

## 2.6 SAMPLE CALCULATIONS

The following section details two (2) examples of maximum assessable roadway impact fee calculations.

### Example 1:

- **Development Type - One (1) Unit of Single-Family Housing**

| <b>Roadway Impact Fee Calculation Steps – Example 1</b> |  |
|---|--|
| <b>Step 1</b>   | <b>Determine Development Unit and Vehicle-Miles Per Development Unit</b>   |
|   | <p><i>From Table 8 [Land Use – Vehicle Mile Equivalency Table]</i><br/>                     Development Type: 1 Dwelling Unit of Single-Family Detached Housing<br/>                     Number of Development Units: 1 Dwelling Unit<br/>                     Veh-Mi Per Development Unit: <b>4.61 vehicle-miles per development unit</b></p> |
| <b>Step 2</b>   | <b>Determine Maximum Assessable Impact Fee Per Service Unit</b>  |
|   | <p><i>From Table 7, Line 15 [Maximum Assessable Fee Per Service Unit]</i><br/>                     Maximum Fee for Town of Fairview: <b>\$549 / vehicle-mile</b></p>   |
| <b>Step 3</b>   | <b>Determine Maximum Assessable Impact Fee</b>   |
|   | <p>Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit<br/>                     Impact Fee = 1 * 4.61 * \$549<br/>                     Maximum Assessable Impact Fee = \$2,525.00</p>  |

### Example 2:

- **Development Type – 3,500 sq. ft. High Turnover Sit-Down Restaurant**

| <b>Roadway Impact Fee Calculation Steps – Example 2</b> |  |
|---|--|
| <b>Step 1</b>   | <b>Determine Development Unit and Vehicle-Miles Per Development Unit</b>   |
|   | <p><i>From Table 8 [Land Use – Vehicle Mile Equivalency Table]</i><br/>                     Development Type: 3,500 square foot High Turnover Sit-Down Restaurant<br/>                     Development Unit: 1,000 square feet of Gross Floor Area<br/>                     Veh-Mi Per Development Unit: <b>15.68 vehicle-miles per development unit</b></p> |
| <b>Step 2</b>   | <b>Determine Maximum Assessable Impact Fee Per Service Unit</b>  |
|   | <p><i>From Table 7 Line 15 [Maximum Assessable Fee Per Service Unit]</i><br/>                     Maximum Fee for Town of Fairview: <b>\$549 / vehicle-mile</b></p>  |
| <b>Step 3</b>   | <b>Determine Maximum Assessable Impact Fee</b>   |
|   | <p>Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit<br/>                     Impact Fee = 3.5 * 15.68 * \$549<br/>                     Maximum Assessable Impact Fee = \$30,129.12</p>  |

**Table 2.8 Land Use / Vehicle-Mile Equivalency Table (LUVMET)**

| Land Use Category                    | ITE Land Use Code | Development Unit | Trip Gen Rate (PM) | Pass-by Rate | Pass-by Source | Trip Rate | NHTS Trip Length (mi) | Adj. For O-D | Adj. Trip Length (mi) | Max Trip Length (mi) | Veh-Mi Per Dev-Unit |
|--------------------------------------|-------------------|------------------|--------------------|--------------|----------------|-----------|-----------------------|--------------|-----------------------|----------------------|---------------------|
| <b>PORT AND TERMINAL</b>             |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Truck Terminal                       | 030               | 1,000 SF GFA     | 1.87               |              |                | 1.87      | 14.65                 | 50%          | 7.33                  | 5.00                 | 9.35                |
| <b>INDUSTRIAL</b>                    |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| General Light Industrial             | 110               | 1,000 SF GFA     | 0.65               |              |                | 0.65      | 14.65                 | 50%          | 7.33                  | 5.00                 | 3.25                |
| Industrial Park                      | 130               | 1,000 SF GFA     | 0.34               |              |                | 0.34      | 14.65                 | 50%          | 7.33                  | 5.00                 | 1.70                |
| Warehousing                          | 150               | 1,000 SF GFA     | 0.18               |              |                | 0.18      | 14.65                 | 50%          | 7.33                  | 5.00                 | 0.90                |
| Mini-Warehouse                       | 151               | 1,000 SF GFA     | 0.15               |              |                | 0.15      | 14.65                 | 50%          | 7.33                  | 5.00                 | 0.75                |
| <b>RESIDENTIAL</b>                   |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Single-Family Detached Housing       | 210               | Dwelling Unit    | 0.94               |              |                | 0.94      | 9.79                  | 50%          | 4.90                  | 4.90                 | 4.60                |
| Multi-Family Housing (Low-Rise)      | 220               | Dwelling Unit    | 0.51               |              |                | 0.51      | 9.79                  | 50%          | 4.90                  | 4.90                 | 2.49                |
| Multi-Family Housing (Mid-Rise)      | 221               | Dwelling Unit    | 0.39               |              |                | 0.39      | 9.79                  | 50%          | 4.90                  | 4.90                 | 1.91                |
| Multi-Family Housing (High-Rise)     | 222               | Dwelling Unit    | 0.32               |              |                | 0.32      | 9.79                  | 50%          | 4.90                  | 4.90                 | 1.56                |
| Residential Condominium/Townhome     | 220               | Dwelling Unit    | 0.51               |              |                | 0.51      | 9.79                  | 50%          | 4.90                  | 4.90                 | 2.49                |
| Senior Adult Housing - Single-Family | 251               | Dwelling Unit    | 0.30               |              |                | 0.30      | 9.79                  | 50%          | 4.90                  | 4.90                 | 1.47                |
| Senior Adult Housing - Multi-Family  | 252               | Dwelling Unit    | 0.25               |              |                | 0.25      | 9.79                  | 50%          | 4.90                  | 4.90                 | 1.22                |
| Assisted Living                      | 254               | Beds             | 0.24               |              |                | 0.24      | 9.79                  | 50%          | 4.90                  | 4.90                 | 1.17                |
| <b>LODGING</b>                       |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Hotel                                | 310               | Room             | 0.59               |              |                | 0.59      | 6.43                  | 50%          | 3.22                  | 3.22                 | 1.89                |
| Motel / Other Lodging Facilities     | 320               | Room             | 0.36               |              |                | 0.36      | 6.43                  | 50%          | 3.22                  | 3.22                 | 1.15                |
| <b>RECREATIONAL</b>                  |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Golf Driving Range                   | 432               | Tee              | 1.25               |              |                | 1.25      | 7.86                  | 50%          | 3.93                  | 3.93                 | 4.91                |
| Golf Course                          | 430               | Acre             | 0.28               |              |                | 0.28      | 7.86                  | 50%          | 3.93                  | 3.93                 | 1.10                |
| Recreational Community Center        | 495               | 1,000 SF GFA     | 2.50               |              |                | 2.50      | 7.86                  | 50%          | 3.93                  | 3.93                 | 9.82                |
| Ice Skating Rink                     | 465               | 1,000 SF GFA     | 1.33               |              |                | 1.33      | 7.86                  | 50%          | 3.93                  | 3.93                 | 5.22                |
| Miniature Golf Course                | 431               | Hole             | 0.33               |              |                | 0.33      | 7.86                  | 50%          | 3.93                  | 3.93                 | 1.29                |
| Multiplex Movie Theater              | 445               | Screens          | 13.96              |              |                | 13.96     | 7.86                  | 50%          | 3.93                  | 3.93                 | 54.86               |
| Racquet / Tennis Club                | 491               | Court            | 3.82               |              |                | 3.82      | 7.86                  | 50%          | 3.93                  | 3.93                 | 15.01               |
| <b>INSTITUTIONAL</b>                 |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Church                               | 560               | 1,000 SF GFA     | 0.49               |              |                | 0.49      | 8.31                  | 50%          | 4.16                  | 4.16                 | 2.03                |
| Day Care Center                      | 565               | 1,000 SF GFA     | 11.12              | 44%          | C              | 6.23      | 3.49                  | 50%          | 1.75                  | 1.75                 | 10.90               |
| Primary /Middle School (1-8)         | 522               | Students         | 0.15               |              |                | 0.15      | 3.49                  | 50%          | 1.75                  | 1.75                 | 0.26                |
| High School (9-12)                   | 525               | Students         | 0.14               |              |                | 0.14      | 3.49                  | 50%          | 1.75                  | 1.75                 | 0.24                |
| Junior / Community College           | 540               | Students         | 0.11               |              |                | 0.11      | 10.44                 | 50%          | 5.22                  | 5.00                 | 0.55                |
| University / College                 | 550               | Students         | 0.15               |              |                | 0.15      | 10.44                 | 50%          | 5.22                  | 5.00                 | 0.75                |
| <b>MEDICAL</b>                       |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Clinic                               | 630               | 1,000 SF GFA     | 3.69               |              |                | 3.69      | 9.85                  | 50%          | 4.93                  | 4.93                 | 18.19               |
| Hospital                             | 610               | 1,000 SF GFA     | 0.86               |              |                | 0.86      | 9.85                  | 50%          | 4.93                  | 4.93                 | 4.23                |
| Nursing Home                         | 620               | Beds             | 0.14               |              |                | 0.14      | 9.85                  | 50%          | 4.93                  | 4.93                 | 0.69                |
| Animal Hospital/Veterinary Clinic    | 640               | 1,000 SF GFA     | 3.53               | 30%          | B              | 2.47      | 9.85                  | 50%          | 4.93                  | 4.93                 | 12.17               |
| <b>OFFICE</b>                        |                   |                  |                    |              |                |           |                       |              |                       |                      |                     |
| Corporate Headquarters Building      | 714               | 1,000 SF GFA     | 1.30               |              |                | 1.30      | 14.65                 | 50%          | 7.33                  | 5.00                 | 6.50                |
| General Office Building              | 710               | 1,000 SF GFA     | 1.44               |              |                | 1.44      | 14.65                 | 50%          | 7.33                  | 5.00                 | 7.20                |
| Medical-Dental Office Building       | 720               | 1,000 SF GFA     | 3.93               |              |                | 3.93      | 9.85                  | 50%          | 4.93                  | 4.93                 | 19.37               |
| Single Tenant Office Building        | 715               | 1,000 SF GFA     | 1.76               |              |                | 1.76      | 14.65                 | 50%          | 7.33                  | 5.00                 | 8.80                |
| Office Park                          | 750               | 1,000 SF GFA     | 1.30               |              |                | 1.30      | 14.65                 | 50%          | 7.33                  | 5.00                 | 6.50                |

**Key to Sources of Pass-by Rates:**

A: ITE Trip Generation Handbook 3rd Edition (September 2017)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: 2021 Pass-By Tables for ITETripGen Appendices

**Table 2.8 Land Use / Vehicle-Mile Equivalency Table (LUVMET) (Continued)**

| Land Use Category                              | ITE Land Use Code | Development Unit         | Trip Gen Rate (PM) | Pass-by Rate | Pass-by Source | Trip Rate | NHTS Trip Length (mi) | Adj. For O-D | Adj. Trip Length (mi) | Max Trip Length (mi) | Veh-Mi Per Dev-Unit |
|--|-------------------|--------------------------|--------------------|--------------|----------------|-----------|-----------------------|--------------|-----------------------|----------------------|---------------------|
| <b>COMMERCIAL</b>                              |                   |                          |                    |              |                |           |                       |              |                       |                      |                     |
| <b>Automobile Related</b>                      |                   |                          |                    |              |                |           |                       |              |                       |                      |                     |
| Automobile Care Center                         | 942               | 1,000 SF Occ. GLA        | 3.11               | 40%          | B              | 1.87      | 4.45                  | 50%          | 2.23                  | 2.23                 | 4.17                |
| Automobile Parts Sales                         | 843               | 1,000 SF GFA             | 4.90               | 43%          | A              | 2.79      | 4.45                  | 50%          | 2.23                  | 2.23                 | 6.22                |
| Gasoline/Service Station                       | 944               | Vehicle Fueling Position | 13.91              | 42%          | A              | 8.07      | 1.20                  | 50%          | 0.60                  | 0.60                 | 4.84                |
| Gasoline/Service Station w/ Conv Market        | 945               | Vehicle Fueling Position | 18.42              | 56%          | B              | 8.10      | 1.20                  | 50%          | 0.60                  | 0.60                 | 4.86                |
| New and Used Car Sales                         | 841               | 1,000 SF GFA             | 3.75               | 20%          | B              | 3.00      | 4.45                  | 50%          | 2.23                  | 2.23                 | 6.69                |
| Quick Lubrication Vehicle Shop                 | 941               | Servicing Positions      | 4.85               | 40%          | B              | 2.91      | 4.45                  | 50%          | 2.23                  | 2.23                 | 6.48                |
| Self-Service Car Wash                          | 947               | Wash Stalls              | 5.54               | 40%          | B              | 3.32      | 1.20                  | 50%          | 0.60                  | 0.60                 | 1.99                |
| Car Wash and Detail Center                     | 949               | Wash Stalls              | 13.60              | 40%          | B              | 8.16      | 1.20                  | 50%          | 0.60                  | 0.60                 | 4.89                |
| Tire Store                                     | 848               | 1,000 SF GFA             | 3.75               | 25%          | C              | 2.81      | 4.45                  | 50%          | 2.23                  | 2.23                 | 6.26                |
| <b>Dining</b>                                  |                   |                          |                    |              |                |           |                       |              |                       |                      |                     |
| Fast Food Restaurant with Drive-Thru Window    | 934               | 1,000 SF GFA             | 33.03              | 50%          | A              | 16.52     | 5.64                  | 50%          | 2.82                  | 2.82                 | 46.58               |
| Fast Food Restaurant without Drive-Thru Window | 933               | 1,000 SF GFA             | 33.21              | 50%          | B              | 16.61     | 5.64                  | 50%          | 2.82                  | 2.82                 | 46.84               |
| High Turnover (Sit-Down) Restaurant            | 932               | 1,000 SF GFA             | 9.05               | 43%          | A              | 5.16      | 6.07                  | 50%          | 3.04                  | 3.04                 | 15.68               |
| Fine Dining Restaurant                         | 931               | 1,000 SF GFA             | 7.80               | 44%          | A              | 4.37      | 6.07                  | 50%          | 3.04                  | 3.04                 | 13.28               |
| Fast Casual Restaurant                         | 930               | 1,000 SF GFA             | 12.55              | 43%          | A              | 7.15      | 6.07                  | 50%          | 3.04                  | 3.04                 | 21.73               |
| Coffee/Donut Shop with Drive-Thru Window       | 937               | 1,000 SF GFA             | 38.99              | 70%          | A              | 11.70     | 4.53                  | 50%          | 2.27                  | 2.27                 | 26.55               |
| <b>Other Retail</b>                            |                   |                          |                    |              |                |           |                       |              |                       |                      |                     |
| Free-Standing Retail Store                     | 815               | 1,000 SF GFA             | 4.86               | 20%          | C              | 3.89      | 5.60                  | 50%          | 2.80                  | 2.80                 | 10.89               |
| Nursery (Garden Center)                        | 817               | 1,000 SF GFA             | 6.94               | 30%          | B              | 4.86      | 5.60                  | 50%          | 2.80                  | 2.80                 | 13.60               |
| Home Improvement Superstore                    | 862               | 1,000 SF GFA             | 2.29               | 48%          | A              | 1.19      | 5.60                  | 50%          | 2.80                  | 2.80                 | 3.33                |
| Pharmacy/Drugstore                             | 881               | 1,000 SF GFA             | 10.25              | 49%          | A              | 5.23      | 5.60                  | 50%          | 2.80                  | 2.80                 | 14.64               |
| Shopping Center                                | 820               | 1,000 SF GLA             | 3.40               | 34%          | A              | 2.24      | 5.60                  | 50%          | 2.80                  | 2.80                 | 6.27                |
| Supermarket                                    | 850               | 1,000 SF GFA             | 8.95               | 24%          | C              | 6.80      | 5.60                  | 50%          | 2.80                  | 2.80                 | 19.04               |
| Toy/Children's Superstore                      | 864               | 1,000 SF GFA             | 5.00               | 30%          | B              | 3.50      | 5.60                  | 50%          | 2.80                  | 2.80                 | 9.80                |
| Department Store                               | 875               | 1,000 SF GFA             | 1.95               | 30%          | B              | 1.37      | 5.60                  | 50%          | 2.80                  | 2.80                 | 3.83                |
| <b>SERVICES</b>                                |                   |                          |                    |              |                |           |                       |              |                       |                      |                     |
| Walk-In Bank                                   | 911               | 1,000 SF GFA             | 12.13              | 40%          | B              | 7.28      | 4.45                  | 50%          | 2.23                  | 2.23                 | 16.23               |
| Drive-In Bank                                  | 912               | Drive-in Lanes           | 27.07              | 47%          | A              | 14.35     | 4.45                  | 50%          | 2.23                  | 2.23                 | 32.00               |
| Hair Salon                                     | 918               | 1,000 SF GLA             | 1.45               | 30%          | B              | 1.02      | 4.45                  | 50%          | 2.23                  | 2.23                 | 2.27                |

**Key to Sources of Pass-by Rates:**

- A: ITE Trip Generation Handbook 3rd Edition (September 2017)
- B: Estimated by Kimley-Horn based on ITE rates for similar categories
- C: 2021 Pass-By Tables for ITETripGen Appendices

Table 3.1: Maximum Assessable Water Impact Fee for Commonly Used Meters

| Meter Size*   | Maximum Continuous Operating Capacity (GPM)** | Service Unit Equivalent | Maximum Assessable Fee (\$) |
|---------------|---|-------------------------|-----------------------------|
| 5/8"x 3/4" PD | 10  | 1                       | 1,175                       |
| 3/4" PD       | 15  | 1.5                     | 1,763                       |
| 1" PD         | 25  | 2.5                     | 2,938                       |
| 1 1/2" PD     | 50  | 5                       | 5,875                       |
| 2" PD         | 80  | 8                       | 9,400                       |
| 2" Compound   | 80  | 8                       | 9,400                       |
| 2" Turbine    | 160   | 16                      | 18,800                      |
| 3" Compound   | 175   | 17.5                    | 20,563                      |
| 3" Turbine    | 350   | 35                      | 41,125                      |
| 4" Compound   | 300   | 30                      | 35,250                      |
| 4" Turbine    | 650   | 65                      | 76,375                      |
| 6" Compound   | 675   | 67.5                    | 79,313                      |
| 6" Turbine    | 1,400   | 140                     | 164,500                     |
| 8" Compound   | 900   | 90                      | 105,750                     |
| 8" Turbine    | 2,400   | 240                     | 282,000                     |
| 10" Turbine   | 3,500   | 350                     | 411,250                     |

\* PD = Positive Displacement Meter (Typical Residential Meter)

\*\* Operating capacities obtained from American Water Works (AWWA) C-700, C-701 & C-702

## 3.2 INTRODUCTION

The Town contracted Kimley-Horn and Associates, Inc. (Kimley-Horn) in January of 2021 to update the existing water impact fee. The most recent water impact fee update was completed by Kimley-Horn in September 2015. The purpose of the report is to satisfy the requirements of the law and provide the Town with an updated impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the Local Government Code.

- (a) *The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:*
- (1) *a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;*
  - (2) *an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;*

Table 4.1: Maximum Assessable Wastewater Impact Fee for Commonly Used Meters

| Meter Size*   | Maximum Continuous Operating Capacity (GPM)** | Service Unit Equivalent | Maximum Assessable Fee (\$) |
|---------------|---|-------------------------|-----------------------------|
| 5/8"x 3/4" PD | 10  | 1                       | 810                         |
| 3/4" PD       | 15  | 1.5                     | 1,215                       |
| 1" PD         | 25  | 2.5                     | 2,025                       |
| 1 1/2" PD     | 50  | 5                       | 4,050                       |
| 2" PD         | 80  | 8                       | 6,480                       |
| 2" Compound   | 80  | 8                       | 6,480                       |
| 2" Turbine    | 160   | 16                      | 12,960                      |
| 3" Compound   | 175   | 17.5                    | 14,175                      |
| 3" Turbine    | 350   | 35                      | 28,350                      |
| 4" Compound   | 300   | 30                      | 24,300                      |
| 4" Turbine    | 650   | 65                      | 52,650                      |
| 6" Compound   | 675   | 67.5                    | 54,675                      |
| 6" Turbine    | 1,400   | 140                     | 113,400                     |
| 8" Compound   | 900   | 90                      | 72,900                      |
| 8" Turbine    | 2,400   | 240                     | 194,400                     |
| 10" Turbine   | 3,500   | 350                     | 283,500                     |

\* PD = Positive Displacement Meter (Typical Residential Meter)

\*\* Operating capacities obtained from American Water Works (AWWA) C-700, C-701 & C-702

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- (1) *a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;*
  - (2) *an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;*