification of these unique requirements.

First, as specified in 67-8204(2) of the Idaho Act, "development impact fees shall be calculated on the basis of levels of service for public facilities . . . applicable to existing development as well as new growth and development."

Second, Idaho requires a Capital Improvements Plan (CIP) [see 67-8208]. The CIP requirements are summarized in this report, with detailed documentation provided in the discussion on infrastructure.

Third, the Idaho Act also requires documentation of any existing deficiencies in the types of infrastructure to be funded by development impact fees [see 67-8208(1)(a)]. The intent of this requirement is to prevent charging new development to cure existing deficiencies. In the context of development impact fees for the Fire District, the term "deficiencies" means a shortage or inadequacy of current system improvements when measured against the levels of service to be applied to new development. It does not mean a shortage or inadequacy when measured against some "hoped for" level of service.

TischlerBise used the current infrastructure cost per service unit (i.e., existing standards), or future levels of service where appropriate, multiplied by the projected increase in service units over an appropriate planning timeframe, to yield the cost of growth-related system improvements. The relationship between these three variables can be reduced to a mathematical formula, expressed as A x B = C. In section 67-8204(16), the Idaho Act simply reorganizes this formula, stating the cost per service unit (i.e., development impact fee) may not exceed the cost of growth-related system improvements divided by the number of projected service units attributable to new development (i.e., A = C ÷ B). By using existing infrastructure standards to determine the need for growth-related capital improvements, the Fire District ensures the same level-of-service standards are applicable to existing and new development. Using existing infrastructure standards also means there are no existing deficiencies in the current system that must be corrected from non-development impact fee funding.

Fourth, Idaho requires a proportionate share determination [see 67-8207]. Basically, local government must consider various types of applicable credits and/or other revenues that may reduce the capital costs attributable to new development. The development impact fee methodologies and the cash flow analysis have addressed the need for credits to avoid potential double payment for growth-related infrastructure.

SUMMARY OF CAPITAL IMPROVEMENT PLAN AND DEVELOPMENT IMPACT FEES

Development impact fees can be calculated by any one of several legitimate methods. The choice of a particular method depends primarily on the service characteristics and planning requirements for each facility type. Each method has advantages and disadvantages, and to some extent can be interchangeable, because each allocates facility costs in proportion to the needs created by development.

Reduced to its simplest terms, the process of calculating development 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. The following paragraphs discuss three basic methods for calculating development impact fees, and how each method can be applied.

- ***Cost Recovery.*** The rationale for the cost recovery approach is that new development is paying for its share of the useful life and remaining capacity of facilities already built or land already purchased from which new growth will benefit. This methodology is often used for systems that were oversized such as sewer and water facilities.
- ***Incremental Expansion.*** The incremental expansion method documents the current level of service (LOS) for each type of public facility in both quantitative and qualitative measures, based on an existing service standard (such as park land acres per 1,000 residents). This approach ensures that there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments, with LOS standards based on current conditions in the community.
- ***Plan-Based.*** The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Facility plans identify needed improvements, and land use plans identify development. In this method, the total cost of relevant facilities is divided by total demand to calculate a cost per unit of demand. Then, the cost per unit of demand is multiplied by the amount of demand per unit of development (e.g., housing units or square feet of building area) in each category to arrive at a cost per specific unit of development (e.g., single family detached unit).
- ***Credits.*** Regardless of the methodology, a consideration of "credits" is integral to the development of a legally valid impact fee methodology. There are two types of "credits," each with specific and distinct characteristics, but both of which should be addressed in the calculation of development impact fees. The first is a credit due to possible double payment situations. This could occur when contributions are made by the property owner toward the capital costs of the public facility covered by the impact fee. This type of credit is integrated into the impact fee calculation. The second is a credit toward the payment of a fee for dedication of public sites or improvements provided by the developer and for which the facility fee is imposed. This type of credit is addressed in the administration and implementation of a facility fee program.

Fire Protection Development Impact Fees

The Fire District's development impact fee includes three components: station space, vehicles/apparatus, and equipment. TischlerBise recommends a *plan-based* approach, based on current capital expansion plans. Per the Idaho Act, capital improvements are limited to those improvements that have a certain lifespan. As specified in 67-8203(3) of the Idaho Act, "'Capital improvements' means improvements with a useful life of ten (10) years or more, by new construction or other action, which increase the service capacity of a public facility." The residential portion of the fee is derived from the product of persons per housing unit (by type of unit) multiplied by the net capital cost per person. The nonresidential portion is derived from the product of nonresidential vehicle trips per 1,000 square feet of nonresidential space multiplied by the net capital cost per vehicle trip.

COST ALLOCATION FOR FIRE PROTECTION INFRASTRUCTURE

Both residential and nonresidential developments increase the demand for fire services and facilities. To calculate the proportional share between residential and nonresidential demand on service and facilities, calls for service data is analyzed. Shown at the top of Figure 4, 62 percent of calls are to residential locations, 4 percent to nonresidential locations, and 35 percent are classified as traffic or other calls.

Base year vehicle trips are used to assign traffic calls to residential and nonresidential land uses. This results in 393 additional residential calls (74,978 residential vehicle trips / 86,422 total vehicle trips X 453 traffic or other calls for service) and 60 additional nonresidential calls (11,444 nonresidential vehicle trips / 86,422 total vehicle trips X 453 traffic or other calls for service).

After this adjustment, 92 percent of calls are attributed to resident development, and 8 percent are attributed to nonresidential development. These percentages are used to attribute facilities to respective demand units.

Figure 4. Calls for Service

Land Use	Annual Calls for Service	% of Total
Residential	813	62%
Nonresidential	47	4%
Traffic	453	35%
Total	**1,313**	**100%**

Land Use	Base Year Vehicle Trips	% of Total
Residential	74,978	87%
Nonresidential	11,444	13%
Total	**86,422**	**100%**

Land Use	Adj. Calls for Service	% of Total
Residential	1,206	92%
Nonresidential	107	8%
Total	**1,313**	**100%**

Source: Middleton Rural Fire District

FIRE PROTECTION CURRENT LEVEL OF SERVICE

The following section details the level of service calculations for the Fire District.

FIRE STATIONS

As shown in Figure 5, after the current improvement of Station #54, the Fire District will operate two stations, which total 12,688 square feet. The existing level of service for residential development is 410 square feet per 1,000 persons. The nonresidential level of service is 90 square feet per 1,000 vehicle trips. This is determined by multiplying the total square footage by the proportionate share factors (92 percent for residential development and 8 percent for nonresidential development), and then dividing the respective totals by the current service units (28,394 persons and 11,444 nonresidential vehicle trips) and multiplying by 1,000.

Figure 5. Existing Fire Station Level of Service

Fire Stations	Square Feet
Station #53	10,000
Station #54 Harvey (2/3)	2,688
Total	**12,688**

Level-of-Service Standards	Residential	Nonresidential
Proportionate Share	92%	8%
Share of Square Feet	11,654	1,034
2023 Population/Nonres. Vehicle Trips	28,394	11,444
Square Feet per 1,000 Persons/Vehicle Trips	410	90

FIRE APPARATUS

As shown in Figure 6, the Fire District currently has 10 pieces of apparatus. The existing level of service for residential development is 0.323 pieces of apparatus for every 1,000 persons. The nonresidential level of service is 0.071 pieces of apparatus per 1,000 vehicle trips. This is determined by multiplying the total apparatus inventory by the proportionate share factors (92 percent for residential development and 8 percent for nonresidential development), and then dividing the respective totals by the current service units (28,394 persons for residential and 11,444 nonresidential vehicle trips) and multiplying by 1,000.

Figure 6. Existing Fire Apparatus Level of Service

Apparatus	Units
Fire Engine	2
Brush Truck	2
Water Tender	1
Command Vehicle	4
Trailer	1
Total	**10**

Level-of-Service Standards	Residential	Nonresidential
Proportionate Share	92%	8%
Share of Units	9.2	0.8
2023 Population/Nonres. Vehicle Trips	28,394	11,444
Units per 1,000 Persons/Vehicle Trips	0.323	0.071

FIRE EQUIPMENT

As shown in Figure 7, the Fire District currently has 48 pieces of equipment with a useful life of 10 years or longer. The existing level of service for residential development is 1.55 pieces of equipment for every 1,000 persons. The nonresidential level of service is 0.34 pieces of equipment per 1,000 vehicle trips. This is determined by multiplying the total equipment inventory by the proportionate share factors (92 percent for residential development and 8 percent for nonresidential development), and then dividing the respective totals by the current service units (28,394 persons for residential and 11,444 nonresidential vehicle trips) and multiplying by 1,000.

Figure 7. Existing Fire Equipment Level of Service

Equipment Type	Units
SCBAs	30
Radios	12
Generators	2
Extrication Equipment	1
Thermal Imaging Equipment	1
Extractor	1
Air Compressor Fill Station	1
Total	**48**

Level-of-Service Standards	Residential	Nonresidential
Proportionate Share	92%	8%
Share of Units	44.1	3.9
2023 Population/Nonres. Vehicle Trips	28,394	11,444
Units per 1,000 Persons/Vehicle Trips	1.55	0.34

PLANNED GROWTH-RELATED INFRASTRUCTURE IMPROVEMENTS

The following section details the future capital plans to accommodate growth.

FIRE STATIONS

The Fire District currently plans on expanding the Harvey fire station and constructing a new joint station at a 50 percent split of costs with Star Fire Protection District. Shown in Figure 8, the Fire District estimates adding 5,540 square feet, with an estimated cost of $3,480,458, would be sufficient through the year 2033.

The cost per residential and nonresidential service unit is determined by multiplying the planned square footage by the proportionate share factors (92 percent for residential and 8 percent for nonresidential), and then dividing the respective totals by the projected increase in service units through the year 2033 (10,576 persons and 8,056 nonresidential vehicle trips). When the resulting residential and nonresidential levels of service (481 square feet per 1,000 persons and 56 square feet per 1,000 nonresidential trips) are compared to the cost per square foot ($628), the resulting cost per service units are $302 per person and $35 per nonresidential vehicle trip.

Based on development trends, market needs, and projections the demand on fire services is going to shift further towards housing development compared to commercial development.

Figure 8. Planned Fire Station Level of Service & Cost Analysis

Fire Stations	Square Feet	Replacement Cost
Station #54 Harvey (1/3)	1,344	$480,458
Station #56 (50% split with Star)	4,196	$3,000,000
Total	**5,540**	**$3,480,458**

Level-of-Service Standards	**Residential**	**Nonresidential**
Proportionate Share	92%	8%
Share of Square Feet	5,089	451
10-Year Population/Nonres. Vehicle Trips Increase	10,576	8,056
Square Feet per 1,000 Persons/Vehicle Trips	481	56

Cost Analysis	**Residential**	**Nonresidential**
Square Feet per 1,000 Persons/Vehicle Trips	481	56
Average Cost per Square Foot	$628	$628
Capital Cost per Person/Vehicle Trip	$302	$35

Fire Apparatus

To complement the planned additional stations, the Fire District plans on purchasing five additional apparatus. Shown in Figure 9, the estimated cost of the apparatus is $2,575,000. Similar to the planned station, the Fire District estimates the additional apparatus will be sufficient through the year 2033.

In Figure 9, the cost per residential and nonresidential service unit is determined by multiplying the planned vehicle/apparatus by the proportionate share factors (92 percent for residential and 8 percent for nonresidential), and then dividing the respective totals by the projected increase in service units through the year 2033 (10,576 persons and 8,056 nonresidential vehicle trips). When the resulting residential and nonresidential levels of service (0.434 units per 1,000 persons and 0.051 units per 1,000 nonresidential trips) are compared to the average cost for the apparatus ($515,000), the resulting cost per service units are $224 per person and $26 per nonresidential vehicle trip.

Based on development trends, market needs, and projections the demand on fire services is going to shift further towards housing development compared to commercial development.

Figure 9. Planned Fire Apparatus Level of Service & Cost Analysis

Apparatus	Units	Replacement Cost
Station #54 Harvey:		
Refurb 2022 Pierce Enforcer	1	$450,000
Refurb Brush Type 3/4	1	$400,000
New Engine	1	$900,000
Station #56 Purple Sage:		
New Brush Type 3	1	$275,000
New Engine (50% split)	1	$550,000
Total	**5**	**$2,575,000**

Level-of-Service Standards	Residential	Nonresidential
Proportionate Share	92%	8%
Share of Units	4.6	0.4
10-Year Population/Nonres. Vehicle Trips Increase	10,576	8,056
Units per 1,000 Persons/Vehicle Trips	0.434	0.051

Cost Analysis	Residential	Nonresidential
Units per 1,000 Persons/Vehicle Trips	0.43	0.05
Average Cost per Unit	$515,000	$515,000
Capital Cost per Person/Vehicle Trip	$224	$26

Fire Equipment

To facilitate the addition of growth-related personnel, the Fire District plans on purchasing eight self-contained breathing apparatus (SCBA). Shown in Figure 10, the estimated cost of the equipment is $80,000. Similar to the planned station, the Fire District estimates the equipment will be sufficient through the year 2033.

In Figure 10 the cost per residential and nonresidential service unit is determined by multiplying the planned equipment by the proportionate share factors (92 percent for residential and 8 percent for nonresidential), and then dividing the respective totals by the projected increase in service units through the year 2033 (10,576 persons and 8,056 nonresidential vehicle trips). When the resulting residential and nonresidential levels of service (0.69 equipment units per 1,000 persons and 0.08 equipment units per 1,000 nonresidential trip) are compared to the average cost per piece of equipment ($10,000), the resulting cost per service units are $7 per person and $1 per nonresidential vehicle trip.

Figure 10. Planned Fire Equipment Level of Service & Cost Analysis

Equipment Type	Units	Replacement Cost
SCBAs	8	$80,000
Total	**8**	**$80,000**

Level-of-Service Standards	**Residential**	**Nonresidential**
Proportionate Share	92%	8%
Share of Units	7.3	0.7
10-Year Population/Nonres. Vehicle Trips Increase	10,576	8,056
Units per 1,000 Persons/Vehicle Trips	0.69	0.08

Cost Analysis	**Residential**	**Nonresidential**
Units per 1,000 Persons/Vehicle Trips	0.69	0.08
Average Cost per Unit	$10,000	$10,000
Capital Cost per Person/Vehicle Trip	$7	$1

SHARE OF THE DEVELOPMENT IMPACT FEE STUDY

The cost to prepare the Capital Improvement Plan and Development Impact Fee Report totals $19,720. The Fire District will need to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from Appendix B. Demographic Assumptions, the cost is $3 per person and $1 per nonresidential vehicle trip.

Figure 11. Share of the Development Impact Fee Study

Share of Study Cost	Residential Share	Nonresidential Share
$19,720	92%	8%

Residential Growth Share	Five-Year Population Increase	Capital Cost per Person
100%	5,393	$3

Nonresidential Growth Share	Five-Year Veh. Trip Increase	Capital Cost per Trip
100%	3,927	$1

FIRE IMPACT FEE CREDIT ANALYSIS

The district currently has an impact fee fund balance of $828,132, which requires consideration of a credit. As shown below in Figure 12, this balance accounts for 12 percent of the ten-year projected growth expenditures, resulting in a 12 precent credit in the impact fee to ensure the Fire District is only collecting the remaining costs to complete the Capital Improvement Plan.

Figure 12. Fire Impact Fee Credit Analysis

Fire Impact Fee Fee Credit	
Available Fund Balance	$828,132
10-Year Capital Plan	$6,655,000
Available Fund Balance % of Plan	12%

INPUT VARIABLES AND MAXIMUM SUPPORTABLE IMPACT FEES

Figure 13 provides a summary of the input variables (described in the chapter sections above) used to calculate the net cost per person and vehicle trip. The residential Fire Development Impact Fees are the product of persons per housing unit by type multiplied by the total net capital cost per person. For example, the single family maximum impact fee is $1,481 per unit ($472 per person x 3.14 persons per housing unit = $1,481, rounded). The nonresidential fees are the product of vehicle trips per 1,000 square feet multiplied by the net capital cost per nonresidential vehicle trip.

The Fire District Board may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure 13. Middleton Rural Fire District Maximum Supportable Impact Fees

Fee Component	Cost per Person	Cost per Vehicle Trip
Fire Stations	$302	$35
Fire Apparatus	$224	$26
Fire Equipment	$7	$1
Impact Fee Study	$3	$1
Gross Total	$536	$63
Credit for Fund Balance (12%)	($64)	($8)
Net Total	**$472**	**$55**

Residential

Housing Type	Persons per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	3.14	$1,481	$849	$632
Multifamily	2.38	$1,123	$849	$274

Nonresidential

Development Type	Vehicle Trips per KSF	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail	14.06	$780	$420	$360
Office	5.42	$300	$420	($120)
Industrial	2.44	$135	$420	($285)
Institutional	9.76	$541	$420	$121

CASH FLOW PROJECTIONS FOR MAXIMUM SUPPORTABLE IMPACT FEE

This section summarizes the potential cash flow to the Fire District if the development impact fees are implemented at the maximum supportable amounts. The cash flow projections are based on the assumptions detailed in this chapter and the development projections discussed in Appendix B. Demographic Assumptions.

The summary provides an indication of the impact fee revenue generated by new development. Shown at the bottom of Figure 14, the maximum supportable fire impact fee is estimated to generate $5.4 million in revenue while there is a growth-related cost of $6.1 million. The revenue is able to mitigate 88 percent of growth-related costs. The remaining funding gap is the result of the credit included for the existing fund balance, which will in turn fund the funding gap.

Figure 14. Projected Revenue from Maximum Supportable Impact Fees

Infrastructure Costs for Fire Facilities

	Total Cost	Growth Cost
Fire Stations	$3,480,458	$3,480,458
Fire Apparatus	$2,575,000	$2,575,000
Fire Equipment	$80,000	$80,000
Impact Fee Study	$39,440	$39,440
Total Expenditures	**$6,174,898**	**$6,174,898**

Projected Development Impact Fee Revenue

Year		Single Family $1,481 per unit	Multifamily $1,123 per unit	Retail $780 per KSF	Office $300 per KSF	Industrial $135 per KSF	Institutional $541 per KSF
		Housing Units	**Housing Units**	**KSF**	**KSF**	**KSF**	**KSF**
Base	2023	8,931	239	202	144	315	723
1	2024	9,261	248	218	155	340	780
2	2025	9,591	257	234	167	365	838
3	2026	9,921	266	247	176	384	882
4	2027	10,251	275	259	185	403	927
5	2028	10,581	284	271	193	423	971
6	2029	10,911	293	284	202	442	1,016
7	2030	11,241	302	296	211	461	1,060
8	2031	11,571	311	312	223	486	1,117
9	2032	11,901	320	328	234	511	1,175
10	2033	12,231	329	344	245	536	1,232
Ten-Year Increase		3,300	90	142	101	222	509
Projected Revenue		$4,887,718	$100,753	$110,945	$30,407	$29,904	$275,322

Projected Revenue =>	**$5,435,000**
Projected Expenditures =>	**$6,175,000**
Non-Impact Fee Funding =>	**$740,000**

CAPITAL IMPROVEMENT PLAN

The following section provides a summary of the Capital Improvement Plans depicting growth-related capital demands. First, Figure 15 lists the projected growth over the next ten years in the Fire District. Overall, there is an estimated 37 percent increase in residential development (10,576 new residents and 3,390 housing units) and a 70 percent increase in nonresidential development (1,453 new jobs and 974,000 square feet of development). Further details on the growth projections can be found in Appendix B. Demographic Assumptions.

Figure 15. Ten-Year Growth Projections

		5-Year Increment						
	Base Year	*1*	*2*	*3*	*4*	*5*	*10*	Total
	2023	2024	2025	2026	2027	2028	2033	Increase
Population [1]	28,394	29,452	30,510	31,567	32,625	33,683	38,971	**10,576**
Housing Units by Type [1]								
Single Family	8,931	9,261	9,591	9,921	10,251	10,581	12,231	**3,300**
Multifamily	239	248	257	266	275	284	329	**90**
Total Housing Units	9,170	9,509	9,848	10,187	10,526	10,865	12,560	**3,390**
Jobs [1]								
Retail	429	463	497	523	550	576	731	**302**
Office	469	506	543	572	601	630	799	**330**
Industrial	494	533	572	603	633	664	842	**348**
Institutional	672	725	778	820	861	903	1,145	**473**
Total Jobs	2,064	2,228	2,391	2,518	2,645	2,772	3,517	**1,453**
Nonresidential Floor Area (1,000 sq. ft.) [2]								
Retail	202	218	234	247	259	271	344	**142**
Office	144	155	167	176	185	193	245	**101**
Industrial	315	340	365	384	403	423	536	**222**
Institutional	723	780	838	882	927	971	1,232	**509**
Total Floor Area	1,384	1,493	1,603	1,688	1,773	1,858	2,358	**974**
Vehicle Trips [2]								
Residential Subtotal	*74,978*	*77,750*	*80,521*	*83,292*	*86,064*	*88,835*	*102,691*	**27,714**
Nonresidential Subtotal	*11,444*	*12,351*	*13,258*	*13,962*	*14,667*	*15,371*	*19,500*	**8,056**
Total Vehicle Trips	86,422	90,101	93,779	97,255	100,730	104,206	122,192	**35,770**

[1] Source: COMPASS (Community Planning Association of Southwest Idaho) Traffic Analysis Zone Model; TischlerBise analysis

[2] Source: Institute of Transportation Engineers, Trip Generation, 2021

The Idaho Development Fee Act requires Capital Improvement Plans to be updated regularly, at least once every five years (Idaho Code 67-8208(2)). This report projects revenue and fees based on ten-year forecast in an effort to provide the public and elected officials with illustrative guidance of probable growth demands based on current trends however, per Idaho Code, it is expected that an update to all Capital Improvement Plans included in this study will occur within five years.

The development impact fee is based on the capital improvement plan to accommodate future growth. To serve projected growth over the next ten years, the following infrastructure is planned:

- 5,540 square feet of station space
- 5 new fleet units
- 8 new equipment units
- 2 updates to impact fee study (once every five years)
- $6.6 million growth-related costs

Additionally, there are replacement plans in the CIP that are not growth-related, thus not included in the impact fee study and not eligible for impact fee funding.

A CIP project to note is the Station #54 improvement. At the moment, the structure is a storage facility that is being improved to an operational fire station. The finished station will be 4,032 square feet and serving existing and future demand. It has been determined that one-third (1,344 square feet) is growth-related.

Figure 16. Capital Improvement Plan

10-Year Capital Improvement Plan	Need	Time Frame (Yrs)	Current Cost	Growth Related Cost
Station #54: Harvey (improving existing structure)	1,344 square feet	1 to 3	$1,000,000	$1,000,000
Station #56: Purple Sage (50% split with Star Fire)	4,196 square feet	7 to 10	$3,000,000	$3,000,000
Station #54 units: Refurb Brush & Engines	2 units	1 to 3	$850,000	$850,000
Station #54 units: New Engine	1 unit	3 to 5	$900,000	$900,000
Station #54 units: New SCBAs	8 units	10	$80,000	$80,000
Station #56 units: New Brush & Engine (50% split with Star Fire)	2 units	7 to 10	$825,000	$825,000
Station #53 units: Replace Water Tender	1 unit	1 to 2	$429,000	$0
Station #53 units: Replace Brush	1 unit	2 to 5	$400,000	$0
Station #53 units: Replace Engine	1 unit	5 to 10	$1,200,000	$0
Station #53: Replace SCBAs	27 units	10	$324,000	$0
Replace Battalion Command (50% split with Star Fire)	1 unit	2 to 3	$70,000	$0
Replace Command 503 Pickup	1 unit	5 to 10	$95,000	$0
		Total	**$9,173,000**	**$6,655,000**

FUNDING SOURCES FOR CAPITAL IMPROVEMENTS

In determining the proportionate share of capital costs attributable to new development, the Idaho Development Fee Act states that local governments must consider historical, available, and alternative sources of funding for system improvements (Idaho Code 67-8209(2)). Currently, there are no other dedicated revenues being collected by the Fire District to fund growth-related projects. However, there is an existing balance in the Fire District's impact fee fund which has been set aside for future expansions in the CIP. A credit is included in the impact fee analysis to account for the balance's share of the future CIP.

Proportionate Share Analysis

Development impact fees for the Fire District are based on reasonable and fair formulas or methods. The fees do not exceed a proportionate share of the costs incurred or to be incurred by the Fire District in the provision of system improvements to serve new development. The Fire District will fund non-growth-related improvements with non-development impact fee funds as it has in the past. Specified in the Idaho Development Impact Fee Act (Idaho Code 67-8207), several factors must be evaluated in the development impact fee study and are discussed below.

1) The development impact fees for the Fire District are based on new growth's share of the costs of previously built projects along with planned public facilities as provided by the Fire District. Projects are included in the Fire District's capital improvements plan and will be included in annual capital budgets.
2) Estimated development impact fee revenue was based on the maximum supportable development impact fees for the one, districtwide service area; results are shown in the cash flow analyses in this report. Development impact fee revenue will entirely fund growth-related improvements.
3) TischlerBise has evaluated the extent to which new development may contribute to the cost of public facilities. Also, the report has shown that all applicable growth-related public facility costs will be entirely funded by impact fees, thus no credit is necessary for general tax dollar funding.
4) The Fire District will evaluate the extent to which newly developed properties are entitled to a credit for system improvements that have been provided by property owners or developers. These "site-specific" credits will be available for system improvements identified in the annual capital budget and long-term Capital Improvements Plans. Administrative procedures for site-specific credits should be addressed in the development impact fee ordinance.
5) Extraordinary costs, if any, in servicing newly developed properties should be addressed through administrative procedures that allow independent studies to be submitted to the Fire District. These procedures should be addressed in the development impact fee ordinance. One service area represented by the Fire District's geographic boundary is appropriate for the fees herein.
6) The time-price differential inherent in fair comparisons of amounts paid at different times has been addressed. All costs in the development impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the annual evaluation and update of development impact fees.

Implementation and Administration

The Idaho Development Impact Fee Act (hereafter referred to as the Idaho Act) requires jurisdictions to form a Development Impact Fee Advisory Committee. The committee must have at least five members with a minimum of two members active in the business of real estate, building, or development. The committee acts in an advisory capacity and is tasked to do the following:

- Assist the governmental entity in adopting land use assumptions;
- Review the capital improvements plan, and proposed amendments, and file written comments;
- Monitor and evaluate implementation of the capital improvements plan;
- File periodic reports, at least annually, with respect to the capital improvements plan and report to the governmental entity any perceived inequities in implementing the plan or imposing the development impact fees; and
- Advise the governmental entity of the need to update or revise land use assumptions, the capital improvements plan, and development impact fees.

Furthermore, it is the collecting jurisdiction that is required to form the DIFAC. In this case, Middleton Rural Fire Protection Impact Fees will be collected by the City of Middleton and Canyon County. Thus, those jurisdictions will form separate DIFACs.

Per the above, each jurisdiction has formed a DIFAC. TischlerBise has met with each DIFAC during the process and provided information on land use assumptions, level of service and cost assumptions, and draft development impact fee schedules. This report reflects comments and feedback received from the DIFACs.

The Fire District must develop and adopt a capital improvements plan ("CIP") that includes those improvements for which fees were developed. The Idaho Act defines a capital improvement as an "improvement with a useful life of ten years or more, by new construction or other action, which increases the service capacity of a public facility." Requirements for the CIP are outlined in Idaho Code 67-8208. Certain procedural requirements must be followed for adoption of the CIP and the development impact fee ordinance. Requirements are described in detail in Idaho Code 67-8206. The Fire District has a CIP that meets the above requirements.

TischlerBise recommends that development impact fees be updated annually to reflect recent data. One approach is to adjust for inflation in construction costs by means of an index like the RSMeans or Engineering News Record (ENR). This index can be applied against the calculated development impact fee. If cost estimates change significantly, the Fire District should evaluate an adjustment to the CIP and development impact fees.

Idaho's enabling legislation requires an annual development impact fees report that accounts for fees collected and spent during the preceding year (Idaho Code 67-8210). Development impact fees must be deposited in interest-bearing accounts earmarked for the associated capital facilities as outlined in capital improvements plans. Also, fees must be spent within eight years of when they are collected (on a first in, first out basis) unless the local governmental entity identifies in writing (a) a reasonable cause why the fees should be held longer than eight years; and (b) an anticipated date by which the fees will be expended but in no event greater than eleven years from the date they were collected.

Credits must be provided for in accordance with Idaho Code Section 67-8209 regarding site-specific credits or developer reimbursements for system improvements that have been included in the development impact fee calculations. Project improvements normally required as part of the development approval process are not eligible for credits against development impact fees. Specific policies and procedures related to site-specific credits or developer reimbursements for system improvements should be addressed in the ordinance that establishes the Fire District's fees.

The general concept is that developers may be eligible for site-specific credits or reimbursements only if they provide system improvements that have been included in CIP and development impact fee calculations. If a developer constructs a system improvement that was included in the fee calculations, it is necessary to either reimburse the developer or provide a credit against the fees in the area that benefits from the system improvement. The latter option is more difficult to administer because it creates unique fees for specific geographic areas. Based on TischlerBise's experience, it is better for a reimbursement agreement to be established with the developer that constructs a system improvement. For example, if a developer elects to construct a system improvement, then a reimbursement agreement can be established to payback the developer from future development impact fee revenue. The reimbursement agreement should be based on the actual documented cost of the system improvement, if less than the amount shown in the CIP. However, the reimbursement should not exceed the CIP amount that has been used in the development impact fee calculations.

APPENDIX A. LAND USE DEFINITIONS

- **Single Family:**

  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 row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

  3. Mobile home includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.

- **Multifamily:**

  1. 2+ units (duplexes and apartments) are units in structures containing two or more housing units, further categorized as units in structures with "2 or more units."

  2. Boat, RV, Van, etc. includes any living quarters occupied as a housing unit that does not fit the other categories (e.g., houseboats, railroad cars, campers, and vans). RVs, boats, vans, and the like are included only if they are occupied as a current place of residence.

Nonresidential development categories used throughout this study are based on land use classifications from the book *Trip Generation* (ITE, 2021). A summary description of each development category is provided below.

- **Retail:** Establishments primarily selling merchandise, eating/drinking places, and entertainment uses. By way of example, *Retail* includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, movie theaters, and lodging (hotel/motel).

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

- **Industrial:** Establishments primarily engaged in the production and transportation of goods. By way of example, *Industrial* includes manufacturing plants, trucking companies, warehousing facilities, 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, health care facilities, and government buildings.

APPENDIX B. DEMOGRAPHIC ASSUMPTIONS

POPULATION AND HOUSING CHARACTERISTICS

Impact fees often use per capita standards and persons per housing unit or persons per household to derive proportionate share fee amounts. Housing types have varying household sizes and, consequently, a varying demand on District infrastructure and services. Thus, it is important to differentiate between housing types and size.

When persons per housing unit (PPHU) is used in the development impact fee calculations, infrastructure standards are derived using year-round population. In contrast, when persons per household (PPHH) is used in the development impact fee calculations, the fee methodology assumes all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that fees for residential development in Middleton Rural Fire District be imposed according to persons per housing unit.

Based on housing characteristics, TischlerBise recommends using two housing unit categories for the Impact Fee study: (1) Single Family and (2) Multifamily. Each housing type has different characteristics which results in a different demand on District facilities and services.

The boundaries of the Fire District are not contiguous with available US Census geographies. In this case, geographies have been chosen that best represent the demographics of each area. The estimates in Figure 17 are for PPHU calculations for Middleton CCD. Base year population and housing units are estimated with another, more recent data source.

Middleton CCD is a US Census defined geography that is larger than the City of Middleton, including portions of unincorporated areas surrounding the city. This provides a better sample of demographics in the Middleton Rural Fire District. As a result, single family units have a household size of 3.14 persons and multifamily units have a household size of 2.38 persons. Additionally, there is a housing mix of 97 percent single family and 3 percent multifamily.

Figure 17. Persons per Housing Unit – Middleton Rural Fire District

Housing Type	Persons	Housing Units	Persons per Housing Unit	Households	Persons per Household	Housing Unit Mix
Single Family [1]	18,860	6,009	3.14	5,873	3.21	97%
Multifamily [2]	383	161	2.38	161	2.38	3%
Total	19,243	6,170	3.12	6,034	3.19	

[1] Includes attached and detached single family homes and mobile homes
[2] Includes all other types
Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

BASE YEAR HOUSING UNITS AND POPULATION

Base year population is derived from Middleton Rural Fire District Population and Housing Growth estimate data provided by the district. Based off of this data, the base year population estimate for Middleton Rural Fire District is 28,394. PPHU data shown in Figure 18 is used to convert this total population number to a total housing unit number, which is estimated to be 9,170 units. Then the housing unit mix percentage is applied to this total housing unit estimate to get a breakdown between single and multifamily units.

Figure 18. Base Year Housing Units and Population

Middleton Rural Fire District	Base Year 2023
Population [1]	28,394
Housing Units [2]	
Single Family	8,931
Multifamily	239
Total Housing Units	9,170

[1] Middleton Rural Fire District Population Estimate

[2] Middleton Rural Fire District Housing Estimate, TischlerBise analysis

NEW RESIDENTIAL CONSTRUCTION TREND

To illustrate residential development trends in the district, Figure 19 lists the past five years of new construction in Middleton CCD. The Fire District provides service to areas in Canyon County, Gem County, and Ada County. Housing growth estimates provided by the Fire District were analyzed to calculate the annual totals.

As seen in Figure 19, over the past five years in the Middleton Rural Fire District there has been a total of 1,694 housing units added with 1,650 being single family homes and 44 being multifamily homes. This leads to a five-year average of 339 housing units added annually.

Figure 19. Annual New Construction Estimates by Housing Type Middleton Rural Fire District

Housing Type	2018	2019	2020	2021	2022	Total	5-Year Average
Single Family	291	286	328	504	241	1,650	330
Multifamily	0	24	0	20	0	44	9
Total	291	310	328	524	241	1,694	339

Source: Middleton Rural Fire District building permit history

HOUSING UNIT AND POPULATION PROJECTIONS

Past housing construction trends are assumed to continue through the next ten years. The five-year annual average totals are included in the projections to estimate housing growth in the Fire District. Population growth is estimated based on housing development and PPHU by housing type. As a result, there are 3,390 new housing units projected in the Fire District over the next ten years, 3,300 units single family and 90 units multifamily. Based on the housing development, population in the Fire District is estimated to grow by 10,576 residents or 37.2 percent.

Figure 20. Residential Development Projections

Middleton Rural Fire District	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population [1]	28,394	29,452	30,510	31,567	32,625	33,683	34,740	35,798	36,855	37,913	38,971	**10,576**
Percent Increase		*3.7%*	*3.6%*	*3.5%*	*3.4%*	*3.2%*	*3.1%*	*3.0%*	*3.0%*	*2.9%*	*2.8%*	***37.2%***
Housing Units [2]												
Single Family	8,931	9,261	9,591	9,921	10,251	10,581	10,911	11,241	11,571	11,901	12,231	**3,300**
Multifamily	239	248	257	266	275	284	293	302	311	320	329	**90**
Total Housing Units	9,170	9,509	9,848	10,187	10,526	10,865	11,204	11,543	11,882	12,221	12,560	**3,390**

[1] Population projections are based on housing growth and PPHU factors
[2] Housing projections are based on building permit trends

CURRENT EMPLOYMENT AND NONRESIDENTIAL FLOOR AREA

The impact fee study will include nonresidential development as well. Utilizing ESRI Business Analyst data, 2023 total employment in the district is estimated at 2,064 jobs. ESRI Business Analyst profile data is used to breakdown this job total. Listed in Figure 21, there are an estimated 429 retail jobs, 469 office jobs, 494 industrial jobs, and 672 institutional jobs located in the district.

To estimate the nonresidential floor area, employee density factors from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual (2021) are applied to job estimated. Figure 22 lists the land use type and density factors that are included in the analysis. Overall, there are 1,383,671 square feet estimated in the district. Institutional and industrial development make up the majority of this with a combined 75 percent of the total floor area.

Figure 21. Base Year Employment and Nonresidential Floor Area

Employment Industries	Base Year Jobs [1]	Sq. Ft. per job [2]	Floor Area (sq. ft.)	Percent of Total
Retail	429	471	202,059	15%
Office	469	307	143,983	10%
Industrial	494	637	314,678	23%
Institutional	672	1,076	722,951	52%
Total	**2,064**		**1,383,671**	**100%**

[1] ESRI Business Analyst

[2] Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

Figure 22. Institute of Transportation Engineers (ITE) Employment Density Factors

Employment Industry	ITE Code	Land Use	Demand Unit	Emp per Dmd Unit	Sq. Ft. per Emp
Retail	820	Shopping Center	1,000 Sq Ft	2.12	471
Office	710	General Office	1,000 Sq Ft	3.26	307
Industrial	110	Light Industrial	1,000 Sq Ft	1.57	637
Institutional	520	Elementary School	1,000 Sq Ft	0.93	1076

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

EMPLOYMENT AND NONRESIDENTIAL FLOOR AREA PROJECTIONS

Job and nonresidential floor area projections for the next ten years are provided in Figure 23. Job growth is projected using Community Planning Association of Southwest Idaho (COMPASS) traffic analysis zone data. Over the next ten years there is a projected increase of 1,453 jobs in the district, a 70 percent increase from the base year. Institutional and industrial developments account for the greatest share of the increase.

Job growth is converted into nonresidential floor area using the ITE square feet per employee averages shown in Figure 22. Over the next ten years, the nonresidential floor area is projected to increase by approximately 974,000 square feet, a 70 percent increase from the base year.

Figure 23. Employment and Nonresidential Floor Area Projections

Middleton Rural Fire District	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs [1]												
Retail	429	463	497	523	550	576	603	629	663	697	731	**302**
Office	469	506	543	572	601	630	659	688	725	762	799	**330**
Industrial	494	533	572	603	633	664	694	724	763	803	842	**348**
Institutional	672	725	778	820	861	903	944	985	1,039	1,092	1,145	**473**
Total	2,064	2,228	2,391	2,518	2,645	2,772	2,899	3,026	3,190	3,353	3,517	**1,453**
Nonresidential Floor Area (1,000 sq. ft.) [2]												
Retail	202	218	234	247	259	271	284	296	312	328	344	**142**
Office	144	155	167	176	185	193	202	211	223	234	245	**101**
Industrial	315	340	365	384	403	423	442	461	486	511	536	**222**
Institutional	723	780	838	882	927	971	1,016	1,060	1,117	1,175	1,232	**509**
Total	1,384	1,493	1,603	1,688	1,773	1,858	1,944	2,029	2,138	2,248	2,358	**974**

[1] COMPASS (Community Planning Association of Southwest Idaho) Traffic Analysis Zone Model; TischlerBise analysis
[2] Source: Institute of Transportation Engineers, *Trip Generation* , 2021

VEHICLE TRIP GENERATION

RESIDENTIAL VEHICLE TRIPS BY HOUSING TYPE

A customized trip rate is calculated for the single family and multifamily units in the Middleton Rural Fire District. In Figure 24, the most recent data from the US Census American Community Survey is inputted into equations provided by the ITE to calculate the trip ends per housing unit factor. A single family unit is estimated to generate 12.91 trip ends and a multifamily unit is estimated to generate 7.76 trip ends on an average weekday.

Figure 24. Customized Residential Trip Ends by Housing Type

		Households by Structure Type[2]			
Tenure by Units in Structure	Vehicles Available[1]	Single Family	Multifamily	Total	Vehicles per HH by Tenure
Owner-Occupied	14,117	5,365	0	5,365	2.63
Renter-Occupied	1,485	508	161	669	2.22
Total	15,602	5,873	161	6,034	2.59
Housing Units[3]		6,009	161	6,170	

Housing Type	Persons in Households[4]	Trip Ends[5]	Vehicles by Type of Unit	Trip Ends[6]	Average Trip Ends	Local Trip Ends per HH	National Trip Ends per Unit[7]
Single Family	18,860	52,391	15,238	99,309	75,850	12.91	9.43
Multifamily	383	796	357	1,702	1,249	7.76	4.54
Total	19,243	53,187	15,595	101,011	77,099	12.78	

1. Vehicles available by tenure from Table B25046, 2020 American Community Survey 5-Year Estimates.
2. Households by tenure and units in structure from Table B25032, 2020 American Community Survey 5-Year Estimates.
3. Housing units from Table B25024, 2020 American Community Survey 5-Year Estimates.
4. Total population in households from Table B25033, 2020 American Community Survey 5-Year Estimates.
5. Vehicle trips ends based on persons using formulas from ITE Trip Generation. For single-family housing (ITE 210), the fitted curve equation is EXP(0.89*LN(persons)+1.72) [ITE 2017]. To approximate the average population of the ITE studies, persons were divided by 33 and the equation result multiplied by 33. For multi-family housing (ITE 221), the fitted curve equation is (2.29*persons)-81.02 [ITE 2017].
6. Vehicle trip ends based on vehicles available using formulas from ITE Trip Generation. For single-family housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.93) [ITE 2017]. To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 59 and the equation result multiplied by 59. For multifamily housing (ITE 220), the fitted curve equation is (3.94*vehicles)+293.58 [ITE 2012].
7. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

RESIDENTIAL VEHICLE TRIPS ADJUSTMENT FACTORS

A vehicle trip end is the out-bound or in-bound leg of a vehicle trip. As a result, so to not double count trips, a standard 50 percent adjustment is applied to trip ends to calculate a vehicle trip. For example, the out-bound trip from a person's home to work is attributed to the housing unit and the trip from work back home is attributed to the employer.

However, an additional adjustment is necessary to capture District residents' work bound trips that are outside of the district. The trip adjustment factor includes two components. According to the National Household Travel Survey, home-based work trips are typically 31 percent of out-bound trips (which are 50 percent of all trip ends). Also, utilizing the most recent data from the Census Bureau's web application "OnTheMap", 93 percent of Middleton workers travel outside the district for work. In combination, these factors account for 14 percent of additional production trips (0.31 x 0.50 x 0.93 = 0.14). Shown in Figure 25, the total adjustment factor for residential housing units includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (14 percent of production trips) for a total of 64 percent.

Figure 25. Residential Trip Adjustment Factor for Commuters

Trip Adjustment Factor for Commuters

Employed Middleton Residents (2020)	7,572
Residents Working in Middleton (2020)	649
Residents Commuting Outside of Middleton for Work	6,923
Percent Commuting Out of Middleton	91%
Additional Production Trips	**14%**

Standard Trip Adjustment Factor	**50%**
Residential Trip Adjustment Factor	**64%**

Source: U.S. Census, OnTheMap Application, 2020

NONRESIDENTIAL VEHICLE TRIPS

Vehicle trip generation for nonresidential land uses are calculated by using ITE's average daily trip end rates and adjustment factors found in their recently published 11th edition of *Trip Generation*. To estimate the trip generation in the Middleton Rural Fire District, the weekday trip end per 1,000 square feet factors listed in Figure 26 are used.

Figure 26. Institute of Transportation Engineers Nonresidential Factors

Employment Industry	ITE Code	Land Use	Demand Unit	Wkdy Trip Ends per Dmd Unit	Wkdy Trip Ends per Employee
Retail	820	Shopping Center	1,000 Sq Ft	37.01	17.42
Office	710	General Office	1,000 Sq Ft	10.84	3.33
Industrial	110	Light Industrial	1,000 Sq Ft	4.87	3.10
Institutional	520	Elementary School	1,000 Sq Ft	19.52	21.00

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

For nonresidential land uses, the standard 50 percent adjustment is applied to office, industrial, and institutional. A lower vehicle trip adjustment factor is used for retail because this type of development attracts vehicles as they pass-by on arterial and collector roads. For example, when someone stops at a convenience store on their way home from work, the convenience store is not their primary destination.

In Figure 27, the Institute for Transportation Engineers' land use code, daily vehicle trip end rate, and trip adjustment factor is listed for each land use.

Figure 27. Daily Vehicle Trip Factors

Land Use	ITE Codes	Daily Vehicle Trip Ends	Trip Adj. Factor	Daily Vehicle Trips
Residential (per housing unit)				
Single Family	210	12.91	64%	8.26
Multifamily	220	7.76	64%	4.97
Nonresidential (per 1,000 square feet)				
Retail	820	37.01	38%	14.06
Office	710	10.84	50%	5.42
Industrial	110	4.87	50%	2.44
Institutional	520	19.52	50%	9.76

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021); 'National Household Travel Survey, 2009

VEHICLE TRIP PROJECTIONS

The base year vehicle trip totals and vehicle trip projections are calculated by combining the vehicle trip end factors, the trip adjustment factors, and the residential and nonresidential assumptions for housing stock and floor area. Districtwide, residential land uses account for 74,978 vehicle trips and nonresidential land uses account for 11,444 vehicle trips in the base year (Figure 28).

Through 2033, it is projected that daily vehicle trips will increase by 35,770 trips with the majority of the growth being generated by single family (76 percent) and institutional (14 percent) development which leads to a 41 percent increase in vehicle trips from the base year through 2033.

Figure 28. Middleton Rural Fire District Vehicle Trip Projections

Middleton Rural Fire District	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Residential Trips												
Single Family	73,789	76,518	79,245	81,971	84,698	87,424	90,151	92,878	95,604	98,331	101,057	**27,268**
Multifamily	1,188	1,232	1,276	1,321	1,366	1,410	1,455	1,500	1,545	1,589	1,634	**446**
Subtotal	74,978	77,750	80,521	83,292	86,064	88,835	91,606	94,377	97,149	99,920	102,691	**27,714**
Nonresidential Trips												
Retail	2,842	3,067	3,292	3,467	3,642	3,817	3,992	4,167	4,392	4,617	4,842	**2,000**
Office	780	842	904	952	1,000	1,048	1,096	1,144	1,206	1,268	1,330	**549**
Industrial	766	827	888	935	982	1,029	1,076	1,123	1,184	1,245	1,306	**539**
Institutional	7,056	7,615	8,174	8,608	9,043	9,477	9,911	10,346	10,905	11,464	12,023	**4,967**
Subtotal	11,444	12,351	13,258	13,962	14,667	15,371	16,076	16,780	17,687	18,594	19,500	**8,056**
Vehicle Trips												
Grand Total	86,422	90,101	93,779	97,255	100,730	104,206	107,682	111,158	114,836	118,514	122,192	**35,770**

Source: Institute of Transportation Engineers, *Trip Generation* , 11th Edition (2021)