

ATTACHMENT A SCOPE OF SERVICES

SEDALIA STORM DRAINAGE IMPROVEMENTS Project Area 30

Task 1 – Topographic and Utility Survey

1.1 Property Research

Perform a field search to recover existing monumentation (existing front property corners and right-of-way markers). Review the subdivision plats and field research to develop the existing property lines and establish the existing right-of-way. This work task is not intended to be a property survey.

1.2 Horizontal and Vertical Control

Set three (3) control points at each project area. The control will be tied to Missouri State Plane – Central Zone (NAD 83) & NAVD 88 Vertical Datum.

1.3 Utility Survey

Locate marked utilities at each project area including, but not limited to, water, sewer, gas, power, telephone, cable TV, and fiber optics. Buried utility companies will be contacted through the Missouri One-Call system and as supplemented by the City for those utilities not associated with the One-Call system. Utilities will be horizontally field located according to the field marks made by the utility companies or the One-Call locator. The inflow/outflow elevations for storm and sanitary sewer structures will be located along with the size and type of structure and the size and type of the conduit entering and leaving the structure.

1.4 Topographic Survey

Perform field surveys to obtain sufficient detail for the project design. The field information shall include topographic information to clearly identify breaklines, slopes, and terrain issues including paving, sidewalks, entrances & utilities.

1.5 Documentation

Prepare a CADD drawing of the property lines, right-of-way, existing utilities, existing topographic features, and spot elevations that will be used to supplement the City GIS/Lidar data. This drawing will be used as the basemap for the design and plan preparation.

Task 2 – Plan Preparation

2.1 Preliminary Plan Preparation (60% Plans)

Based on the Wilson & Company Stormwater Master Plan – Priority Projects Memorandum dated April 12, 2018; plans will be prepared for the Project Area 30 – Alternative #1.

Plan sheets will be developed as required to convey sufficient detail for construction. The following sheets will be prepared for the Preliminary Plan submittal:

- Title Sheet
- General Layout Sheet
- Plan & Profile Sheets
- Erosion Control Sheets
- Traffic Control Sheets

The Preliminary Plans and Engineer’s Opinion of Probable Construction Cost will be submitted to the City for review. City comments will be addressed and written responses will be prepared and submitted with Final Plans.

2.2 Final Plans and Project Manual Preparation (100% Plans)

Based on comments received during the Preliminary Plan review, Final Plans will be revised. A written list of comments from the Preliminary Plan review will be assembled into a single document and responses to each comment will be provided. A Project Manual will be developed using the City’s standard front end documents and technical specifications.

The Final Plans, Project Manual and Engineer’s Opinion of Probable Construction Cost will be submitted to the City for review. City comments will be addressed and written responses will be prepared prior to advertising the project for Bid.

2.3 Post Design Services

The following post design services will be provided:

- Submit Final Plans and Project Manual documents in PDF format for bidding the project by the City.
- Answer questions and issue addendums, if required, during the project advertisement period.
- Review shop drawings
- Address contractor RFIs during construction

Items Not Included in the Scope of Services

1. Any work requested by the City that is not included in the basic services will be classified as supplemental services. Supplementary services shall include, but are not limited to the following:
 - a. Changes in the scope, extent, or character of the project.
 - b. Revisions to the plans when inconsistent with previous approvals or instructions by the City.
 - c. Updating plans to reflect development that has occurred after the Final Plans are complete.
2. Utility coordination except as specifically stated in Task 1.3.
3. Obtaining Ownership & Encumbrance or Title Reports for the adjacent properties.
4. Public Involvement or meetings with the adjacent property owners.
5. Design of sidewalks or handicap ramps.
6. Full property survey or setting of new property corners if they are missing is not required.
7. Environmental permitting.
8. Construction Phase Services:
 - a. Construction inspection or testing.
 - b. Substantial and Final completion inspections.
 - c. Preparation of record drawings.

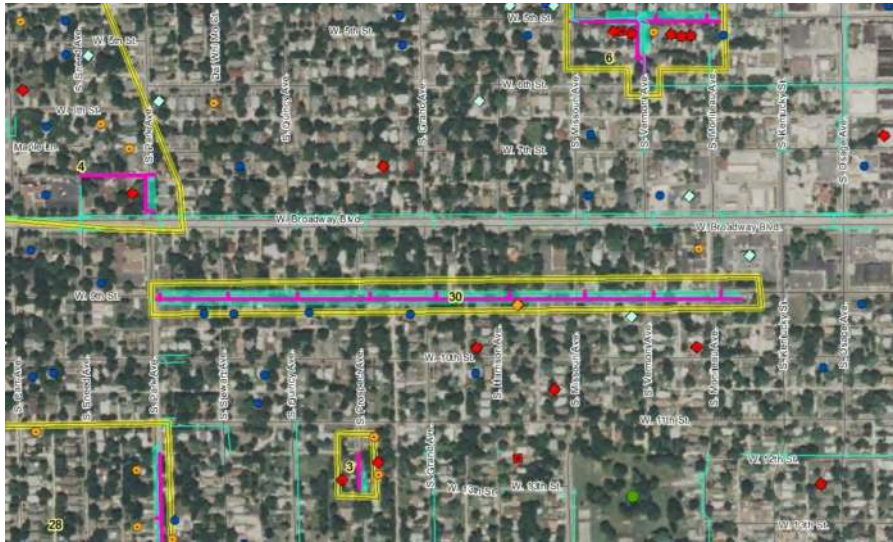


**EXHIBIT A
FEE ESTIMATE WORKSHEET**

Proj.: Storm Drainage Improvements
 By: GJLust
 Date: October 28, 2021
 Client: Sedalia, MO
 Notes: Project Area 30

TASK I.D.	WORK TASK DESCRIPTION	TASK CODE WCI CLASS	ESTIMATED MANHOURS				TOTAL HOURS	LABOR EFFORT	EXPENSE EFFORT	TOTAL FEE		
			P5 Project Manager	P3 Design Engineer	OD4 CADD Technician	FS6 Survey Manager					FS5 Chief Surveyor	FS4 Survey Tech
TASK 1 - RIGHT-OF-WAY and UTILITY SURVEY												
1.1	Property Research				4	2		6.00	\$ 624.00	\$ -	\$ 624.00	
1.2	Horizontal & Vertical Control						8	8	16.00	\$ 1,680.00	\$ 925.50	\$ 2,605.50
1.3	Utility Survey						12	12	24.00	\$ 2,520.00	\$ 617.00	\$ 3,137.00
1.4	Topographic Survey						24	24	48.00	\$ 5,040.00	\$ 1,667.50	\$ 6,707.50
1.5	Documentation			24	4			28.00	\$ 2,528.00	\$ -	\$ 2,528.00	
	Subtotal		0	0	28	6	44	44	122.00	\$ 12,392.00	\$ 3,210.00	\$ 15,602.00
TASK 2 - PLAN PREPARATION												
2.1	60% Plans		40	120	96				256.00	\$ 28,160.00	\$ 532.00	\$ 28,692.00
2.2	Final Plans and Project Manual Preparation		20	80	48				148.00	\$ 16,380.00	\$ 110.00	\$ 16,490.00
2.3	Post Design Services		4	8					12.00	\$ 1,588.00	\$ 128.00	\$ 1,716.00
	Subtotal		64	208	144	0	0	0	416.00	\$ 46,128.00	\$ 770.00	\$ 46,898.00
TOTALS			64	208	172	6	44	44	538.00	\$ 58,520.00	\$ 3,980.00	\$ 62,500.00

Improvement Area 30 – West 9th Street



Benefit Point Total	450
Project Cost	\$749,475
Cost/Benefit Score	1666

Location Map

Project Problem and Solution Summary

Along West 9th Street flooding of the street occurs in rain events from South Moniteau Avenue to South Park Avenue. Street flooding in this area was identified as a problem by the City of Sedalia. Stormwater flows from the east and is conveyed in West 9th Street. Portions of West 9th Street are curbed and in several locations the curb is in poor condition. The stormwater enters an existing open channel at the intersection of South Park Avenue and West 9th Street. Because the stormwater is conveyed in the street flooding occurs along West 9th Street and could restrict vehicles.

To prevent street flooding on West 9th Street an enclosed system should be installed to collect and convey the stormwater. The system will begin between South Moniteau Avenue and South Kentucky Street and parallel West 9th Street to South Park Street where it will outlet into an existing open channel. Several cross road pipe should also be installed to capture water on both portions of the street. For final design survey information will be needed for home low openings, utility information, more detailed topographic data and existing storm sewer information to provide more accurate alignment and pipe sizing.

Cost Estimate				
<u>Item Description</u>	<u>Quantity</u>	<u>Qty. Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Pipe 21" and Smaller - Street	41	LF	\$180	\$7,380
Pipe 21" and Larger - Street	2820	LF	\$210	\$592,200
			Subtotal	\$599,580
			Utilities and Misc. Contingency (25%)	\$149,895
			Total	\$749,475

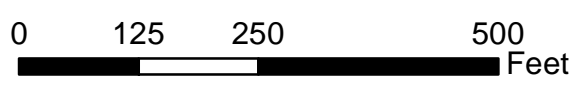


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Legend

- Proposed Channel
- Proposed Pipes
- Street Flood
- Potential System Improvements
- Surface Water, Ground Water and Sanitary Sewer Backup
- ◆ Surface Flooding
- ▲ Ground and Surface Water Flooding
- ◆ Sanitary Sewer Backup
- Returned Questionnaires with No Major Issues
- Surface Flooding and Sanitary Sewer Backup
- Ground Water Flooding and Sanitary Sewer Backup
- ◆ Ground Water Flooding

**City of Sedalia, MO
Potential System Improvements
Project ID #30**



Memorandum

To: City of Sedalia, Missouri
From: Wilson & Company, Inc., Engineers & Architects
CC:
Date: April 12, 2018 **File Number:** 14-100-509-00
Re: Stormwater Master Plan Improvement Areas – No. 30

From the field investigation, it appears that the primary issue with this location is the lack of an enclosed system with curb and gutter. The runoff flows from east to west down W 9th St. to an open channel at the intersection of 9th and S Park Ave. Some properties along 9th have curb and gutter and some do not, leading to the runoff being conveyed in the street. The back and forth transition from curb and gutter to no curb and gutter leads to ponding in those areas.

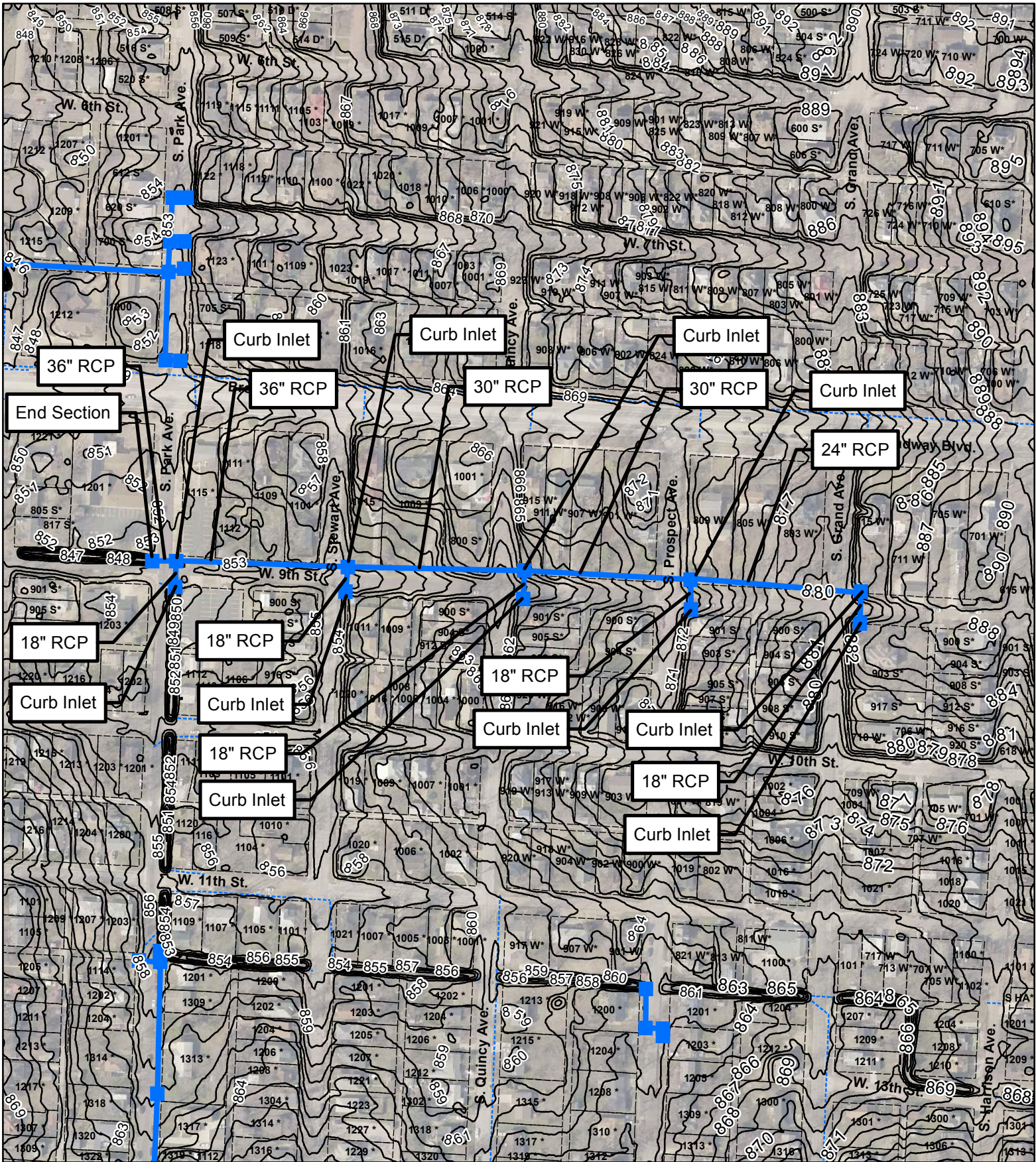
Based on 2013 aerial imagery and 2011 LiDAR contours, the area of concern has a drainage area of approximately 16 acres. Based on rational method and drainage area parameters, the 1% design storm will yield a peak discharge of approximately 90 cfs.

Alternative #1:









Alternative #1 includes adding an enclosed system with curb and gutter along W 9th St. from S Grand Ave. west to S Park Ave. The proposed system would outlet into the existing open channel at the intersection of 9th and Park. New inlets, 18" RCP, 24" RCP, 30" RCP, and 36" RCP will make up the new enclosed system. The street, alleys, and driveways will need to be patched. The new system will be located within the Right-of-Way, so no easements will be required.

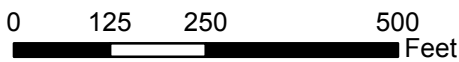
Alternative #1 Cost Estimate:

Item	Quantity	Unit	Unit Price	Total
Clearing and Grubbing	1	LS	\$ 12,000	\$ 12,000
Grading	250	CY	\$ 20	\$ 5,000
Inlet	10	EA	\$ 6,000	\$ 60,000
Storm Sewer (18")	125	LF	\$ 100	\$ 12,500
Storm Sewer (24")	350	LF	\$ 120	\$ 42,000
Storm Sewer (30")	700	LF	\$ 150	\$ 105,000
Storm Sewer (36")	350	LF	\$ 180	\$ 63,000
End Section	1	EA	\$ 4,000	\$ 4,000
Street Patch	750	SY	\$ 120	\$ 90,000
Driveway Patch	125	SY	\$ 80	\$ 10,000
			Sub-Total	\$ 403,500
			Contingency (20%)	\$ 80,700
			Total	\$ 484,200



Legend

-  Proposed Berm
-  Proposed Channel
-  Proposed Storm Sewer
-  Proposed Storm Structure
-  Existing Storm Sewer
-  Corporate_limits
-  Parcel
-  Contour - 1 ft



City of Sedalia, Missouri

Stormwater Master Plan Improvements

Improvement Area: 30

April 2018

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