



# 12<sup>th</sup> Avenue S Highway District Expansion Preliminary Engineering Report

City of Saint James, MN  
July 2025



Real People. Real Solutions.

**Submitted by:**

Bolton & Menk, Inc.  
1960 Premier Drive  
Mankato, MN 56001  
P: 507-625-4171  
F: 507-625-4177  
BMI No. 24X.136274.000

# Certification

## Preliminary Engineering Report

For

12<sup>th</sup> Avenue S Highway District Expansion

City of Saint James, MN  
24X.136274.000

July 7, 2025

### **PROFESSIONAL ENGINEER**

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: \_\_\_\_\_

Typed or Printed Name: Adam L. Jacobs, P.E.

Date: 07/07/2025 License Number: 48295

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## I. Background and Scope

In accordance with Minnesota Statutes, Chapter 429, the St. James City Council has authorized the preparation of a Preliminary Engineering Report to define the scope and determine the feasibility of infrastructure improvements on the 12<sup>th</sup> Avenue S Highway District Expansion. The improvements will construct 12<sup>th</sup> Avenue S from 7<sup>th</sup> Street S to 11<sup>th</sup> Street S (TH 4), construct a regional storm water pond, and provide the grading of the lots along 12<sup>th</sup> Avenue S.

The specific objectives of this Preliminary Engineering Report are as follows:

- Evaluate the need for the project
- Determine the necessary improvements
- Provide information on the estimated costs for the proposed improvements
- Determine the project schedule
- Determine the feasibility of the proposed improvements

The project as proposed would consist of constructing about 1,450 feet of new roadway & utilities along 12<sup>th</sup> Avenue S.

Specific items of construction along the streets may consist of:

- Relocation of sanitary sewer and installation of sanitary sewer services.
- Installation of watermain and water services.
- Installation of storm sewer.
- Installation of bituminous pavement with concrete curb & gutter and sidewalk.
- Installation of regional storm water pond and outlet pipe.
- Mass grading of lots.
- Installation of turn lanes on 11th Street S (TH 4)
- Turf establishment.
- Other miscellaneous items of construction.

## II. Existing Conditions

### A. Street

Currently, the proposed project area is agricultural land used for crop production. A street opening with curb returns will be constructed at the 7<sup>th</sup> Street S/12<sup>th</sup> Avenue S intersection as a part of the 7<sup>th</sup> Street S Improvement this year. 9<sup>th</sup> Street S terminates 180 feet south of 10<sup>th</sup> Avenue S. 9<sup>th</sup> Street S is currently bituminous surfaced, urban section streets with concrete curb and gutter.

The soils in this area of the City are expected to be generally clay in nature and should provide a good sub-base for roadway construction. However, if unsuitable subsoils are discovered during construction, engineered fill may be required.



## B. Sanitary Sewer

The existing sanitary sewer throughout the project area was originally constructed in 1993, 1999, and 2003. These sewer lines were installed as a trunk sewer line to connect the lift station off 11<sup>th</sup> Street S to the 12<sup>th</sup> Avenue S/4<sup>th</sup> Street S area and the area to the south around the hospital. The existing sanitary sewer consists of 8"-12" polyvinyl chloride pipe (PVC) with concrete structures with gasketed joints. The sanitary sewer is in good condition.

The existing sanitary sewer system is shown on **Figure 1**.

## C. Watermain

A 12-inch watermain currently exists along 7<sup>th</sup> Street S with a stub at the 12<sup>th</sup> Avenue S intersection. This watermain was installed in 2006 and is in good condition.

A 8-inch ductile iron watermain currently exists along 9<sup>th</sup> Street S. This watermain was installed in 1993 and is in good condition.

Along 11<sup>th</sup> Street S (TH 4), a 12-inch watermain exists in the east inslope of the roadway and a watermain is stubbed across at the 12<sup>th</sup> Avenue S intersection to the western edge of the right-of-way. This watermain was originally installed in 1992. The watermain south of 12<sup>th</sup> Avenue S was then replaced in 2021 due to multiple watermain breaks in the area. The watermain north of 12<sup>th</sup> Avenue S is in fair to poor conditions and the watermain south of 12<sup>th</sup> Avenue S is in good condition.

The existing water distribution system is shown on **Figure 1**.

## D. Storm Sewer/Drainage

**Figure 2** presents the delineation of three hydrologically distinct drainage catchments within the project study area. The general topographic gradient directs overland flow from west to east. The primary land use within the contributing area is agricultural (row crops), with minor contributions from low-density residential developments situated along 11th Avenue South (north) and 4th Street/12th Avenue South (west).

A 10-inch subsurface agricultural tile, represented approximately by a cyan line in **Figure 2**, serves as the primary hydraulic conveyance system under low-intensity precipitation events. Although the exact outlet location of this tile is currently unverified, it is presumed to discharge into St. James Creek based on regional hydrologic patterns.

During moderate to high rainfall events, surface runoff from Drainage Area 1 is intercepted by an existing 36-inch storm sewer. This pipe segment conveys flow north along 4th Street before turning eastward at 12th Street, where it discharges to a field located within Drainage Area 2. Downstream of this point, flow transitions to shallow overland movement until reaching dual culverts beneath 7th Street South. Flow ultimately converges in a low-lying topographic depression in Drainage Area 3, immediately west of Trunk Highway (TH) 4. This location is prone to prolonged periods of attenuation due to the inadequate hydraulic infrastructure within the project area.

The cumulative drainage area, encompassing approximately 220 acres, is conveyed through a 36-inch reinforced concrete pipe (RCP) crossing beneath TH 4. The assumed outfall location for this system is St. James Creek.

## E. Private Utilities

Other privately owned utilities are present along 7<sup>th</sup> Street S and 11<sup>th</sup> Street S (TH 4). These include natural gas, electricity, and telecommunication. The conditions of these utilities are unknown, but it is assumed they are in good condition based on their assumed age.

### III. Proposed Conditions

#### A. Street

The proposed 12<sup>th</sup> Avenue S. street improvements will consist of a bituminous street with concrete curb and gutter on both sides. The roadway will be 36-foot-wide between curb openings. 36-foot-wide roadways can accommodate 2-way traffic with parallel parking on both sides if desired.

The 12<sup>th</sup> Avenue S proposed commercial/industrial pavement section will consist of 6.5 inches of bituminous pavement, 12 inches of Class 5 aggregate base, 12 inches of select granular borrow, and geotextile fabric placed on a prepared subgrade. The construction of perforated edge drains along the back of curb on both sides of the proposed roadways is proposed to provide subsurface drainage for the pavement section.

A sidewalk is proposed along the south side of 12<sup>th</sup> Avenue S. The sidewalk will meet the Americans with Disabilities Act (ADA) standards for accessibility. Concrete driveway aprons will be installed at each driveway. Boulevards will be restored with topsoil and seeded in all disturbed areas.

The proposed 9<sup>th</sup> Street S. street improvements will consist of installing a cul-de-sac at the terminus of the existing street to accommodate emergency and maintenance vehicle turnaround. The cul-de-sac will be a bituminous street with concrete curb and gutter on both sides. The residential pavement section will consist of 4 inches of bituminous on 12 inches of Class 5 aggregate, and geotextile fabric all placed on a prepared subgrade.

In conversations with MnDOT regarding access to 12<sup>th</sup> Avenue S off 11<sup>th</sup> Street S (TH 4), they are requiring right and left turn lanes to be constructed at the 12<sup>th</sup> Avenue S intersection. This will require expanding the concrete pavement, paving bituminous shoulders, and grading into the ditch area. The pavement section will match the existing roadway section. This will be determined during final design with recommendations from MnDOT. This will also require the access road to Fleet & Farm Supply to be relocated to align with the 12<sup>th</sup> Avenue S intersection.

The proposed roadway typical sections are shown on **Figure 3**, and the proposed street improvements are shown in **Figure 4**.

#### B. Sanitary sewer

Given the age and condition of the sanitary sewer throughout the project area, most of the existing pipe and manholes are recommended to remain in place. Due to conflicts with the proposed storm water pond, the sanitary sewer will need to be rerouted with 12-inch PVC pipe and precast concrete manholes with gasketed joints on the south and east side of the proposed storm water pond. The remaining existing manhole heights will be adjusted to accommodate the proposed roadway elevation. 6-inch service lines will be installed from the existing mainline sewer and stubbed to the right-of-way lines to serve the proposed lots.

The proposed sanitary sewer improvements are shown in **Figure 3**.

#### C. Watermain

A 12-inch watermain is proposed to be constructed along 12<sup>th</sup> Avenue S from 7<sup>th</sup> Street S to 11<sup>th</sup> Street S (TH 4) and an 8-inch watermain is proposed to be constructed along 9<sup>th</sup> Street S to the end of the cul-de-sac. 6-inch water services will be constructed at the proposed lot locations. New valves and hydrants will be provided at appropriate locations to facilitate pressure testing of the new watermain and allow for isolating segments of watermain for repairs and future maintenance.

The watermain along 11<sup>th</sup> Street S (TH4) will be encroached upon by the widening of the roadway for turn lanes. If a watermain break would happen in the area, roadway replacement would be required and increase the cost of the repair. Given the history of watermain breaks in the area, the watermain along 11<sup>th</sup> Street S (TH 4) from 10<sup>th</sup> Ave S to 12<sup>th</sup> Ave S is recommended for replacement prior to the widen of the roadway for turn lanes.

The proposed water distribution system improvements are shown in **Figure 3**.

#### D. Storm Sewer/Drainage

The proposed site improvements are designed to optimize the developable land area, meet post-construction water quality volume requirements, and mitigate flood risk for parcels located near the low-lying area west of Trunk Highway (TH) 4, which is subject to high runoff volumes from a large upstream drainage basin. A regional wet detention pond is proposed to address the substantial retention volume needs, comply with water quality standards, and accommodate site topography. Excavation for the pond will also serve to balance earthwork quantities across the site, thereby minimizing construction costs.

##### Storm Sewer Design Considerations

The storm sewer system must address several critical factors:

- **Discharge Feasibility:** Evaluate the potential to discharge to the existing 36-inch reinforced concrete pipe (RCP) culvert under TH 4 while integrating the proposed pond.
- **Hydraulic Connectivity:** The project site lies downgradient of the existing 36-inch storm sewer at 12th Avenue and 4th Street, necessitating provisions for future hydraulic connection.
- **Planned Infrastructure:** Scheduled 2025 improvements to 7th Street South include installation of a new 18-inch storm sewer outfall at the future 12th Avenue intersection and replacement of existing dual 22-inch culverts with a single 36-inch culvert.

Due to significant fill requirements and associated costs, utilizing the existing 36-inch TH 4 culvert for stormwater discharge is not feasible. Additionally, the invert elevation of the 12th Avenue storm sewer is too deep to allow for a gravity connection to the proposed basin. A straight-grade alignment from St. James Creek to the 12th Avenue invert results in a 0.35% slope, which will define the normal water level (NWL) of the proposed basin.

Hydraulic modeling supports the use of a 36-inch storm sewer from 7th Street South to the basin and from the basin to St. James Creek. This configuration satisfies design criteria and mitigates flood risk within the project area.

##### Volume and Storage Requirements

The proposed basin is designed in accordance with the National Pollutant Discharge Elimination System (NPDES) permit requirements. Wet sedimentation basins must provide a permanent pool volume of 1,800 cubic feet per acre of tributary drainage area and limit water quality discharge rates to 5.66 cubic feet per second (cfs) per acre of basin surface area.

The low-lying area adjacent to TH 4 is the most suitable location for basin construction. Preliminary grading yields a surface area of 2.8 acres at NWL, resulting in a maximum allowable discharge rate of 15.85 cfs at the water quality elevation.

Best management practices recommend that the basin fully contain the 100-year design storm without activating the emergency overflow (EOF). However, due to site constraints, the design also considers a back-to-back 100-year storm event scenario. Modeling indicates that even under conditions where the TH 4 culvert is fully obstructed, adjacent properties remain unaffected.

Water Quality: To promote development and reduce stormwater-related construction costs for future stakeholders, the project aims to provide stormwater treatment for fully developed parcels. Assuming 85% impervious coverage for commercial and industrial lots, the estimated water quality volume (WQ<sub>V</sub>) is calculated as follows:

$$WQ_V = \left( 1.45 \text{ acres} * \frac{1 \text{ in}}{12 \frac{\text{in}}{\text{ft}}} \right) + \left( 16.48 \text{ acres} * 0.85 * \frac{1 \text{ in}}{12 \frac{\text{in}}{\text{ft}}} \right) = 1.29 \text{ acre} - \text{ft}$$

Future expansion of the water quality volume will be considered to accommodate anticipated residential development between 4th Street and 7th Street South, which will be hydraulically connected to the proposed basin via future storm sewer extensions.

**Figure 4** illustrates the proposed basin footprint and storm sewer layouts.

#### E. Site Grading Improvements

To minimize excavation costs for roadway and stormwater pond improvements, it is proposed that excess material from the pond construction be used to build up the elevation of the streets and the lots within the project area. A stockpile of suitable material from the 7<sup>th</sup> Street S Improvements will also be available for use as fill on this project. Prior to placing any fill on the proposed street or lots, the underlying topsoil will be stripped, and suitable clay material will be placed in lifts and compacted according to recommendations provided by a geotechnical engineer. Soil boring will be conducted during the design phase to determine the properties of the underlying soil and its ability to support commercial/industrial business when placed on compacted embankment.

It should be noted that proposed earthwork quantities are an estimate and depend on several assumptions that are difficult to quantify. Adjustments and corrections during construction will likely be necessary to account for variations in topsoil depth, soil moisture content and shrinkage, and the contractor's means and methods of construction.

#### F. Private Utilities

Major conflicts with existing private utilities are not expected as a part of this project. Private utility owners will be contacted during the design and construction phase of the project to coordinate any issues that may arise. It is expected that gas, electric, and telecommunication utilities will be extended along the roadway corridors following the proposed improvements to provide service to the proposed project.

## IV. Right of Way and Easements

Right of way and permanent easements acquisition are necessary for this project. A plat will need to be developed for the project area to define the proposed right of way, permanent easements, and lot areas. A permanent easement will also have to be acquired for storm pond outlet pipe.

The proposed right of way along 12<sup>th</sup> Street S will be 60 foot wide.

## V. Approvals and Permits

Approvals and Permits are required from various agencies for the construction of the project. They include the following:

- Minnesota Pollution Control Agency (MPCA) General Construction Storm Water Permit
- MPCA Sanitary Sewer Extension Permit and Environmental Review Pre-screening Form
- Minnesota Department of Health (MDH) Plan Review for Watermain Construction
- Minnesota Department of Transportation (MnDOT) Utility Work in Trunk Highway Right-of-Way Permit
- Coordination with Minnesota Department of Transportation (MnDOT) for proposed turn lanes.

## VI. Project Cost Estimate and Financing

The estimated costs are summarized in the following table:

Estimated Project Cost	
Street	\$1,012,740
Storm	\$147,640
Sanitary Sewer and Services	\$297,730
Watermain and Services	\$538,320
Pond/Grading	\$3,052,030
Turn Lanes	\$518,760
<b>Total</b>	<b>\$5,567,210</b>

These cost estimates are based on public construction cost information from other recent projects similar in scope. A contingency factor has been included to compensate for incidental and unforeseen items of work which may not be readily identifiable during the preliminary design stage. The estimated costs of engineering, administration, legal and financing are included in the project costs. Since the cost estimates are dependent on the cost of labor, materials, competitive bidding process, weather conditions, and other factors affecting the cost of construction, all cost estimates are opinions for general information and no warranty or guarantee as to the accuracy of construction cost is made. Therefore, financing for this project should be based upon actual competitive bid prices with reasonable contingencies.

It is anticipated that funding for the proposed street and utility improvements would be provided by a combination of special assessments, City funds, and bond funds. Following the requirements of Chapter 429 of the Minnesota State Statutes, at least 20% of the project cost bonded for will have to be assessed.

Assessment proceedings (hearing, notices, etc.) for the project will follow the requirements of Chapter 429 of the Minnesota State Statutes. Detailed assessment rolls will be prepared once the Preliminary Engineering Report has been approved and a date for the Improvement Hearing has been set.

## VII. Proposed Project Schedule

The following schedule is proposed for this project:

Proposed Project Schedule	
Date	Task
July 15, 2025	Resolution Receiving Report and Calling for Hearing on Improvements
August 19, 2025	Improvement Hearing & Authorize Plans & Specifications
January 20, 2026	Approve Plans & Specs and Advertise for Bid
February 19, 2026	Open Bids
March 17, 2026	Assessment Hearing
	Resolution Adopting Assessment
	Resolution Awarding Contract
May 2026	Begin Construction (Approx.)
September 2026	End Construction (Approx.)

## VIII. Conclusions and Recommendations

The extension of City roadways and utilities is necessary for the expansion of the 12<sup>th</sup> Avenue S highway district. From an engineering perspective, the improvements recommended in this report are feasible, cost effective, and necessary. These improvements can best be accomplished by letting competitive bids for the work. Feasibility is contingent upon City Council findings with respect to project financing.

We recommend that the Council accept this report and call for a hearing on the proposed improvements to solicit public input on this project.

## Appendix A: Figures



12th Avenue S Highway District Expansion

City of St. James, Minnesota

Figure 1: Existing Conditions

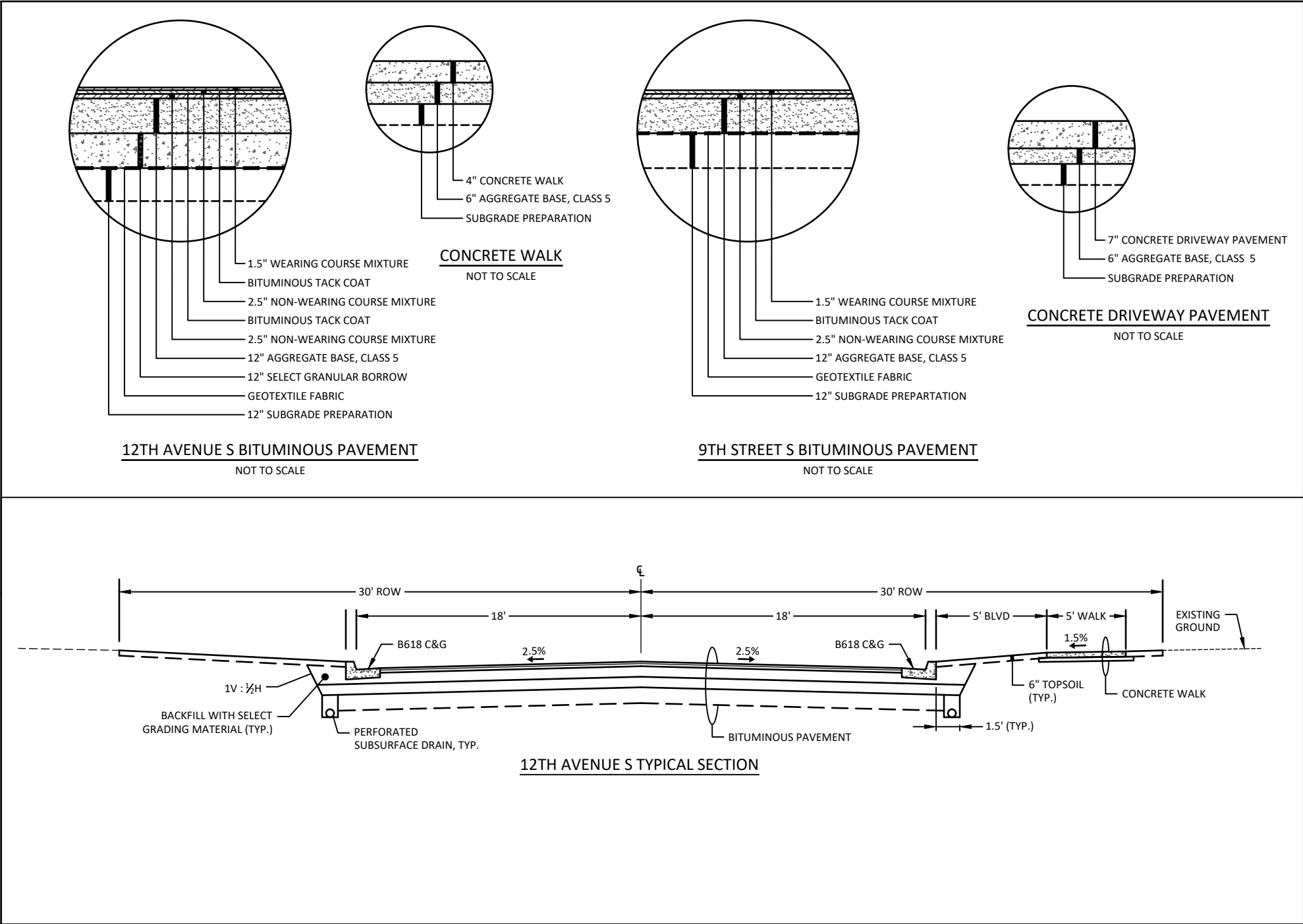
July 2025











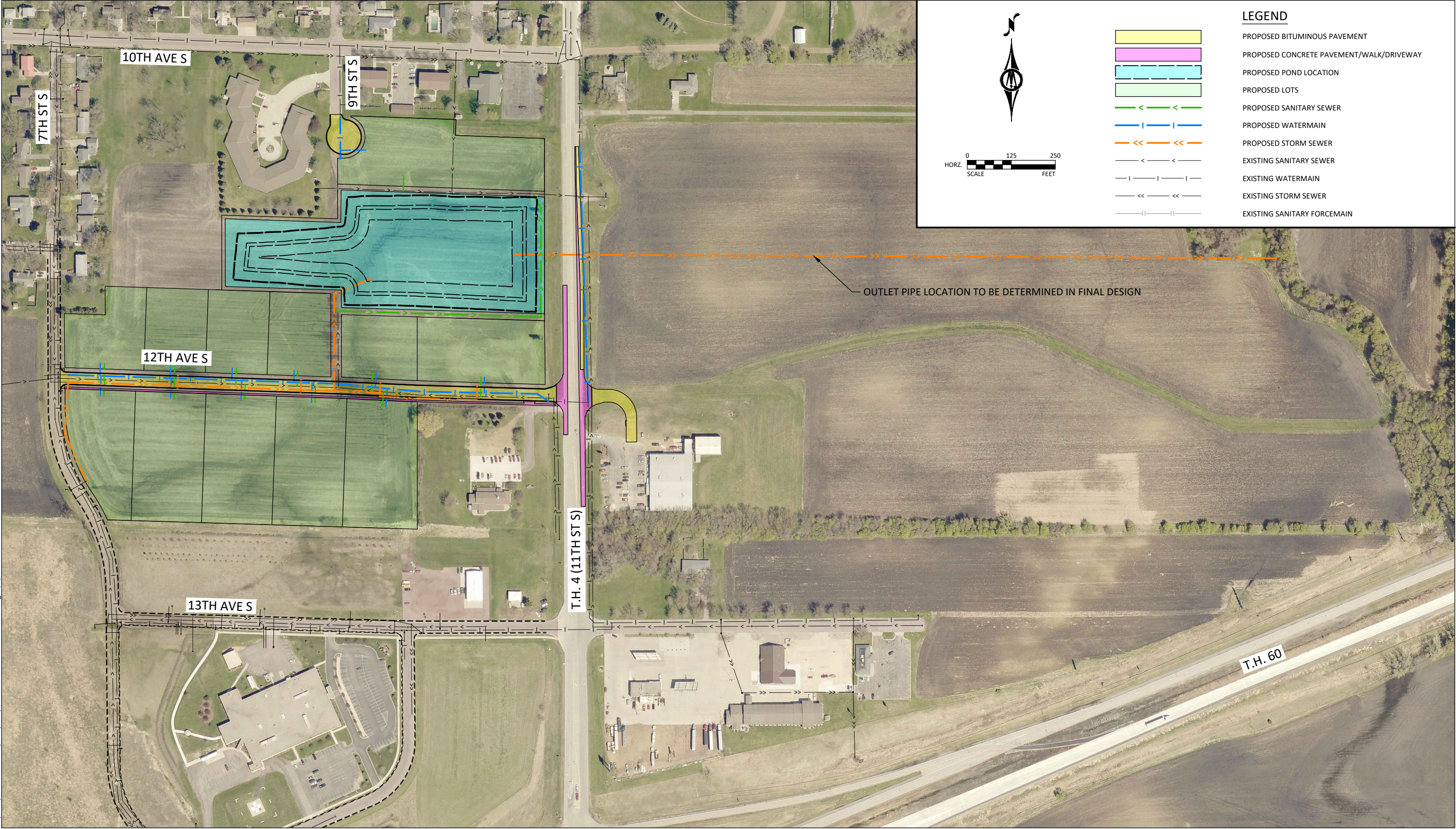


12th Avenue S Highway District Expansion

City of St. James, Minnesota

Figure 4: Proposed Improvements

July 2025





## Appendix B: Preliminary Engineer's Estimate

PRELIMINARY ENGINEER'S ESTIMATE

12th Avenue S Highway District Expansion

City of Saint James, MN

BMI PROJECT NO. 24X.136274

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Item No.	Item	Unit	Unit Price	STREET		POND/GRADING/STORM		STORM SEWER		SANITARY SEWER		WATERMAIN		TH 4 TURN LANES		PROJECT COSTS	
				Est. Quantity	Est. Amount	Est. Quantity	Est. Amount	Est. Quantity	Est. Amount	Est. Quantity	Est. Amount	Est. Quantity	Est. Amount	Est. Quantity	Est. Amount	Est. Quantity	Est. Amount
1	MOBILIZATION & TRAFFIC CONTROL	LUMP SUM	\$150,000.00	0.15	\$23,100.00	0.45	\$68,200.00	0.02	\$3,300.00	0.04	\$6,600.00	0.06	\$8,800.00	0.27	\$40,000.00	1.00	\$150,000.00
2	REMOVE CURB & GUTTER	LIN FT	\$12.00	200	\$2,400.00											200	\$2,400.00
3	REMOVE PAVEMENT	SQ YD	\$10.00	520	\$5,200.00									2310	\$23,100.00	2830	\$28,300.00
4	EXCAVATION - COMMON	CU YD	\$9.00			80000	\$720,000.00							2500	\$22,500.00	82500	\$742,500.00
5	COMMON EMBANKMENT	CU YD	\$6.00			94000	\$564,000.00							1000	\$6,000.00	95000	\$570,000.00
6	SUBGRADE EXCAVATION	CU YD	\$15.00	1600	\$24,000.00									200	\$3,000.00	1800	\$27,000.00
7	STABILIZING AGGREGATE (CV)	CU YD	\$60.00	1600	\$96,000.00									200	\$12,000.00	1800	\$108,000.00
8	SELECT GRANULAR BORROW (CV)	CU YD	\$25.00	2600	\$65,000.00									1350	\$33,750.00	3950	\$98,750.00
9	AGGREGATE BASE, CLASS 5	CU YD	\$45.00	2600	\$117,000.00									900	\$40,500.00	3500	\$157,500.00
10	1.5" BITUMINOUS WEAR COURSE	SQ YD	\$8.00	6400	\$51,200.00									1500	\$12,000.00	7900	\$63,200.00
11	2.0" BITUMINOUS NON-WEAR COURSE	SQ YD	\$10.00	6400	\$64,000.00											6400	\$64,000.00
12	2.5" BITUMINOUS NON-WEAR COURSE	SQ YD	\$13.00	6400	\$83,200.00									1500	\$19,500.00	7900	\$102,700.00
13	8" CONCRETE PAVEMENT	SQ YD	\$90.00											1930	\$173,700.00	1930	\$173,700.00
14	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	\$25.00	3500	\$87,500.00											3500	\$87,500.00
15	4" PERFORATED EDGE DRAIN	LIN FT	\$15.00	3500	\$52,500.00											3500	\$52,500.00
16	4" CONCRETE WALK	SQ FT	\$8.00	7200	\$57,600.00											7200	\$57,600.00
17	6" CONCRETE WALK	SQ FT	\$14.00	200	\$2,800.00											200	\$2,800.00
18	TRUNCATED DOMES	SQ FT	\$70.00	40	\$2,800.00											40	\$2,800.00
19	CONNECT TO EXISTING SANITARY	EACH	\$1,000.00							14	\$14,000.00					14	\$14,000.00
20	12" SANITARY SEWER	LIN FT	\$85.00							1000	\$85,000.00					1000	\$85,000.00
21	CONSTRUCT SANITARY MANHOLE	LIN FT	\$600.00							100	\$60,000.00					100	\$60,000.00
22	8"x6" WYE	EACH	\$600.00							3	\$1,800.00					3	\$1,800.00
23	12"x6" WYE	EACH	\$1,300.00							10	\$13,000.00					10	\$13,000.00
24	6" SANITARY SERVICE	LIN FT	\$50.00							700	\$35,000.00					700	\$35,000.00
25	CASTING ASSEMBLY - SANITARY	EACH	\$1,000.00							4	\$4,000.00					4	\$4,000.00
26	CONNECT TO EXISTING WATERMAIN	EACH	\$1,200.00									7	\$8,400.00			7	\$8,400.00
27	6" WATERMAIN	LIN FT	\$55.00									800	\$44,000.00			800	\$44,000.00
28	8" WATERMAIN	LIN FT	\$65.00									1650	\$107,250.00			1650	\$107,250.00
29	12" WATERMAIN	LIN FT	\$75.00									950	\$71,250.00			950	\$71,250.00
30	6" GATE VALVE & BOX	EACH	\$2,500.00									16	\$40,000.00			16	\$40,000.00
31	8" GATE VALVE & BOX	EACH	\$3,500.00									4	\$14,000.00			4	\$14,000.00
32	12" GATE VALVE & BOX	EACH	\$6,000.00									2	\$12,000.00			2	\$12,000.00
33	HYDRANT	EACH	\$6,500.00									5	\$32,500.00			5	\$32,500.00
34	WATERMAIN FITTINGS	EACH	\$13.00									4500	\$58,500.00			4500	\$58,500.00
35	CONNECT TO EXISTING STORM SEWER	EACH	\$1,000.00			2	\$2,000.00									2	\$2,000.00
36	12" STORM SEWER	LIN FT	\$60.00					200	\$12,000.00							200	\$12,000.00
37	18" STORM SEWER	LIN FT	\$70.00					300	\$21,000.00							300	\$21,000.00
38	24" STORM SEWER	LIN FT	\$90.00					150	\$13,500.00							150	\$13,500.00
39	36" STORM SEWER	LIN FT	\$160.00			2200	\$352,000.00									2200	\$352,000.00
40	42" STORM SEWER	LIN FT	\$200.00			1500	\$300,000.00									1500	\$300,000.00
41	36" RCP APRON	EACH	\$3,000.00			2	\$6,000.00									2	\$6,000.00
42	42" RCP APRON	EACH	\$3,500.00			1	\$3,500.00									1	\$3,500.00
43	CONSTRUCT POND SKIMMER	EACH	\$15,000.00			1	\$15,000.00									1	\$15,000.00
44	CONSTRUCT STORM MANHOLE	LIN FT	\$1,000.00			120	\$120,000.00	20	\$20,000.00							140	\$140,000.00
45	CONSTRUCT CATCH BASIN	LIN FT	\$600.00					40	\$24,000.00							40	\$24,000.00
46	CASTING ASSEMBLY - STORM	EACH	\$1,000.00			12	\$12,000.00	12	\$12,000.00							24	\$24,000.00
47	STABILIZED CONSTRUCTION EXIT	EACH	\$2,000.00	3	\$6,000.00											3	\$6,000.00
48	SILT FENCE TYPE MACHINE SLICED	LIN FT	\$3.00			5800	\$17,400.00							2000	\$6,000.00	7800	\$23,400.00
49	STORM DRAIN INLET PROTECTION	EACH	\$200.00					15	\$3,000.00							15	\$3,000.00
50	SEEDING	ACRE	\$3,000.00	2	\$6,000.00	23	\$69,000.00							1	\$3,000.00	26	\$78,000.00
51	4" SOLID LINE PAINT	LIN FT	\$0.50											2900	\$1,450.00	2900	\$1,450.00
52	4" DOUBLE SOLID LINE PAINT	LIN FT	\$1.00											1450	\$1,450.00	1450	\$1,450.00
53	24" SOLID LINE PAINT	LIN FT	\$6.00											60	\$360.00	60	\$360.00
54	PAVEMENT MESSAGE PAINT	SQ FT	\$10.00											135	\$1,350.00	135	\$1,350.00
SUBTOTAL:					746,300.00		\$2,249,100.00		\$108,800.00		\$219,400.00		\$396,700.00		\$399,660.00		\$4,119,960.00
CONTINGENCY:					111,950.00		\$337,360.00		\$16,320.00		\$32,910.00		\$59,500.00		\$39,970.00		\$598,010.00
TOTAL ESTIMATED CONSTRUCTION COST:					858,250.00		\$2,586,460.00		\$125,120.00		\$252,310.00		\$456,200.00		\$439,630.00		\$4,717,970.00
DESIGN, ADMINISTRATION AND CONSTRUCTION ENGINEERING:					154,490.00		\$465,560.00		\$22,520.00		\$45,420.00		\$82,120.00		\$79,130.00		\$849,240.00
TOTAL ESTIMATED PROJECT COST:					1,012,740.00		\$3,052,020.00		\$147,640.00		\$297,730.00		\$538,320.00		\$518,760.00		\$5,567,210.00