

Preliminary Engineering Report



2017 Alley Reconstruction

- **Alley between 1st Avenue & 2nd Avenue and Lewis Street & Sommerville Street**

Alley Reconstruction and Appurtenant Work



PRELIMINARY ENGINEERING REPORT

2017 ALLEY RECONSTRUCTION

- Alley between 1st Avenue & 2nd Avenue
and Lewis Street & Sommerville Street

City Project Number 2017-6

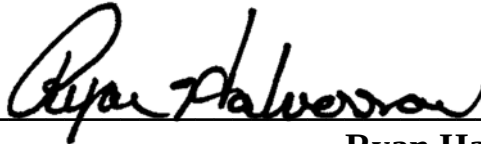
April 2017

Prepared By:

City of Shakopee
Engineering Department
129 South Holmes Street
Shakopee, MN 55379
(952) 233-9300
(952) 233-3803 (Fax)

**PRELIMINARY ENGINEERING REPORT
FOR
2017 ALLEY RECONSTRUCTION
SHAKOPEE, MINNESOTA**

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.



Ryan Halverson

Date April 13, 2017 **License No.** 49803

EXECUTIVE SUMMARY

The intent of this section is to highlight the important issues of this project. More detailed information is contained in the body of the report.

On February 21, 2017, the Shakopee Economic Development Authority ordered the preparation of construction plans for improvements to the downtown business district, including the Lewis Street parking lot and the adjacent alley. Per policy, a portion of the construction cost of the alley is to be assessed, creating the need for this feasibility report.

The proposed improvements consist of installing new storm sewer and reconstructing the alley with concrete pavement for:

- Alley between 1st Avenue & 2nd Avenue
and Lewis Street and Sommerville Street

The total estimated costs for the proposed improvements are \$120,000 for the alley concrete pavement improvements and the storm sewer improvements.

The project will be funded as follows:

Assessments (25% of street improvements)	\$ 30,000.00
Storm Sewer Fund	<u>\$ 90,000.00</u>
TOTAL PROJECT COST	\$ 120,000.00

(Note: numbers in the report are rounded)

TABLE OF CONTENTS

<u>Description</u>	<u>Page No.</u>
1. Introduction	1
2. Scope	1
3. Background	1
4. Existing Conditions	1
5. Proposed Improvements	2
6. Special Assessments	4
7. Estimated Costs	5
8. Funding Sources	5
9. Conclusion	5
Appendix	6

1. INTRODUCTION

On February 21, 2017, the Shakopee Economic Development Authority ordered the preparation of construction plans for improvements to the downtown business district, including the Lewis Street parking lot and the adjacent alley. Per policy, a portion of the construction cost of the alley is to be assessed, creating the need for this feasibility report for the following alley:

- Alley between 1st Avenue & 2nd Avenue and Lewis Street and Sommerville Street

This project is included in the City's Proposed 2017 Capital Improvement Program.

2. SCOPE

This report will determine the feasibility and cost effectiveness of reconstructing the above-mentioned alley. All existing infrastructure elements (street, utilities, etc.) within the project area were evaluated as part of this report.

The report will provide a description of the proposed improvements, an itemized cost estimate, a cost apportionment and a preliminary assessment roll.

3. BACKGROUND

Based on the asbuilt information the City has for the proposed project area, it appears the alley was bituminous paved in 1995. Improvements to the alley have since been limited to patching.

The existing pavement of the alley project area are deteriorated to the point where they require more than normal maintenance. There are many transverse and longitudinal cracks, areas of patching, and drainage problems.

4. EXISTING CONDITIONS

The existing conditions are identified in Drawing 1 in the Appendix.

The alley has a bituminous pavement surface that varies in width, has some drainage problems and has deteriorated significantly and requires more than normal patching.

5. PROPOSED IMPROVEMENTS

The proposed project area is identified in Drawing 3 in the Appendix.

The proposed improvements are as follows:

5.1 Alley Reconstruction

The alley between 1st Avenue and 2nd Avenue and Lewis Street and Sommerville Street is proposed to be reconstructed a width of 12-feet. It will be constructed with concrete pavement and have an inverted crown allowing for drainage down the center of the alley. For the most part, existing grades and drainage patterns will need to be maintained.

The proposed storm sewer improvements consist of replacing some storm sewer structures at the west end of the alley on Lewis Street and adding storm sewer pipe and an inlet structure for the inverted center crown. The improvements are identified in Drawing 2 in the Appendix.

The total estimated cost for the alley reconstruction is \$120,000.00.

6. SPECIAL ASSESSMENTS

6.1 Alley Reconstruction

25% of the project costs for the alley and storm sewer improvements are proposed to be assessed on a front footage basis to benefiting properties.

The remaining 75% of the project cost for the proposed alley improvements will be funded by the Storm Sewer Fund.

The estimated assessment rate for the proposed street improvements is \$50.00 per front foot.

A preliminary assessment roll is included in the Appendix.

Actual Assessments will be based on the final project costs and apportionments.

7. ESTIMATED COSTS

An itemized cost estimate is included in the Appendix. The following costs were prepared using 2016 construction costs and are subject to change, depending on the final design of the project, bids received, and actual work performed. A summary of the estimated construction costs plus a 10% contingency, engineering and administration costs for the project are as follows:

Alley Improvements	<u>\$ 120,000.00</u>
TOTAL PROJECT COST	\$ 120,000.00

8. FUNDING SOURCES

A summary of the estimated funding apportionment for the recommended improvements is as follows:

Assessments	\$ 30,000.00
Storm Sewer Fund	<u>\$ 90,000.00</u>
TOTAL PROJECT COST	\$ 120,000.00

9. CONCLUSION

From an engineering standpoint, the recommended improvements are feasible, cost effective and necessary to maintain the City's existing infrastructure.

APPENDIX

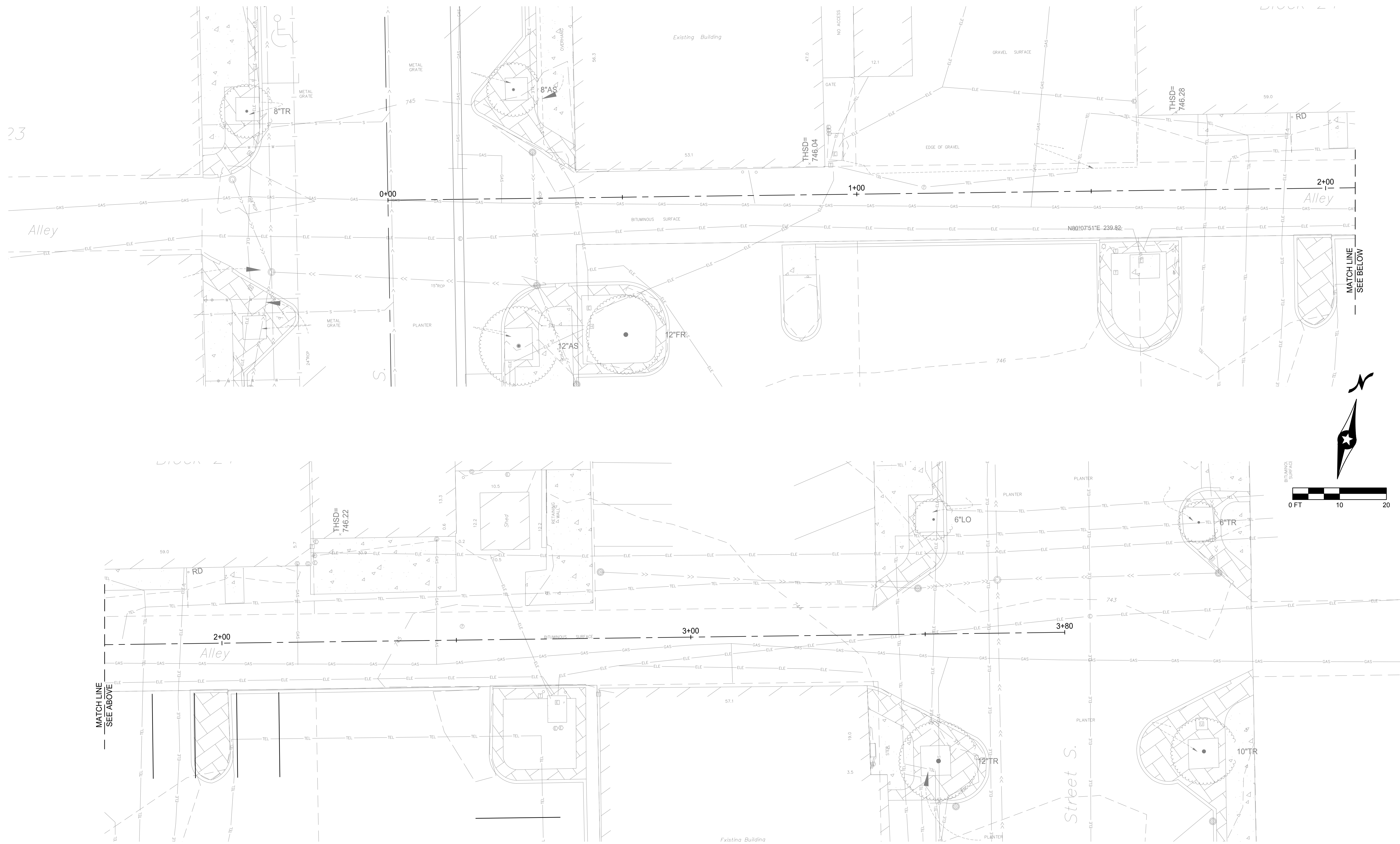
Existing Conditions

Proposed Alley Improvements

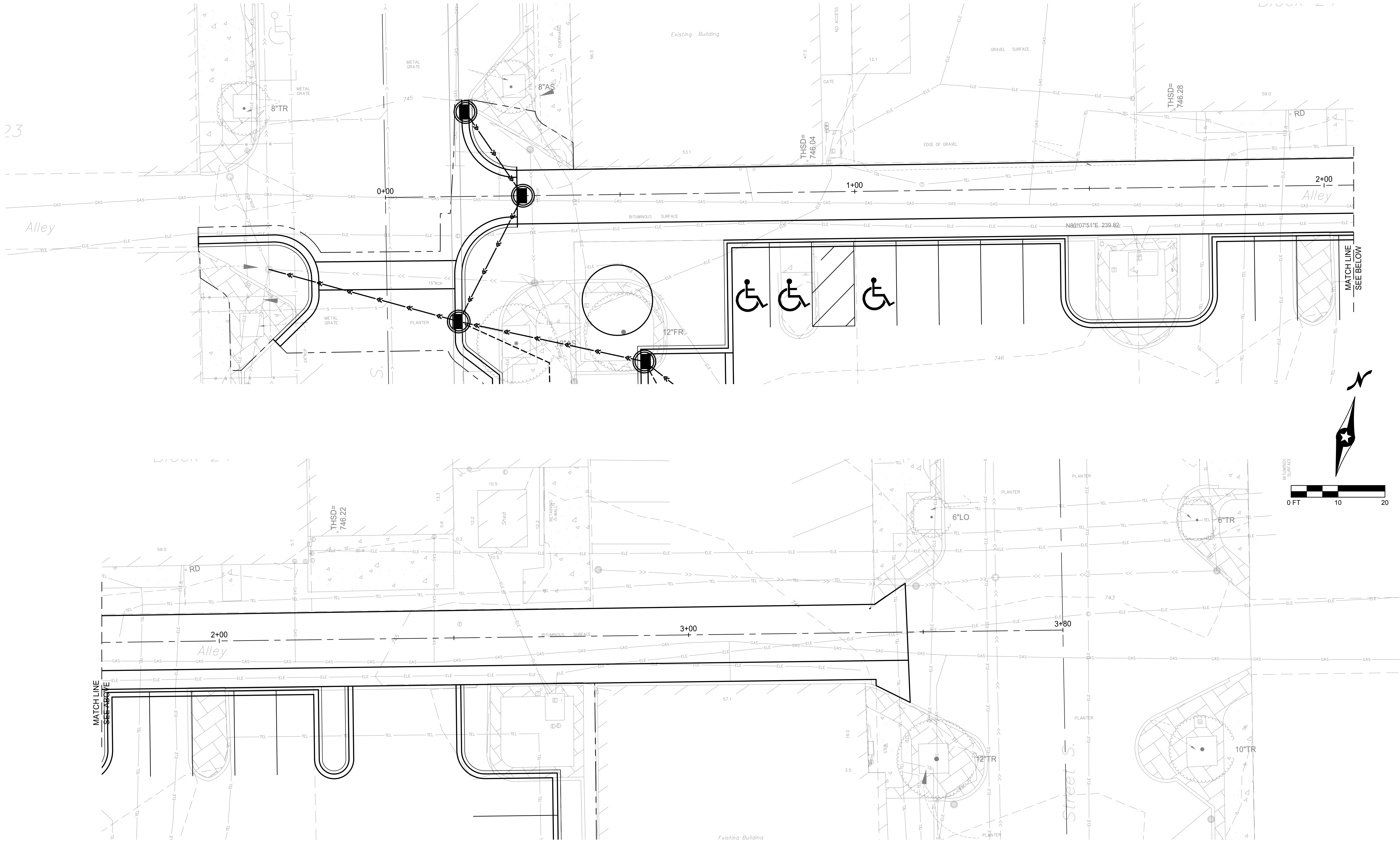
Proposed Area of Improvements

Cost Estimate

Assessment Roll



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**DOWNTOWN IMPROVEMENTS
STREET & UTILITY CONSTRUCTION
SHAKOPEE, MINNESOTA**

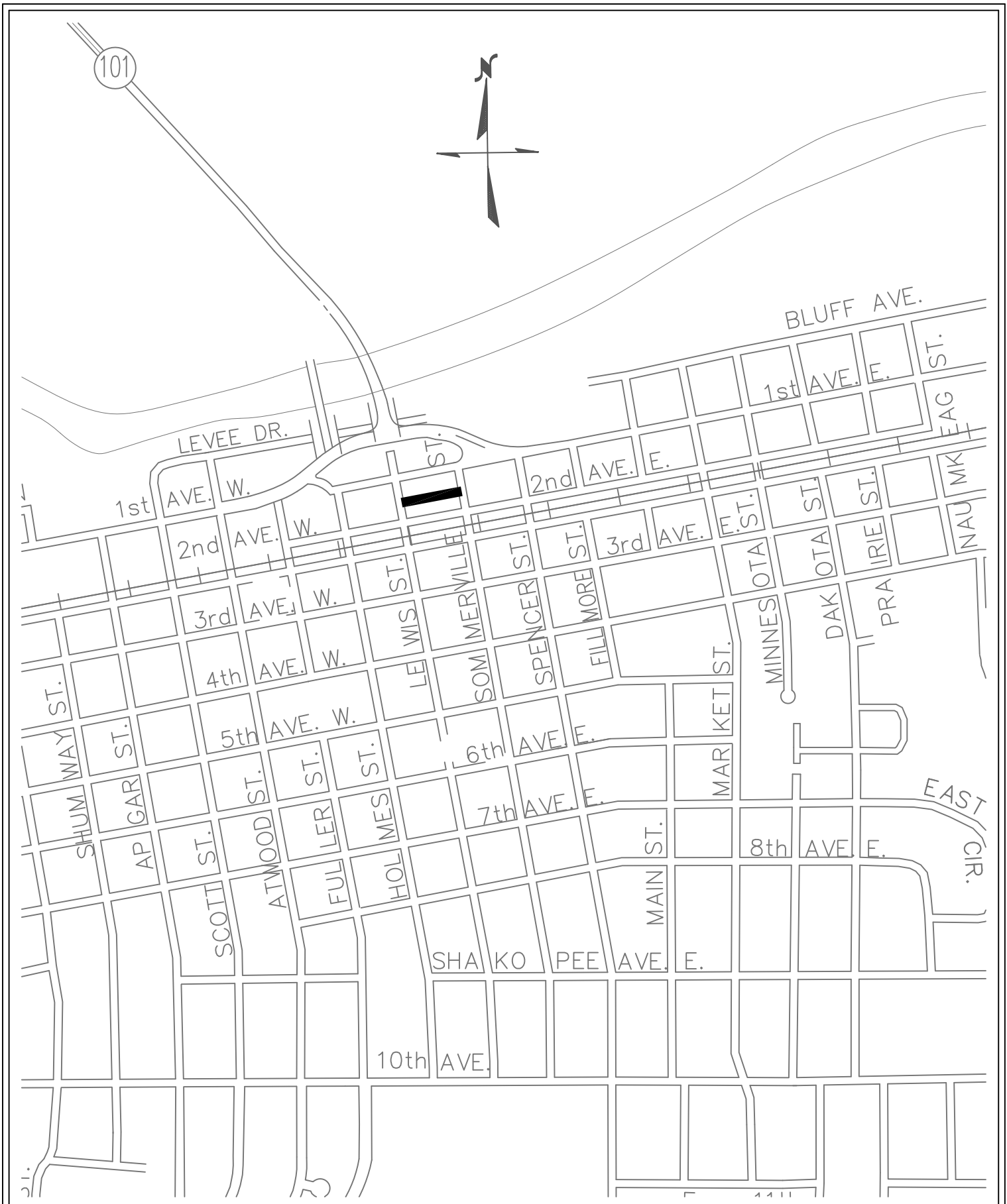
WSB
701 Xenia Avenue South, Suite 300
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Tel: (763) 541-4800 • Fax: (763) 541-1700
wsbeng.com

engineering • planning • environmental • construction

THEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT
AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER
UNDER THE LAWS OF THE STATE OF MINNESOTA

DATE: XX XX 2017 LIC. NO. _____

SCALE	AS NOTED	REVISION NO.
PLAN BY:	DESIGN BY: EL	DATE
CHECKED BY: EL	PROJECT NO: 1756-17	
RECORD COPY BY:		



**2017 LEWIS STREET
ALLEY RECONSTRUCTION
PROJECT LOCATION**

DATE:	APR 2017
DRAWN BY:	AIE
SHAKOPEE ENGINEERING DEPARTMENT	



DRAWING NO:
3

Opinion of Probable Cost

WSB Project: Shakopee Downtown Improvement Project
City of Shakopee
01756-17

Item Description	Unit	Estimated Quantity	Estimated Unit Price	Estimated Total Cost
SCHEDULE B - ALLEY IMPROVEMENTS				
General				
MOBILIZATION	LUMP SUM	1	\$10,000.00	\$10,000.00
UTILITY COORDINATION	LUMP SUM	1	\$1,000.00	\$1,000.00
TRAFFIC CONTROL	LUMP SUM	1	\$1,000.00	\$1,000.00
EROSION CONTROL	LUMP SUM	1	\$8,250.00	\$8,250.00
Subtotal				\$20,250.00
Removals				
TREE REMOVAL	1	1	\$500.00	\$500.00
REMOVE CONCRETE CURB AND GUTTER	LIN FT	138	\$5.00	\$687.50
REMOVE CONCRETE WALK	SQ FT	0	\$1.00	\$0.00
REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	781	\$2.50	\$1,952.50
SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	211	\$3.00	\$633.60
REMOVE BRICK PAVERS	SQ FT	332	\$5.00	\$1,661.00
Subtotal				\$5,434.60
Grading and Utilities				
COMMON EXCAVATION	CU YD	221	\$15.00	\$3,320.37
SUBGRADE PREPARATION	RD ST	4	\$300.00	\$1,050.00
AGGREGATE BASE CLASS 5	CU YD	221	\$25.00	\$5,533.95
REMOVE SEWER PIPE (STORM)	LIN FT	55	\$12.50	\$687.50
REMOVE DRAINAGE STRUCTURE	EACH	2	\$250.00	\$500.00
15" RC PIPE SEWER	LIN FT	55	\$50.00	\$2,750.00
24" RC PIPE SEWER	LIN FT	11	\$55.00	\$605.00
CONNECT TO EXISTING STORM SEWER	EACH	1	\$750.00	\$750.00
ADJUST FRAME AND RING CASTING	EACH	1	\$500.00	\$500.00
CONST DRAINAGE STRUCTURE DES 48-4020	LIN FT	10	\$500.00	\$5,000.00
CONSTRUCT DRAINAGE STRUCTURE DESIGN SPEC 1	EACH	1	\$1,500.00	\$1,500.00
CASTING ASSEMBLY	EACH	2	\$650.00	\$1,300.00
Subtotal				\$23,496.82
Hardscape/Paving				
CONCRETE PAVEMENT 6" (ALLEY PAVEMENT)	SQ YD	684	\$55.00	\$37,631.00
BITUMINOUS MATERIAL FOR TACK COAT	GALLON	3	\$3.00	\$9.24
TYPE SP 9.5 WEARING COURSE MIX (2,B)	TON	7	\$60.00	\$417.65
TYPE SP 12.5 NON WEAR COURSE MIX (2,B)	TON	10	\$60.00	\$626.47
CONCRETE CURB AND GUTTER DESIGN B618	LIN FT	141	\$20.00	\$2,816.00
6" CONCRETE PAVEMENT (CROSS WALK)	SQ YD	18	\$60.00	\$1,080.00
TRUNCATED DOMES	SQ FT	24	\$50.00	\$1,200.00
Subtotal				\$43,780.36
Site Furnishings				
SIGNS	LUMP SUM	1	\$1,875.00	\$1,875.00
Subtotal				\$1,875.00
TOTAL				\$94,840.00
CONTINGENCY TOTAL (10%)				\$9,484.00
TOTAL				\$104,000.00

Indirect Costs + \$16,000.00

Grand Total \$120,000.00

Preliminary Assessment Roll
2017 Alley Reconstruction Project 2017-6

PID	Owner Name	Property Address	Owner Address	Owner Address	Legal Description	Front Footage (LF)	Proposed Assessment (\$50/LF)
270011750	CITY OF SHAKOPEE		129 HOLMES ST S	SHAKOPEE MN 55379	SubdivisionName CITY OF SHAKOPEE Lot 001 Block 024 SubdivisionCd 27001 N 25' LOTS 1 & 2 EX E 1' OF 2	120	\$ 6,000
270011790	CITY OF SHAKOPEE		129 HOLMES ST S	SHAKOPEE MN 55379	SubdivisionName CITY OF SHAKOPEE Lot 003 Block 024 SubdivisionCd 27001 & LOT 4 & E 1' OF 2	120	\$ 6,000
270011810	ROBSON KIM J	124 SOMMERVILLE ST S	5812 ZENITH AVE S	EDINA MN 55410	SubdivisionName CITY OF SHAKOPEE Lot 005 Block 024 SubdivisionCd 27001 N 1.5' OF S 79' & N 63' OF	60	\$ 3,000
270011820	QUIRING JAMES R & CRYSTAL L	112 SOMMERVILLE ST S	112 SOMMERVILLE ST S	SHAKOPEE MN 55379	SubdivisionName CITY OF SHAKOPEE Lot 006 Block 024 SubdivisionCd 27001	60	\$ 3,000
270011830	KEDYK INTERPRISES LLC	232 1 AVE E	10631 MCCOOL DR E	BURNSVILLE MN 55337	SubdivisionName CITY OF SHAKOPEE Lot 007 Block 024 SubdivisionCd 27001 E 27' & S 41' OF E 30' OF	30	\$ 1,500
270011840	JOURNEY HOLDINGS LLC	230 1 AVE E	17476 DEERFIELD DR SE	PRIOR LAKE MN 55372	SubdivisionName CITY OF SHAKOPEE Lot 007 Block 024 SubdivisionCd 27001 W1/2 & N 101' OF W 3' OF E 30'	30	\$ 1,500
270011850	TURTLE GARY F & SHERRY L	222 1 AVE E	4810 SUNDAY CT	SARASOTA FL 34235	SubdivisionName CITY OF SHAKOPEE Lot 008 Block 024 SubdivisionCd 27001	60	\$ 3,000
270011860	HALVER RICHARD T	212 1 AVE E	10271 GREAT PLAINS BLVD	CHASKA MN 55318	SubdivisionName CITY OF SHAKOPEE Lot 009 Block 024 SubdivisionCd 27001	60	\$ 3,000
270011910	HERNTIER JOHN R & DENISE J	113 LEWIS ST S	15736 OLD BRICK YARD RD	SHAKOPEE MN 55379	SubdivisionName CITY OF SHAKOPEE Lot 010 Block 024 SubdivisionCd 27001 S 59.55' OF	60	\$ 3,000