

Feasibility Report
for
City of Worthington, Minnesota

West Gateway Drive Area
Sewer & Water Extensions

November 17, 2017

Prepared By:



Alexandria Office
120 17th Avenue W.
Alexandria, MN 56308
(320) 762-1290

St. Cloud Office
3339 West St. Germain, Suite 250
St. Cloud, MN 56301
(320) 217-5557

Introduction

The purpose of this report is to determine the feasibility of extending sanitary sewer and watermain to the future development of the West Gateway Drive Area located North of T.H. 59 near County Road 57. This report will focus specifically on the extension of sanitary sewer and watermain to the southwest area of the development, where a gas station is being proposed. The effect of these utility extensions will also be studied as to how they limit and/or accommodate future development in the West Gateway Drive Area, which is shown on the attached Exhibit A map.

This report has been prepared pursuant to Council resolutions of August 14, 2017.

Project Need

The proposed extension of sanitary sewer and watermain is intended to provide service to the West Gateway Drive Area. This is being considered at this time due to a proposed gas station located at the northwest quadrant of the intersection between T.H. 59 and County Road 57. Extending the sewer and watermain to the proposed property would act as the beginning of Phase I of the City's T.H. 59/60 Master Plan as well as provide water and sewer services to a property within City limits that does not abut a watermain or sanitary sewer main.

The City's Master Plan includes preliminary corridors with sanitary sewer and watermain trunk lines to provide services to the West Gateway Drive area. Phase I of the Master Plan includes extending watermain and sanitary sewer and adding a stormwater drainage system to Area A of the development (See attached Exhibit A).

Design

Watermain Extension

The City's T.H. 59/60 Master Plan shows a 10" watermain extending south on South Lake Street for roughly 550 feet before turning west toward Plotts Avenue for 1,235 feet and again running south along Plotts Avenue for 741 feet. This will be Option 1 for the feasibility report and will end with a 10"x10" Tee having stubs to the east and west. As shown on Exhibit B, Option 1 utilizes the B Street corridor for utility placement. This street corridor is preliminary and has not been platted. Installing the watermain under a preliminary street design limits the layout of the future development lot sizes and could restrict how the property is able to develop in the future.

A second option, Option 2, was considered for extending watermain as shown in attached Exhibit C. This option extends the 10" watermain south on South Lake Street for 150 feet before turning west running north of and parallel to an existing sanitary sewer trunk line. Before intersecting Plotts Avenue it again heads south along the ditch 1,143 feet, where it ends with a 10"x10" Tee. Stubs will be provided for future connections to the east and west.

Both options include properly spaced hydrant assemblies for flushing and pressure testing after installation. Where possible, hydrants will be positioned at high points. To serve the proposed gas

station and future developments, both options include a 75-foot, 10” stub to the west. The developer will be responsible for further extension of the main as needed to service their property.

Future extensions of the watermain will create a loop which will provide an increased maximum flow capacity and better water quality. The proposed 10” watermain will mitigate the deficiencies of the temporarily non-looped main and ensure adequate flow capacity for future extensions.

Sanitary Sewer Extension

The proposed sanitary sewer will connect to the existing 8” stub in place on County Road 57 and extend on a projection of the current main’s elevation and grade. A proposed manhole will be placed within the right of way, where City owned property begins, west of County Road 57. From the first proposed manhole, the main will gradually direct southwest into the west ditch to minimize road repair costs. Once the main extends far enough to be placed without impacting the county road, it will again head south paralleling the road. Exhibit D attached shows the sanitary sewer layout.

The invert depths of structures will begin at approximately 22 feet at the connection and approximately 8 feet at the terminating end. An 8” main at minimum grade (0.4%) will ensure Area A from the City’s Master Plan is served with sanitary sewer. An 8”, 20-foot long stub to the west will be provided for the proposed gas station and other future development. The developer will be responsible for further extension of the main as needed to service their property.

Cost

Option 1

The total estimated improvement project cost, including engineering and contingencies, for Option 1 is \$500,636. The price includes watermain extension Option 1, sanitary sewer extension, and the street repairs associated with the utility extensions. A summary of the costs is shown below with a more detailed breakdown attached in the appendix.

<u>Proposed Design Estimate</u>	
Subtotal Water Costs:	\$277,125
Subtotal Sewer Costs:	<u>\$223,511</u>
Total Cost including Contingency, Engineering and Administration:	\$500,636
 <u>Standard Depth & Size Estimate</u>	
Subtotal Water Costs:	\$229,776
Subtotal Sewer Costs:	<u>\$206,658</u>
Total Cost including Contingency, Engineering and Administration:	\$436,434

Option 2

The total estimated improvement project cost, including engineering and contingencies, for Option 2 is \$499,290. The price includes watermain extension Option 2, sanitary sewer extension, and the street repairs associated with the utility extensions. A summary of the costs is shown below with a more detailed breakdown attached in the appendix.

Proposed Design Estimate

Subtotal Water Costs:	\$275,779
Subtotal Sewer Costs:	\$223,511
Total Cost including Contingency, Engineering and Administration:	\$499,290

Standard Depth & Size Estimate

Subtotal Water Costs:	\$228,572
Subtotal Sewer Costs:	\$206,658
Total Cost including Contingency, Engineering and Administration:	\$435,230

Assessments

Special assessments for wastewater collection and for water distribution projects are levied in two components, trunk assessments and lateral assessments. In general, lateral assessments are levied to properties along a project based on the cost that would be incurred in constructing a sewer or water main of the size and depth (applicable to sewer only) adequate for only providing service to abutting properties. Such lateral costs are based on the installation of an 8" main at up to 10' feet in depth (standard depth and size). The remaining costs would be defined as trunk costs or those additional costs associated with providing service to an area larger than that which abuts on the project. In the case of water distribution projects, the cost of installing hydrants is also defined as trunk costs. The estimated trunk costs of the proposed improvement are as follows:

<u>Sanitary Sewer</u>	<u>Water Option 1</u>	<u>Water Option 2</u>
\$16,852.61	\$47,348.95	\$47,207.27

Lateral Assessments

Lateral assessments are based on the lateral costs as previously defined and the rate determining frontage or Residential Equivalent Connections (RECs) applicable to the project. The lateral costs divided by the rate determining units establishes the assessment rate. The amount of assessments is equal to the assessment rate multiplied by assessable units. Assessable units may be less than rate determining units when a portion or portions of the project abut property that is not benefitted by the project or is outside the corporate limits. Portions of the properties on the opposite side of West Gateway Drive as the location of the sewer or water main are not found to be benefitted nor proposed to be assessed at this time because it has been the recent practice of the City to not assess lateral benefit across highways such as West Gateway Drive due to the physical barrier they tend to pose. The determination of lateral benefit on such a basis is consistent with previous projects having comparable circumstances such as the West-North Interceptor Phase V and VI projects (along South Crailsheim Road/ Olson Park) and Water

Main Improvement 102 (water main on North Crailsheim south of Collegeway). Only those properties having access to the mains without crossing West Gateway Drive as shown on Exhibits E through G are proposed to be immediately assessed lateral benefit. In regard to frontage at the points where the mains are extended across West Gateway Drive at the southerly end of the improvements, each point of access would support two independent service connections and therefore the equivalent frontage of two REC's (108.9 feet each) would be assigned at each point of access. Such an assignment of property by a point of connection is also consistent with previous improvements such as those cited above. The wetland area north of the Water Main Option 2 would not be considered benefitted at this time.

The selection of REC or frontage units tends to be based on the status of the abutting property. Frontage is generally used when assessments are to be levied to undeveloped property or properties that may be subdivided or rearranged. The use of frontage units yields a uniformly distributed rate which is beneficial in equitably reapportioning assessments at the time development or changes in property lines occurs. REC units are typically used where the number of individual connections or lots is able to be identified at the time the project is undertaken. In the case of this project, one property is proposed to be rearranged and the other could potentially be subdivided. It is therefore proposed to utilize frontage units.

As per past City practice, the rate determining frontage would be established on the basis of what would be potentially benefitted frontages if not for the separation created by county highways, being outside city limits or being undevelopable. The determination of lateral rates on such a basis is consistent with previous projects having comparable circumstances. The lateral assessment rate will therefore be equal to the lateral costs divided by the frontage that would abut each side of the length of the sanitary sewer or water main extension.

The sanitary sewer and water lateral assessment rate would be calculated as follows:

	<u>Lateral Costs</u>	<u>Rate Determining Units</u>	<u>Lateral Rate</u>
Sanitary Sewer	\$206,658.08	2,205.9	\$93.68
Water Main Option 1	\$229,776.13	5,065.8	\$45.36
Water Main Option 2	\$228,571.85	5,040.4	\$45.35

Due to the unusually high assessments that would result from strict use of the City's Assessment Ordinance, it is believed that these assessments would exceed the benefit derived from the project as defined by the intent of Minnesota Statutes. It is therefore recommended that the lateral assessment be based on the current value of the previous calculated sewer and water lateral assessment rates used in similar situations, which are estimated to be \$38.31 per foot for water main and \$63.70 per foot for sanitary sewer at the time the project is undertaken. Final lateral assessments will be determined at the time of project financing or on calculated rates, whichever is less.

Properties that are not proposed to be assessed lateral benefit at this time will be subject to additional assessments in the future if connections (lateral or service) are made to the mains installed in the proposed improvement. This would be the case whether a services is extended under West Gateway Drive, the wetland area is developed (wetland replacement required), or properties are annexed and subsequently utilize a main crossing of West Gateway Drive.

Trunk Assessments

Trunk assessments are levied on the basis of area benefitted by a water extension and the current trunk assessment rate which is independent of a particular project's cost. The trunk rate is defined by ordinance and originates from a July 1975 determination of estimated costs for all trunk improvements needed at that time and the total area to be served by those improvements. An adjustment using a construction cost index maintains current value of the trunk rate. A trunk fund receives all trunk assessments and is utilized to retire those debt costs attributable to trunk project costs. The trunk fund may receive more or less assessments than trunk costs for each project undertaken. As with lateral assessments, only the areas shown on Exhibits E through G are proposed to be immediately subject to trunk sanitary sewer or water assessments as a result of the proposed improvement.

Similar to lateral assessments, properties or portions of properties that are not proposed to be assessed trunk benefit at this time will be subject to additional assessments in the future if the mains installed in the proposed improvement are utilized in one manner or the other. Additional trunk assessments are also levied as additional property is developed. In other words, as property is incorporated into a development that property will be subject to additional trunk assessments if not assessed at this time.

Estimated Assessments

Estimated assessments, trunk fund obligations, and "City Share" costs of the project are as follows:

SANITARY SEWER

	<u>LATERAL</u>	<u>TRUNK</u>	<u>TOTAL</u>
Assessments	\$44,534.20	\$32,588.54	\$77,122.74 (34.5%)
Trunk Fund (due to)		(\$15,735.93)	(\$15,735.93)
City Share	<u>\$162,123.88</u>	<u>0.00</u>	<u>\$162,123.88</u>
TOTAL	\$206,658.08	\$16,852.61	\$223,510.69

WATER MAIN OPTION 1

	<u>LATERAL</u>	<u>TRUNK</u>	<u>TOTAL</u>
Assessments ¹	\$127,993.36	\$52,514.74	\$180,508.10 (65.1%)
Trunk Fund (due to)		(\$5,165.79)	(\$5,165.79)
City Share	<u>\$101,782.77</u>	<u>0.00</u>	<u>\$101,782.77</u>
TOTAL	\$229,776.13	\$47,348.95	\$277,125.08

WATER MAIN OPTION 2 (RECOMMENDED)

	<u>LATERAL</u>	<u>TRUNK</u>	<u>TOTAL</u>
Assessments ¹	\$69,807.94	\$52,514.74	\$122,322.68 (44.4%)
Trunk Fund (due to)		(\$5,307.47)	(\$5,307.47)
City Share	<u>\$158,763.91</u>	<u>0.00</u>	<u>\$158,763.91</u>
TOTAL	\$228,571.85	\$47,207.27	\$275,779.12

¹ Includes City assessments as property owner

It is proposed that the project be initially financed by PIR bonding. Temporary use of 401 Construction Fund reserves may be needed until bond proceeds are received. Revenues from special assessments levied as a result of the project along with the annual special tax levy required to recover the city share of the project would be utilized for bond repayment. Assessments for City owned property is not presented as a City share and is to be paid from sources other than levy for debt services.

Recommendation

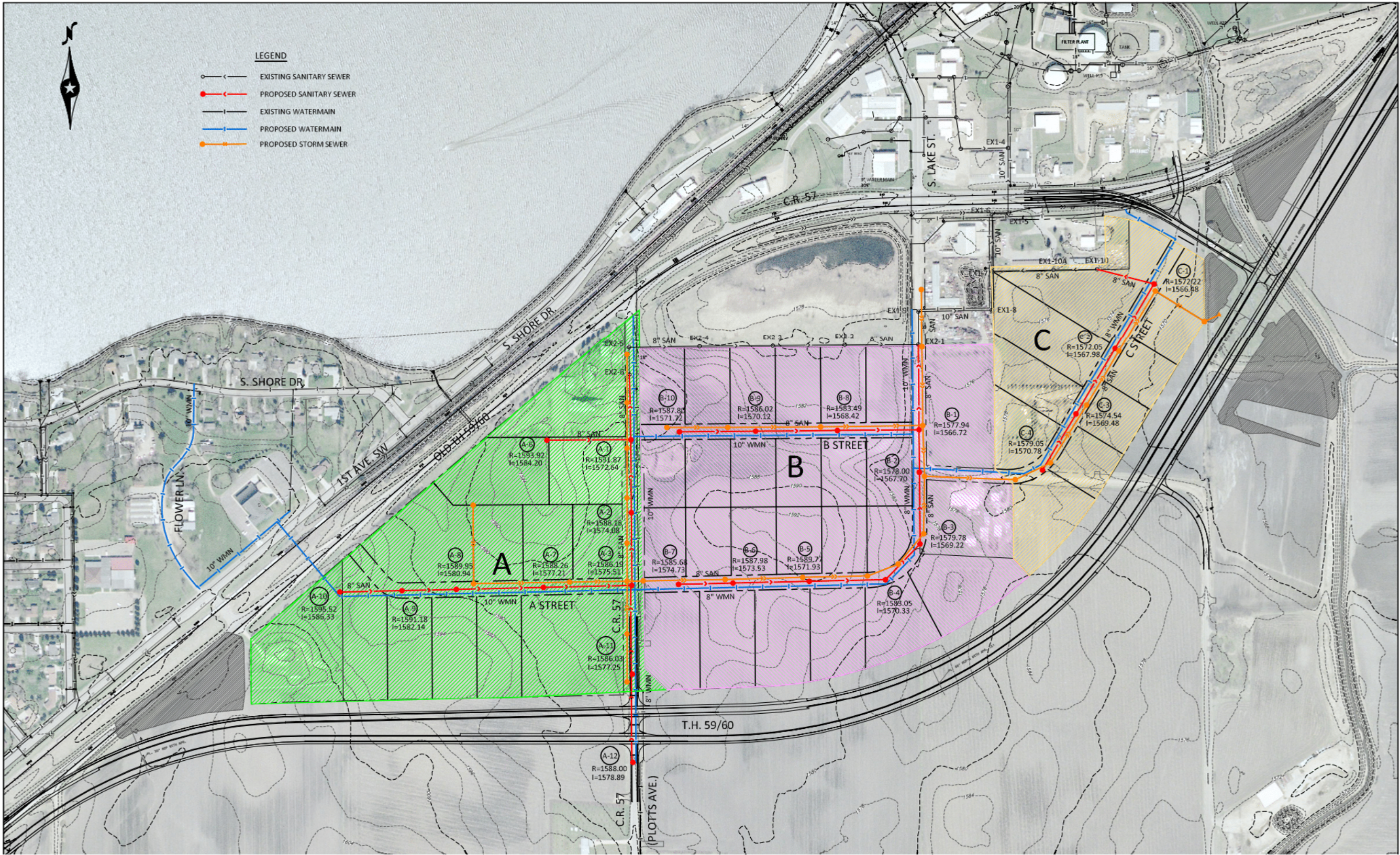
For the watermain extension, we recommend Option 2. This option is slightly lower in cost, will provide the greatest flexibility when future development occurs in Area B between South Lake Street and Plotts Avenue, and keeps the watermain in proximity to the sanitary sewer main which will be more efficient when maintaining the utilities in the future.

For the Sanitary Sewer Extension, the alignment selected provides the most cost effective solution by minimizing county road impacts while still providing gravity sewer service to the West Gateway Drive Area as shown on the attached exhibit.

Summary

This report and attached appendices complete Design Tree Engineering Inc.'s submittal of the Feasibility Study for West Gateway Drive Area Sewer and Watermain Extension. The public improvements project as proposed in this report, is a feasible and cost effective manner in which to provide water service and a wastewater collection service to the West Gateway Development area.

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**WEST GATEWAY
DRIVE AREA
SEWER AND
WATER
EXTENSIONS**

**PRELIMINARY:
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**WORTHINGTON,
MINNESOTA**

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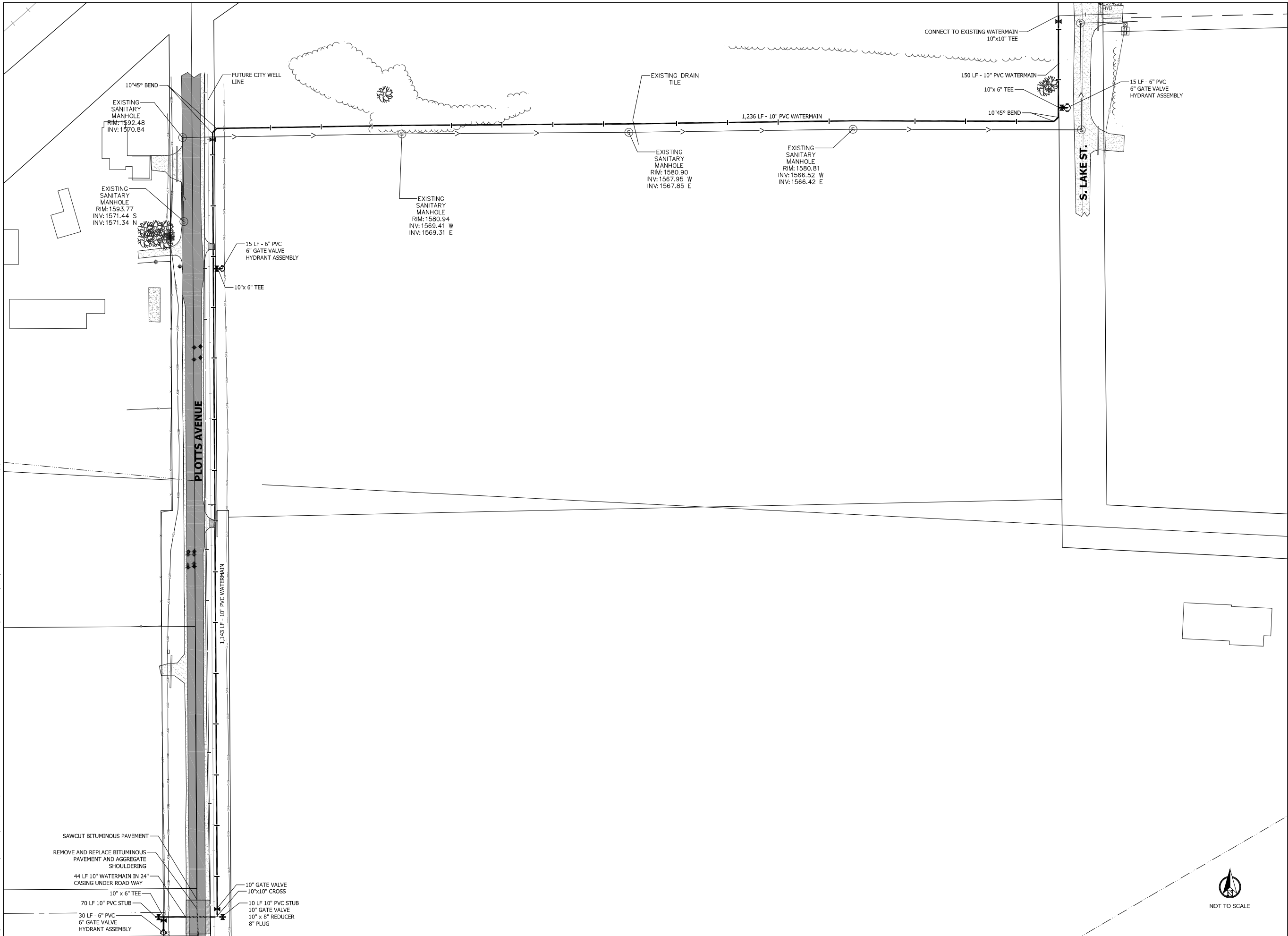
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Design Tree

ENGINEERING AND
LAND SURVEYING

1201 17th Avenue W.
St. Cloud, MN 56301
(320) 762-1290

3339 W. St., Germantown, Suite 250
St. Cloud, MN 56301
(320) 217-5557 (Phone)
(320) 217-5597 (Fax)

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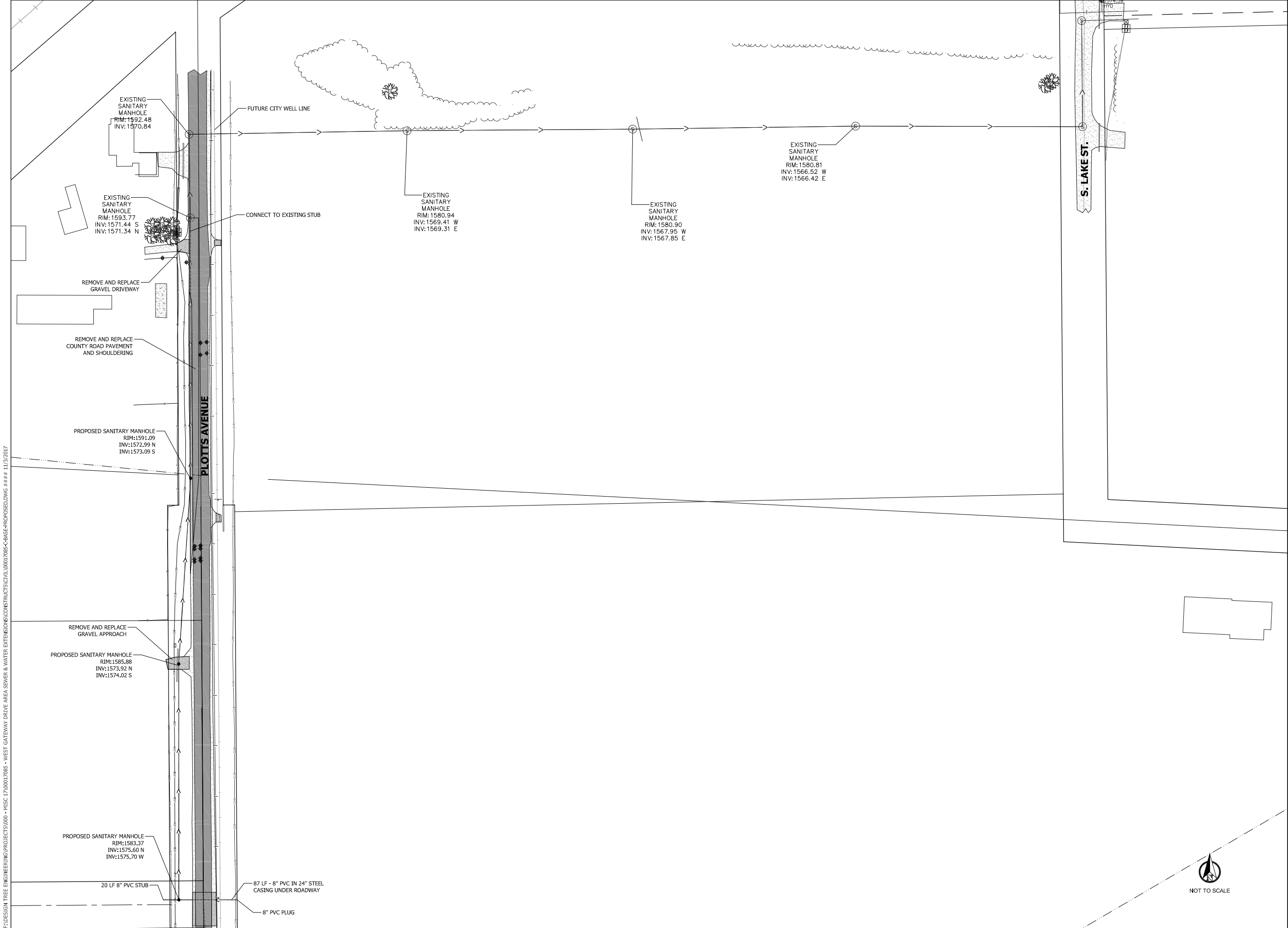
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Design Tree
ENGINEERING AND
LAND SURVEYING
1201 17th Avenue W. St. Cloud, MN 56301
Alexandria, MN 56308 (320) 217-5537 (Phone)
(320) 217-5597 (Fax)

09-25-17

WEST GATEWAY
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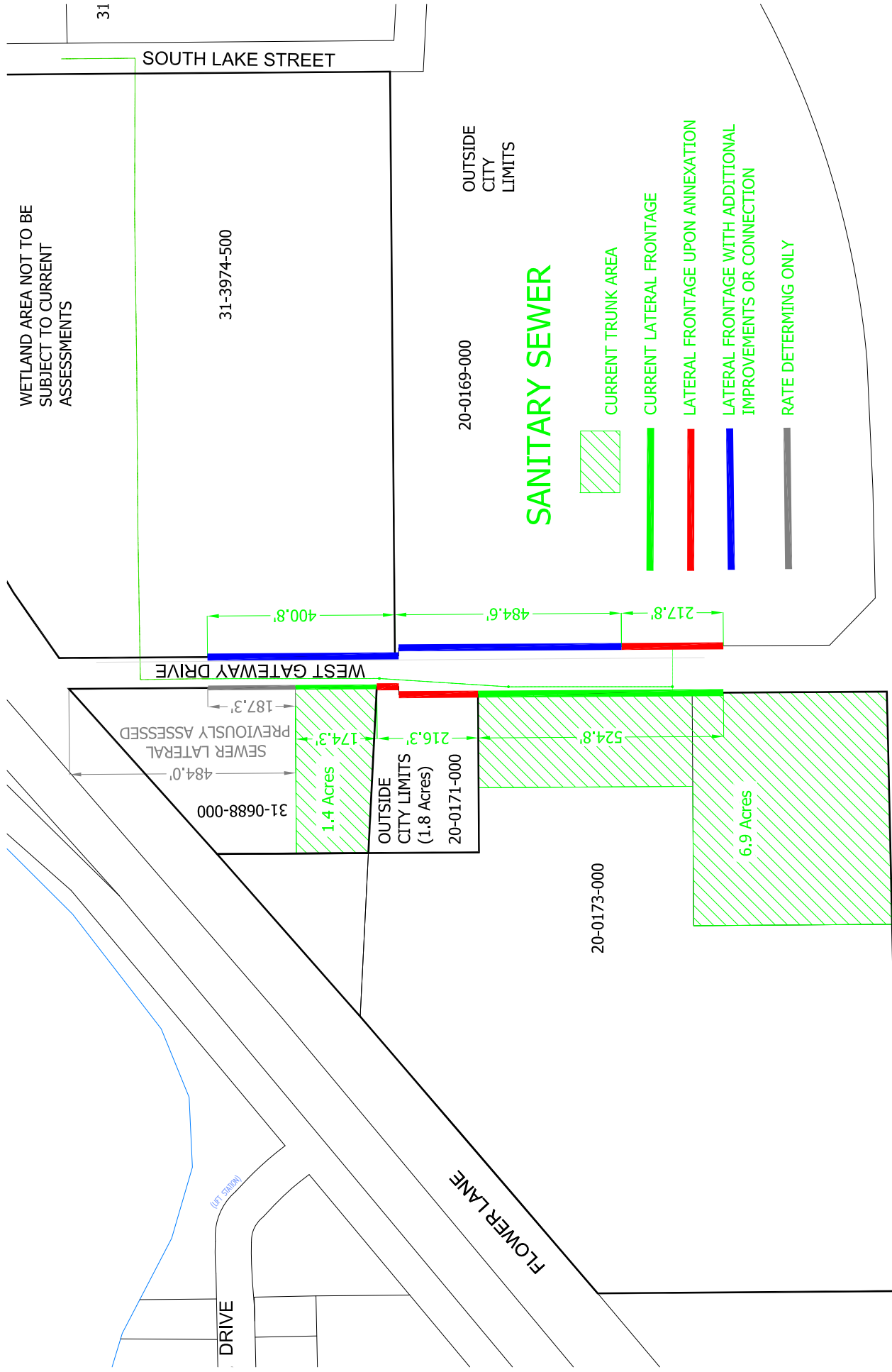
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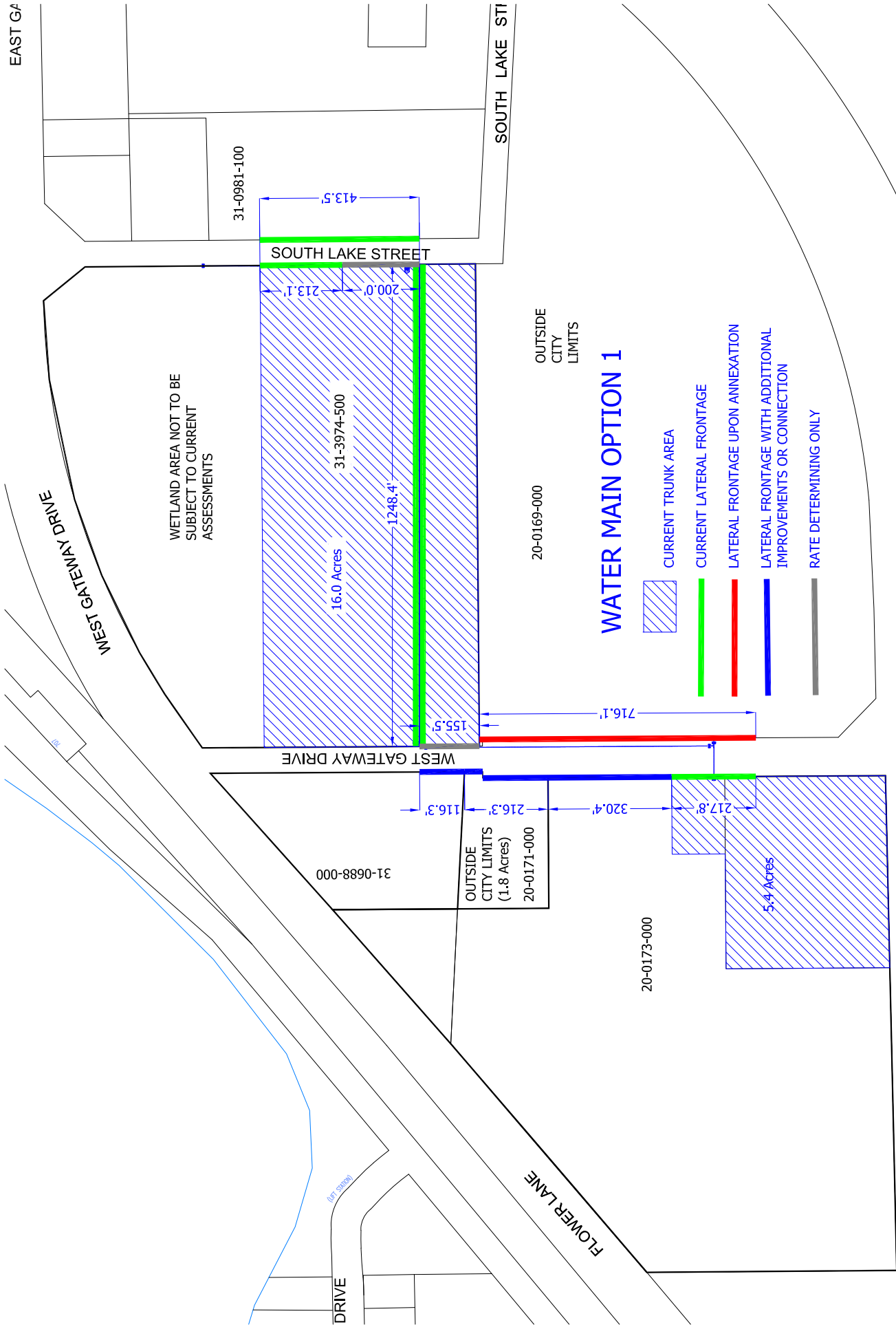
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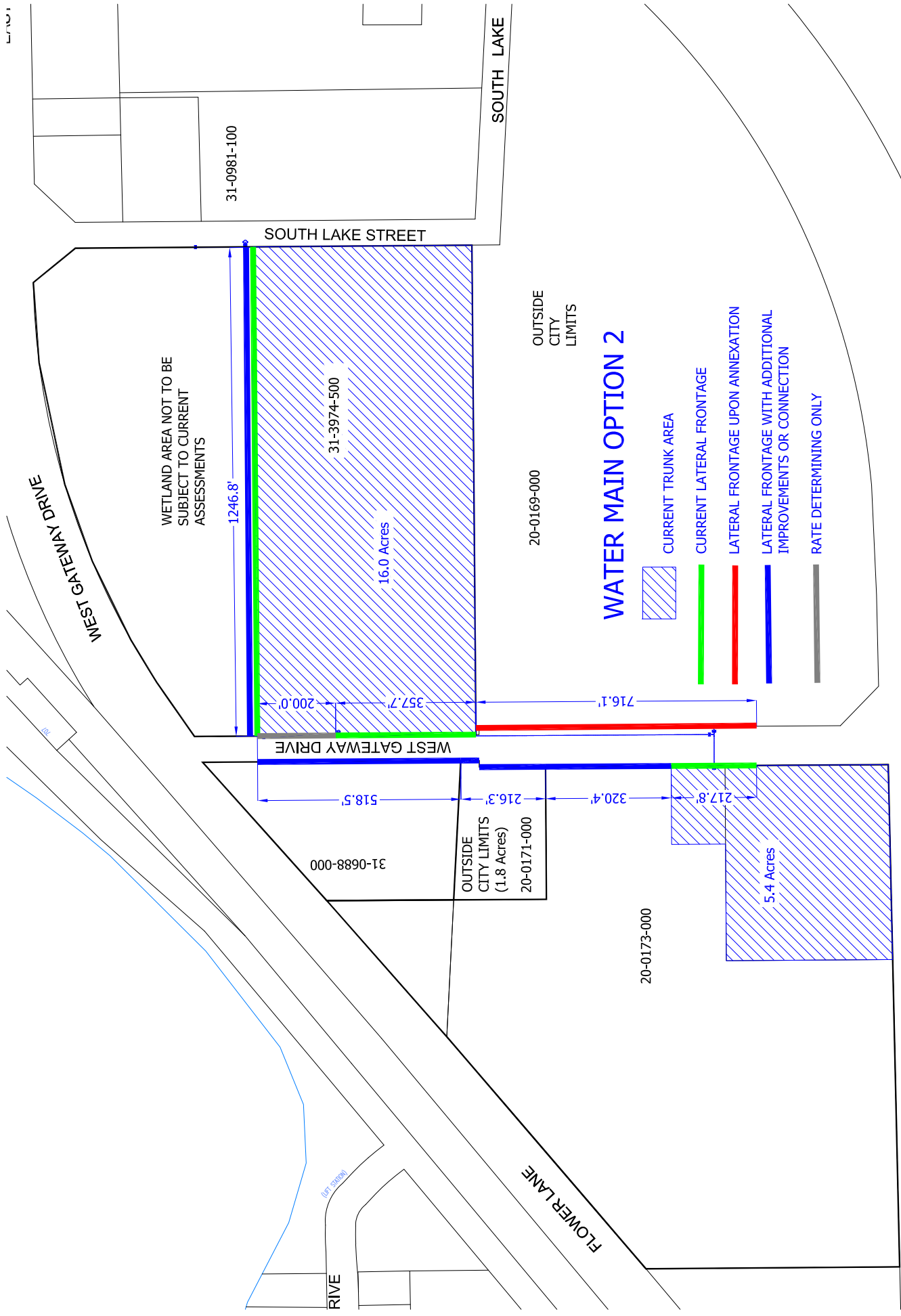






HWY 59 - 60

EXHIBIT F



HWY 59 - 60

EXHIBIT G

OPINION OF PROBABLE COST (OPTION 1)

CITY OF WORTHINGTON

WEST GATEWAY DRIVE AREA SEWER AND WATER EXTENSIONS

Project No. 00017085



DESCRIPTION	UNIT	UNIT PRICE	PROPOSED DESIGN		STANDARD DEPTH & SIZE	
			QUANTITY	AMOUNT	QUANTITY	AMOUNT
MOBILIZATION	LS	\$20,000.00	1	\$20,000.00	1	\$20,000.00
SAWCUT BITUMINIOUS PAVEMENT	LF	\$4.50	48	\$216.00	48	\$216.00
REMOVE BITUMINIOUS PAVEMENT	SY	\$7.80	131	\$1,024.40	131	\$1,024.40
COMMON EXCAVATION	CY	\$35.10	66	\$2,304.90	66	\$2,304.90
AGGREGATE BASE (CV)	CY	\$8.00	44	\$350.22	44	\$350.22
BITUMINIOUS PAVEMENT	TON	\$98.00	53	\$5,170.32	53	\$5,170.32
AGGREGATE SURFACING (LV)	CY	\$25.00	7	\$175.00	7	\$175.00
AGGREGATE SHOULDERING (LV)	CY	\$25.00	15	\$370.37	15	\$370.37
TRAFFIC CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
EROSION CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
TURF ESTABLISHMENT	LS	\$12,500.00	1	\$12,500.00	1	\$12,500.00
24" CASING	LF	\$250.00	44	\$11,000.00	44	\$11,000.00
10" WATERMAIN	LF	\$38.00	2670	\$101,460.00	0	\$0.00
8" WATERMAIN	LF	\$34.00	0	\$0.00	2670	\$90,780.00
6" WATERMAIN	LF	\$30.00	60	\$1,800.00	0	\$0.00
10" GATE VALVE	EA	\$2,700.00	5	\$13,500.00	0	\$0.00
8" GATE VALVE	EA	\$2,150.00	0	\$0.00	5	\$10,750.00
6" GATE VALVE	EA	\$1,400.00	3	\$4,200.00	0	\$0.00
HYDRANT, 8' BURY	EA	\$4,800.00	3	\$14,400.00	0	\$0.00
DUCTILE IRON FITTINGS	LB	\$8.00	2450	\$19,600.00	2000	\$16,000.00
CONNECT TO EXISTING WATERMAIN	EA	\$1,000.00	1	\$1,000.00	1	\$1,000.00
SUBTOTAL WATER OPTION 1			\$219,071.21		\$181,641.21	

SUBTOTAL	\$219,071.21	\$181,641.21
CONTINGENCY (10%)	\$21,907.12	\$18,164.12
CONSTRUCTION TOTAL	\$240,978.33	\$199,805.33
LEGAL, FISCAL, ADMINISTRATION (5%)	\$12,048.92	\$9,990.27
DESIGN ENGINEERING (10%)	\$24,097.83	\$19,980.53
WATERMAIN EXTENSION TOTAL	\$277,125.08	\$229,776.13

MOBILIZATION	LS	\$16,000.00	1	\$16,000.00	1	\$16,000.00
SAWCUT BITUMINIOUS PAVEMENT	LF	\$4.50	498	\$2,241.00	498	\$2,241.00
REMOVE BITUMINIOUS PAVEMENT	SY	\$7.80	519	\$4,051.67	519	\$4,051.67
COMMON EXCAVATION	CY	\$8.00	260	\$2,077.78	260	\$2,077.78
AGGREGATE BASE (CV)	CY	\$35.10	173	\$6,077.50	173	\$6,077.50
BITUMINIOUS PAVEMENT	TON	\$98.00	199	\$19,535.35	199	\$19,535.35
AGGREGATE SHOULDERING (LV)	CY	\$25.00	3	\$75.00	39	\$977.78
AGGREGATE SURFACING (LV)	CY	\$25.00	32	\$800.00	32	\$800.00
SALVAGE AND REINSTALL CULVERT	LF	\$20.00	48	\$960.00	48	\$960.00
TRAFFIC CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
EROSION CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
TURF ESTABLISHMENT	LS	\$12,500.00	1	\$12,500.00	1	\$12,500.00
24" CASING	LF	\$250.00	44	\$11,000.00	44	\$11,000.00
6" PVC SANITARY SEWER	LF	\$30.00	20	\$600.00	20	\$600.00
8" PVC SANITARY SEWER (0'-10' DEPTH)	LF	\$45.00	322	\$14,490.00	1101	\$49,545.00
8" PVC SANITARY SEWER (10'-15' DEPTH)	LF	\$50.00	349	\$17,450.00	0	\$0.00
8" PVC SANITARY SEWER (15'-20' DEPTH)	LF	\$60.00	277	\$16,620.00	0	\$0.00
8" PVC SANITARY SEWER (20'-25' DEPTH)	LF	\$70.00	153	\$10,710.00	0	\$0.00
CONNECT TO EXISTING SANITARY SEWER PIPE	EA	\$1,000.00	1	\$1,000.00	1	\$1,000.00
SANITARY SEWER MANHOLE (0'-8')	EA	\$7,000.00	3	\$21,000.00	3	\$21,000.00
SANITARY SEWER MANHOLE EXTRA DEPTH	LF	\$300.00	15	\$4,500.00	0	\$0.00
DEWATERING	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
SUBTOTAL SEWER			\$176,688.29		\$163,366.07	

SUBTOTAL	\$176,688.29	\$163,366.07
CONTINGENCY (10%)	\$17,668.83	\$16,336.61
CONSTRUCTION TOTAL	\$194,357.12	\$179,702.68
LEGAL, FISCAL, ADMINISTRATION (5%)	\$9,717.86	\$8,985.13
DESIGN ENGINEERING (10%)	\$19,435.71	\$17,970.27
SANITARY EXTENSION TOTAL	\$223,510.69	\$206,658.08
PROJECT TOTAL	\$500,635.77	\$436,434.21

OPINION OF PROBABLE COST (OPTION 2)

CITY OF WORTHINGTON

WEST GATEWAY DRIVE AREA SEWER AND WATER EXTENSIONS

Project No. 00017085



DESCRIPTION	UNIT	UNIT PRICE	PROPOSED DESIGN		STANDARD DEPTH & SIZE	
			QUANTITY	AMOUNT	QUANTITY	AMOUNT
MOBILIZATION	LS	\$20,000.00	1	\$20,000.00	1	\$20,000.00
SAWCUT BITUMINOUS PAVEMENT	LF	\$4.50	48	\$216.00	48	\$216.00
REMOVE BITUMINOUS PAVEMENT	SY	\$7.80	131	\$1,024.40	131	\$1,024.40
COMMON EXCAVATION	CY	\$35.10	66	\$2,304.90	66	\$2,304.90
AGGREGATE BASE (CV)	CY	\$8.00	44	\$350.22	44	\$350.22
BITUMINOUS PAVEMENT	TON	\$98.00	53	\$5,170.32	53	\$5,170.32
AGGREGATE SURFACING (LV)	CY	\$25.00	7	\$175.00	7	\$175.00
AGGREGATE SHOULDERING (LV)	CY	\$25.00	15	\$370.37	15	\$370.37
TRAFFIC CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
EROSION CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
TURF ESTABLISHMENT	LS	\$12,500.00	1	\$12,500.00	1	\$12,500.00
24" CASING	LF	\$250.00	44	\$11,000.00	44	\$11,000.00
10" WATERMAIN	LF	\$38.00	2642	\$100,396.00	0	\$0.00
8" WATERMAIN	LF	\$34.00	0	\$0.00	2642	\$89,828.00
6" WATERMAIN	LF	\$30.00	60	\$1,800.00	0	\$0.00
10" GATE VALVE	EA	\$2,700.00	5	\$13,500.00	0	\$0.00
8" GATE VALVE	EA	\$2,150.00	0	\$0.00	5	\$10,750.00
6" GATE VALVE	EA	\$1,400.00	3	\$4,200.00	0	\$0.00
HYDRANT, 8' BURY	EA	\$4,800.00	3	\$14,400.00	0	\$0.00
DUCTILE IRON FITTINGS	LB	\$8.00	2450	\$19,600.00	2000	\$16,000.00
CONNECT TO EXISTING WATERMAIN	EA	\$1,000.00	1	\$1,000.00	1	\$1,000.00
SUBTOTAL WATER OPTION 1			\$218,007.21		\$180,689.21	

SUBTOTAL	\$218,007.21	\$180,689.21
CONTINGENCY (10%)	\$21,800.72	\$18,068.92
CONSTRUCTION TOTAL	\$239,807.93	\$198,758.13
LEGAL, FISCAL, ADMINISTRATION (5%)	\$11,990.40	\$9,937.91
DESIGN ENGINEERING (10%)	\$23,980.79	\$19,875.81
WATERMAIN EXTENSION TOTAL	\$275,779.12	\$228,571.85

MOBILIZATION	LS	\$16,000.00	1	\$16,000.00	1	\$16,000.00
SAWCUT BITUMINOUS PAVEMENT	LF	\$4.50	498	\$2,241.00	498	\$2,241.00
REMOVE BITUMINOUS PAVEMENT	SY	\$7.80	519	\$4,051.67	519	\$4,051.67
COMMON EXCAVATION	CY	\$8.00	260	\$2,077.78	260	\$2,077.78
AGGREGATE BASE (CV)	CY	\$35.10	173	\$6,077.50	173	\$6,077.50
BITUMINOUS PAVEMENT	TON	\$98.00	199	\$19,535.35	199	\$19,535.35
AGGREGATE SHOULDERING (LV)	CY	\$25.00	3	\$75.00	39	\$977.78
AGGREGATE SURFACING (LV)	CY	\$25.00	32	\$800.00	32	\$800.00
SALVAGE AND REINSTALL CULVERT	LF	\$20.00	48	\$960.00	48	\$960.00
TRAFFIC CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
EROSION CONTROL	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
TURF ESTABLISHMENT	LS	\$12,500.00	1	\$12,500.00	1	\$12,500.00
24" CASING	LF	\$250.00	44	\$11,000.00	44	\$11,000.00
6" PVC SANITARY SEWER	LF	\$30.00	20	\$600.00	20	\$600.00
8" PVC SANITARY SEWER (0'-10' DEPTH)	LF	\$45.00	322	\$14,490.00	1101	\$49,545.00
8" PVC SANITARY SEWER (10'-15' DEPTH)	LF	\$50.00	349	\$17,450.00	0	\$0.00
8" PVC SANITARY SEWER (15'-20' DEPTH)	LF	\$60.00	277	\$16,620.00	0	\$0.00
8" PVC SANITARY SEWER (20'-25' DEPTH)	LF	\$70.00	153	\$10,710.00	0	\$0.00
CONNECT TO EXISTING SANITARY SEWER PIPE	EA	\$1,000.00	1	\$1,000.00	1	\$1,000.00
SANITARY SEWER MANHOLE (0'-8')	EA	\$7,000.00	3	\$21,000.00	3	\$21,000.00
SANITARY SEWER MANHOLE EXTRA DEPTH	LF	\$300.00	15	\$4,500.00	0	\$0.00
DEWATERING	LS	\$5,000.00	1	\$5,000.00	1	\$5,000.00
SUBTOTAL SEWER			\$176,688.29		\$163,366.07	

SUBTOTAL	\$176,688.29	\$163,366.07
CONTINGENCY (10%)	\$17,668.83	\$16,336.61
CONSTRUCTION TOTAL	\$194,357.12	\$179,702.68
LEGAL, FISCAL, ADMINISTRATION (5%)	\$9,717.86	\$8,985.13
DESIGN ENGINEERING (10%)	\$19,435.71	\$17,970.27
SANITARY EXTENSION TOTAL	\$223,510.69	\$206,658.08

PROJECT TOTAL	\$499,289.81	\$435,229.93
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