

**RAMSEY COUNTY
COOPERATIVE AGREEMENT
WITH THE CITY OF SAINT PAUL FOR
Reconstruction of White Bear Avenue (County State Aid Highway 65)
between I-94 and Beech Street
S.A.P. 062-665-052 and M.S.A.P. 164-020-138**

Total Project Cost: \$5,811,262.13
City of Saint Paul Cost: \$446,070.86

Attachments:
A – Engineer’s Estimate
B – Hydraulics Memo
C – Cost Participation Policy
D – Storm Sewer Ownership

This Agreement is between the City of Saint Paul, a municipal corporation ("City") and Ramsey County, a political subdivision of the State of Minnesota, ("County") for the reconstruction of White Bear Avenue ("Project") between I-94 and Beech Street.

WITNESSETH:

WHEREAS, the City and the County desire to proceed with the Project; and

WHEREAS, the Project is identified in Ramsey County’s Transportation Improvement Program; and

WHEREAS, White Bear Avenue, in the area affected by reconstruction, is designated County State Aid Highway (CSAH) 65; and

WHEREAS, the Project has been designated by the Minnesota Department of Transportation (Mn/DOT) as eligible for Federal Aid funds; and

WHEREAS, the Project has been designated as State Project (S.P.) S.P. 062-665-052 and St. Paul Municipal State Aid (MSA) 164-020-138; and

WHEREAS, the subject street segment is located entirely within the City; and

WHEREAS, the proposed Project includes, in addition to other items, grading, paving, concrete curb and gutter, pedestrian curb ramps, traffic signals, accessible pedestrian signals, landscaping, turf establishment, utility adjustments and betterments, and related features; and

WHEREAS, construction of storm sewer systems will be constructed as part of the Project in accordance with municipal ordinances and local watershed rules; and

WHEREAS, plans for the Project showing proposed construction will be presented to the City and will be on file at Ramsey County Public Works Department; and

NOW, THEREFORE, IT IS HEREBY MUTUALLY AGREED AS FOLLOWS:

1. The Whereas recitals set forth in this Agreement are hereby made a part of this Agreement as if set out in full.
2. Responsibility for Design Engineering
 - 2.1. Except for those portions identified below, the County will prepare plans, specifications, and proposals for the Project, which will include, among other things, the proposed reconstruction, alignment, profiles, grades, cross sections, paving, concrete curb and gutter, medians, storm sewer, pedestrian curb ramps, turf establishment, traffic signals, street lighting, accessible pedestrian signals, and utility replacement and adjustments.
 - 2.1.1. The City will prepare plans and specifications for sanitary sewer service.
 - 2.2. Any costs associated with Project revisions after the completion of plans and specifications will be paid for by the party requesting the revisions. Revisions must be consistent with Mn/DOT State Aid requirements and are subject to approval by the County.
3. Procurement and Award of Contract
 - 3.1. The County will take bids in accordance with state law and County rules.
 - 3.2. The County will prepare an abstract of bids and a cost participation summary based on the lowest responsible bidder's proposal, and will provide the same to the City.
 - 3.3. The County will request the City's concurrence to award a contract to the lowest responsible bidder.
 - 3.4. The County will award a contract, and pay the contractor from the Federal Aid, County State Aid Highway, Municipal State Aid Highway, and local funds identified for the Project.
4. Responsibility for Construction Engineering

4.1. Except for those portions identified below, the County shall perform or contract the performance of the construction engineering for all elements of the Project.

4.1.1. The City will provide construction engineering for traffic signal, and street lighting installation.

4.1.2. The City will provide construction engineering for sanitary sewer service installation.

5. Project Costs

5.1. An estimate of the City's share of the Project costs is attached as Exhibit A, (Cost Participation Based on Engineer's Estimate). Quantities and unit prices in Exhibit A are estimates. Actual costs shall be based on the contract unit prices and the quantities constructed.

5.2. Except as provided herein, the County and City will participate in the costs of construction in accordance with the Ramsey County Cost Participation Policy, attached as Exhibit C. If there is a conflict between Exhibit C and this Agreement, this Agreement will prevail.

5.2.1. The costs of contractor mobilization, field office operation, erosion control supervisor, and traffic control will be allocated based upon cost participation percentages for the entire Project and based on contract unit prices and quantities at the time of contract award. No adjustments in the allocation will be made if unit prices or quantities vary during construction.

5.2.2. The costs of storm sewer construction needed for Project drainage will be split between the County and City in accordance with the MnDOT Hydraulics Memorandum, attached as Exhibit B.

5.2.3. The County shall maintain the portion of the storm sewer used for storm water rate control highlighted in Exhibit D.

5.2.4. The City will pay 100% of the sanitary sewer service improvements on the Project and will reimburse the County for all costs for sanitary sewer service improvements.

5.2.5. The City will pay 100% of the cost of street lighting construction on the Project, after federal funds are applied.

5.2.6. The City will supply the signal system cabinet and emergency vehicle preemption equipment which will be paid for under a separate force account agreement.

5.3. Design Engineering Costs

5.3.1. The City shall pay the County a design engineering fee equal to 12% of the portion of the Project Costs for which the City participates, except as provided below. An estimate of the City's design engineering fee is provided within Exhibit A.

5.3.2. The City shall pay the County a design engineering fee equal to 2% of the project costs related to sanitary sewer services.

5.3.3. Design engineering fees shall be calculated based on the quantities and unit prices at the time of contract award.

5.4. Construction Engineering and Administration Costs

5.4.1. The City shall pay the County a construction engineering and administration fee equal to 12% of the portion of the Project Costs for which the City participates, except as provided below. An estimate of the City's construction engineering fee is provided within Exhibit A.

5.4.2. The City shall pay the County a construction engineering and administration fee equal to 2% of the project costs related to street lighting and sanitary sewer services.

5.4.3. The City shall be credited a construction engineering fee equal to 10% for the project costs related to traffic signals on County legs.

5.4.4. Construction engineering and administration fees shall be calculated based on the final contract quantities and unit prices.

6. Payment Schedule

6.1. Design engineering will be invoiced at the time of contract award.

6.2. The County will invoice the City for construction costs incurred on a monthly basis or as determined by the payment schedule for the contractor.

6.3. Construction engineering will be invoiced at the time of substantial project completion, as determined by the County.

6.4. Payment will be made within 30 days of receipt of an invoice.

7. Maintenance Responsibility for Project Elements

- 7.1. Upon completion of the Project, the County shall own all elements of the Project, except as provided below.
- 7.2. The City shall own storm sewer catch basins, manholes, and laterals that are located on City streets. Exhibit D attached, references ownership responsibility of the storm water manholes, catch basins and laterals.
- 7.3. County owned storm sewer catch basins and laterals will be maintained by the City in accordance with Joint Powers Agreement between Ramsey County and the City of St. Paul, Council File 93-1974.
- 7.4. The City shall own and maintain the storm sewer trunk lines within the Project.
- 7.5. Storm and sanitary sewer laterals and drains servicing private property are owned and maintained by the City or the respective property owners, pursuant to City agreements and policy.
- 7.6. The City shall own and maintain street lights.
- 7.7. The City shall own traffic signals that direct City streets.
- 7.8. Traffic signals will be maintained by the City in accordance with Joint Powers Agreement between Ramsey County and the City of St. Paul, Council File 93-1974.
- 7.9. The City shall own and maintain the boulevard trees.
8. The City grants the County temporary construction easements over all City owned rights-of-way and property within the limits of the Project for use during construction at no cost to the County.
9. The County and the City agree that, except as otherwise expressly provided herein, each party will be responsible for its own acts and the results thereof to the extent authorized by law and shall not be responsible for the acts of any others and the results thereof. Liability shall be governed by applicable law. Without limiting the foregoing, liability of the parties shall be governed by the provisions of Minnesota Statutes Chapter 466 (Tort Liability, Political Subdivisions) or other applicable law. Nothing in this Agreement shall constitute a waiver by the County or the City of any statutory or common law immunities, limits, or exceptions on liability.
10. This Agreement shall remain in full force and effect until terminated by mutual agreement of the parties.

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CITY OF SAINT PAUL, MINNESOTA

By: _____
Mayor

Date: _____

By: _____
Director of Public Works

Date: _____

Approved by the Office of Financial Services:

By: _____

Approved as to Form:

By: _____
City Attorney

RAMSEY COUNTY, MINNESOTA

Julie Kleinschmidt, County Manager

Date: _____

Approval recommended:

James E. Tolaas, Director
Public Works Department

Approved as to form:

Assistant County Attorney

Engineer's Estimate of Probable Cost

WSB Project: White Bear Lake Reconstruction
 Project Location: St. Paul
 WSB Project No: 03189-000

EXHIBIT A

DJ Sosa

DATE: 5/31/2016

STATEMENT OF ESTIMATED QUANTITIES

				PARTICIPATING								NON PARTICIPATING							
				S.P. 062-665-052				S.P. 062-665-052				C.P. 164-020-138		RAMSEY COUNTY		C.P. 164-020-138		C.P. 164-020-138	
				Project Total				STORM SEWER				CITY OF ST PAUL		CITY OF ST PAUL		CITY OF ST PAUL			
												100% LOCAL		100% LOCAL		100% LOCAL			
Item Number	Description	Notes	Unit	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost		
2021.501	MOBILIZATION		LUMP SUM	1	\$482,900.00	0.57	\$275,253.00	0.16	\$77,264.00	0.1	\$48,290.00	0.01	\$4,829.00	0.03	\$14,487.00	0.13	\$62,777.00		
2031.501	FIELD OFFICE TYPE D - MODIFIED	(7)	EACH	1	\$15,500.00	0.57	\$8,835.00	0.16	\$2,480.00	0.1	\$1,550.00	0.01	\$155.00	0.03	\$465.00	0.13	\$2,015.00		
2041.610	TRAINEES		HOURS	600	\$600.00	600	\$600.00												
2101.502	CLEARING		TREE	82	\$16,400.00	82	\$16,400.00												
2101.507	GRUBBING		TREE	82	\$16,400.00	82	\$16,400.00												
2102.502	PAVEMENT MARKING REMOVAL		LIN FT	1000	\$1,000.00	1000	\$1,000.00												
2104.501	REMOVE SEWER PIPE (STORM)		LIN FT	3652	\$41,961.48	3652	\$41,961.48												
2104.501	REMOVE CURB AND GUTTER		LIN FT	5777	\$37,088.34	5777	\$37,088.34												
2104.501	REMOVE WATER MAIN		LIN FT	3886	\$11,658.00	103	\$309.00									3783	\$11,349.00		
2104.501	REMOVE WATER SERVICE PIPE		LIN FT	335	\$1,005.00	260	\$780.00									75	\$225.00		
2104.501	REMOVE SANITARY SERVICE PIPE		LIN FT	890	\$2,670.00									710	\$2,130.00	180	\$540.00		
2104.503	REMOVE CONCRETE PAVEMENT		SQ FT	4522	\$6,421.24	4522	\$6,421.24												
2104.505	REMOVE CONCRETE WALK	(P)	SQ YD	3421	\$39,546.76	3421	\$39,546.76												
2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ YD	977	\$15,485.45	977	\$15,485.45												
2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT		SQ YD	8	\$200.00	8	\$200.00												
2104.505	REMOVE PAVEMENT SPECIAL	(1) (1)	SQ YD	18051	\$321,127.29	18051	\$321,127.29												
2104.509	REMOVE MANHOLE OR CATCH BASIN		EACH	47	\$35,250.00			47	\$35,250.00										
2104.509	REMOVE CASTING		EACH	63	\$6,300.00			63	\$6,300.00										
2104.509	REMOVE UTILITY VAULT		EACH	2	\$2,000.00											2	\$2,000.00		
2104.509	REMOVE HYDRANT		EACH	11	\$3,410.00	7	\$2,170.00									4	\$1,240.00		
2104.509	REMOVE SERVICE CABINET		EACH	2	\$1,050.00					2	\$1,050.00								
2104.509	REMOVE SIGN BASE		EACH	2	\$800.00	2	\$800.00												
2104.509	REMOVE SIGN TYPE C		EACH	77	\$1,925.00	77	\$1,925.00												
2104.509	REMOVE SIGNAL SYSTEM B		EACH	1	\$3,296.00	0.5	\$1,648.00			0.5	\$1,648.00								
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	(4)	LIN FT	289	\$2,312.00	289	\$2,312.00												
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	(4)	LIN FT	869	\$2,520.10	869	\$2,520.10												
2104.523	SALVAGE LIGHTING UNIT	(7)	EACH	7	\$2,450.00					7	\$2,450.00								
2104.523	SALVAGE SIGN TYPE SPECIAL		EACH	10	\$250.00	10	\$250.00												
2104.523	SALVAGE HYDRANT		EACH	1	\$1,580.00	1	\$1,580.00												
2104.601	HAUL SALVAGED MATERIAL	(7)	LUMP SUM	1	\$2,500.00					1	\$2,500.00								
2105.501	COMMON EXCAVATION (EV)	(P)	CU YD	14172	\$240,498.84	14172	\$240,498.84												
2105.522	SELECT GRANULAR BORROW (CV)	(P)	CU YD	12754	\$278,419.82	12754	\$278,419.82												
2105.523	COMMON BORROW (CV)	(P)	CU YD	199	\$199.00	199	\$199.00												
2105.607	HAUL & DISPOSE OF CONTAMINATED MATERIAL		CU YD	170	\$12,350.50									70	\$5,085.50	100	\$7,265.00		
2105.619	MINOR GRADING	(16)	RDST	7	\$4,277.00	7	\$4,277.00												
2123.610	TRACTOR MOUNTD BACKHOE	(7) (8)	HOUR	50	\$7,000.00	50	\$7,000.00												
2123.610	STREET SWEEPER (WITH PICKUP BROOM)	(7) (8)	HOUR	175	\$24,500.00	175	\$24,500.00												
2130.501	WATER	(5) (8)	MGAL	100	\$4,000.00	100	\$4,000.00												
2211.503	AGGREGATE BASE (CV) CLASS 6	(P)	CU YD	3851	\$150,959.20	3851	\$150,959.20												
2301.602	DRILL & GROUT REINFORCEMENT BAR		EACH	300	\$3,993.00	300	\$3,993.00												
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	2123	\$5,519.80	2123	\$5,519.80												
2360.501	TYPE SP 9.5 BITUMINOUS MIXTURE FOR PATCHING	(8)	TON	100	\$16,000.00	100	\$16,000.00												
2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	(8)	TON	150	\$15,750.00	150	\$15,750.00												
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE (4,F)		TON	4820	\$356,680.00	4820	\$356,680.00												
2360.502	TYPE SP 12.5 NON WEARING COURSE MIXTURE (4,B)		TON	3620	\$220,820.00	3620	\$220,820.00												
2402.601	SALVAGE & INSTALL METAL RAILING	(2)	LIN FT	176	\$23,408.00	176	\$23,408.00												
2411.507	CONCRETE STAIRWAY	(7) (8)	EACH	36	\$11,988.00	36	\$11,988.00												
2451.609	GRANULAR BACKFILL	(7)	TON	1899	\$32,700.78									240	\$4,132.80	1659	\$28,567.98		
2501.521	44" SPAN RC PIPE-ARCH SEWER CL IIA			812	\$84,740.32			812	\$84,740.32										
2502.521	4" TP PIPE DRAIN		LIN FT	492	\$11,724.36	492	\$11,724.36												
2503.541	15" RC PIPE SEWER DESIGN 3006 CLASS V		LIN FT	1709	\$74,888.38			1709	\$74,888.38										
2503.541	18" RC PIPE SEWER DESIGN 3006 CLASS III		LIN FT	808	\$36,796.32			808	\$36,796.32										
2503.541	21" RC PIPE SEWER DESIGN 3006 CLASS III		LIN FT	575	\$27,479.25			575	\$27,479.25										
2503.541	24" RC PIPE SEWER DESIGN 3006 CLASS III		LIN FT	394	\$19,404.50			394	\$19,404.50										
2503.541	27" RC PIPE SEWER DESIGN 3006 CLASS III		LIN FT	416	\$22,880.00			416	\$22,880.00										
2503.601	TELEWISE PROJECT SANITARY SEWER		LS	1	\$17,000.00					1	\$17,000.00								

Engineer's Estimate of Probable Cost

WSB Project: White Bear Lake Reconstruction
 Project Location: St. Paul
 WSB Project No: 03189-000

EXHIBIT A

DJ Sosa

DATE: 5/31/2016

STATEMENT OF ESTIMATED QUANTITIES

						PARTICIPATING						NON PARTICIPATING					
						S.P. 062-665-052		S.P. 062-665-052		C.P. 164-020-138		RAMSEY COUNTY		C.P. 164-020-138		C.P. 164-020-138	
								STORM SEWER		CITY OF ST PAUL				CITY OF ST PAUL		CITY OF ST PAUL	
						Project Total				100% LOCAL				100% LOCAL		100% LOCAL	
Item			Unit	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated
Number	Description	Notes	Price	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
2503.602	CONNECT TO EXISTING STORM SEWER		EACH	12	\$6,480.00			12	\$6,480.00								
2503.602	CONNECT TO EXISTING SANITARY SEWER		EACH	20	\$10,800.00									20	\$10,800.00		
2503.602	CONNECT TO EXISTING SANITARY SEWER SERVICE	(7)	EACH	56	\$20,720.00									20	\$7,400.00	36	\$13,320.00
2503.602	CONSTRUCT BULKHEAD	(7)	EACH	15	\$4,500.00	15	\$4,500.00										
2503.603	6" PVC PIPE SEWER		LIN FT	892	\$68,184.48									712	\$54,425.28	180	\$13,759.20
2504.602	CONNECT TO EXISTING WATER MAIN	(7)	EACH	19	\$37,525.00											19	\$37,525.00
2504.602	CONNECT TO EXISTING WATER SERVICE	(7)	EACH	25	\$8,725.00	24	\$8,376.00									1	\$349.00
2504.602	HYDRANT		EACH	9	\$54,630.00	6	\$36,420.00									3	\$18,210.00
2504.602	INSTALL HYDRANT	(7)	EACH	1	\$1,580.00	1	\$1,580.00										
2504.602	4" GATE VALVE & BOX	(7)	EACH	1	\$2,116.00											1	\$2,116.00
2504.602	6" GATE VALVE & BOX		EACH	1	\$2,267.00	1	\$2,267.00										
2504.602	8" GATE VALVE & BOX		EACH	17	\$47,005.00	4	\$11,060.00									13	\$35,945.00
2504.602	12" BUTTERFLY VALVE & BOX		EACH	20	\$72,620.00	2	\$7,262.00									18	\$65,358.00
2504.602	16" BUTTERFLY VALVE & BOX		EACH	1	\$4,735.00											1	\$4,735.00
2504.602	20" BUTTERFLY VALVE & BOX		EACH	1	\$6,494.00											1	\$6,494.00
2504.602	24" BUTTERFLY VALVE & BOX	(7)	EACH	1	\$8,634.00											1	\$8,634.00
2504.602	VALVE BOX	(7)	EACH	2	\$1,820.00											2	\$1,820.00
2504.602	ADJUST VALVE BOX	(7)	EACH	2	\$900.00	2	\$900.00										
2504.602	ADJUST CURB BOX		EACH	62	\$7,750.00	62	\$7,750.00										
2504.602	0.75" CURB STOP & BOX	(7)	EACH	4	\$2,824.00											4	\$2,824.00
2504.602	1" CURB STOP & BOX	(7)	EACH	5	\$3,640.00											5	\$3,640.00
2504.603	12" WATERMAIN HDPE (PIPE BURSTING)		LIN FT	567	\$80,599.05											567	\$80,599.05
2504.603	4" WATERMAIN DUCTILE IRON CL 52	(7)	LIN FT	19	\$2,630.93											19	\$2,630.93
2504.603	6" WATERMAIN DUCTILE IRON CL 52		LIN FT	138	\$9,101.10	80	\$5,276.00									58	\$3,825.10
2504.603	8" WATERMAIN DUCTILE IRON CL 52		LIN FT	453	\$26,554.86											453	\$26,554.86
2504.603	12" WATERMAIN DUCTILE IRON CL 52		LIN FT	2769	\$208,007.28											2769	\$208,007.28
2504.603	16" WATERMAIN DUCTILE IRON CL 52		LIN FT	250	\$30,502.50											250	\$30,502.50
2504.603	20" WATERMAIN DUCTILE IRON CL 52		LIN FT	61	\$11,430.18											61	\$11,430.18
2504.603	24" WATERMAIN DUCTILE IRON CL 52	(7)	LIN FT	32	\$6,154.88											32	\$6,154.88
2504.603	3/4" TYPE K COPPER PIPE	(7)	LIN FT	260	\$30,381.00	260	\$30,381.00										
2504.603	1" TYPE K COPPER PIPE		LIN FT	100	\$12,026.00											100	\$12,026.00
2504.604	2" INSULATION	(7)	SQ YD	142	\$4,970.00	142	\$4,970.00										
2504.608	DUCTILE IRON FITTINGS		POUND	7450	\$61,239.00	810	\$6,658.20									6640	\$54,580.80
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 7B		LIN FT	195	\$72,735.00			195	\$72,735.00								
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020		LIN FT	16	\$5,488.00			16	\$5,488.00								
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4020		LIN FT	102	\$43,860.00			102	\$43,860.00								
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4020		LIN FT	65	\$31,915.00			65	\$31,915.00								
2506.502	CONSTRUCT DRAINAGE DESIGN SPECIAL 1		EACH	4	\$19,984.00			4	\$19,984.00								
2506.502	CONSTRUCT DRAINAGE DESIGN SPECIAL 2		EACH	4	\$20,244.00			4	\$20,244.00								
2056.601	SEDIMENT COLLECTION DEVICE		EACH	4	\$17,956.00			4	\$17,956.00								
2506.516	CASTING ASSEMBLY		EACH	115	\$101,430.00			115	\$101,430.00								
2506.522	ADJUST FRAME AND RING CASTING		EACH	11	\$4,950.00			11	\$4,950.00								
2506.602	CONNECT TO EXISTING STORM SEWER		EACH	1	\$540.00			1	\$540.00								
2506.602	CONSTRUCT SURVEY CONTROL STRUCTURE	(7)	EACH	1	\$1,800.00	1	\$1,800.00										
2506.602	RECONSTRUCT DRAINAGE STRUCTURE SPECIAL	(17)	EACH	10	\$21,700.00	10	\$21,700.00										
2506.602	CASTING ASSEMBLY SPECIAL	(7)	EACH	6	\$6,996.00	6	\$6,996.00										
2521.501	4" CONCRETE WALK		SQ FT	25130	\$129,168.20	25130	\$129,168.20										
2521.501	6" CONCRETE WALK		SQ FT	4262	\$69,300.12	4262	\$69,300.12										
2531.501	CONCRETE CURB AND GUTTER DESIGN B624		LIN FT	6030	\$161,543.70	6030	\$161,543.70										
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	(9)	SQ YD	684	\$48,085.20	684	\$48,085.20										
2531.507	8" CONCRETE DRIVEWAY PAVEMENT		SQ YD	142	\$12,951.82	142	\$12,951.82										
2531.618	TRUNCATED DOMES		SQ FT	422	\$15,090.72	422	\$15,090.72										
2545.511	LIGHTING UNIT TYPE SPECIAL 1 (L14)		EACH	34	\$97,410.00					34	\$97,410.00						
2545.511	LIGHTING UNIT TYPE SPECIAL 2 (2L14)		EACH	4	\$15,860.00					4	\$15,860.00						
2545.513	LUMINAIRE (LED)		EACH	42	\$95,130.00					42	\$95,130.00						
2545.515	LIGHT BASE DESIGN TYPE STANDARD		EACH	31	\$30,535.00					31	\$30,535.00						
2545.523	1.5" NON-METALLIC CONDUIT		LIN FT	5800	\$31,030.00					5800	\$31,030.00						
2545.531	UNDERGROUND WIRE 1 COND NO 4		LIN FT	19200	\$50,880.00					19200	\$50,880.00						
2545.531	UNDERGROUND WIRE 1 COND NO 8		LIN FT	5700	\$9,975.00					5700	\$9,975.00						
2545.541	SERVICE CABINET	(14)	EACH	2	\$30,180.00					2	\$30,180.00						
2545.551	JUNCTION BOX		EACH	6	\$13,410.00					6	\$13,410.00						

Engineer's Estimate of Probable Cost

WSB Project: White Bear Lake Reconstruction
 Project Location: St. Paul
 WSB Project No: 03189-000

EXHIBIT A

DJ Sosa

DATE: 5/31/2016

STATEMENT OF ESTIMATED QUANTITIES

		PARTICIPATING										NON PARTICIPATING						
						S.P. 062-665-052		S.P. 062-665-052		C.P. 164-020-138		RAMSEY COUNTY		C.P. 164-020-138		C.P. 164-020-138		
								STORM SEWER		CITY OF ST PAUL				CITY OF ST PAUL		CITY OF ST PAUL		
						Project Total				100% LOCAL				100% LOCAL		100% LOCAL		
Item Number	Description	Notes	Unit	Price	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost	Estimated Quantity	Estimated Cost		
2563.601	TRAFFIC CONTROL		LUMP SUM	\$112,000.00	1	\$112,000.00	0.57	\$63,840.00	0.16	\$17,920.00	0.1	\$11,200.00	0.01	\$1,120.00	0.03	\$3,360.00	0.13	\$14,560.00
2563.601	ALTERNATE PEDESTRIAN ROUTE		LUMP SUM	\$9,500.00	1	\$9,500.00	1	\$9,500.00										
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN		UDAY	\$125.00	56	\$7,000.00	56	\$7,000.00										
2564.531	SIGN PANELS TYPE C		SQ FT	\$43.00	254	\$10,922.00	254	\$10,922.00										
2564.537	INSTALL SIGN TYPE SPECIAL	(13)	EACH	\$100.00	10	\$1,000.00	10	\$1,000.00										
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM B		SYSTEM	\$257,000.00	1	\$257,000.00	0.5	\$128,500.00			0.5	\$128,500.00						
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM D	(3)	SYSTEM	\$149,000.00	1	\$149,000.00					0.5	\$74,500.00	0.5	\$74,500.00				
2565.513	EMERGENCY VEHICLE PREEMPTION SYSTEM		LUMP SUM	\$9,000.00	1	\$9,000.00	0.5	\$4,500.00			0.5	\$4,500.00						
2565.603	FIBER OPTIC INTERCONNECT	(7)	LUMP SUM	\$94,000.00	1	\$94,000.00	0.5	\$47,000.00			0.5	\$47,000.00						
2565.616	REVISE SIGNAL SYSTEM A		SYSTEM	\$37,000.00	1	\$37,000.00	1	\$37,000.00										
2565.616	REVISE SIGNAL SYSTEM C		SYSTEM	\$60,000.00	1	\$60,000.00	0.5	\$30,000.00			0.5	\$30,000.00						
2565.616	TEMPORARY SIGNAL SYSTEM B	(7)	SYSTEM	\$85,000.00	1	\$85,000.00	1	\$85,000.00										
2571.502	DECIDUOUS TREE 2.5" CAL B&B		EACH	\$435.00	95	\$41,325.00	95	\$41,325.00										
2573.502	SILT FENCE, TYPE MS		LIN FT	\$3.32	222	\$737.04	222	\$737.04										
2573.530	STORM DRAIN INLET PROTECTION		EACH	\$310.00	66	\$20,460.00	66	\$20,460.00										
2573.533	SEDIMENT CONTROL LOG TYPE COMPOST	(8)	LIN FT	\$8.00	400	\$3,200.00	400	\$3,200.00										
2573.535	STABILIZED CONSTRUCTION EXIT		LUMP SUM	\$11,600.00	1	\$11,600.00	1	\$11,600.00										
2573.550	EROSION CONTROL SUPERVISOR		LUMP SUM	\$20,000.00	1	\$20,000.00	0.57	\$11,400.00	0.16	\$3,200.00	0.1	\$2,000.00	0.01	\$200.00	0.03	\$600.00	0.13	\$2,600.00
2574.508	FERTILIZER TYPE 3		POUND	\$2.00	250	\$500.00	250	\$500.00										
2574.525	COMMON TOPSOIL BORROW (LV)		CU YD	\$26.60	576	\$15,321.60	576	\$15,321.60										
2575.505	SODDING TYPE LAWN		SQ YD	\$5.65	3457	\$19,532.05	3457	\$19,532.05										
2575.513	MULCH MATERIAL TYPE 6		CU YD	\$100.00	33	\$3,300.00	33	\$3,300.00										
2575.560	HYDRAULIC MULCH MATRIX		POUND	\$1.77	4495	\$7,956.15	4495	\$7,956.15										
2582.501	PAVEMENT MESSAGE (LT ARROW) EPOXY		EACH	\$295.00	6	\$1,770.00	6	\$1,770.00										
2582.502	4" SOLID LINE PAINT	(8)	LIN FT	\$0.45	1000	\$450.00	1000	\$450.00										
2582.502	4" DOUBLE SOLID LINE PAINT	(8)	LIN FT	\$0.90	2300	\$2,070.00	2300	\$2,070.00										
2582.502	4" SOLID LINE EPOXY		LIN FT	\$0.38	2626	\$997.88	2626	\$997.88										
2582.502	4" BROKEN LINE EPOXY		LIN FT	\$0.38	6744	\$2,562.72	6744	\$2,562.72										
2582.502	24" SOLID LINE EPOXY		LIN FT	\$7.70	245	\$1,886.50	245	\$1,886.50										
2582.502	12" SOLID LINE EPOXY		LIN FT	\$5.50	858	\$4,719.00	858	\$4,719.00										
2582.502	4" DOUBLE SOLID LINE EPOXY		LIN FT	\$0.76	8819	\$6,702.44	8819	\$6,702.44										
2582.503	CROSSWALK EPOXY	(12)	SQ FT	\$18.20	960	\$17,472.00	960	\$17,472.00										
SUBTOTAL					\$5,811,262.13		\$3,320,649		\$776,146		\$672,098		\$80,804		\$177,386		\$784,180	
CONSTRUCTION COSTS					\$5,811,262		\$3,320,649		\$776,146		\$672,098		\$80,804		\$177,386		\$784,180	

GROUP 1 WHITE BEAR AVENUE ROADWAY EXHIBIT A

**FUNDING 20% CSAH SP 062-665-052
80% FEDERAL AID**

GROUP 1-A

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	0.57	\$ 482,900.00	\$ 275,253.00
2031.501	FIELD OFFICE TYPE D - MODIFIED	EACH	0.57	\$ 15,500.00	\$ 8,835.00
2041.610	TRAINEES	HOURS	600	\$ 1.00	\$ 600.00
2101.502	CLEARING	TREE	82	\$ 200.00	\$ 16,400.00
2101.507	GRUBBING	TREE	82	\$ 200.00	\$ 16,400.00
2102.502	PAVEMENT MARKING REMOVAL	LIN FT	1000	\$ 1.00	\$ 1,000.00
2104.501	REMOVE CURB AND GUTTER	LIN FT	5777	\$ 6.42	\$ 37,088.34
2104.501	REMOVE WATER MAIN	LIN FT	103	\$ 3.00	\$ 309.00
2104.501	REMOVE WATER SERVICE PIPE	LIN FT	260	\$ 3.00	\$ 780.00
2104.503	REMOVE CONCRETE PAVEMENT	SQ FT	4522	\$ 1.42	\$ 6,421.24
2104.505	REMOVE CONCRETE WALK	SQ YD	3421	\$ 11.56	\$ 39,546.76
2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	977	\$ 15.85	\$ 15,485.45
2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	8	\$ 25.00	\$ 200.00
2104.505	REMOVE PAVEMENT SPECIAL	SQ YD	18051	\$ 17.79	\$ 321,127.29
2104.509	REMOVE HYDRANT	EACH	7	\$ 310.00	\$ 2,170.00
2104.509	REMOVE SIGN BASE	EACH	2	\$ 400.00	\$ 800.00
2104.509	REMOVE SIGN TYPE C	EACH	77	\$ 25.00	\$ 1,925.00
2104.509	REMOVE SIGNAL SYSTEM B	EACH	0.5	\$ 3,296.00	\$ 1,648.00
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	289	\$ 8.00	\$ 2,312.00
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	869	\$ 2.90	\$ 2,520.10
2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	10	\$ 25.00	\$ 250.00
2104.523	SALVAGE HYDRANT	EACH	1	\$ 1,580.00	\$ 1,580.00
2105.501	COMMON EXCAVATION (EV)	CU YD	14172	\$ 16.97	\$ 240,498.84
2105.522	SELECT GRANULAR BORROW (CV)	CU YD	12754	\$ 21.83	\$ 278,419.82
2105.523	COMMON BORROW (CV)	CU YD	199	\$ 1.00	\$ 199.00
2105.619	MINOR GRADING	RDST	7	\$ 611.00	\$ 4,277.00
2123.610	TRACTOR MOUNTD BACKHOE	HOUR	50	\$ 140.00	\$ 7,000.00
2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	175	\$ 140.00	\$ 24,500.00
2130.501	WATER	MGAL	100	\$ 40.00	\$ 4,000.00
2211.503	AGGREGATE BASE (CV) CLASS 6	CU YD	3851	\$ 39.20	\$ 150,959.20
2301.602	DRILL & GROUT REINFOCEMENT BAR	EACH	300	\$ 13.31	\$ 3,993.00

GROUP 1 WHITE BEAR AVENUE ROADWAY EXHIBIT A

**FUNDING 20% CSAH SP 062-665-052
80% FEDERAL AID**

GROUP 1-A

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2123	\$ 2.60	\$ 5,519.80
2360.501	TYPE SP 9.5 BITUMINOUS MIXTURE FOR PATCHING	TON	100	\$ 160.00	\$ 16,000.00
2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	150	\$ 105.00	\$ 15,750.00
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE (4,F)	TON	4820	\$ 74.00	\$ 356,680.00
2360.502	TYPE SP 12.5 NON WEARING COURSE MIXTURE (4,B)	TON	3620	\$ 61.00	\$ 220,820.00
2402.601	SALVAGE & INSTALL METAL RAILING	LIN FT	176	\$ 133.00	\$ 23,408.00
2411.507	CONCRETE STAIRWAY	EACH	36	\$ 333.00	\$ 11,988.00
2502.521	4" TP PIPE DRAIN	LIN FT	492	\$ 23.83	\$ 11,724.36
2503.602	CONSTRUCT BULKHEAD	EACH	15	\$ 300.00	\$ 4,500.00
2504.602	CONNECT TO EXISTING WATER SERVICE	EACH	24	\$ 349.00	\$ 8,376.00
2504.602	HYDRANT	EACH	6	\$ 6,070.00	\$ 36,420.00
2504.602	INSTALL HYDRANT	EACH	1	\$ 1,580.00	\$ 1,580.00
2504.602	6" GATE VALVE & BOX	EACH	1	\$ 2,267.00	\$ 2,267.00
2504.602	8" GATE VALVE & BOX	EACH	4	\$ 2,765.00	\$ 11,060.00
2504.602	12" BUTTERFLY VALVE & BOX	EACH	2	\$ 3,631.00	\$ 7,262.00
2504.602	ADJUST VALVE BOX	EACH	2	\$ 450.00	\$ 900.00
2504.602	ADJUST CURB BOX	EACH	62	\$ 125.00	\$ 7,750.00
2504.603	6" WATERMAIN DUCTILE IRON CL 52	LIN FT	80	\$ 65.95	\$ 5,276.00
2504.603	3/4" TYPE K COPPER PIPE	LIN FT	260	\$ 116.85	\$ 30,381.00
2504.604	2" INSULATION	SQ YD	142	\$ 35.00	\$ 4,970.00
2504.608	DUCTILE IRON FITTINGS	POUND	810	\$ 8.22	\$ 6,658.20
2506.602	CONSTRUCT SURVEY CONTROL STRUCTURE	EACH	1	\$ 1,800.00	\$ 1,800.00
2506.602	RECONSTRUCT DRAINAGE STRUCTURE SPECIAL	EACH	10	\$ 2,170.00	\$ 21,700.00
2506.602	CASTING ASSEMBLY SPECIAL	EACH	6	\$ 1,166.00	\$ 6,996.00
2521.501	4" CONCRETE WALK	SQ FT	25130	\$ 5.14	\$ 129,168.20
2521.501	6" CONCRETE WALK	SQ FT	4262	\$ 16.26	\$ 69,300.12
2531.501	CONCRETE CURB AND GUTTER DESIGN B624	LIN FT	6030	\$ 26.79	\$ 161,543.70
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	684	\$ 70.30	\$ 48,085.20
2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	142	\$ 91.21	\$ 12,951.82
2531.618	TRUNCATED DOMES	SQ FT	422	\$ 35.76	\$ 15,090.72
2563.601	TRAFFIC CONTROL	LUMP SUM	0.57	\$ 112,000.00	\$ 63,840.00

GROUP 1 WHITE BEAR AVENUE ROADWAY EXHIBIT A

**FUNDING 20% CSAH SP 062-665-052
80% FEDERAL AID**

GROUP 1-A

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2563.601	ALTERNATE PEDESTRIAN ROUTE	LUMP SUM	1	\$ 9,500.00	\$ 9,500.00
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UDAY	56	\$ 125.00	\$ 7,000.00
2564.531	SIGN PANELS TYPE C	SQ FT	254	\$ 43.00	\$ 10,922.00
2564.537	INSTALL SIGN TYPE SPECIAL	EACH	10	\$ 100.00	\$ 1,000.00
2565.616	TEMPORARY SIGNAL SYSTEM B	SYSTEM	1	\$ 85,000.00	\$ 85,000.00
2571.502	DECIDUOUS TREE 2.5" CAL B&B	EACH	95	\$ 435.00	\$ 41,325.00
2573.502	SILT FENCE, TYPE MS	LIN FT	222	\$ 3.32	\$ 737.04
2573.530	STORM DRAIN INLET PROTECTION	EACH	66	\$ 310.00	\$ 20,460.00
2573.533	SEDIMENT CONTROL LOG TYPE COMPOST	LIN FT	400	\$ 8.00	\$ 3,200.00
2573.535	STABILIZED CONSTRUCTION EXIT	LUMP SUM	1	\$ 11,600.00	\$ 11,600.00
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	0.57	\$ 20,000.00	\$ 11,400.00
2574.508	FERTILIZER TYPE 3	POUND	250	\$ 2.00	\$ 500.00
2574.525	COMMON TOPSOIL BORROW (LV)	CU YD	576	\$ 26.60	\$ 15,321.60
2575.505	SODDING TYPE LAWN	SQ YD	3457	\$ 5.65	\$ 19,532.05
2575.513	MULCH MATERIAL TYPE 6	CU YD	33	\$ 100.00	\$ 3,300.00
2575.560	HYDRAULIC MULCH MATRIX	POUND	4495	\$ 1.77	\$ 7,956.15
2582.501	PAVEMENT MESSAGE (LT ARROW) EPOXY	EACH	6	\$ 295.00	\$ 1,770.00
2582.502	4" SOLID LINE PAINT	LIN FT	1000	\$ 0.45	\$ 450.00
2582.502	4" DOUBLE SOLID LINE PAINT	LIN FT	2300	\$ 0.90	\$ 2,070.00
2582.502	4" SOLID LINE EPOXY	LIN FT	2626	\$ 0.38	\$ 997.88
2582.502	4" BROKEN LINE EPOXY	LIN FT	6744	\$ 0.38	\$ 2,562.72
2582.502	24" SOLID LINE EPOXY	LIN FT	245	\$ 7.70	\$ 1,886.50
2582.502	12" SOLID LINE EPOXY	LIN FT	858	\$ 5.50	\$ 4,719.00
2582.502	4" DOUBLE SOLID LINE EPOXY	LIN FT	8819	\$ 0.76	\$ 6,702.44
2582.503	CROSSWALK EPOXY	SQ FT	960	\$ 18.20	\$ 17,472.00

GROUP 1-A SUBTOTAL \$3,073,648.54

* ENGINEERING AND CONSTRUCTION COST APPLY TO GROUP TOTAL

12% CSAH DESIGN ENGINEERING COST \$ 368,837.82

12% CSAH CONSTRUCTION ENGINEERING COST \$ 368,837.82

COUNTY CSAH PORTION * \$ 935,115.13

GROUP 1-A CSAH TOTAL \$1,672,790.78

FEDERAL AID PORTION * \$2,138,533.41

GROUP 1-A FEDERAL TOTAL \$2,138,533.41

GROUP 1 WHITE BEAR AVENUE ROADWAY EXHIBIT A

FUNDING 20% CSAH SP 062-665-052
80% FEDERAL AID

GROUP 1-B

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM B	SYSTEM	0.5	\$ 257,000.00	\$ 128,500.00
2565.513	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	0.5	\$ 9,000.00	\$ 4,500.00
2565.603	FIBER OPTIC INTERCONNECT	LUMP SUM	0.5	\$ 94,000.00	\$ 47,000.00
2565.616	REVISE SIGNAL SYSTEM A	SYSTEM	1	\$ 37,000.00	\$ 37,000.00
2565.616	REVISE SIGNAL SYSTEM C	SYSTEM	0.5	\$ 60,000.00	\$ 30,000.00

GROUP 1-B SUBTOTAL \$ 247,000.00

* ENGINEERING AND CONSTRUCTION COST/CREDITS APPLY TO GROUP TOTAL
 12% CSAH DESIGN ENGINEERING COST \$ 29,640.00
 12% CSAH CONSTRUCTION ENGINEERING COST \$ 29,640.00
 COUNTY CSAH PORTION * \$ 75,146.34

GROUP 1-B CSAH TOTAL \$ 134,426.34

* GROUP 1-B INCLUDES A CREDIT TO THE CITY OF SAINT PAUL FOR SIGNAL INSPECTION
 10% CONSTRUCTION ENGINEERING CREDIT \$ (24,700.00)

GROUP 1-B CITY OF SAINT PAUL MSAS TOTAL \$ (24,700.00)

FEDERAL AID PORTION * \$ 171,853.66

GROUP 1-B FEDERAL TOTAL \$ 171,853.66

FUNDING CSAH SP 062-665-052
GROUP 1 TOTAL (GROUP1-A + GROUP 1-B) \$1,807,217.12

FUNDING MSAS 164-020-138
GROUP 1 TOTAL (GROUP 1-B) \$ (24,700.00)

FUNDING FEDERAL AID
GROUP 1 TOTAL (GROUP1-A + GROUP 1-B) \$2,310,387.07

* NOTE: ELIGIBLE ITEM COSTS EXCEED AVAILIABLE FEDERAL FUNDS. 69.5763806% OF THE COST OF THE ESTIMATED ELIGIBLE ITEMS WILL BE PAID BY FEDERAL FUNDS. REMAINDERS WILL BE APPLIED TO THE COUNTY CSAH PORTION.

GROUP 2 WHITE BEAR AVENUE STORM SEWER

**FUNDING 20% CSAH SP 062-665-052
80% FEDERAL AID**

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	0.16	\$ 482,900.00	\$ 77,264.00
2031.501	FIELD OFFICE TYPE D - MODIFIED	EACH	0.16	\$ 15,500.00	\$ 2,480.00
2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	3652	\$ 11.49	\$ 41,961.48
2104.509	REMOVE MANHOLE OR CATCH BASIN	EACH	47	\$ 750.00	\$ 35,250.00
2104.509	REMOVE CASTING	EACH	63	\$ 100.00	\$ 6,300.00
2501.521	44" SPAN RC PIPE-ARCH SEWER CL IIA	0	812	\$ 104.36	\$ 84,740.32
2503.541	15" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	1709	\$ 43.82	\$ 74,888.38
2503.541	18" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	808	\$ 45.54	\$ 36,796.32
2503.541	21" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	575	\$ 47.79	\$ 27,479.25
2503.541	24" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	394	\$ 49.25	\$ 19,404.50
2503.541	27" RC PIPE SEWER DESIGN 3006 CLASS III	LIN FT	416	\$ 55.00	\$ 22,880.00
2503.602	CONNECT TO EXISTING STORM SEWER	EACH	12	\$ 540.00	\$ 6,480.00
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 7B	LIN FT	195	\$ 373.00	\$ 72,735.00
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	16	\$ 343.00	\$ 5,488.00
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4020	LIN FT	102	\$ 430.00	\$ 43,860.00
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4020	LIN FT	65	\$ 491.00	\$ 31,915.00
2506.502	CONSTRUCT DRAINAGE DESIGN SPECIAL 1	EACH	4	\$ 4,996.00	\$ 19,984.00
2506.502	CONSTRUCT DRAINAGE DESIGN SPECIAL 2	EACH	4	\$ 5,061.00	\$ 20,244.00
2056.601	SEDIMENT COLLECTION DEVICE	EACH	4	\$ 4,489.00	\$ 17,956.00
2506.516	CASTING ASSEMBLY	EACH	115	\$ 882.00	\$ 101,430.00
2506.522	ADJUST FRAME AND RING CASTING	EACH	11	\$ 450.00	\$ 4,950.00
2506.602	CONNECT TO EXISITNG STORM SEWER	EACH	1	\$ 540.00	\$ 540.00
2563.601	TRAFFIC CONTROL	LUMP SUM	0.16	\$ 112,000.00	\$ 17,920.00
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	0.16	\$ 20,000.00	\$ 3,200.00

GROUP 2

SUBTOTAL \$ 776,146.25

* ENGINEERING AND CONSTRUCTION COST APPLY TO GROUP TOTAL

12% CSAH DESIGN ENGINEERING COST \$ 93,137.55

12% CSAH CONSTRUCTION ENGINEERING COST \$ 93,137.55

COUNTY CSAH PORTION * \$ 236,131.78

GROUP 2-A CSAH TOTAL

\$ 422,406.88

GROUP 2 WHITE BEAR AVENUE STORM SEWER

FUNDING 20% CSAH SP 062-665-052
80% FEDERAL AID

FEDERAL AID PORTION * \$ 540,014.47
GROUP 2-A FEDERAL TOTAL \$ 540,014.47

FUNDING CSAH SP 062-665-052
GROUP 2 TOTAL **\$ 422,406.88**

FUNDING FEDERAL AID
GROUP 2 TOTAL **\$ 540,014.47**

* NOTE: ELIGIBLE ITEM COSTS EXCEED AVAILABLE FEDERAL FUNDS. 69.5763806% OF THE COST OF THE ESTIMATED ELIGIBLE ITEMS WILL BE PAID BY FEDERAL FUNDS. REMAINDERS WILL BE APPLIED TO THE COUNTY CSAH PORTION.

GROUP 3 CITY OF SAINT PAUL

**FUNDING 20% CP 062-665-052
80% FEDERAL AID**

GROUP 3-A

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	0.1	\$ 482,900.00	\$ 48,290.00
2031.501	FIELD OFFICE TYPE D - MODIFIED	EACH	0.1	\$ 15,500.00	\$ 1,550.00
2104.509	REMOVE SERVICE CABINET	EACH	2	\$ 525.00	\$ 1,050.00
2104.509	REMOVE SIGNAL SYSTEM B	EACH	0.5	\$ 3,296.00	\$ 1,648.00
2104.523	SALVAGE LIGHTING UNIT	EACH	7	\$ 350.00	\$ 2,450.00
2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	1	\$ 2,500.00	\$ 2,500.00
2503.601	TELEVISE PROJECT SANITARY SEWER	LS	1	\$ 17,000.00	\$ 17,000.00
2545.511	LIGHTING UNIT TYPE SPECIAL 1 (L14)	EACH	34	\$ 2,865.00	\$ 97,410.00
2545.511	LIGHTING UNIT TYPE SPECIAL 2 (2L14)	EACH	4	\$ 3,965.00	\$ 15,860.00
2545.513	LUMINAIRE (LED)	EACH	42	\$ 2,265.00	\$ 95,130.00
2545.515	LIGHT BASE DESIGN TYPE STANDARD	EACH	31	\$ 985.00	\$ 30,535.00
2545.523	1.5" NON-METALLIC CONDUIT	LIN FT	5800	\$ 5.35	\$ 31,030.00
2545.531	UNDERGROUND WIRE 1 COND NO 4	LIN FT	19200	\$ 2.65	\$ 50,880.00
2545.531	UNDERGROUND WIRE 1 COND NO 8	LIN FT	5700	\$ 1.75	\$ 9,975.00
2545.541	SERVICE CABINET	EACH	2	\$ 15,090.00	\$ 30,180.00
2545.551	JUNCTION BOX	EACH	6	\$ 2,235.00	\$ 13,410.00
2563.601	TRAFFIC CONTROL	LUMP SUM	0.1	\$ 112,000.00	\$ 11,200.00
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	0.1	\$ 20,000.00	\$ 2,000.00

GROUP 3-A SUBTOTAL \$ 462,098.00

* ENGINEERING AND CONSTRUCTION FEES APPLY TO GROUP TOTAL

12% DESIGN ENGINEERING FEE \$ 55,451.76

2% CONSTRUCTION ENGINEERING FEE \$ 9,241.96

CITY OF SAINT PAUL PORTION \$ 140,586.94

GROUP 3-A CITY OF SAINT PAUL MSAS TOTAL \$ 205,280.66

FEDERAL AID PORTION * \$ 321,511.06

GROUP 3-A FEDERAL TOTAL \$ 321,511.06

GROUP 3 CITY OF SAINT PAUL

FUNDING 20% CP 062-665-052
80% FEDERAL AID

GROUP 3-B

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM B	SYSTEM	0.5	\$ 257,000.00	\$ 128,500.00
2565.513	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	0.5	\$ 9,000.00	\$ 4,500.00
2565.603	FIBER OPTIC INTERCONNECT	LUMP SUM	0.5	\$ 94,000.00	\$ 47,000.00
2565.616	REVISE SIGNAL SYSTEM C	SYSTEM	0.5	\$ 60,000.00	\$ 30,000.00

GROUP 3-B SUBTOTAL \$ 210,000.00

* ENGINEERING AND CONSTRUCTION FEES APPLY TO GROUP TOTAL

12% DESIGN ENGINEERING FEE \$ 25,200.00

CITY OF SAINT PAUL PORTION * \$ 63,889.60

GROUP 3-B CITY OF SAINT PAUL TOTAL \$ 89,089.60

FEDERAL AID PORTION * \$ 146,110.40

GROUP 3-B FEDERAL TOTAL \$ 146,110.40

FUNDING MSAS 164-020-138

GROUP 3 TOTAL (GROUP 3-A + GROUP 3-B) \$ 294,370.26

FUNDING FEDERAL AID

GROUP 3 TOTAL (GROUP 3-A + GROUP 3-B) \$ 467,621.46

* NOTE: ELIGIBLE ITEM COSTS EXCEED AVAILIABLE FEDERAL FUNDS. 69.5763806% OF THE COST OF THE ESTIMATED ELIGIBLE ITEMS WILL BE PAID BY FEDERAL FUNDS. REMAINDERS WILL BE APPLIED TO THE CITY OF SAINT PAUL PORTION.

GROUP 4 RAMSEY COUNTY NON-PARTICIPATING

FUNDING 100% LOCAL COUNTY

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	0.01	\$ 482,900.00	\$ 4,829.00
2031.501	FIELD OFFICE TYPE D - MODIFIED	EACH	0.01	\$ 15,500.00	\$ 155.00
2563.601	TRAFFIC CONTROL	LUMP SUM	0.01	\$ 112,000.00	\$ 1,120.00
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM D	SYSTEM	0.5	\$ 149,000.00	\$ 74,500.00
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	0.01	\$ 20,000.00	\$ 200.00
GROUP 4				SUBTOTAL	\$ 80,804.00
12% COUNTY DESIGN ENGINEERING COST					\$ 9,696.48
12% COUNTY CONSTRUCTION ENGINEERING COST					\$ 9,696.48
FUNDING 100% LOCAL COUNTY					
GROUP 4 TOTAL					\$ 100,196.96
* GROUP 4 INCLUDES A CREDIT TO THE CITY OF SAINT PAUL FOR SIGNAL INSPECTION					
10% CONSTRUCTION ENGINEERING CREDIT					\$ (8,080.40)
FUNDING 100% CITY OF SAINT PAUL LOCAL					\$ (8,080.40)

GROUP 5 CITY OF SAINT PAUL NON-PARTICIPATING

FUNDING 100% CITY OF SAINT PAUL LOCAL

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	0.03	\$ 482,900.00	\$ 14,487.00
2104.501	REMOVE SANITARY SERVICE PIPE	LIN FT	710	\$ 3.00	\$ 2,130.00
2031.501	FIELD OFFICE TYPE D - MODIFIED	EACH	0.03	\$ 15,500.00	\$ 465.00
2105.607	HAUL & DISPOSE OF CONTAMINATED MATERIAL	CU YD	70	\$ 72.65	\$ 5,085.50
2451.609	GRANULAR BACKFILL	TON	240	\$ 17.22	\$ 4,132.80
2503.602	CONNECT TO EXISTING SANITARY SEWER	EACH	20	\$ 540.00	\$ 10,800.00
2503.602	CONNECT TO EXISTING SANITARY SEWER SERVICE	EACH	20	\$ 370.00	\$ 7,400.00
2503.603	6" PVC PIPE SEWER	LIN FT	712	\$ 76.44	\$ 54,425.28
2563.601	TRAFFIC CONTROL	LUMP SUM	0.03	\$ 112,000.00	\$ 3,360.00
2565.511	TRAFFIC CONTROL SIGNAL SYSTEM D	SYSTEM	0.5	\$ 149,000.00	\$ 74,500.00
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	0.03	\$ 20,000.00	\$ 600.00

GROUP 5				SUBTOTAL	\$ 177,385.58
	2% DESIGN ENGINEERING FEE				\$ 3,547.71
	2% CONSTRUCTION ENGINEERING FEE				\$ 3,547.71

FUNDING 100% CITY OF SAINT PAUL LOCAL

GROUP 5 TOTAL					\$ 184,481.00
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GROUP 6 SAINT PAUL REGIONAL WATER SERVICES NON-PARTICIPATING

FUNDING 100% SAINT PAUL REGIONAL WATER SERVICES

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	0.13	\$ 482,900.00	\$ 62,777.00
2031.501	FIELD OFFICE TYPE D - MODIFIED	EACH	0.13	\$ 15,500.00	\$ 2,015.00
2104.501	REMOVE WATER MAIN	LIN FT	3783	\$ 3.00	\$ 11,349.00
2104.501	REMOVE WATER SERVICE PIPE	LIN FT	75	\$ 3.00	\$ 225.00
2104.501	REMOVE SANITARY SERVICE PIPE	LIN FT	180	\$ 3.00	\$ 540.00
2104.509	REMOVE UTILITY VAULT	EACH	2	\$ 1,000.00	\$ 2,000.00
2104.509	REMOVE HYDRANT	EACH	4	\$ 310.00	\$ 1,240.00
2105.607	HAUL & DISPOSE OF CONTAMINATED MATERIAL	CU YD	100	\$ 72.65	\$ 7,265.00
2451.609	GRANULAR BACKFILL	TON	1659	\$ 17.22	\$ 28,567.98
2503.602	CONNECT TO EXISTING SANITARY SEWER SERVICE	EACH	36	\$ 370.00	\$ 13,320.00
2503.603	6" PVC PIPE SEWER	LIN FT	180	\$ 76.44	\$ 13,759.20
2504.602	CONNECT TO EXISTING WATER MAIN	EACH	19	\$ 1,975.00	\$ 37,525.00
2504.602	CONNECT TO EXISTING WATER SERVICE	EACH	1	\$ 349.00	\$ 349.00
2504.602	HYDRANT	EACH	3	\$ 6,070.00	\$ 18,210.00
2504.602	4" GATE VALVE & BOX	EACH	1	\$ 2,116.00	\$ 2,116.00
2504.602	8" GATE VALVE & BOX	EACH	13	\$ 2,765.00	\$ 35,945.00
2504.602	12" BUTTERFLY VALVE & BOX	EACH	18	\$ 3,631.00	\$ 65,358.00
2504.602	16" BUTTERFLY VALVE & BOX	EACH	1	\$ 4,735.00	\$ 4,735.00
2504.602	20" BUTTERFLY VALVE & BOX	EACH	1	\$ 6,494.00	\$ 6,494.00
2504.602	24" BUTTERFLY VALVE & BOX	EACH	1	\$ 8,634.00	\$ 8,634.00
2504.602	VALVE BOX	EACH	2	\$ 910.00	\$ 1,820.00
2504.602	0.75" CURB STOP & BOX	EACH	4	\$ 706.00	\$ 2,824.00
2504.602	1" CURB STOP & BOX	EACH	5	\$ 728.00	\$ 3,640.00
2504.603	12" WATERMAIN HDPE (PIPE BURSTING)	LIN FT	567	\$ 142.15	\$ 80,599.05
2504.603	4" WATERMAIN DUCTILE IRON CL 52	LIN FT	19	\$ 138.47	\$ 2,630.93
2504.603	6" WATERMAIN DUCTILE IRON CL 52	LIN FT	58	\$ 65.95	\$ 3,825.10
2504.603	8" WATERMAIN DUCTILE IRON CL 52	LIN FT	453	\$ 58.62	\$ 26,554.86
2504.603	12" WATERMAIN DUCTILE IRON CL 52	LIN FT	2769	\$ 75.12	\$ 208,007.28

GROUP 6 SAINT PAUL REGIONAL WATER SERVICES NON-PARTICIPATING

FUNDING 100% SAINT PAUL REGIONAL WATER SERVICES

ITEM NUMBER	ITEM	UNIT	TOTAL ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2504.603	16" WATERMAIN DUCTILE IRON CL 52	LIN FT	250	\$ 122.01	\$ 30,502.50
2504.603	20" WATERMAIN DUCTILE IRON CL 52	LIN FT	61	\$ 187.38	\$ 11,430.18
2504.603	24" WATERMAIN DUCTILE IRON CL 52	LIN FT	32	\$ 192.34	\$ 6,154.88
2504.603	1" TYPE K COPPER PIPE	LIN FT	100	\$ 120.26	\$ 12,026.00
2504.608	DUCTILE IRON FITTINGS	POUND	6640	\$ 8.22	\$ 54,580.80
2563.601	TRAFFIC CONTROL	LUMP SUM	0.13	\$ 112,000.00	\$ 14,560.00
2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	0.13	\$ 20,000.00	\$ 2,600.00

GROUP 6				SUBTOTAL	\$ 784,179.76
	12% DESIGN ENGINEERING FEE				\$ 94,101.57
	2% CONSTRUCTION ENGINEERING FEE				\$ 15,683.60

FUNDING 100% SAINT PAUL REGIONAL WATER SERVICES

GROUP 6 TOTAL

\$ 893,964.93

COOPERATIVE COST SHARE UNDERSTANDING

**WHITE BEAR AVENUE RECONSTRUCTION
Cost Split based on Engineer's Estimate**

Exhibit A

Payment Groups		Federal Aid	Ramsey County CSAH	City of Saint Paul	Ramsey County Non-Participating	City of Saint Paul Non-Participating	Saint Paul Regional Water Services (SPWRS)	Total
Group 1-A	White Bear Avenue Roadway 100% S.A.P. 62-665-052	\$ 2,138,533.41	\$ 935,115.13					\$ 3,073,648.54
Group 1-B	White Bear Avenue Roadway (Signals) 100% S.A.P. 62-665-052	\$ 171,853.66	\$ 75,146.34					\$ 247,000.00
Group 2	White Bear Avenue Storm Sewer 100% S.A.P. 62-665-052	\$ 540,014.47	\$ 236,131.78					\$ 776,146.25
Group 3-A	City Of Saint Paul 100% Lighting, Sanitary Sewer 100% M.S.A.S. 164-020-138	\$ 321,511.06		\$ 140,586.94				\$ 462,098.00
Group 3-B	City Of Saint Paul 100% Signals, Interconnect 100% M.S.A.S. 164-020-138	\$ 146,110.40		\$ 63,889.60				\$ 210,000.00
Group 4	Ramsey County 100% Ramsey County Loca				\$ 80,804.00			\$ 80,804.00
Group 5	City Of Saint Paul 100% Sanitary Sewer Services 100% Local					\$ 177,385.58		\$ 177,385.58
Group 6	Saint Paul Regional Water Services Water Main and Services 100% Local Funds SPRWS						\$ 784,179.76	\$ 784,179.76
Anticipated Construction Total Based on Low Bid		\$ 3,318,023.00	\$ 1,246,393.25	\$ 204,476.54	\$ 80,804.00	\$ 177,385.58	\$ 784,179.76	\$ 5,811,262.13

WHITE BEAR AVENUE RECONSTRUCTION
Cost Split based on Engineer's Estimate

Exhibit A

	(ENGINEERING AND CONSTRUCTION COST/CREDITS APPLY TO GROUP TOTAL)							
Group 1-A	12% COUNTY DESIGN ENGINEERING COST	\$	368,837.82					
	12% COUNTY CONSTRUCTION ENGINEERING COST	\$	368,837.82					
	(ENGINEERING AND CONSTRUCTION COST/CREDITS APPLY TO GROUP TOTAL)							
	12% COUNTY DESIGN ENGINEERING COST	\$	29,640.00					
Group 1-B	12% COUNTY CONSTRUCTION ENGINEERING COST	\$	29,640.00					
	(CITY OF SAINT PAUL INSPECTION OF COUNTY SIGNAL)							
	10% CONSTRUCTION ENGINEERING CREDIT	\$	(24,700.00)					
Group 2	12% COUNTY DESIGN ENGINEERING COST	\$	93,137.55					
	12% COUNTY CONSTRUCTION ENGINEERING COST	\$	93,137.55					
Group 3-A	12% COUNTY DESIGN ENGINEERING FEE	\$	55,451.76					
	2% COUNTY CONSTRUCTION ENGINEERING FEE	\$	9,241.96					
Group 3-B	12% COUNTY DESIGN ENGINEERING FEE	\$	25,200.00					
	12% COUNTY DESIGN ENGINEERING COST	\$			9,696.48			
Group 4	12% COUNTY CONSTRUCTION ENGINEERING COST	\$			9,696.48			
	(CITY OF SAINT PAUL INSPECTION OF COUNTY SIGNAL)							
	10% CONSTRUCTION ENGINEERING CREDIT	\$			(8,080.40)			
Group 5	2% DESIGN ENGINEERING FEE	\$			3,547.71			
	2% CONSTRUCTION ENGINEERING FEE	\$			3,547.71			
Group 6	12% DESIGN ENGINEERING FEE	\$				94,101.57		
	2% CONSTRUCTION ENGINEERING FEE	\$				15,683.60		

Project Total and Engineering	Construction	\$	3,318,023.00	\$	2,229,624.00	\$	269,670.26	\$	100,196.96	\$	176,400.60	\$	893,964.93
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Minnesota Department of Transportation

Memo

Bridge Office
3485 Hadley Avenue North
Oakdale, MN 55128-3307

Date: December 17, 2015

To: Dan Erickson
Metro Division State Aid Engineer
ATTN.: Colleen Brown

From: Juanita Voigt
State Aid Hydraulic Specialist

Phone: (651) 366-4469

Subject: **SP 062-665-052 (White Bear Avenue)**
From Old Hudson Road to Beech Street East
City of Saint Paul, **Ramsey County**

We have completed our review of the storm sewer features of the above referenced Reconstruction Plan and find that Federal Aid and State Aid funds combined can bear the following percentages of the eligible storm sewer costs broken down as follows:

SP 062-665-052	Federal Aid Funds	(.80) (1.00)	80%
SP 062-665-052	State Aid Funds	(.20) (1.00)	20%
Total Funding			100%

The proposed improvements conform to State Aid standards and the State Aid Division will make further review of the plan. We have the following comment:

- 1) There are a few inlets that are not meeting State Aid requirements for Maximum Allowable Spread: 5014-A, 5013, 7003. The consultant has been contacted.

Unless you wish to recommend modifying the amount of participation, the State Aid Division will use the above percentage.

We are forwarding a copy of this report to Jim Tolaas, Ramsey County Engineer, and to DJ Sosa, WSB & Associates, for their information.

If you have any questions regarding this approval or proration, please do not hesitate to call.

EC: Jim Tolaas, Ramsey County Engineer
DJ Sosa, WSB & Associates

CC: Andrea Hendrickson (file)



Department of Public Works Cost Participation Policy

Exhibit C

Ramsey County Public Works Cost Participation Policy for the Reconstruction and Major Maintenance of County Roads and County State Aid Highways

ITEM:	COUNTY SHARE:	NOTES:
Right of Way	50%	County cost participation on right of way acquisition may be reduced or eliminated where the acquisition is specifically for detached trails, aesthetics, or special design elements requested by municipalities or other project partners. County participation on right of way acquisition applies only to construction projects and shall be 0% for maintenance projects, except where additional right of way is required to accommodate improvements within the curb or shoulder line.
Removals	100%	
Travel Lanes	100%	
ITEM:	COUNTY SHARE:	NOTES:

Parking Lanes	25%	100% in cities under 5,000 population or in White Bear Township. 100% on maintenance pavement preservation projects.
Shoulders	100%	100% of the width required to meet State Aid design standards. 100% in cities under 5,000 population or in White Bear Township. 100% on maintenance pavement preservation projects. 50% outside of the required width.
Concrete Curb & Gutter (new)	25%	
Concrete Curb & Gutter (replacement)	100%	100% if in serviceable condition, as determined by the County Engineer; otherwise negotiable. 100% of curb and gutter as part of median construction required for traffic channelization or to serve as a pedestrian refuge.
Storm Sewer	% Eligible for State Aid	
Culverts	100%	
ITEM:	COUNTY SHARE:	NOTES:

Water Main Modification	100%	100%, if required for construction. 0% on betterments.
Sanitary Sewer Modification	100%	100%, if required for construction. . 0% on betterments
Private Utility Relocation	0%	
Traffic Signals	100% of County Legs	Traffic Signal construction is addressed in a separate policy (County Board Resolution 81-1001). Electrical power shall be paid by the municipality.
Roundabouts	100% of County Legs	
Retaining Walls	50%	50% when retaining walls are constructed in lieu of right of way acquisition or to mitigate impacts; by negotiation when necessitated by design parameters.
ITEM:	COUNTY SHARE:	NOTES:

Grading Outside of Curb	100%	100% of area required for road construction. 50% of grading required specifically for sidewalks, trails, or other amenities.
Medians	100%	100% of a standard concrete median design, including curb and gutter; municipalities shall pay for the additional cost of any decorative or aesthetic treatments.
Sidewalks (new)	50%	Includes grading, aggregate base, surfacing, and ADA- compliant pedestrian ramps.
Sidewalks (replacement)	100%	100% if in serviceable condition, as determined by the County Engineer; otherwise negotiable.
Bituminous Trail (new)	50%	Includes grading, aggregate base, surfacing, and ADA-compliant pedestrian ramps.
Bituminous Trail (replacement)	100%	100% if in serviceable condition, as determined by the County Engineer; otherwise negotiable.
ITEM:	COUNTY SHARE:	NOTES:

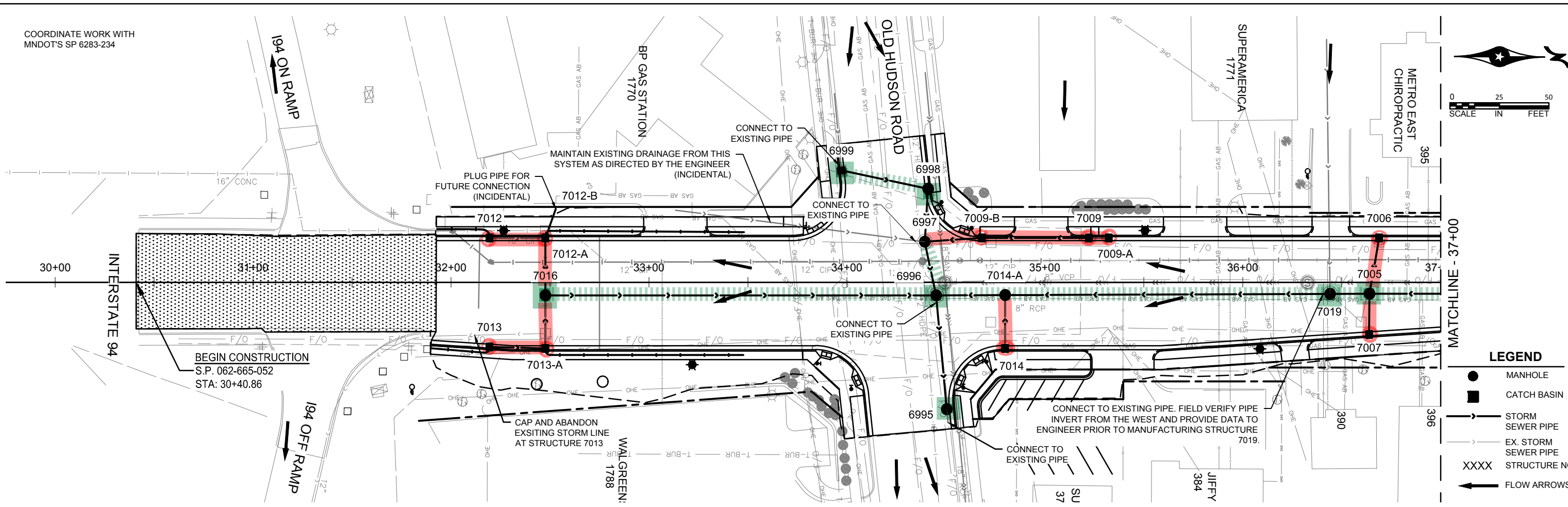
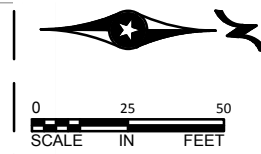
Trail/Sidewalk Grade Separation	0% to 50%, by negotiation	Bridge or underpass construction.
Street Lighting	0%	Street Lighting as part of a traffic signal shall be paid 100% by County. Electrical power shall be paid by the municipality.
Replacement Trees	100%	100%, if 1:1 replacement; 50%, if greater than 1:1
Fence	100%	100% if serviceable; 0% if in County R/W
Turf Restoration	100%	
Amenities and Aesthetics	0%	Special surface treatments, ground covers, or plantings, ornamental railings, etc.
ITEM:	COUNTY SHARE:	NOTES:

Driveway Replacement	100%	
Stormwater Treatment	% eligible for State Aid	Maintenance shall be based on contributing flows.
Preliminary/Design Engineering	% of Participation	
Construction Engineering	% of Participation	

All County participation is subject to the availability of funds.

On Federal Aid Projects, the federal funds shall be applied to all eligible items before cost participation is calculated. Federal participation is typically 50-80% of the total project cost.

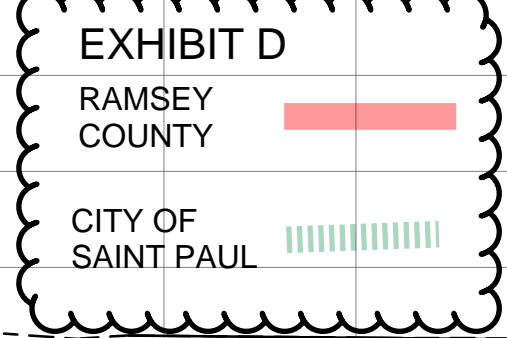
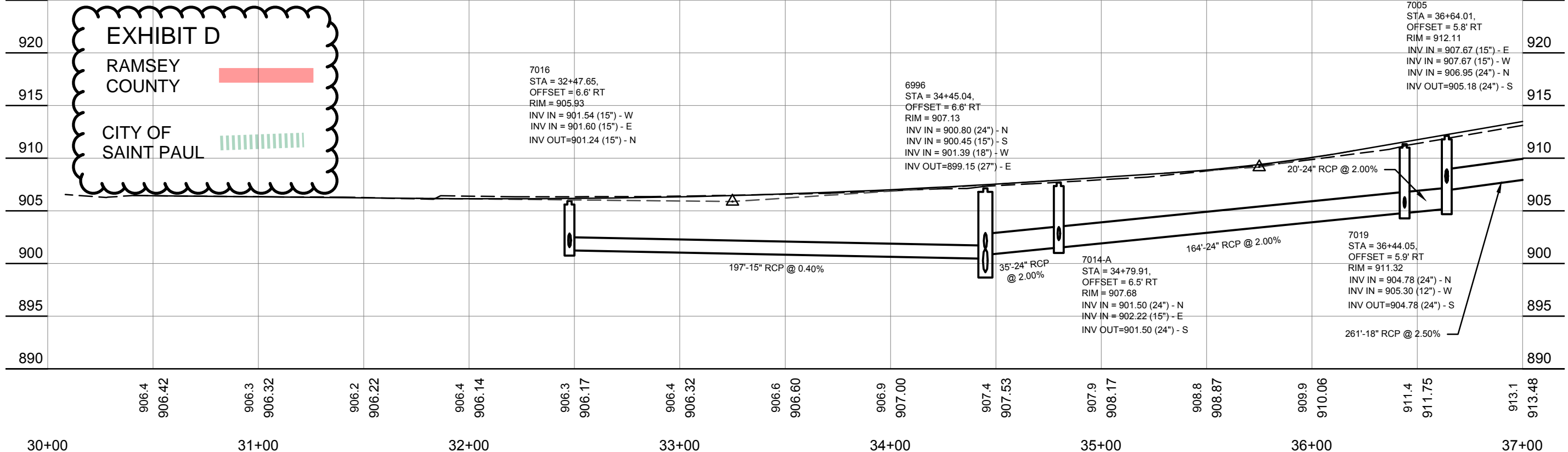
COORDINATE WORK WITH
MNDOT'S SP 6283-234



LEGEND

- MANHOLE
- CATCH BASIN
- STORM PIPE
- SEWER PIPE
- - - EX. STORM PIPE
- - - EX. SEWER PIPE
- XXXX STRUCTURE NO.
- FLOW ARROWS

NOTE: SEE SHEET 61-62 FOR PIPE PROFILES
SEE SHEET 17-18 FOR DRAINAGE TABULATION



Date Printed: 2/9/2016
WSB File Name: K:\03\188\000\Card\Plan\03188-000-C-STRMPLAN.dwg

NO.	DATE	BY	CHK	REVISIONS

DESIGN BY: DSS
 PLAN BY: ERW
 CHECKED BY: JLB
 APPROVED BY: DSS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: DANILO S. SOSA, JR. PE
 DATE: 02/09/2016 LIC. NO.: 49048



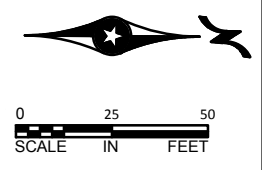
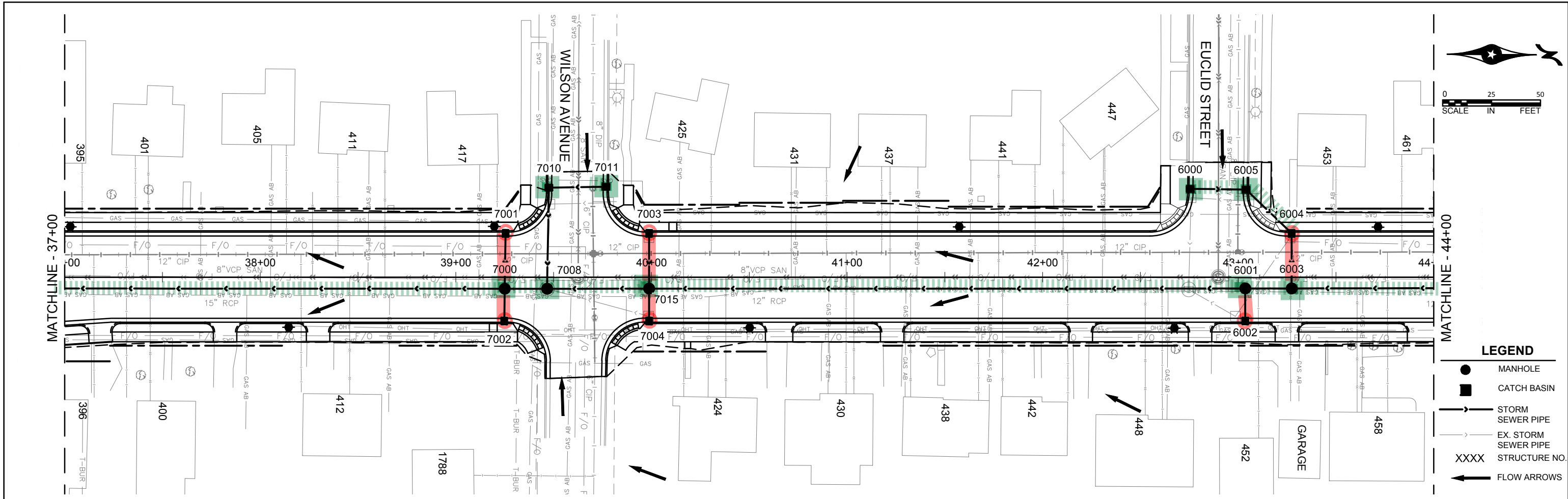
701 Xerve Avenue South, Suite 300
 Minneapolis, MN 55418
 Tel: (760) 541-4000 - Fax: (760) 541-1700
 wsb.com



**WHITE BEAR AVENUE
STREET IMPROVEMENTS**

RAMSEY COUNTY, MINNESOTA
STORM SEWER PLAN AND PROFILE
STA. 30+00 TO 37+00
 S.P. 062-665-052

SHEET
54
 OF
142
 SHEETS



- LEGEND**
- MANHOLE
 - CATCH BASIN
 - STORM SEWER PIPE
 - - - EX. STORM SEWER PIPE
 - XXXX STRUCTURE NO.
 - ← FLOW ARROWS

NOTE: SEE SHEET 61-62 FOR PIPE PROFILES
SEE SHEET 17-18 FOR DRAINAGE TABULATION

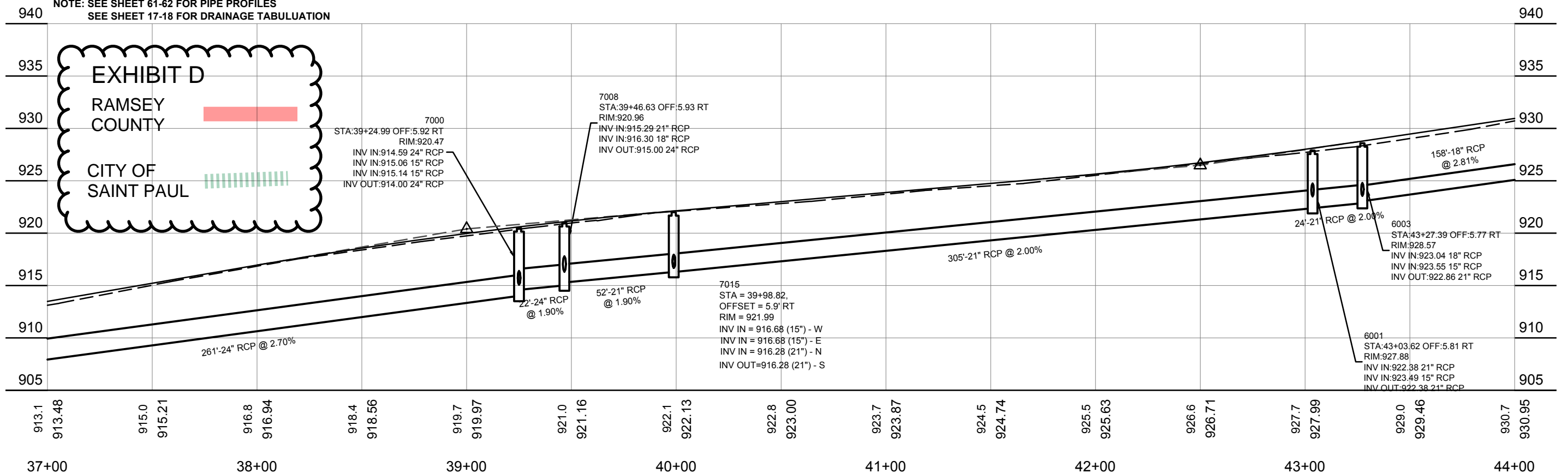


EXHIBIT D
RAMSEY COUNTY
CITY OF SAINT PAUL

Date Printed: 2/9/2016
WSB File Name: K:\03\188-000\Cad\Plan\03188-000-C-STRMPLAN.dwg

NO.	DATE	BY	CHK	REVISIONS

DESIGN BY: DSS
 PLAN BY: ERW
 CHECKED BY: JLB
 APPROVED BY: DSS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: DANILLO S. SOSA, JR. PE
 DATE: 02/09/2016 LIC. NO.: 49048



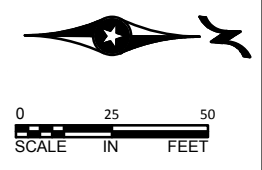
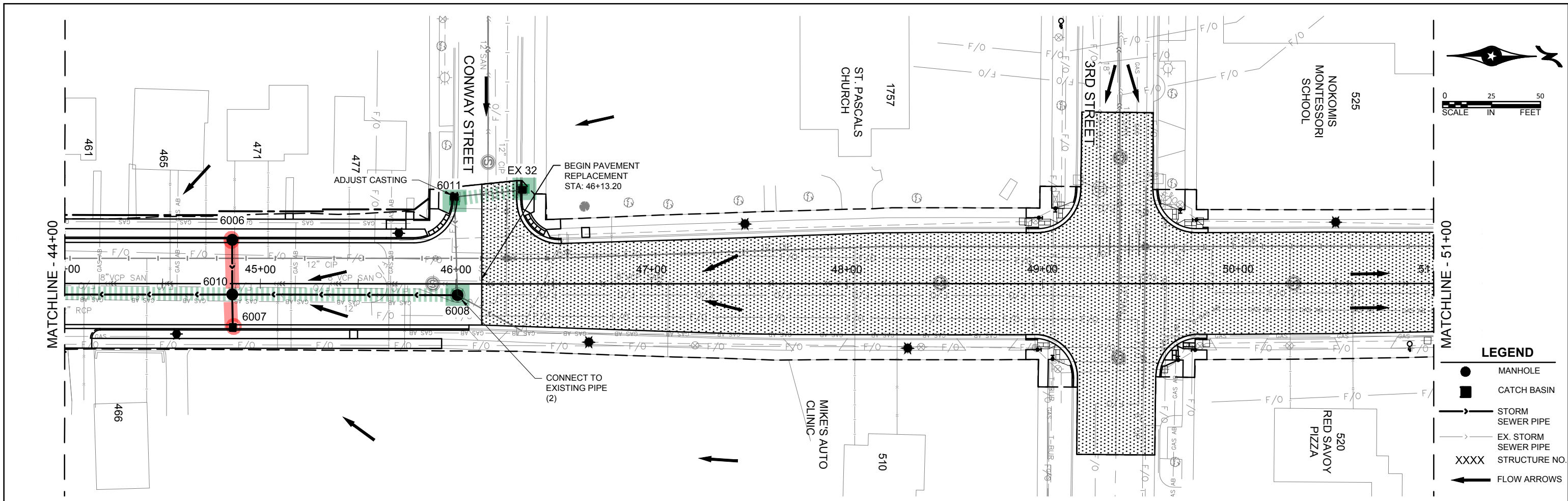
701 Xerve Avenue South, Suite 300
 Minneapolis, MN 55418
 Tel: (763) 541-4000 - Fax: (763) 541-1700
 wsb.com



**WHITE BEAR AVENUE
STREET IMPROVEMENTS**

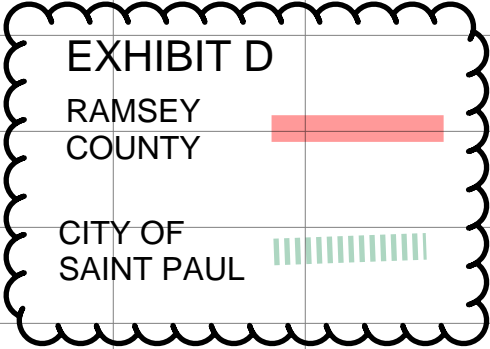
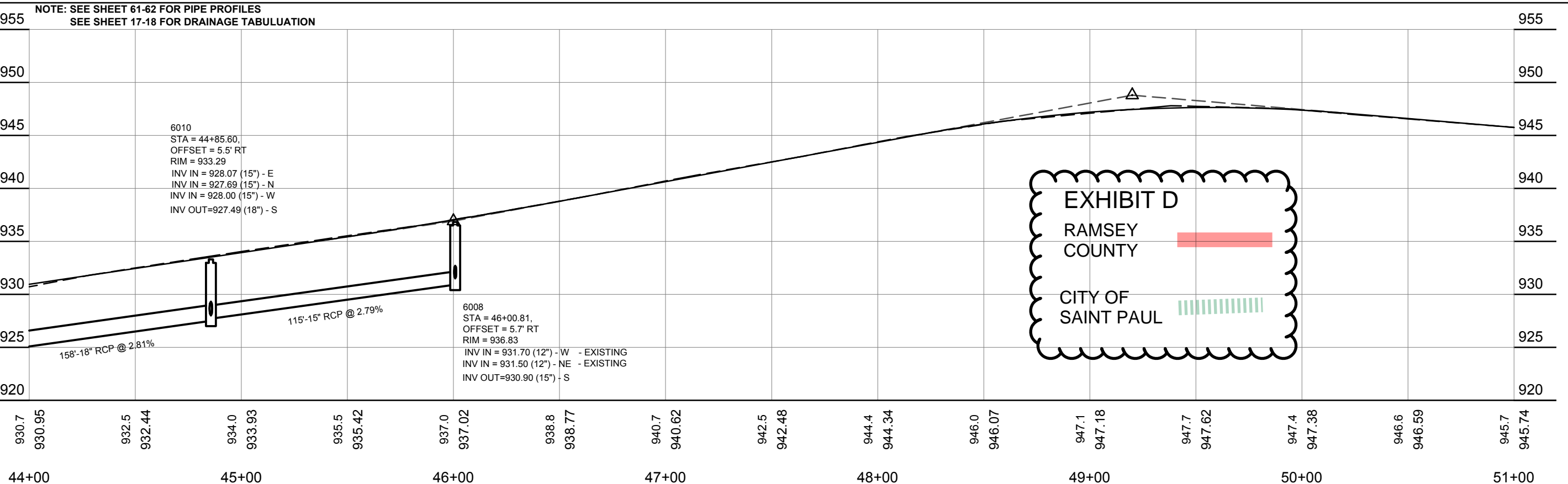
RAMSEY COUNTY, MINNESOTA
STORM SEWER PLAN AND PROFILE
STA. 37+00 TO 44+00
 S.P. 062-665-052

SHEET
55
 OF
142
 SHEETS



LEGEND

- MANHOLE
- CATCH BASIN
- STORM SEWER PIPE
- - - EX. STORM SEWER PIPE
- XXXX STRUCTURE NO.
- ← FLOW ARROWS



NO.	DATE	BY	CHK	REVISIONS

DESIGN BY: DSS
 PLAN BY: ERW
 CHECKED BY: JLB
 APPROVED BY: DSS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: DANILLO S. SOSA, JR. PE
 DATE: 02/09/2016 LIC. NO.: 49048



701 Xerxes Avenue South, Suite 300
 Minneapolis, MN 55418
 Tel: (763) 541-4000 Fax: (763) 541-1700
 wsbeng.com

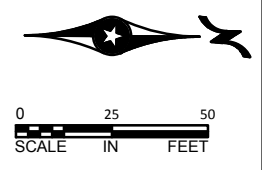
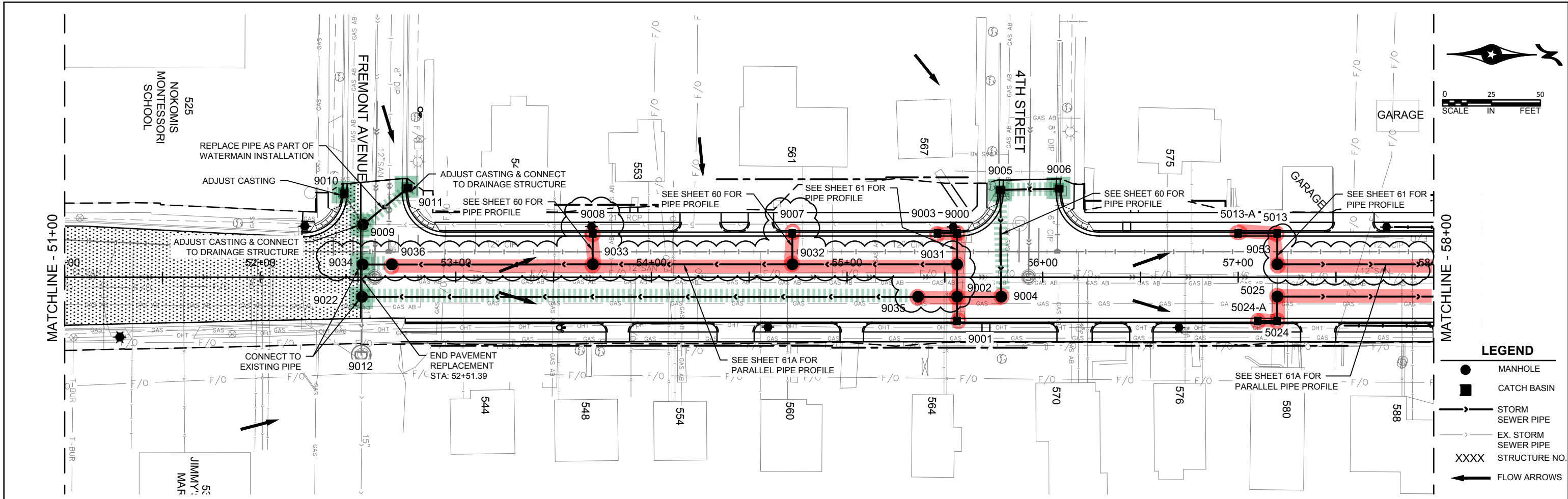


**WHITE BEAR AVENUE
 STREET IMPROVEMENTS**

RAMSEY COUNTY, MINNESOTA
STORM SEWER PLAN AND PROFILE
STA. 44+00 TO 51+00
 S.P. 062-665-052

SHEET
56
 OF
142
 SHEETS

Date Printed: 2/9/2016
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LEGEND

- MANHOLE
- CATCH BASIN
- STORM SEWER PIPE
- - - EX. STORM SEWER PIPE
- XXXX STRUCTURE NO.
- ← FLOW ARROWS

NOTE: SEE SHEET 60-61A FOR PIPE PROFILES
SEE SHEET 17-18 FOR DRAINAGE TABULATION

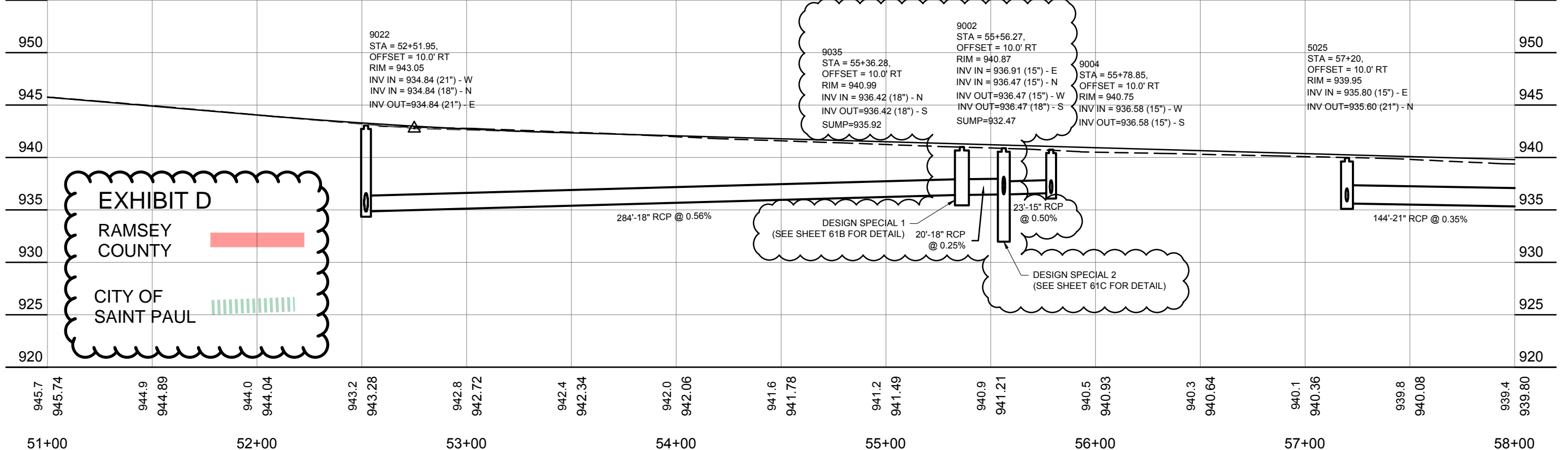


EXHIBIT D
RAMSEY COUNTY
CITY OF SAINT PAUL

NO.	DATE	BY	CHK	REVISIONS
1	5/13/16	EW	TW	ADDENDUM 1

DESIGN BY: DSS
 PLAN BY: ERW
 CHECKED BY: JLB
 APPROVED BY: DSS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: *[Signature]*
 DANIELO S. ROSA, JR. PE
 DATE: 05/13/2016 LIC. NO.: 49048



701 Xerve Avenue South, Suite 300
 Minneapolis, MN 55418
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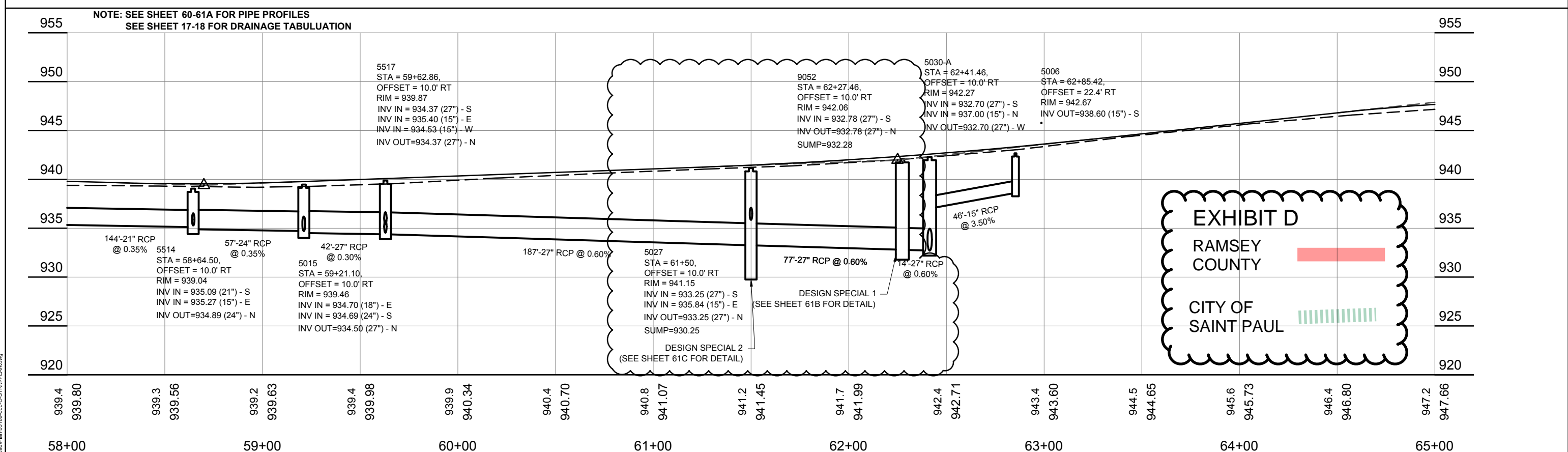
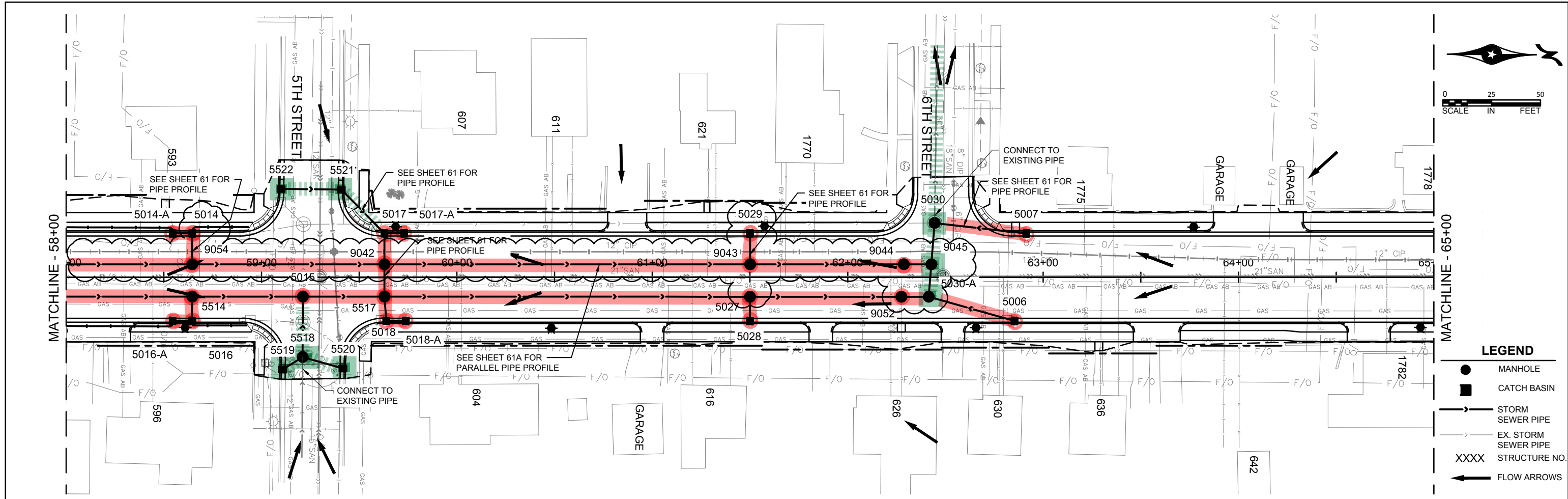


**WHITE BEAR AVENUE
STREET IMPROVEMENTS**

RAMSEY COUNTY, MINNESOTA
STORM SEWER PLAN AND PROFILE
STA. 51+00 TO 58+00
 S.P. 062-665-052 / S.P. 164-020-138

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57
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NO.	DATE	BY	CHK	REVISIONS
1	5/13/16	EW	TW	ADDENDUM 1

DESIGN BY: DSS
 PLAN BY: ERW
 CHECKED BY: JLB
 APPROVED BY: DSS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: *[Signature]*
 DANIL S. ROSA, JR. PE
 DATE: 05/13/2016 LIC. NO.: 49048

WSB
 701 Xerxes Avenue South, Suite 300
 Minneapolis, MN 55418
 Tel: (763) 541-4800 Fax: (763) 541-1700
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RAMSEY COUNTY

**WHITE BEAR AVENUE
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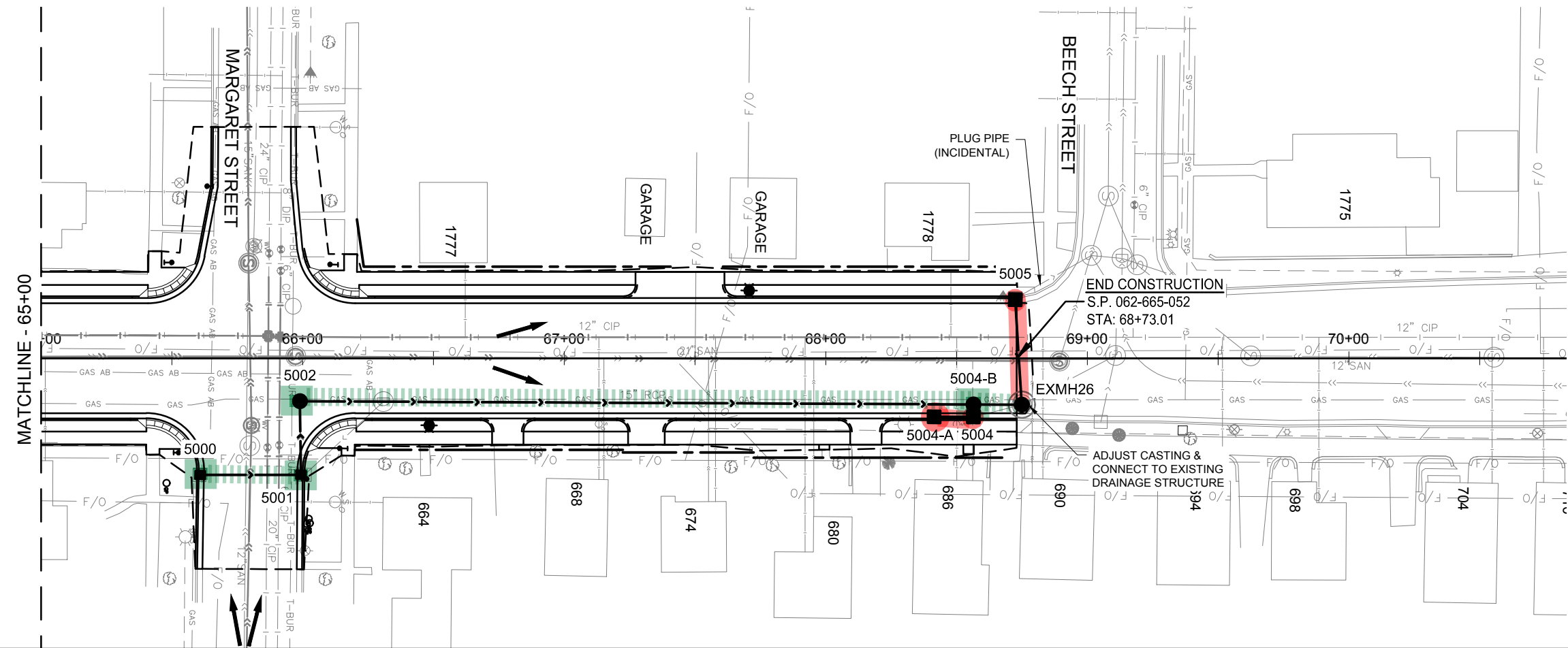
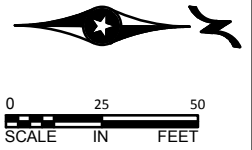
RAMSEY COUNTY, MINNESOTA

**STORM SEWER PLAN AND PROFILE
STA. 58+00 TO 65+00**

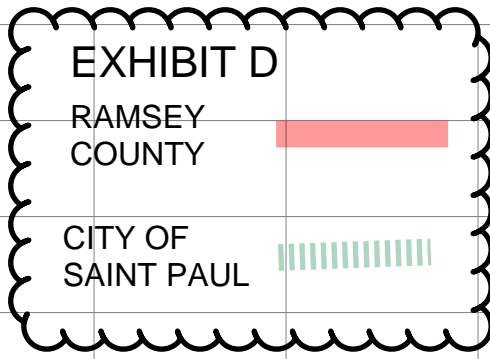
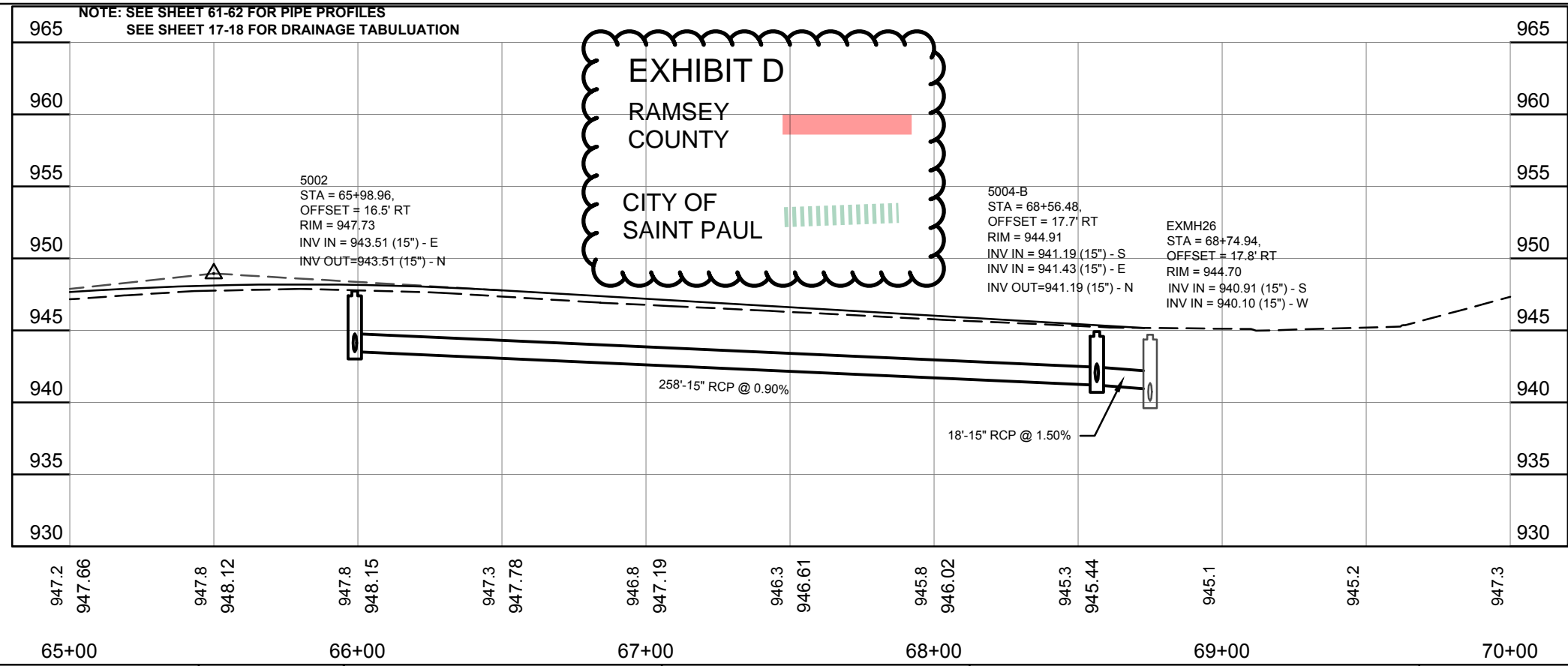
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- LEGEND**
- MANHOLE
 - CATCH BASIN
 - > STORM SEWER PIPE
 - - - EX. STORM SEWER PIPE
 - XXXX STRUCTURE NO.
 - ← FLOW ARROWS



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NO.	DATE	BY	CHK	REVISIONS

DESIGN BY: DSS
 PLAN BY: ERW
 CHECKED BY: JLB
 APPROVED BY: DSS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CERTIFIED BY: DANILO S. SOSA, JR. PE
 DATE: 02/09/2016 LIC. NO.: 49048



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STORM SEWER PLAN AND PROFILE
STA. 65+00 TO 70+00
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