WASTEWATER COLLECTION SYSTEM IMPACT FEE FACILITY PLAN AND IMPACT FEE ANALYSIS

(HAL Project No.: 260.63.100)

DRAFT

December 2025

HANSEN ALLEN & LUCE INC
ENGINEERS

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CITY OF SPRINGVILLE

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Katie Jacobsen, P.E.

Project Manager

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IMPACT FEE CERTIFICATION

The Utah Impact Fee Act requires certifications for the Impact Fee Facilities Plan (IFFP) and the Impact Fee Analysis (IFA). Hansen, Allen & Luce provides these certifications with the understanding that the recommendations in the IFFP and IFA are followed by City Staff and elected officials. If all or a portion of the IFFP or IFA are modified or amended, or if assumptions presented in this analysis change substantially, this certification is no longer valid. All information provided to Hansen, Allen & Luce, Inc. is assumed to be correct, complete, and accurate.

IFFP Certification

Hansen, Allen & Luce, Inc. certifies that the Impact Fee Facilities Plan (IFFP) prepared for the wastewater collection system:

1. includes only the costs of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. complies in each and every relevant respect with the Impact Fees Act.

HANSEN, ALLEN & LUCE, INC.

IFA Certification

Hansen, Allen & Luce, Inc. certifies that the Impact Fee Analysis (IFA) prepared for the wastewater collection system:

1. includes only the costs of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;
    d. offsets costs with grants or other alternate sources of payment; and
3. complies in each and every relevant respect with the Impact Fees Act.

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IMPACT FEE SUMMARY

The impact fees for the Springville wastewater collection system were last updated in 2024. The Wastewater Collection System Master Plan has recently been updated in 2025. Construction costs continue to rise due to a number of factors, including material shortages, labor shortages, and supply chain constraints. To incorporate the master plan update and account for rising construction costs, Springville City commissioned this impact fee update.

This impact fee addresses the **collection system only**. Treatment has been addressed in a different study and is not incorporated into this document.

The **purpose** of the Impact Fee Facility Plan (IFFP) and Impact Fee Analysis (IFA) is to comply with the requirements of the Utah Impact Fees Act by identifying demands placed on the existing wastewater collection system by new development and by identifying the means by which the City will meet these new demands. The Springville City Wastewater Collection System Master Plan has been used in support of this analysis. There are several growth-related capital facilities anticipated to be needed in the next 10 years, so the calculated impact fee is based on anticipated capital facility projects as well as existing excess capacity and documented historic costs.

The impact fee **service area** is the current Springville City municipal boundary, and future areas anticipated to be annexed into the City.

The level of service for wastewater collection is 250 gpd per ERU.

The impact fee unit for wastewater collection is based on the Equivalent Residential Unit (ERU). An ERU is equal to the average quantity of wastewater generated by one residential connection. The method of using ERUs for analysis is a way to allocate existing and future loading of non-residential land uses.

The existing system served about 20,794 ERUs at the beginning of 2025. Projected **growth** adds 4,452 equivalent residential connections in the next 10 years for a total of 25,246 connections or equivalent by 2035.

The costs calculated for the capacity required for growth in the next 10 years come from the proportional historical buy-in costs of **excess capacity** in existing facilities and **new projects** required entirely to provide capacity for new development. The cost of providing capacity to resolve existing deficiencies is not included in the impact fee. However, excess capacity can be built into projects intended to solve existing deficiencies, and this excess capacity can be included in the impact fee. Likewise, available capacity in existing facilities and capacity that is created through new projects is included in the impact fee. In addition to the proportionate share of costs of existing facilities, the impact fee is based on infrastructure that will be constructed within the next 10 years.

Components of the impact fee are presented in Table S-1.

Table S-1
Wastewater Impact Fee Costs

Component	Per Typical Residential Connection
Collection	$1,376
Planning	$47
Total	**$1,423**

SECTION 1
INTRODUCTION

1.1 Background

Springville is located in central Utah County, alongside I-15 and on the southern end of the Provo-Orem metropolitan area. According to Springville City staff, the City had an estimated population of 36,500 in 2024.

1.2 Purpose

The City has recognized the need to plan for increased demands on its wastewater collection system as a result of growth. To do so, an Impact Fee Facility Plan (IFFP) and Impact Fee Analysis (IFA) were completed to allow the City to charge an impact fee to help pay for capital projects necessary to support future growth.

The impact fees for the Springville wastewater collection system were last updated in 2024. Since that time, the Wastewater Collection System Master Plan has been updated and construction costs have risen due to a number of factors, including material shortages, labor shortages, and supply chain constraints. To incorporate the master plan update and account for rising construction costs, Springville City commissioned this impact fee update.

This report identifies those items that the Utah Impact Fees Act specifically requires, including demands placed upon existing facilities by new development and the proposed means by which the municipality will meet those demands. The Wastewater Collection Master Plan that was prepared in 2025 was also used to support this analysis. Information from the master plan was updated to characterize existing conditions. The master plan identified several growth-related projects needed within the 10-year planning window. Therefore, the calculated impact fee is based on excess capacity and documented historic costs, as well as future capital projects.

1.3 Impact Fee Collection

Impact fees enable local governments to finance public facility improvements necessary for growth, without burdening existing customers with costs that are exclusively attributable to growth.

An impact fee is a one-time charge on new development to pay for that portion of a public facility that is required to support that new development.

To determine the appropriate impact fee, the cost of the facilities associated with future development must be proportionately distributed. As a guideline in determining the “proportionate share”, the fee must be found to be roughly proportionate and reasonably related to the impact caused by the new development.

1.4 Master Planning

A Wastewater Collection System Master Plan was prepared in 2025 and is incorporated by reference into this analysis. The master plan for the City's wastewater collection system is more comprehensive than the IFFP and IFA. It provides the basis for the IFFP and IFA and identifies all capital facilities required for the drinking water system inside the 20-year planning range, including maintenance, repair, replacement, and growth-related projects. This updated IFFP and IFA is also based on updated information on actual growth that has occurred since the last report was completed.

The recommendations made within the master plan are in compliance with current City policies and standard engineering practices.

A hydraulic model of the wastewater collection system was used to complete the Wastewater Collection System Master Plan. The model was used to assess existing performance, to establish a proposed level of service and to confirm the effectiveness of the proposed capital facility projects to maintain the proposed level of service over the next 10 years.

SECTION 2
EXISTING WASTEWATER COLLECTION SYSTEM

2.1 General

The purpose of this chapter is to provide information regarding the existing wastewater collection system, identify the current and proposed levels of service, and analyze the remaining capacity of the existing system's facilities.

Springville's existing wastewater collection system is comprised of gravity pipes including laterals, collectors, interceptors and an outfall. The system also includes lift stations, force mains and a wastewater reclamation facility (WRF). Figure 2-1 of the wastewater collection system master plan illustrates the existing wastewater system and is included for reference in Appendix A.

2.2 Existing Equivalent Residential Units

To compare the relative quantities of wastewater generation between different types of land use, it is helpful to use a common unit of measure. The unit of measure that is used with this analysis is the Equivalent Residential Unit (ERU). The use of ERUs is a typical approach to describe the flow requirement of a wastewater collection system. An ERU is equal to the average quantity of wastewater generation of residential connections. Once the ERU is established, non-residential uses can be quantified in terms of ERU fractions or multiples. ERUs for nonresidential uses are computed as the ratio of the non-residential wastewater generation in comparison to an equivalent residential level of service. For this analysis, all residential connections, including townhouses and apartments were equated to one ERU for indoor water demands.

For drinking water, Springville City has selected a 1-inch diameter water meter as the standard connection for a residential service. Non-residential developments are assigned a number of ERUs based on their meter size. Given that wastewater collection is not metered, and given that wastewater is generated from water passing through the drinking water meter, the wastewater impact fee is also based on drinking water meter size. The number of wastewater ERUs designated for each property is the same the number of ERCs designated for the water according to the meter size.

2.3 Level of Service

The level of service designated for the wastewater collection system has been established by the City to provide adequate wastewater collection capacity.

Wastewater Generation

- The existing level of service is 250 gpd per ERU.

Wastewater Collection System Capacity

- Peak daily flow in the pipe must not exceed a depth/diameter ratio of 0.75. The remaining capacity is reserved for unexpected flows, peaking, or flow restrictions. Per State of Utah standards, no newly installed collection pipe may be less than 8 inches in diameter.

2.4 Methodology Used to Determine Existing System Capacity

The method for determining the remaining capacity in the wastewater collection system was based on the defined level of service in terms of ERUs. The difference between the ERU capacity and ERU existing demand for the system is the remaining capacity.

A hydraulic model was developed for the purpose of assessing system operation and capacity. For pipelines, the model was used to develop a plan for the future system. The size of each pipeline was determined based on projected future flow rates and a maximum depth over pipe diameter (d/D) ratio of 0.75.

2.5 Collections

The existing Springville City wastewater collection system consists of nearly 150 miles of gravity pipeline and about 2,900 manholes. The gravity pipes range in size from 4-inch diameter to 36-inch diameter. The system also has force main piping ranging from 2-inch diameter to 12-inch diameter. Lift stations are used to pump wastewater where gravity flow sewers cannot convey flow to the wastewater treatment facility.

2.6 Capital Facilities to Meet System Deficiencies

The existing wastewater collection system is generally adequate to convey the anticipated wastewater to the wastewater treatment plant. However, there are a few areas with inadequate capacity. These are described in Table 6-3 in the Wastewater Collection System Master Plan. Projects intended to correct existing deficiencies are not eligible for impact fees and are not discussed further in this report.

CHAPTER 3
IMPACT FEE CALCULATION

3.1 General

This chapter relies on the data presented in the previous chapters to calculate a proposed impact fee based on the appropriate proportion of cost of projects planned in the next 10 years to increase capacity for new growth and an appropriate buy-in cost of available existing excess capacity previously purchased by the City.

The wastewater collection system facility projects planned in the next 10 years to increase capacity for new growth included within the impact fee are presented. Also included in this chapter are the possible revenue sources that the City may consider to fund the recommended projects.

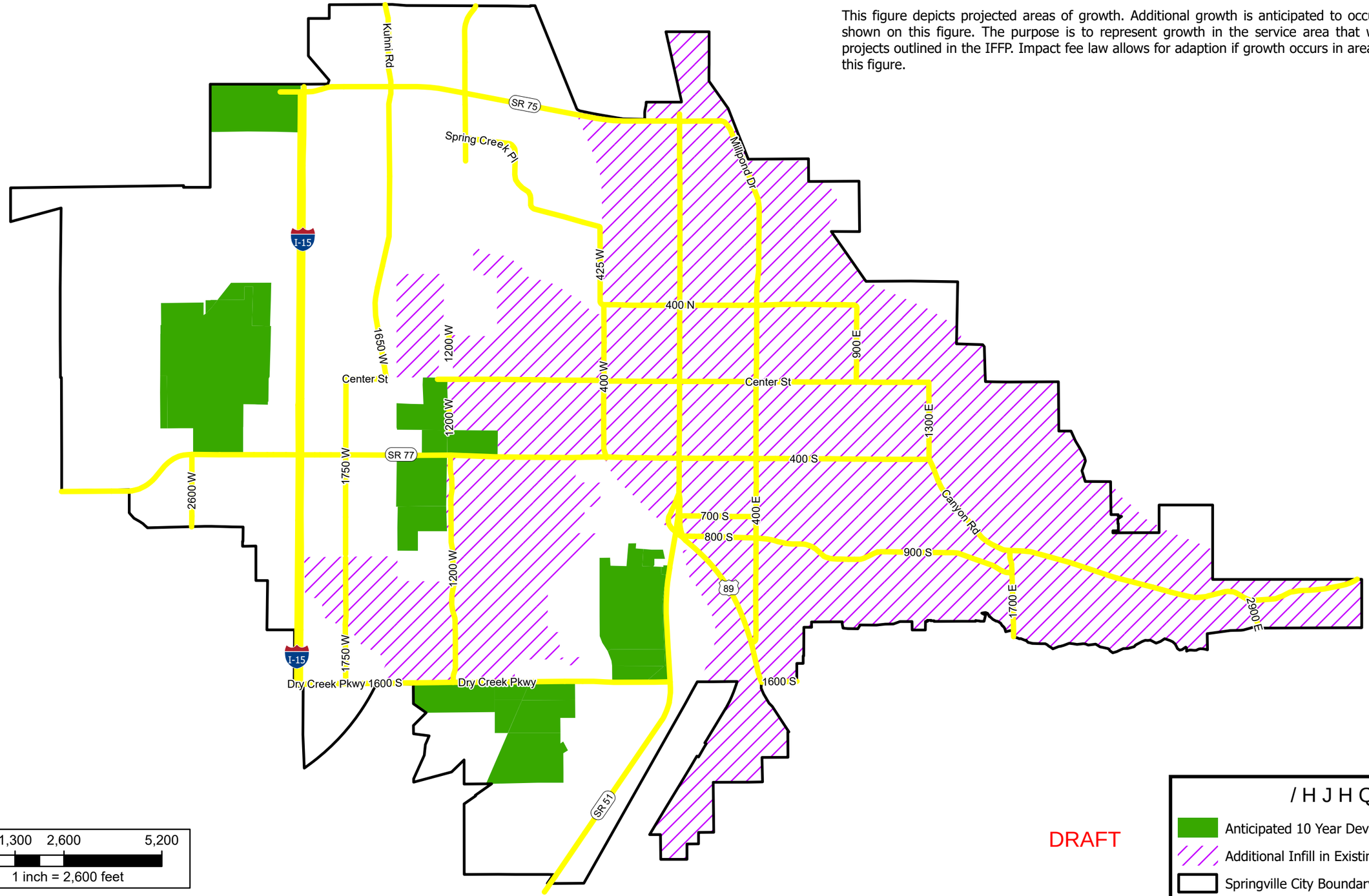
3.2 Growth Projections

The development of impact fees requires growth projections over the next ten years. Growth projections for Springville were made using the rates provided in the Springville Wastewater Master Plan. The existing system serves about 20,794 ERUs. Projected growth adds 4,452 ERUs in the next 10 years for a total of 25,246 ERUs. Growth projections are summarized in Table 3-1. Further information on growth projections can be found in the Wastewater Collection System Master Plan. The projected 10-year growth is shown in Figure 3-1.

Table 3-1
Growth Projections

Year	Total ERUs
2025	20,794
2026	21,216
2027	21,650
2028	22,095
2029	22,551
2030	23,020
2031	23,445
2032	23,880
2033	24,324
2034	24,780
2035	25,246
Change	**+4,452**

This figure depicts projected areas of growth. Additional growth is anticipated to occur in areas not shown on this figure. The purpose is to represent growth in the service area that will require the projects outlined in the IFFP. Impact fee law allows for adaption if growth occurs in area not shown on this figure.



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3.3 Cost of Existing and Future Facilities

The facilities and costs presented in Table 3-2 are existing facilities with remaining buy-in capacity. The historical costs for the existing facilities come from Springville City records.

Table 3-2
Cost of Existing Facilities

Project	Total
Main St. (400 South to 500 South)	$271,775
1500 West (1000 North to Center)	$1,599,340
1500 West (Center to 900 South)	$615,885
550 North (950 West to 1500 West)	$299,915
Spring Haven Lift Station	$220,000
1500 West Lift Station	$1,622,190
Total	**$4,629,105**

1. Records of costs for existing infrastructure can be found in Appendix B.

The impact fee eligible costs of the existing collection facilities are shown in Table 3-3. These values are based on the remaining capacity of each facility. The cost of each facility associated with its remaining capacity is attributable to growth and can be counted towards the impact fee.

Table 3-3
Impact Fee Eligible Cost of Existing Collection Facilities

Project	Cost	% To Growth	Eligible Total Cost	Ineligible Total Cost
Main St. (400 South to 500 South)	$271,775	41.5%[1]	$112,906	$158,869
1500 West (1000 North to Center)	$1,599,340	41.5%[1]	$664,427	$934,913
1500 West (Center to 900 South)	$615,885	41.5%[1]	$255,862	$360,023
550 North (950 West to 1500 West)	$299,915	41.5%[1]	$124,596	$175,319
Spring Haven Lift Station	$220,000	41.5%[1]	$91,396	$128,604
1500 West Lift Station	$1,622,190	41.5%[1]	$673,920	$948,270
Total	**$4,629,105**		**$1,923,108**	**$2,705,997**

1. Capacity remaining in existing system collection facilities was estimated as the difference between the existing ERU count (20,794) and the projected ERU count at the planning horizon (35,572).

The facilities and costs presented in Table 3-4 are proposed projects that are essential to maintain the current level of service while accommodating future growth within the next 10 years. The facility sizing for the future proposed projects was based on the level of service, the City's land use plan, and hydraulic modeling. All future projects have a design life greater than 10 years, as required by the Impact Fee Act. Detailed cost estimates are included in Appendix C. Depictions of these projects are shown in Figure 6-3 of the Wastewater Collection System Master Plan, which has been included in Appendix A for reference. Further details are included in the wastewater collection system master plan.

Unit costs for the construction cost estimates are based on conceptual level engineering. Sources used to estimate construction costs include:

1. "Means Heavy Construction Cost Data, 2025"
2. Price quotes from equipment suppliers
3. Recent construction bids for similar work

All costs are presented in 2025 dollars.

Master plan projects are a high-level representation of the infrastructure the City will need to construct to address existing deficiencies or meet future growth needs. However, due to the many unknown factors at this stage of design (such as alignment and depth of pipes, utility conflicts, the cost of land and easements, construction methodology, types of equipment and material to be used, interest and inflation rates, permitting requirements, etc.), there is a significant level of uncertainty in estimated costs. Master plan-level cost estimates can typically be expected to be accurate within +/- 50% of their actual cost. Prices have been exceptionally volatile from 2020 to 2024 due to supply chain and labor market issues, further complicating attempts to estimate future construction costs.

While detailed cost estimates for all projects are beyond the scope of this study, the intent of planning-level cost estimates is to present reasonable projections of expected project costs. This results in a computed impact fee that is reasonable and fair to both the City and the developer. This is consistent with impact fee law, which requires that the fee must be "roughly proportionate and reasonably related" to the impact caused by new development.

Table 3-4
Estimated Cost of Growth-Related Facilities

Project	Map ID[1]	Total Cost[2]	Cost for Development Within 10 Years[3]
Westfields Lift Station Pump Replacement	10-1	$98,000	$29,522
Westfields Lift Station Upgrades	10-2	$2,841,000	$855,845
New Lift Station near Spring Pointe	10-3	$11,167,000	$3,364,036
Decommission Spring Pointe Lift Station	10-4	$46,000	$13,857
Bore under I-15 (1400 N)	10-5	$1,742,000	$524,774
1000 N Sewer Under Hobble Creek	10-6	$573,000	$172,615
1500 W Lift Station Upgrades	10-7	$130,000	$39,162
2000 W and 500 N Sewer Line	10-8	$281,000	$84,651
800 S Sewer Line	10-9	$1,087,000	$327,457
950 W Sewer Line	10-10	$27,000	$8,134
2600 W Sewer Line	10-11	$419,000	$126,223
	Total	**$18,411,000**	**$5,546,276**

1. Refer to Figure 6-3 of the wastewater collection system master plan for the project and its corresponding ID number. This figure has been included in Appendix A for reference.
2. Only the impact fee eligible costs are shown in this table.
3. Future costs for development within 10 years were calculated for the ERUs within 10 years by assigning a proportionate share of the impact fee eligible costs to the ERUs within 10 years. (4,452 / 14,778) x Total Cost. Refer to Table 3-6.

Only those costs contributing to the new growth in the next 10 years can be included in the impact fee. The following sections describe the impact fee calculation for each component.

3.4 Impact Fee Unit Calculation

Wastewater Impact Fee Unit

It is recommended that the City continue to use the ERU method to calculate a wastewater Impact Fee Unit. The number of ERUs is determined by the size of the water meter. One impact fee unit is equal to 1 ERU, which corresponds to a ¾" or 1" drinking water meter. Larger meters correspond to a higher ERU count.

Impact Fee Calculation

The wastewater impact fee per unit has been calculated based on the value of the excess capacity in the system and the cost of planned future projects over the next 10 years.

Collections

Because pipes are all sized in direct relation to the ultimate capacity of the system, the fee was calculated by dividing the impact fee-eligible cost of existing and planned 10-year projects by the capacity of the future system.

Table 3-5
Collections Facility Costs per ERU

Time Period	Impact Fee Eligible Costs	ERUs Towards Total Growth Capacity	Cost per ERU
Existing	$1,923,108	-	-
Future[1]	$18,411,000	-	-
Total	**$20,334,108**	**14,778[2]**	**$1,376**

1. See Table 3-4.
2. A total future capacity of 14,778 ERUs was calculated as the projected ERU count at the planning horizon (35,572) minus ERUs existing at the beginning of year 2025 (20,794). See Table 3-1.

The collections cost by time period is calculated as shown in Table 3-6. Only those costs contributing to the new growth in the next 10 years are included in the impact fee.

Table 3-6
Collections Facility Costs by Time Period

Time Period	Total ERUs Served	ERUs Towards Total Growth Capacity	Cost per ERU	Historical and Future Costs[4]
Existing[1]	20,794	0	-	$2,705,997
10-year	25,246	4,452[2]	**$1,376**	$6,125,608
Beyond 10-year	35,572	10,326[3]	-	$14,208,499[5]
Total	-	**14,778**	**-**	**$23,040,105**

1. Existing cost was calculated as the cost that has already served growth and is not eligible for impact fee reimbursement. See Table 3-3.
2. Based on master plan growth projections. See Table 3-1.
3. A capacity of 10,326 ERUs beyond 10 years was calculated as the projected ERU count at the planning horizon (35,572) minus ERUs existing at the beginning of year 2035 (25,246). See Table 3-1.
4. Calculated costs may be slightly different due to rounding.
5. A future cost of $14,208,449 was calculated for the ERUs beyond 10 years by assigning a proportionate share of the impact fee eligible costs, totaling $20,334,108 (see Table 3-5) to the ERUs beyond 10 years. (10,326 / 14,778) x $20,334,108 = $14,208,499. These costs are not included within the 10-year planning horizon.

Planning

Planning services are also needed to support growth. The City updates their master plans approximately every 5 years and their impact fee studies are anticipated to be updated every year. The yearly cost to update the impact fee studies is anticipated to be half the cost of the 2025 IFFP and IFA. Considering this schedule, and the cost of the most recent impact fee updates, a planning impact fee was calculated as shown in Table 3-7.

Table 3-7
Planning Component of Impact Fee

Planning Document	Cost	% of Plan Associated with Growth[1]	Cost Associated with Growth	ERUs Served[2]	Cost per ERU
2025 Wastewater Collection System Master Plan	$113,682	60%	$68,209	2,226	$31
2025 IFFP and IFA	$13,952	100%	$13,952	856	$16
Total	**$127,634**	**-**	**$82,161**	**-**	**$47**

1. Percentages to growth for the master plan was based on a review of the scope of the plan and associated fees for tasks associated with the existing system and future growth. The IFFP and IFA are 100% associated with growth.
2. ERUs served was defined as the amount of ERUs expected to develop during the 5-year life of the master plan and the IFFP and IFA being updated every 2 years at the actual cost, respectively.

Facility Cost by Time Period

Costs attributed to growth over the next 10 years are included in the impact fee. Table 3-8 is a summary of the existing and future facility costs by time period. Existing costs are those costs attributed to capacity currently being used by existing connections. Costs attributed to the next 10 years are costs for the existing capacity or new capacity for the assumed growth. These costs are included in the impact fee.

Table 3-8
Facility Cost by Time Period

Component	Existing	Next 10 Years	Beyond 10 Years	Total
Collection	$2,705,997	$6,125,608	$14,208,499	$23,040,105
Planning	$45,473	$209,010	$0.00	$254,482
Total	**$2,751,470**	**$6,334,618**	**$14,208,499**	**$23,294,587**

Table 3-9 is a summary of the cost included in the impact fee calculation by component. It shows the unit cost per ERU, which was calculated by dividing the cost of the collection system by the total ERUs served. This method allows for development to pay their proportionate share of the wastewater collection system costs.

Table 3-9
Proposed Wastewater Collection Impact Fee Per ERU

Component	Impact Fee-Eligible Cost	ERUs Served	Cost per ERU
Collection	$6,125,608	4,452	$1,376
Planning	$209,010	4,452	$47
Total			**$1,423**

Total Impact Fee Calculation for Various Meter Sizes

Table 3-10 shows the recommended impact fee by meter size. Users requiring larger meters will individually be assessed an ERU capacity based on projected water use. The total proposed impact fee for a typical single-family residential connection requiring a ¾-inch or 1-inch drinking water connection would have an impact fee of **$1,423** (see Table 3-9). For larger meter sizes, the fee scales proportionately according to the ERU capacity of the meter. The ERU count for each meter size is calculated based on American Water Works Association (AWWA) rated capacity for

each meter size. This represents an equitable distribution of potential to use the City's wastewater collection system.

Table 3-10
Proposed Wastewater Collection Impact Fee Based on Meter Size

Drinking Water Meter Size	ERUs	Impact Fee
¾" or 1"	1.0	$1,423
1 ½"	3.33	$4,738
2"	5.33	$7,584

For other sizes of meter, or when the values listed in Table 3-9 may not lead to an equitable result, the impact fee may alternatively be calculated based on anticipated peak wastewater discharge in gallons per day as follows:

*Impact fee = (wastewater discharge, gpd) / (250 gpd/ERU) * ($1,423 per ERU)*

For example, a non-residential customer anticipated to discharge 2,000 gpd would have an impact fee calculated as follows:

*Impact fee = (2,000 gpd) / (250 gpd/ERU) * ($1,423 per ERU) = $11,384*

3.5 Revenue Options

Funding options for the recommended projects could include the following: Existing City funds, general obligation bonds, revenue bonds, State/Federal grants and loans, inter-fund loans and impact fees. The City may need to consider a combination of these funding options. The following discussion describes each of these options.

Existing City Funds

Existing City funds, such as a wastewater fund or the general fund, at times may be funding options for existing deficiency projects or infrastructure growth projects. The wastewater fund is often used to resolve existing deficiencies and to provide funding for operations and maintenance.

General Obligation Bonds

This form of debt enables the City to issue general obligation bonds for capital improvements and replacement. General Obligation (GO) bonds are debt instruments backed by the full faith and credit of the City, which would be secured by an unconditional pledge of the City to levy assessments, charges or ad valorem taxes necessary to retire the bonds. GO bonds are often the lowest-cost form of debt financing available to local governments and can be combined with

other revenue sources to form a dual security through the City's revenue generating authority. These bonds are supported by the City as a whole, so the amount of debt issued for the water system is limited to a fixed percentage of the real market value for taxable property within the City.

Revenue Bonds

This form of debt financing is also available to the City for utility-related capital improvements. Revenue bonds are not backed by the City as a whole but constitute a lien against the water service charge revenues of a Water Utility. Revenue bonds present a greater risk to the investor than do GO bonds, since repayment of debt depends on an adequate revenue stream, legally defensible rate structure and sound fiscal management by the issuing jurisdiction. Due to this increased risk, revenue bonds generally require a higher interest rate than GO bonds. This type of debt also has very specific coverage requirements in the form of a reserve fund specifying an amount usually expressed in terms of average or maximum debt service due in any future year. This debt service is required to be held as a cash reserve for annual debt service payment to the benefit of bondholders. Typically, voter approval is not required when issuing revenue bonds.

State/Federal Grants and Loans

Historically, local governments have experienced significant infrastructure funding support from state and federal government agencies in the form of block grants, direct grants in aid, interagency loans, and general revenue sharing. State and federal grants and loans may be investigated as possible funding sources for needed water system improvements.

Impact Fees

Impact fees can be applied to wastewater-related facilities according to the Utah Impact Fees Act (Act). The Act is intended to provide a framework for establishing new development assessments. The fundamental objective for the impact fee structure is the imposition on new development of costs associated with providing or expanding water infrastructure to meet the capacity needs created by new development. Impact fees cannot be applied retroactively.

Interfund Loans

Loans between City funds can be considered as a method of financing capital improvement projects.

Summary of Available Funding Options

Each of the above options has been considered for funding infrastructure projects. Of the above options, impact fees appropriately assign growth-related expenses to new growth and are the preferred funding mechanism for growth-related projects.

APPENDIX A

Information from the Wastewater Collection System Master Plan

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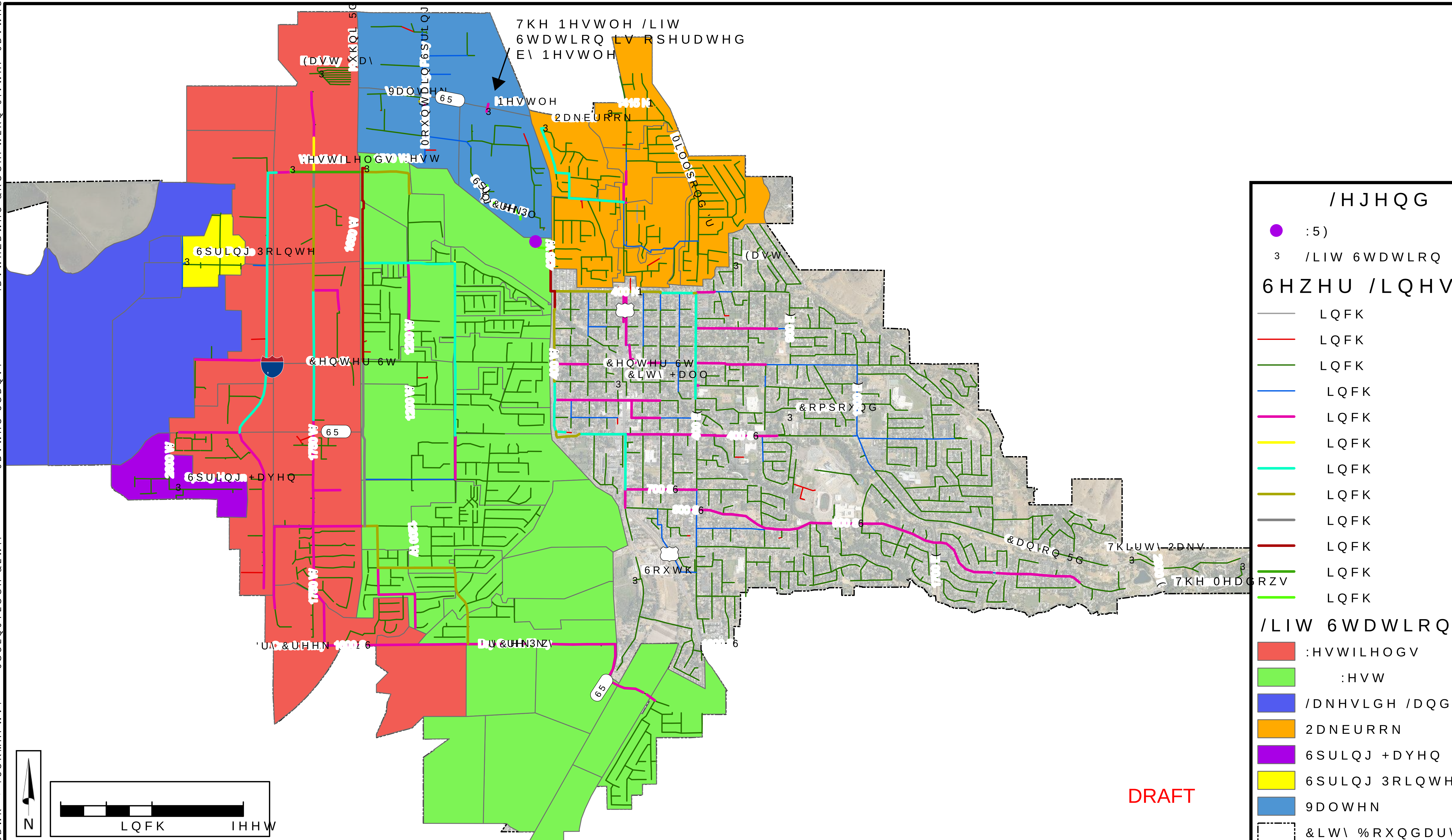
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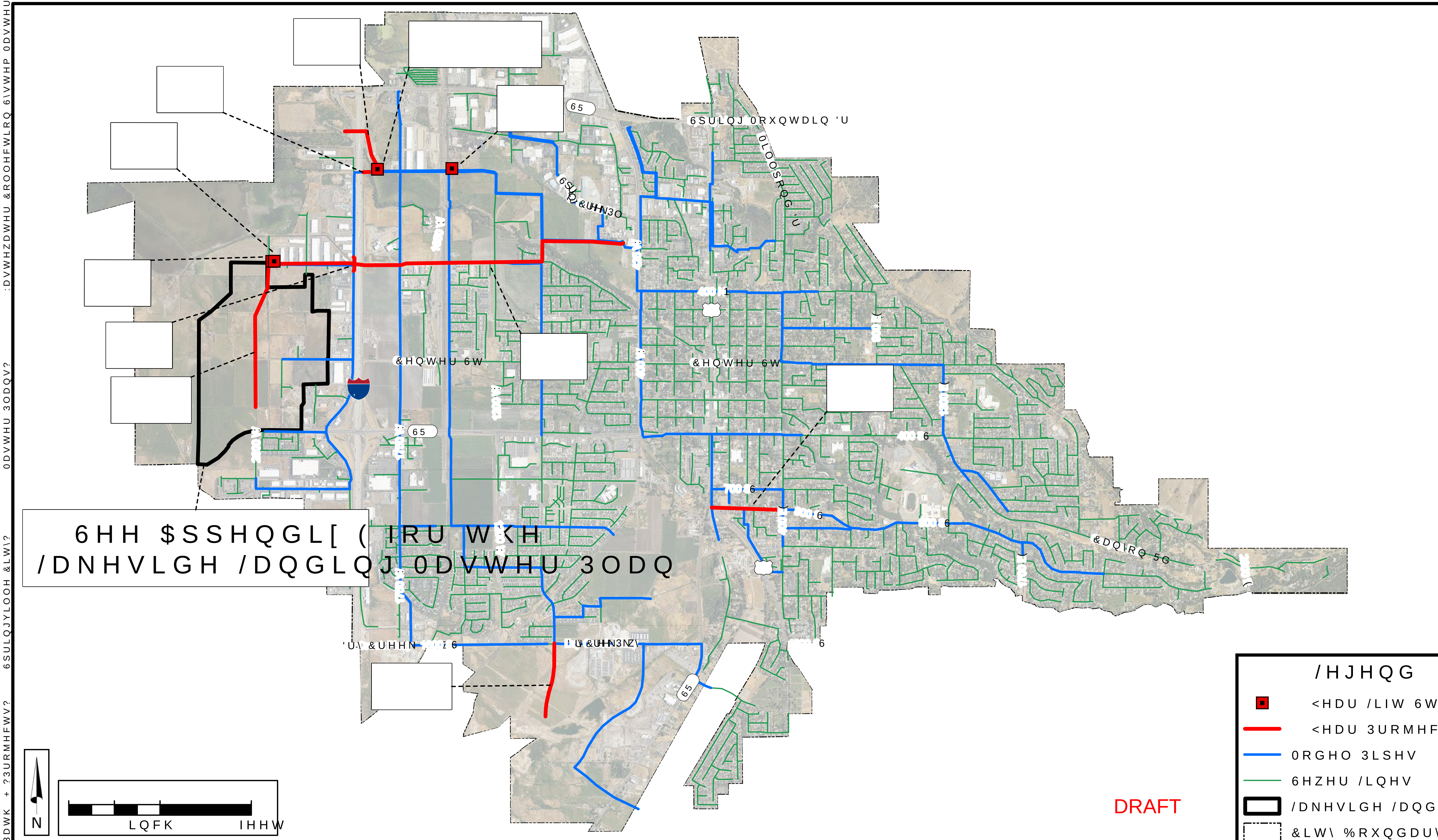

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APPENDIX B

Cost of Existing Infrastructure

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Sources:

City Records

2014 Wastewater Impact Fee Analysis. Lewis, Young, Robertson and Burningham, Inc.

SECTION 4: EXISTING CAPACITY ANALYSIS

EXISTING SYSTEM VALUE

Based on information provided by the City, the existing system is valued as shown below. These values represent amounts that can be included in any excess capacity calculations.

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TABLE 4.1: EXISTING SYSTEM VALUE

SUMMARY OF EXISTING ASSETS	
Original Treatment Plant	$9,546,786
Treatment Plant Expansion	$10,704,310
Collection	$11,151,524
Interest Related to Treatment	$1,859,822
Interest Related to Collection	$698,328
Developer Improvements	$2,468,739
Total	$36,429,509

MANNER OF FINANCING EXISTING PUBLIC FACILITIES

The City has funded its existing capital infrastructure through a combination of different revenue sources, including general utility fund revenues and the issuance of debt. This analysis has removed all known funding related to project improvements that cannot be included in the calculation of the impact fee.

The analysis includes one piece of outstanding debt related to the system's capacity: the 2008 Amended Water and Sewer Revenue Bonds. This outstanding debt was issued for the purpose of constructing the treatment facility expansion and other sewer system improvements.

2008 AMENDED SEWER REVENUE BONDS

In 2008, the City issued $15,135,000 in Water and Sewer Revenue Bonds. These bonds were amended in 2013 to capitalize on interest savings. Approximately 61.8 percent of the proceeds were used to fund the expansion to the sewer treatment facility, with 23.2 percent used to funded collection improvements. The remaining 15 percent of the bond proceeds were used for water projects. The principal and interest payments for the Amended 2008 bonds are shown in the table below. The total interest cost for the 2008 bonds is $3,008,034. The interest costs are an eligible cost that can be paid for with impact fees, as included below.

TABLE 4.4: OUTSTANDING DEBT INCLUDED IN ANALYSIS

$12,440,000 WATER & SEWER REVENUE BONDS SERIES 2008 (AMENDED) (RE-DATED: MAY 23, 2013)					
	PRINCIPAL	COUPON	INTEREST	TOTAL P+I	FISCAL TOTAL
Total	$12,440,000.00	2.80%	$3,008,033.78	$15,448,033.78	$15,448,033.78

IMPACT ON OR CONSUMPTION OF EXCESS CAPACITY

The total original construction cost for all wastewater collection facilities totals approximately $11.85 million, including debt related expense and excluding developer improvements. Approximately 35 percent of the collection system was included within the IFFP analyzed area as serving new development, or $4,147,448. Of this portion, modeling data suggests 14.8 percent is attributed to development in the next ten years, or $611,935 (as shown in Table 4.2).

TABLE 4.2: COLLECTION EXCESS CAPACITY CALCULATION

COLLECTION	
Original Value of Existing Distribution Impr.	11,151,524
Debt Related Expense (2008 Bonds)	698,328
Total Value of Existing Collection	$11,849,852
System Analyzed to Serve New Development	35%
Cost to Serve IFFP Area	$4,147,448
% Attributed to Excess Capacity	14.8%
Value Attributed to Excess Capacity	$611,935
Source: Wastewater Collection System Master Plan Appendix, p.51	

Treatment facilities also have excess capacity to serve new development. Based on the proposed LOS, the total existing demand equals 4.2 MGD (3.53 MGD for Springville City and 0.67 MGD for the Nestles Plant), leaving 1.3 MGD for new development activity (see table 4.3).

TABLE 4.3: TREATMENT EXCESS CAPACITY CALCULATION

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	MGD	% OF TOTAL	PROPORTIONATE VALUE
Original Treatment Capacity	5.50	100.0%	9,546,786
Less Existing Demand (including infiltration)	3.53	64.3%	6,135,028
Less Existing Nestles Demand	0.67	12.2%	1,162,972
Buy-in Capacity of Original Treatment Plant	1.30	23.6%	$2,248,785
Treatment Expansion	1.96		10,704,310
Total Buy-in Capacity	3.26		$12,953,095
Debt Related Expense (2008 Bonds)			$1,859,822
Total Buy-in Value			$14,812,918
	MGD	% OF BUY-IN CAPACITY	PROPORTIONATE VALUE
Capacity Needed in IFFP	1.42	43.5%	$6,447,367
Less Infiltration	(0.35)	(10.8%)	($1,599,721)
Needed Capacity in IFFP (Excluding Infiltration)	1.07	32.7%	$4,847,645

The City completed an expansion to the treatment facility in 2008 and 2009, which added 1.96 MGD of capacity, for a total buy-in capacity of 3.26 MGD. The demand in the next ten years will require 1.42 MGD, including infiltration. The 1.42 MGD of capacity reserved for the next ten years represent 43.5 percent of the latent capacity. The City has chosen to exclude the infiltration component in the IFA, thus reducing the allocation to new development by 10.8 percent. Thus, a total of 1.07 MGD, or 32.7 percent of the proportional value is applied in this analysis. This equals $4,847,645 in value of the original system, including debt related expense.

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Project	Year of Const.	Wastewater Cost
Main Street Sewer Replacement - 400 S to 500 S and PI Phase 2A - Main Street Crossing	2014	$271,775
1500 W (1000 N to Center)	2008	$1,599,340
1500 W (Center to 900 S)	2013	$615,885
1500 W Lift Station	2008	$1,622,190
Spring Haven Lift Station	2005	$220,000
550 N (950W to 1500 W)	2009	$299,915

APPENDIX C

Estimated Future Project Costs

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Springville City Capital Facility Plan
Wastewater 10-Year Recommended Improvements
Preliminary Engineers Cost Estimates

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	Item	Unit	Unit Price	Quantity	Total Price	City Price	City %	Developer Price	Developer %
10-1.	***Westfields Lift Station***								
	Replace one lift station pump	LS	$ 75,000	1	$ 75,000	$ 75,000	100%	$ -	0%
				Total	$ 75,000	$ 75,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 7,500	$ 7,500	100%	$ -	0%
				Contingency (20%)	$ 15,000	$ 15,000	100%	$ -	0%
				Total to Westfields Lift Station	**$ 98,000**	**$ 98,000**	100%	**$ -**	0%
10-2.	***Westfields Lift Station***								
	Install New Pumps	EA	$ 200,000	3	$ 600,000	$ 600,000	100%	$ -	0%
	Upgrade pump bases	EA	$ 10,000	4	$ 40,000	$ 40,000	100%	$ -	0%
	Upgrade lift station electrical components	LS	$ 400,000	1	$ 400,000	$ 400,000	100%	$ -	0%
	Install new VFD	EA	$ 100,000	4	$ 400,000	$ 400,000	100%	$ -	0%
	Upgrade discharge pipes and valves	LS	$ 500,000	1	$ 500,000	$ 500,000	100%	$ -	0%
	Evaluate/clean the existing 10" force main	LS	$ 245,000	1	$ 245,000	$ 245,000	100%	$ -	0%
				Total	$ 2,185,000	$ 2,185,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 218,500	$ 218,500	100%	$ -	0%
				Contingency (20%)	$ 437,000	$ 437,000	100%	$ -	0%
				Total to Westfields Lift Station	**$ 2,841,000**	**$ 2,841,000**	100%	**$ -**	0%
10-3.	***New Lift Station Near Spring Pointe***								
	Construct new lift station	LS	$ 3,000,000	1	$ 3,000,000	$ 3,000,000	100%	$ -	0%
	Install 8" force main pipe in same trench as 10"	LF	$ 35	10600	$ 371,000	$ 371,000	100%	$ -	0%
	Install 10" force main pipe	LF	$ 290	10600	$ 3,074,000	$ 3,074,000	100%	$ -	0%
	Bore under I-15 with 30" casing	LF	$ 3,000	240	$ 720,000	$ 720,000	100%	$ -	0%
	Bore under Railroad with 30" casing	LF	$ 3,000	400	$ 1,200,000	$ 1,200,000	100%	$ -	0%
	Bore under Hobble Creek with 30" casing	LF	$ 3,000	75	$ 225,000	$ 225,000	100%	$ -	0%
				Total	$ 8,590,000	$ 8,590,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 859,000	$ 859,000	100%	$ -	0%
				Contingency (20%)	$ 1,718,000	$ 1,718,000	100%	$ -	0%
				Total to New Lift Station Near Spring Pointe	**$ 11,167,000**	**$ 11,167,000**	100%	**$ -**	0%
10-4.	***Decommission Spring Pointe Lift Station***								
	Decommission Spring Pointe Lift Station	LS	$ 35,000	1	$ 35,000	$ 35,000	100%	$ -	0%
				Total	$ 35,000	$ 35,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 3,500	$ 3,500	100%	$ -	0%
				Contingency (20%)	$ 7,000	$ 7,000	100%	$ -	0%
				Total to Decommission Spring Pointe Lift Station	**$ 46,000**	**$ 46,000**	100%	**$ -**	0%

Springville City Capital Facility Plan
Wastewater 10-Year Recommended Improvements
Preliminary Engineers Cost Estimates

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	Item	Unit	Unit Price	Quantity	Total Price	City Price	City %	Developer Price	Developer %
10-5.	***Bore under I-15***								
	Install 10" gravity line	LF	$ 400	1700	$ 680,000	$ 680,000	100%	$ -	0%
	Install 24" casing with bore under I-15	LF	$ 2,400	275	$ 660,000	$ 660,000	100%	$ -	0%
				Total	$ 1,340,000	$ 1,340,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 134,000	$ 134,000	100%	$ -	0%
				Contingency (20%)	$ 268,000	$ 268,000	100%	$ -	0%
				Total to Bore under I-15	**$ 1,742,000**	**$ 1,742,000**	100%	**$ -**	0%
10-6.	***1000 N Bore Underneath Hobble Creek***								
	Install 15" gravity line	LF	$ 480	450	$ 216,000	$ 216,000	100%	$ -	0%
	Bore 30" casing for 15" parallel pipe	LF	$ 3,000	75	$ 225,000	$ 225,000	100%	$ -	0%
				Total	$ 441,000	$ 441,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 44,100	$ 44,100	100%	$ -	0%
				Contingency (20%)	$ 88,200	$ 88,200	100%	$ -	0%
				Total to 1000 N Bore Underneath Hobble Creek	**$ 573,000**	**$ 573,000**	100%	**$ -**	0%
10-7.	***1500 W Lift Station***								
	Install new 1,500 gpm pump	LS	$ 100,000	1	$ 100,000	$ 100,000	100%	$ -	0%
				Total	$ 100,000	$ 100,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 10,000	$ 10,000	100%	$ -	0%
				Contingency (20%)	$ 20,000	$ 20,000	100%	$ -	0%
				Total to 1500 W Lift Station	**$ 130,000**	**$ 130,000**	100%	**$ -**	0%
10-8.	***2000 W and 500 N***								
	Install 15" parallel gravity line	LF	$ 480	450	$ 216,000	$ 216,000	100%	$ -	0%
				Total	$ 216,000	$ 216,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 21,600	$ 21,600	100%	$ -	0%
				Contingency (20%)	$ 43,200	$ 43,200	100%	$ -	0%
				Total to 2000 W and 500 N	**$ 281,000**	**$ 281,000**	100%	**$ -**	0%
10-9.	***800 S Sewer Line***								
	Remove and upgrade sewer to 12" gravity line	LF	$ 440	1900	$ 836,000	$ 836,000	100%	$ -	0%
				Total	$ 836,000	$ 836,000	100%	$ -	0%
				Engineering & Admin. (10%)	$ 83,600	$ 83,600	100%	$ -	0%
				Contingency (20%)	$ 167,200	$ 167,200	100%	$ -	0%
				Total to 800 S Sewer Line	**$ 1,087,000**	**$ 1,087,000**	100%	**$ -**	0%

Springville City Capital Facility Plan
Wastewater 10-Year Recommended Improvements
Preliminary Engineers Cost Estimates

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	Item	Unit	Unit Price	Quantity	Total Price	City Price	City %	Developer Price	Developer %
10-10.	***950 W Sewer Line***								
	Install 10" gravity line	LF	$ 400	2100	$ 840,000	$ 21,000	2%	$ 819,000	98%
				Total	$ 840,000	$ 21,000	2%	$ 819,000	98%
				Engineering & Admin. (10%)	$ 84,000	$ 2,100	2%	$ 81,900	98%
				Contingency (20%)	$ 168,000	$ 4,200	2%	$ 163,800	98%
				Total to 950 W Sewer Line	**$ 1,092,000**	**$ 27,000**	2%	**$ 1,065,000**	98%
10-11.	***2600 W Sewer Line***								
	Install 12" gravity line	LF	$ 440	1400	$ 616,000	$ 70,000	11%	$ 546,000	89%
	Install 15" gravity line	LF	$ 480	2800	$ 1,344,000	$ 252,000	19%	$ 1,092,000	81%
				Total	$ 1,960,000	$ 322,000	16%	$ 1,638,000	84%
				Engineering & Admin. (10%)	$ 196,000	$ 32,200	16%	$ 163,800	84%
				Contingency (20%)	$ 392,000	$ 64,400	16%	$ 327,600	84%
				Total to 2600 W Sewer Line	**$ 2,548,000**	**$ 419,000**	16%	**$ 2,129,000**	84%
				Total Costs	**$ 21,605,000**	**$ 18,411,000**		**$ 3,194,000**	