

Street Utility Framework Report Bismarck, ND

PREPARED FOR:

City of Bismarck,
North Dakota

AE2S Project No. P00501-2020-010

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Final Report



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1. EXECUTIVE SUMMARY

1.1. Objectives of the Study

The purpose of the study is to provide a comprehensive analysis to evaluate the various methods (Framework) the City of Bismarck (City) could use to design a Street Maintenance Utility Fee that would fund street maintenance activities currently funded with special assessments. This framework, in conjunction with the legislative outreach plan, will be used to demonstrate the impacts to local citizens and statewide leaders when shifting from special assessments to a utility fee structure.

When evaluating alternatives, city staff identified two major objectives for the framework:

Objective 1: The fee should be equitable, affordable, and reasonably tied to use of city streets.

- The final utility framework should equitably charge fees to all parcels.
- The resulting fees should be affordable for the average residential household and local business based on current demographic data.
- The method used to estimate benefit and calculate fees should be reasonably tied to use of the city streets.

Objective 2: The framework should be consistent with current City billing department billing parameters.

- For this framework to effectively replace street maintenance assessments, the city staff must be able to implement the framework using their existing data sources and utility billing software.

1.2. Revenue Requirements

The City maintains 362 center line miles of street through a combination of special assessments, sales taxes, and the occasional grant funding. The baseline revenue requirement for the framework was identified through an analysis of future capital improvements and existing special assessment debt.

AE2S reviewed the City's five-year capital improvement plan (CIP) to identify future street maintenance projects and the underlying revenue streams projected to fund them. The City plans to fund all future street maintenance projects through a combination of special assessments, sales taxes, and the occasional grant funding. The future capital improvements included in the revenue requirements were limited to the portion that would have been special assessed.

AE2S also reviewed the City's existing maintenance debt to determine the annual street maintenance debt service. This existing debt was used to fund street maintenance and reconstruction projects across the city. Table 1 shows the projected revenue requirements identified.

Table 1: Projected Revenue Requirements

	2021	2022	2023	2024	2025
Future Street Maintenance	\$20,275,600	\$15,274,400	\$19,324,340	\$19,207,175	\$19,719,655
Less: Other Revenue Sources	-\$8,080,350	-\$6,041,000	-\$7,020,600	-\$7,170,750	-\$6,331,200
Future Special Assessed Street Maintenance	\$12,195,250	\$9,233,400	\$12,303,740	\$12,036,425	\$13,388,455
<i>% Special Assessed</i>	<i>60%</i>	<i>61%</i>	<i>64%</i>	<i>63%</i>	<i>68%</i>
Annual Payment for Existing Debt	7,416,073	6,144,874	4,896,426	4,406,183	3,525,438
Projected Revenue Requirements	\$19,611,323	\$15,378,274	\$17,200,166	\$16,442,608	\$16,913,893

The City has street maintenance projects from the 2019 and 2020 construction seasons that are still under construction or are completed and have not been bonded yet. The projected debt service for these projects is unknown at this time, but it is assumed that the annual payments for existing debt will not decrease as rapidly in the near future as initially projected above. To account for the unknown future debt service and provide adequate coverage, an annual revenue requirement of \$20 million was selected.

1.3. Framework Design

AE2S met initially with city staff to review potential factors that could be applied to the framework and identify any incomplete data sets. Once the available data was refined, AE2S drafted framework alternatives for city staff to consider. After each alternative was drafted, AE2S met with city staff to discuss the calculation method, data sets used, fee equitability, and potential improvements. Five alternatives were reviewed and revised before the final recommended framework was selected. The recommended alternative applies the Institute of Transportation Engineers' trip generation (ITE) and account classes to calculate the fees.

ITE assigns benefit using standardized daily trip rates calculated for various land use descriptions. The Institute of Transportation Engineers is an international association of transportation professionals that establishes daily trip rates using data points collected over 37 years. ITE is the industry standard for developing trip generation data.

Account classes are generated by the City’s utility billing staff when an account is added to the system based on the current use of that account. This classification goes into significant detail, resulting in approximately 90 classifications at the time of this report.

Each account class was assigned an equivalent ITE land use description with a fixed daily trip rate. The daily trip rates are typically measured using one of three units depending on land use: parcel acreage, dwelling units served, and building square footage.

The final draft of the framework charges fees using either ITE trip generation or account classes depending on whether the parcel is classified as Residential or Commercial. These customer classes were grouped using the state’s property assessment definitions as found under North Dakota Century Code 57-02-01.

Revenue Requirement Allocation

AE2S evaluated multiple methods to allocate revenue requirements between the customer classes include daily trips generated and parcel area. Both resulted in revenue requirement allocations that put significant burden on the commercial class and did not meet the City’s first objective of being equitable, affordable, and reasonably tied to use of city streets for the average commercial property.

To meet this objective, AE2S used the City’s existing street maintenance specials as a benchmark. AE2S reviewed existing street maintenance specials for single family residential parcels, determined an average assessment of \$37 per month and allocated revenue requirements to target an equivalent residential fee. The remaining revenue requirement was allocated to the commercial class as shown in Table 2. More detail about residential and commercial fees are shown in Tables 3 and 4.

Table 2: Final Revenue Requirement Allocation

User Class	% Allocation	Revenue Requirement
Residential	35%	\$7,083,954
Commercial	65%	\$12,916,046
Total		\$20,000,000

Residential

The Residential user class only applies to single family residential parcels. The Residential fees were tiered and weighted to address affordability concerns for low- and fixed-income households. The data sets considered for defining the tiers are

garage stalls, main floor building area, and parcel area. City staff opted to tier residential rates using parcel area because it is the most complete data set available that will not become inaccurate over time as houses are improved. The final tiers are developed based on the percentiles for the data set and the target revenue requirement established above.

Table 3: Selected Alternative Residential Fees

Tier	Min. Parcel Area (sqft)	Weighting	Monthly Fee
1	0	0.75	\$24.00
2	8,000 (30 percentile)	1	\$32.00
3	11,000 (70 percentile)	1.25	\$40.00

Commercial

Commercial fees are calculated using ITE daily trip rates and weighting. Daily trips are calculated by applying ITE daily trip rates to account classes. Once daily trips are calculated, tiers are developed using percentile ranges to decrease variability of commercial rates while still accounting for differences in infrastructure usage. The percentiles applied ensure commercial accounts are evenly grouped across the tiers and the revenue requirements are not inequitably distributed within the commercial class. In addition to commercial classes, one multi-family tier class was also calculated. The multi-family and commercial tiers 2-4 are all determined by the tier 1 fee. Taking into account this weighting of the other tiers, the tier 1 fee was set to generate the commercial revenue requirement. The resulting fees are shown in Table 4.

Table 4: Selected Alternative Commercial Fees

Tier	Daily Trips	Percentiles	Fee Weight	Monthly Fee
1	0 – 10	0 – 29%	1	\$33.25
2	11 – 23	30 - 59%	3	\$99.75
3	24 – 87	60 – 79%	6	\$199.50
4	+88	+80%	10	\$332.50
Multi Family			80%	\$26.60 per unit

1.4. Implementation Hurdles

Prior to implementing this framework, there are three areas we recommend the City address:

- 1. Commercial Data Clean-Up:** There are a number of commercial parcels with building area and/or account class data missing. Both data sets should be audited to ensure accurate data is applied.

2. **Handling Pre-paid Assessments:** The City should develop a policy for how it will treat parcels that have pre-paid their street maintenance assessments. The exact number of parcels this applies to is unknown at this time, but the City should be cognizant of how policies deferring fees may impact utility revenues.
3. **Public Outreach:** It is recommended that the City engage in a public outreach program prior to the required public vote. Providing an opportunity for public input and education will be important as the subject matter can be complex.

2. INTRODUCTION

2.1. Background of the Study

The City of Bismarck created task forces in 2017 and 2018 to review the City's use of special assessments to fund city infrastructure and discuss other funding alternatives. Both the 2017 Special Assessment Task Force and the 2018 Combined Infrastructure and Special Assessment Task Forces recommended implementing a street utility fee to replace special assessments for maintenance costs to the City Commission.

Task Force members included representatives from government, business, apartment owners, builders, realtors, mobile home court owners, homeowners, renters, and mobile home park residents. These groups represented a wide gamut of the community and resulted in the 2017 and 2018 recommendations supported by nearly every community organization in the City. The recommendations received from both task forces led to the creation of this study.

2.2. Objectives of the Study

The purpose of the study is to provide a comprehensive analysis to evaluate the various methods (Framework) the City of Bismarck (City) could use to design a Street Maintenance Utility Fee that would fund street maintenance activities currently funded with special assessments. This framework, in conjunction with the legislative outreach plan, will be used to demonstrate the impacts to local citizens and statewide leaders when shifting to a utility fee structure.

When evaluating alternatives, city staff identified two major objectives for the framework:

Objective 1: The fee should be equitable, affordable, and reasonably tied to use of city streets.

- The final utility framework should equitably charge fees to all parcels.
- The resulting fees should be affordable for the average residential household and local business based on current demographic data.
- The method used to estimate benefit and calculate fees should be reasonably tied to use of the city streets.

Objective 2: The framework should be consistent with current City billing department billing parameters.

- For this framework to effectively replace street maintenance assessments, the city staff must be able to implement the framework using their existing data sources and utility billing software.

2.3. Study Overview

To meet the City’s objectives, the study consists of the following components:

- Develop Revenue Requirements;
- Identify User Classes; and
- Evaluate Framework Alternatives.

3. REVENUE REQUIREMENTS

The first step in developing a utility framework is identifying the annual revenues the fees will need to produce, otherwise known as revenue requirements. Identifying the annual revenue requirements involves analyzing future capital improvements to be funded through special assessments and the existing debt service payments from past street maintenance projects.

3.1. Future Capital Improvements

To promote the success of the street utility, it is vital to have a clear understanding of how the City currently funds street maintenance projects and what other revenue sources are used. AE2S reviewed the City’s five-year capital improvement plan (CIP) to identify future street maintenance projects and the underlying revenue streams projected to fund them. The City plans to fund all street maintenance projects through a combination of special assessments, sales taxes, and the occasional grant funding.

The City regularly uses revenues from the Sales Tax Fund to subsidize street maintenance. This revenue stream will continue to fund a portion of street maintenance expenses so the future capital improvements included in the revenue requirements were limited to the portion that would have been special assessed.

Table 5: Street Maintenance Funding Sources (2021-2025)

	2021	2022	2023	2024	2025	Total
Sales Tax Fund	\$7,510,350	\$3,361,000	\$6,250,600	\$6,500,750	\$5,711,200	\$29,333,900
Special Assessment Bonds	\$12,195,250	\$9,233,400	\$12,303,740	\$12,036,425	\$13,388,455	\$59,157,270
Other (Special Deficiency)	\$570,000	\$400,000	\$770,000	\$670,000	\$620,000	\$3,030,000
Federal Grant	\$ -	\$2,280,000	\$ -	\$ -	\$ -	\$2,280,000
Total	\$20,275,600	\$15,274,400	\$19,324,340	\$19,207,175	\$19,719,655	\$93,801,170

3.2. Existing Special Assessment Debt

The City has approximately \$35 million in outstanding special assessment debt attributed to street maintenance. This debt was used to fund street maintenance and reconstruction projects across the city. These improvements included resurfacing, mill and overlays, patch and seals, pavement repair, rehabilitation, and reconstruction of existing city streets. The City is not required to pay or subsidize the existing debt to implement the street utility but staff chose to include existing assessment debt in the revenue requirements to simplify implementation and ensure parcels were not paying annual street maintenance assessments as well as monthly street maintenance utility fees.

AE2S reviewed the City's existing maintenance debt schedules to determine the annual street maintenance debt service. The results of this review are shown in Table 6.

Table 6: Annual Debt Service for Street Maintenance Assessment Debt (2021-2025)

	2021	2022	2023	2024	2025
Reconstruction	\$2,548,662	\$2,223,269	\$1,629,804	\$1,570,056	\$1,532,699
Maintenance	\$4,867,411	\$3,921,605	\$3,266,621	\$2,836,127	\$1,992,739
Total Annual Debt Service	\$7,416,073	\$6,144,874	\$4,896,425	\$4,406,183	\$3,525,438

3.3. Results of Analysis

After reviewing both components, AE2S proposed two revenue requirement scenarios:

1. Future street maintenance and reconstruction costs; or
2. Future street maintenance and reconstruction costs plus all existing street maintenance special assessments.

The five-year projected annual revenue requirements for both scenarios are shown in Table 7 and Table 8.

Table 7: Scenario 1 Revenue Requirements (2021-2025)

	2021	2022	2023	2024	2025
Future Street Maintenance	\$20,275,600	\$15,274,400	\$19,324,340	\$19,207,175	\$19,719,655
Less: Other Revenue Sources	-\$8,080,350	-\$6,041,000	-\$7,020,600	-\$7,170,750	-\$6,331,200
Total Revenue Requirements	\$12,195,250	\$9,233,400	\$12,303,740	\$12,036,425	\$13,388,455

Table 8: Scenario 2 Revenue Requirements (2021-2025)

	2021	2022	2023	2024	2025
Future Street Maintenance	\$20,275,600	\$15,274,400	\$19,324,340	\$19,207,175	\$19,719,655
Less: Other Revenue Sources	-\$8,080,350	-\$6,041,000	-\$7,020,600	-\$7,170,750	-\$6,331,200
Existing Special Assessment Debt Payment	7,416,073	6,144,874	4,896,426	4,406,183	3,525,438
Total Revenue Requirements	\$19,611,323	\$15,378,274	\$17,200,166	\$16,442,608	\$16,913,893

Based on the information presented in Scenario 1 and Scenario 2, City staff elected to use Scenario 2 and fund both future street maintenance and existing special assessment debt service payments. The City has street maintenance projects from the 2019 and 2020 construction seasons that are still under construction or are completed and have not been bonded yet. The annual debt service for these projects is unknown at this time but it is assumed that the annual payments for existing debt will not decrease as rapidly in the near future as initially projected above. To account for the unknown future debt service and provide adequate coverage, an annual revenue requirement of \$20 million was selected.

4. USER CLASSES

Data from the City’s GIS and Utility Billing Departments was used to develop the framework and the utility’s user classes. AE2S evaluated this data as well as other City utilities to define user classes that are justifiable and in line with existing utility fees. A review of the City’s water, sewer, and stormwater utilities showed three major classes are currently used: Single Family Residential, Multi-Family Residential, and Commercial. The street utility applies those same classes to keep the billing consistent across all city utilities.

5. FRAMEWORK DEVELOPMENT

5.1. Factors Considered

AE2S reviewed street utilities in Pueblo, CO, Neenah, WI, and Clintonville, WI as well as the City’s existing utilities to identify which factors could be applied and which data is readily available to develop the utility fees. These factors are listed and described below:

- **Frontage Foot:** assigns benefit based on a parcel’s frontage. This measure has been used by the City in the past and is commonly used to assign benefit in special assessing.

- **Parcel Area:** assigns benefit based on a parcel's area. The City currently uses this method to assign benefit in special assessments.
- **Building Area:** assigns benefit based on the square footage of any buildings located on the parcel.
- **Impervious Area:** this factor is used to measure the level of development on a parcel. Higher benefit is assigned to parcels with higher impervious area. This factor is currently used in the stormwater utility.
- **Garage Stalls / Parking Lot Spaces:** assigns benefit based on the number of garage stalls within residential parcels and number of parking spaces associated with commercial parcels.
- **Land Use:** assigns benefit based on the land use code assigned by the city.
- **Zoning:** assigns benefit based on the zoning code assigned by the city.
- **Account Class:** assigns benefit based on the account class assigned by the City's billing department. Account classes describe the use of the property and are the most detailed land use data set available.
- **ITE Trip Generation (ITE):** assigns benefit using standardized daily trip rates calculated for various land use descriptions. The Institute of Transportation Engineers is an international association of transportation professionals that establishes daily trip rates using data points collected over 37 years. ITE is the industry standard for developing trip generation data and this is the most common factor applied in other street utilities reviewed for this project.

Initial feedback from the staff indicated that:

1. Frontage feet creates significant inequities for residential parcels and does not sufficiently reflect use of city streets;
2. Impervious area is only available for non-residential parcels; and
3. Land Use descriptions are out of date and unreliable.

5.2. Framework Design

Once the annual revenue requirement was identified and the City established which factors are available and reliable, AE2S created two initial framework alternatives for the City Staff to consider using account classes and zoning. ITE is applied in both alternatives to normalize the fees across the diverse uses within the city and acts as a defensible basis for applying different charges to different property types.

5.2.1. Alternative 1: Account Class + ITE Trip Generation

Account classes are generated by the City's utility billing staff when an account is added to the system based on the current use of that account. This classification goes into significant detail, resulting in approximately 90 classifications at the time of this report.

For this alternative, each account class was assigned an equivalent ITE land use description with a fixed daily trip rate. The daily trip rates are typically measured using one of three units depending on land use: parcel acreage, dwelling units served, and building square footage.

Revenue Requirement Allocation

Alternative 1 allocates revenue requirements and calculates monthly fees solely based on daily trip generation for individual parcels. The general calculation method is demonstrated in Figure 1. Table 9 outlines the total daily trips generated for the Residential and Commercial classes and the corresponding revenue requirements.

Figure 1: Alternative 1 Calculation Method

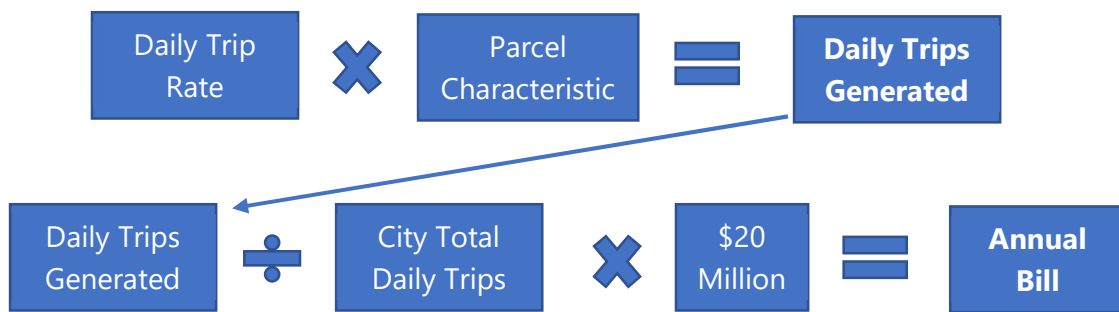


Table 9: Alternative 1 Revenue Requirement Allocation

	Daily Trips	%	Revenue Requirement
Residential	256,924	29%	\$5,739,127.25
Commercial	638,417	71%	\$14,260,872.75
Total	895,341	100%	\$20,000,000.00

Residential

ITE calculates daily trips for residential properties based on dwelling unit so the resulting residential fees are measured in dwelling units. Single Family Residential parcels are charged \$17.57 per dwelling unit and Multi-Family Residential parcels are charged \$13.63 per unit. The difference in per unit fee is a result of the difference in ITE daily trip rates. According to the daily trip rates, the average multifamily housing unit produces approximately 22.5 percent fewer trips than the

average single family household. Table 10 summarizes the average and maximum monthly fees for the residential classes.

Table 10: Alternative 1 Residential Fees

ITE Land Use	Average Units Served	Average Monthly Fee	Max Monthly Fee
Single Family	1.00	\$17.58	\$105.43
Multi-Family	3.36	\$48.18	\$1,989.41

Commercial

The majority of the ITE daily trip rates are attributed to commercial properties which leads to a wide range of ITE classes and daily trip rates. This is beneficial because it allows the city to more accurately classify commercial properties, but it also results in significant fee variability. Table 11 summarize the average and maximum monthly fees for commercial classes.

Table 11: Alternative 1 Commercial Fees

ITE Land Use	Average Monthly Fee	Max Monthly Fee
General Light Industrial	\$366	\$3,455
Manufacturing	\$221	\$221
Warehousing	\$48	\$209
Mini-Warehouse	\$21	\$34
Single-Family Residential	\$18	\$228
Multifamily Housing	\$33	\$436
Mid-Rise Residential w/ 1 st -Floor Commercial	\$272	\$749
Mobile Home Park	\$1,270	\$4,263
Public Park	\$100	\$265
Recreational Community Center	\$956	\$3,133
School	\$210	\$1,922
Church	\$98	\$532
Daycare Center	\$266	\$293
Hospital	\$18	\$18
Nursing Home	\$1,126	\$1,810
Clinic	\$1,501	\$7,081
General Office Building	\$50	\$4,159
Office Park	\$162	\$267
Business Park	\$433	\$2,330
Variety Store	\$3,881	\$86,870
Shopping Center	\$2,304	\$24,999
Automobile Sales (New)	\$342	\$617
Automobile Sales (Used)	\$357	\$690
Automobile Parts Sales	\$671	\$680
Supermarket	\$5,342	\$12,028
Discount Club	\$2,994	\$4,980
Department Store	\$7,919	\$9,508
Drive-In Bank	\$2,148	\$13,068
Drinking Place	\$205	\$238
Quality Restaurant	\$1,451	\$14,684
Fast Food Restaurant	\$2,306	\$4,915
Automobile Care Center	\$289	\$1,786
Gasoline/Service Station	\$14,373	\$36,835

5.2.2. Alternative 2: Zoning + ITE Trip Generation

The City has established 23 zoning codes across the city to estimate the general use and density of parcels within the zones. These zoning codes are assigned to ITE classes in a method similar to Alternative 1 to estimate the daily trips generated. Once the total daily trips are determined, the monthly fee is calculated by pro-rating the total revenue requirement (\$20 million).

Revenue Requirement Allocation

Revenue requirements are allocated solely based on daily trip generation for individual parcels. Because zoning can differ significantly from account class, the resulting total daily trips and revenue requirements differ from those in Alternative 1. The revenue requirement allocations for Alternative 2 are shown in Table 12 below.

Table 12: Alternative 2 Revenue Requirement Allocation

	Daily Trips	%	Revenue Requirement
Residential	264,059	36%	\$7,220,215
Commercial	467,385	64%	\$12,779,785
Total	731,444	100%	\$20,000,000

Residential

As with Alternative 1, ITE calculates daily trips for residential properties based on dwelling unit so the resulting residential fees are measured in dwelling units. Single Family Residential parcels were charged \$21.51 per dwelling unit and Multi-Family Residential parcels were charged \$16.68 per unit. Table 13 summarize the average and maximum monthly fees for the residential zoning codes.

Table 13: Alternative 2 Residential Fees

Zoning Code	Zoning Description	Average Monthly Bill	Max Monthly Bill
RMH	Res Mobile Hm Owned Lots	\$513.55	\$5,217.99
RMHC	Res Mobile Home Court	\$21.51	\$21.51
RM10	Res Multi Fam-10 Unit/Acre	\$29.96	\$100.08
RM30	Res Multi Fam-30 Unit/Acre	\$72.99	\$2,435.18
RM13	Res Multi-Fam 13 Unit/Acre	\$32.81	\$66.72
RM20	Res Multi-Fam 20 Unit/Acre	\$109.15	\$2,134.95
RM15	Res Muti Family 15 Units	\$32.66	\$1,134.19
R10	Residential Duplex	\$22.93	\$100.08
RT	Residential Light Comm	\$38.21	\$376.24
RM	Residential Multi Family	\$50.04	\$66.72
R5	Residential Single Family	\$21.64	\$107.55
RR	Rural Residential	\$21.51	\$21.51

Commercial

There are fewer commercial zoning codes than there are commercial account classes so Alternative 2 had less commercial variability than Alternative 1. Table 14 summarizes the average and maximum monthly fees for the commercial classes.

Table 14: Alternative 2 Commercial Fees

Zoning Code	Zoning Description	Average Monthly Bill	Max Monthly Bill
A	Agricultural	\$21.51	\$21.51
CG	Commercial	\$356.84	\$20,841.61
CA	Commercial Light	\$425.34	\$1,869.36
DC	Core Zoning District	\$2,153.75	\$34,725.62
DF	Downtown Fringe Zoning	\$753.75	\$6,934.94
HM	Health Medical	\$295.15	\$2,292.68
MB	Heavy Industrial	\$38.47	\$38.47
MA	Light Industrial	\$99.69	\$4,229.48
N/A	Not Applicable	\$21.51	\$21.51
PUD	Planned Unit Development	\$50.69	\$2,965.21
P	Public Use	\$73.49	\$821.11
RMH	Res Mobile Hm Owned Lots	\$21.51	\$21.51
RMHC	Res Mobile Home Court	\$21.51	\$21.51
RM10	Res Multi Fam-10 Unit/Acre	\$50.04	\$50.04
RM30	Res Multi Fam-30 Unit/Acre	\$21.51	\$21.51
RM13	Res Multi-Fam 13 Unit/Acre	\$21.51	\$21.51
RM20	Res Multi-Fam 20 Unit/Acre	\$21.51	\$21.51
RM15	Res Muti Family 15 Units	\$21.51	\$21.51
R10	Residential Duplex	\$33.36	\$33.36
RT	Residential Light Comm	\$21.51	\$21.51
R5	Residential Single Family	\$21.51	\$21.51
RR	Rural Residential	\$21.51	\$21.51

5.2.3. Alternative 1 and 2 Review with Staff

AE2S met with City Staff to review Alternatives 1 and 2 and discuss potential adjustments to the alternatives to normalize the fees and reduce variability for non-residential properties. Staff expressed concerns over maintenance of zoning designations and ensuring accuracy in the future.

AE2S was given direction to:

1. Use account classes as the underlying data source (Alternative 1)
2. Tier residential rates to address affordability for low-income and fixed-income residents; and
3. Reduce variability of non-residential rates.

5.2.4. Alternative 3: Garage Stalls + ITE Trip Generation

AE2S modified the Alternative 1 model, tiering single family properties using garage stalls. Garage stalls were selected as a data set because it is easily available to the city and can be correlated to a household's use of city streets. The three tiers were developed using percentiles to address the affordability concerns expressed by staff. The residential tiers with percentiles and weighting are shown in Table 15.

Table 15: Alternative 3 Residential Tiering

Tier	Garage Stalls	Percentiles	Weighting
1	0-1	0% – 19%	0.75
2	2-3	20% - 69%	1.0
3	+4	+70%	1.45

Revenue Requirement Allocation

Alternative 3 continues to allocate revenue requirements using daily trip counts of individual parcels, as done in Alternatives 1 and 2. Tiering the residential rates did not significantly impact revenue allocations between the two classes, reducing the residential allocation by approximately 0.05 percent. The resulting revenue requirement allocation is shown in Table 16.

Table 16: Alternative 3 Revenue Requirement Allocation

	Daily Trips	%	Revenue Requirement
Residential	254,957	29%	\$5,707,740
Commercial	638,417	71%	\$14,292,260
Total	893,374	100%	\$20,000,000

Resulting Fees

Table 17: Alternative 3 Residential Fees

ITE Land Use	Average Units Served	Average Monthly Fee	Max Monthly Fee
Single Family	1.00	\$17.39	\$79.25
Multi-Family	3.36	\$48.27	\$1,993.79

Table 18: Alternative 3 Commercial Fees

ITE Land Use	Average Monthly Fee	Max Monthly Fee
General Light Industrial	\$367	\$3,463
Manufacturing	\$221	\$221
Warehousing	\$48	\$209
Mini-Warehouse	\$21	\$34
Single-Family Residential	\$18	\$229
Multifamily Housing	\$33	\$437
Mid-Rise Residential w/ 1 st -Floor Commercial	\$272	\$751
Mobile Home Park	\$1,273	\$4,272
Public Park	\$100	\$266
Recreational Community Center	\$958	\$3,140
School	\$210	\$1,926
Church	\$98	\$533
Daycare Center	\$267	\$293
Hospital	\$18	\$18
Nursing Home	\$1,129	\$1,814
Clinic	\$1,504	\$7,097
General Office Building	\$50	\$4,168
Office Park	\$162	\$267
Business Park	\$434	\$2,335
Variety Store	\$3,890	\$87,062
Shopping Center	\$2,309	\$25,054
Automobile Sales (New)	\$343	\$618
Automobile Sales (Used)	\$357	\$691
Automobile Parts Sales	\$673	\$681
Supermarket	\$5,354	\$12,054
Discount Club	\$3,001	\$4,991
Department Store	\$7,937	\$9,528
Drive-In Bank	\$2,153	\$13,097
Drinking Place	\$206	\$239
Quality Restaurant	\$1,454	\$14,717
Fast Food Restaurant	\$2,311	\$4,925
Automobile Care Center	\$289	\$1,790
Gasoline/Service Station	\$14,405	\$36,916

Conclusions

After reviewing and discussing Alternative 3, AE2S and city staff reached the following conclusions:

1. Main floor square footage is a more reliable data set for single family tiering.
2. Charging fees directly from daily trips creates too much variability for commercial properties. Consolidated or averaged trip rates are needed.

5.2.5. Alternative 4: Weighted Dwelling Units + ITE Trip Generation

Alternative 4 had greater changes to rate calculations and revenue requirement allocations than seen in previous frameworks. Commercial fees were calculated using averaged daily trip rates. Residential fees were calculated based on weighted units, rather than the trip generation rates used previously. Once the residential user class ceased calculating daily trips, a new method was needed to allocate revenue requirements.

Revenue Requirement Allocation

Rather than allocating revenues based on city-wide trip generation, revenue requirements were assigned using parcel area. It was assumed that 50 percent of all commercial trips begin or end at a residential property so 50 percent of commercial parcel area was allocated to the residential class. Table 19 shows the new allocation.

Table 19: Alternative 4 Revenue Requirement Allocation

User Class	% Allocation	Revenue Requirement
Residential	64%	\$12,892,000
Commercial	36%	\$7,108,000
Total		\$20,000,000

Residential Weighting

The change from daily trips to weighted units resulted in new fee calculation methods for both single family and multi-family user classes. Without the use of account classes, a new data set was needed to distinguish between single family and multi-family residential. The City's utility billing data, which tracks the number of dwelling units served by each account, was used for this purpose. Single family residential is defined as a parcel serving one unit and multi-family residential is defined as a parcel serving more than one unit.

Once single family residential parcels were identified, tiers were applied using a method similar to the one shown in Alternative 3. Percentiles of main floor square

footage were reviewed to define tiers of similar sizes and the same weightings were applied. These new tiers are shown in Table 20.

Table 20: Alternative 4 Single Family Residential Tiering

Tier	Main Floor Sqft.	Percentiles	Weighting
1	0 – 999	0% – 33%	0.75
2	1,000 – 1,249	34% - 62%	1.0
3	+1,250	+63%	1.45

A single weighting factor of 77.54 percent is applied to all multi-family parcels. This factor is calculated by dividing the daily trip rate for multi-family housing by the daily trip rate for single family housing. Table 21 shows the resulting monthly fees for single family and multi-family parcels.

Table 21: Alternative 4 Residential Fees

ITE Land Use	Average Weighted Units	Average Monthly Fee	Max Monthly Fee
Single Family	1.08	\$39.41	\$53.07
Multi-Family	5.53	\$202.53	\$1,993.79

Commercial Fees

To address the variability of commercial fees in previous alternatives, averaged daily trip rates are applied. ITE daily trip rates are organized into nine major categories: Industrial/Agricultural, Residential, Lodging, Recreational, Institutional, Medical, Office, Retail, and Service. The average daily trip rates were calculated for each major category and are shown in Table 22.

Table 22: Alternative 4 Averaged Daily Trip Rates

ITE Class	Average Daily Trip Rate
Industrial/Agricultural	2.75
Residential	4.92
Lodging	5.05
Recreational	95.92
Institutional	23.49
Medical	18.37
Office	27.14
Retail	118.24
Services	432.39

The average daily trip rates were then applied based on the underlying account class and which ITE class it was associated with. The full list of account classes and associated ITE classes is shown in Appendix B. The resulting commercial fees are shown in Table 23.

Table 23: Alternative 4 Commercial Fees

ITE Class	Average Monthly Fee	Max Monthly Fee
Industrial/Agricultural	\$29.88	\$404.09
Residential	\$105.10	\$839.23
Lodging	\$21.65	120.71
Recreational	\$1,818.01	\$22,491.49
Institutional	\$118.66	\$4,743.93
Office	\$32.92	\$3,568.13
Retail	\$248.40	\$21,617.72
Services	\$127.94	\$1,848.41

Conclusions

AE2S and city staff met to review Alternative 4 and felt that this alternative was moving in the wrong direction. Final thoughts from the discussion were:

1. Main floor square footage is likely to change as homes are improved. Parcel area will remain accurate and is the better option for tiering.
2. Averaged trip rates are not the best way to reduce commercial variability.

5.2.6. Alternative 5: Tiered Fixed Fees

Incorporating the final thoughts from the Alternative 4 discussion with staff, major changes were made to the framework in developing Alternative 5.

User Classes

It was noted that multi-family residential properties are in fact treated as commercial in all other city utilities. To remain consistent with the other city utilities, all multi-family parcels were moved to the commercial user class.

Revenue Requirement Allocation

With the change to the user classes, a new allocation method was needed to determine revenue requirements. AE2S reviewed existing street maintenance specials for single family residential parcels, determined an average assessment of \$37 per month and allocated revenue requirements to target an equivalent residential fee.

Table 24: Alternative 5 Revenue Requirement Allocation

User Class	% Allocation	Revenue Requirement
Residential	35%	\$7,083,954
Commercial	65%	\$12,916,046
Total		\$20,000,000

Residential

Calculations for the single family residential fees are simplified as the underlying data point is changed from main floor square footage to parcel area and fixed tiers are established. The resulting tiers and fees are shown in Table 25.

Table 25: Alternative 5 Residential Fees

Tier	Min. Parcel Area (sqft)	Weighting	Monthly Fee
1	0	0.75	\$24.00
2	8,000 (30 percentile)	1	\$32.00
3	11,000 (70 percentile)	1.25	\$40.00

Commercial

Rather than using an average daily trip rate as shown in Alternative 4, Commercial variability is addressed by applying tiered, fixed fees to all commercial parcels based on daily trips. Daily trips are calculated in the same method used in Alternative 1 by applying ITE daily trip rates to account classes. Once daily trips are calculated, tiers are developed using percentile ranges to decrease variability of commercial rates while still accounting for differences in infrastructure usage. The percentiles applied ensure commercial accounts are evenly grouped across the tiers and the revenue requirements are not inequitably distributed within the commercial class. In addition to commercial classes, one multi-family tier was also calculated. All other tiers are weighted based on the tier 1 fee. Taking into account the weighting of the other tiers, the tier 1 fee was set to generate the commercial revenue requirement shown in Table 24. The resulting commercial and multi-family tiers are shown in Table 26.

Table 26: Alternative 5 Commercial Fees

Tier	Daily Trips	Percentiles	Fee Weight	Monthly Fee
1	0 – 10	0 – 29%	1	\$33.25
2	11 – 23	30 - 59%	3	\$99.75
3	24 – 87	60 – 79%	6	\$199.50
4	+88	+80%	10	\$332.50
Multi Family			80%	\$26.60 per unit

6. IMPLEMENTATION HURDLES

Prior to implementing this framework, there are three areas we recommend the City address:

- 1. Commercial Data Clean-Up:** There are a number of commercial parcels with building area and/or account class data missing. Both data sets should be audited to ensure accurate data is applied.
- 2. Handling Pre-paid Assessments:** The City should develop a policy for how it will treat parcels that have pre-paid their street maintenance assessments. The exact number of parcels this applies to is unknown at this time, but the City should be cognizant of how policies deferring fees may impact utility revenues.
- 3. Public Outreach:** It is recommended that the City engage in a public outreach program prior to the required public vote. Providing an opportunity for public input and education will be important as the subject matter can be complex.

APPENDIX A: ITE Trip Generation Land Use Rates

ITE No.	Land Use Description	Unit	Daily Rate
Industrial/Agricultural			
110	General Light Industrial	ksf	4.96
130	Industrial Park	ksf	3.37
140	Manufacturing	ksf	3.93
		ac.	35.02
150	Warehousing	ksf	1.74
		emp.	5.05
151	Mini-Warehouse	ksf	1.51
160	Data Center	ksf	0.99
Residential			
210	Single-Family Detached Housing	DU	9.44
220	Multifamily Housing	DU	7.32
231	Mid-Rise Residential w/ 1st-Floor Commercial	DU	3.44
240	Mobile Home Park	DU	5
251	Senior Adult Housing - Detached	DU	4.27
252	Senior Adult Housing - Attached	DU	3.7
253	Congregate Care Facility	DU	2.02
254	Assisted Living	beds	4.24
255	Continuing Care Retirement Community	units	2.4
270	Residential Planned Unit Development	DU	7.38
Lodging			
310	Hotel	rooms	8.36
311	All Suites Hotel	rooms	4.46
312	Business Hotel	rooms	4.02
320	Motel	rooms	3.35
330	Resort Hotel	rooms	n/a
Recreational			
411	Public Park	ac.	0.78
416	Campground/Recreational Vehicle Park	occ. sites	n/a
444	Movie Theatre	screens	220
445	Multiplex Movie Theatre	screens	292.5
488	Soccer Complex	fields	71.33
490	Tennis Courts	courts	30.32
491	Racquet/Tennis Club	courts	27.71
492	Health/Fitness Club	ksf	n/a
495	Recreational Community Center	ksf	28.82

ITE No.	Land Use Description	Unit	Daily Rate
Institutional			
520	Elementary School	ksf	19.52
		students	1.89
522	Middle School/Junior High School	ksf	20.17
		students	2.13
530	High School	ksf	14.07
		students	2.03
534	Private School (K-8)	students	4.11
536	Private School (K-12)	students	2.48
540	Junior/Community College	ksf	20.25
		students	1.15
560	Church (Weekday)	ksf	6.95
		seats	0.44
	Church (Sunday/Sunday peak)	ksf	27.63
		seats	1.21
565	Daycare Center	ksf	47.62
		students	4.09
590	Library	ksf	72.05
Medical			
610	Hospital	ksf	10.72
		beds	22.32
620	Nursing Home	ksf	6.24
		beds	3.06
630	Clinic	ksf	38.16
Office			
710	General Office Building	ksf	9.74
		emp.	3.28
715	Single Tenant Office Building	ksf	11.25
		emp.	3.77
720	Medical-Dental Office Building	ksf	34.8
		emp.	8.7
730	Government Office Building	ksf	22.59
		emp.	7.45
732	United States Post Office	ksf	103.94
750	Office Park	ksf	11.07
760	Research and Development Center	ksf	11.26
770	Business Park	ksf	12.44

ITE No.	Land Use Description	Unit	Daily Rate
Retail			
813	Free-Standing Discount Superstore	ksf	50.7
814	Variety Store	ksf	63.47
815	Free-Standing Discount Store	ksf	53.12
816	Hardware/Paint Store	ksf	9.14
817	Nursery (Garden Center)	ksf	68.1
820	Shopping Center	ksf	37.75
840	Automobile Sales (New)	ksf	27.84
841	Automobile Sales (Used)	ksf	27.06
843	Automobile Parts Sales	ksf	55.34
850	Supermarket	ksf	106.78
851	Convenience Market	ksf	762.28
		ksf	624.2
853	Convenience Market w/ Gas Pumps	fuel pos.	322.5
854	Discount Supermarket	ksf	90.87
857	Discount Club	ksf	41.8
858	Farmers Market	ksf	103.94
862	Home Improvement Superstore	ksf	30.74
875	Department Store	ksf	22.88
880	Pharmacy/Drugstore w/o Drive-Thru Window	ksf	90.08
881	Pharmacy/Drugstore w/Drive-Thru Window	ksf	109.16
890	Furniture Store	ksf	6.3
899	Liquor Store	ksf	101.49

ITE No.	Land Use Description	Unit	Daily Rate
Services			
912	Drive-In Bank	ksf	100.03
		lanes	124.76
925	Drinking Place	ksf	11.36
930	Fast Casual Restaurant	ksf	315.17
931	Quality Restaurant	ksf	83.84
		seats	2.6
932	High-Turnover (Sit-Down) Restaurant	ksf	112.18
		seats	4.37
933	Fast Food Restaurant w/o Drive-Thru	ksf	346.23
		seats	42.12
934	Fast Food Restaurant w/ Drive-Thru	ksf	470.95
		seats	19.52
936	Coffee/Donut Shop w/o Drive-Thru	ksf	754.55
		seats	n/a
937	Coffee/Donut Shop w/ Drive-Thru	ksf	820.38
		seats	n/a
942	Automobile Care Center	ksf	15.86
944	Gasoline/Service Station	ksf	1202.83
		fuel	
		pos.	172.01
945	Gasoline/Service Station w/ Convenience Market	ksf	1440.02
		fuel	
		pos.	205.36
949	Car Wash and Detail Center	stalls	156.2
960	Super Convenience Market/Gas Station	ksf	837.58
		fuel	
		pos.	230.52
970	Winery (Weekday)	ksf	45.96
	Winery (Saturday/Sunday peak)	ksf	205.11

APPENDIX B: Alternative 4 Account Class Categorizations

Account Class	ITE Class
Activity Center for Condo Complex	Residential
Addition for relatives	Residential
Apartment	Residential
Apartment Business Office	Residential
Assisted Living Facility	Residential
Auto Body Repair Shop	Services
Auto Repair Shop	Services
Bank	Services
Bar/Tavern	Retail
Brewery	Retail
Car Dealership - New, Used, Rental	Retail
Car Wash separate or no Gas Station	Services
Child Day Care Center	Institutional
Church	Institutional
City Fire Station	Institutional
Club House	Recreational
College Dormitory	Residential
Concrete Batch Plant	Industrial/Agricultural
Condo or Townhouse	Residential
Contracted Consecutive User	Retail
Emergency Service for the public	Institutional
Event Center	Services
Fast Food Restaurant	Retail
Fraternal organization owned property	Recreational
Funeral Home, Accountant, Salon, Etc...	Services
Gas Station separate or no Car Wash	Retail
Gas Station with Car wash	Retail
Golf Course Pro Shop	Retail
Grocery Store, butcher shop, food sales	Retail
Gym/Workout Facility	Recreational
Hanger for airport	Services
Healthcare Service (Home health, marijuana dispensary, etc)	Services
Healthcare, Dental, Eye Clinic	Services
Hotel	Lodging
Independent Living Apartments	Residential
Large retail chain store	Retail
Large Retail Mall	Retail
Laundromat	Services

Account Class	ITE Class
Law Enforcement Facility - Police, Highway Patrol, Sheriff	Institutional
Light Industrial uses - contractor, landscaper, etc.	Industrial/Agricultural
Local Jail, County Jail	Institutional
Main Hospital Building	Services
Maintenance Shop	Services
Meeting Hall for Church/gathering place	Recreational
Military Installation - housing, shops, etc.	Institutional
Mixed Use Facility - living units and commercial entity	Residential
Movie Theatres, Performing Arts, etc.	Services
Multi Family Condos	Residential
Museum	Services
Newspaper Publishing Facility	Retail
None	Retail
Nursing Home, Memory Care	Residential
Office Building	Office
Parking Garage	Retail
Parsonage for Church	Institutional
Police Department	Institutional
Pool House, Public Pool	Recreational
Public Park	Recreational
Public zoo	Recreational
Restaurant	Services
Restaurant with a Bar	Services
Retail	Retail
RV, Auto, and Equipment Dealership	Retail
School	Institutional
Sewer Lift Station	Institutional
Shelter for at risk persons	Residential
Shop Condo	Industrial/Agricultural
Single Family Dwelling	Residential
Small Retail or Mixed Services Mall	Retail
Sports Facility	Recreational
State Government Building	Institutional
State or Public Library	Institutional
State Prison	Institutional
Storage Units	Retail
Storage Warehouse	Retail
Strip Mall	Retail
Strip Mall with Mainly Professional Services in it	Services

Account Class	ITE Class
Tire Sales and Service	Retail
Trailer Court - Mobile Home Park	Residential
Triplex Homes	Residential
Twin Home / Duplex	Residential
Utility Substation	Institutional
Veterinary Clinic	Services
Wastewater Treatment Plant	Institutional
Water only meter that also feeds a cooling tower	Institutional
Water Pumping Station	Institutional
Water Treatment Plant	Institutional
Wholesale Sales	Retail