



City of Duluth

DEPARTMENT OF PUBLIC WORKS/UTILITIES
Engineering Division
211 City Hall • Duluth MN 55802
(218) 730-5200 Fax: (218) 730-5907

Date: July 19, 2013

City of Duluth Bid # 13-0426
Job Description: Cross City Trail
City Project No. 0568TR
S.P. 118-090-020 and 118-090-022

Addendum #1

This addendum consists of the following changes:

Bid Form:

The items and quantities in the Bid Form (Exhibit A) have been revised. Replace Exhibit A with the attached Exhibit A.

Specifications:

SP-23 has been revised as follows:

1. **Replace Title with the following:**

SP-23 (2506) ADJUST FRAME & RING CASTING DESIGN SPECIAL

2. **Replace Paragraph SP-23.4 with the following:**

SP-23.4 Measurement and Payment

Measurement will be made by the number of structures satisfactorily adjusted as specified. Payment will be made under Item 2506.602 (Adjust Frame & Ring Casting Design Special) at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto.

Plansheets:

Plan Sheets 5-6, 8-12, 14, 19-22, 25, 31-36, 53-55, and 75-85 have been revised. Remove these sheets and replace with the attached revised sheets 5-6, 88-12, 14, 19-22, 25, 31-36, 53-55, and 75-85 signed on July 19th, 2013.

The revised Exhibit A is attached. Be sure to acknowledge this addendum and all others on your bid (make extra lines for addendum acknowledgements, if necessary). Return the entire bound Project Proposal and all addenda as your bid.

A handwritten signature in black ink, reading "Patrick F. Loomis". The signature is written in a cursive, flowing style.

Patrick F. Loomis
Project Engineer

Bid 13-0426 Pr 0568TR

Cr C Tr P 1

Initial

EXHIBIT A

I	N	S	N	D	U	E	Q	U	Pr	T	Pr
1	2021.501	MOBILIZATION			LUMP SUM	1					
2	2101.502	CLEARING			TREE	3					
3	2101.507	GRUBBING			TREE	3					
4	2102.502	PAVEMENT MARKING REMOVAL-PERMANENT			LIN FT	9235					
5	2104.501	REMOVE CURB AND GUTTER			LIN FT	555					
6	2104.501	REMOVE INTEGRANT CURB			LIN FT	3939					
7	2104.501	REMOVE CHAIN LINK FENCE			LIN FT	2505					
8	2104.501	REMOVE SEWER PIPE (STORM)			LIN FT	170					
9	2104.501	REMOVE UNDERGROUND WIRE			LIN FT	175					
10	2104.503	REMOVE CONCRETE WALK			SQ FT	28506					
11	2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT			SQ FT	9733					
12	2104.505	REMOVE PAVEMENT	(P)		SQ YD	3740					
13	2104.509	REMOVE HYDRANT			EACH	6					
14	2104.509	REMOVE GATE VALVE & BOX			EACH	2					
15	2104.509	REMOVE CATCH BASIN			EACH	8					
16	2104.509	REMOVE CASTING			EACH	9					
17	2104.509	REMOVE BOULDER			EACH	11					
18	2104.509	REMOVE BOLLARDS			EACH	5					
19	2104.509	REMOVE LIGHT BASE FOUNDATION			EACH	8					
20	2104.513	SAWING CONCRETE PAVEMENT (FULL DEPTH)			LIN FT	4331					
21	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)			LIN FT	273					
22	2104.523	SALVAGE LIGHTING UNIT			EACH	8					
23	2104.523	SALVAGE SIGN TYPE C			EACH	38					
24	2104.523	SALVAGE SIGN TYPE SPECIAL			EACH	6					
25	2104.602	RELOCATE BENCH			EACH	2					
26	2104.603	REMOVE AND REPLACE BITUMINOUS PAVEMENT			LIN FT	439					
27	2105.501	COMMON EXCAVATION	(P)		CU YD	6075					

28	2105.525	TOPSOIL BORROW (CV)		CU YD	492		
29	2112.501	SUBGRADE PREPARATION 6"-12"		ROAD STA	144		
30	2123.610	STREET SWEEPER (WITH PICK UP BROOM)		HOURL	70		
31	2131.502	CALCIUM CHLORIDE SOLUTION		GALLON	3399		
32	2201.501	CONCRETE BASE		SQ YD	466		
33	2211.502	AGGREGATE BASE (LV) CLASS 5		CU YD	135		
34	2211.503	AGGREGATE BASE (CV) CLASS 5	(P)	CU YD	3466		
35	2232.501	MILL BITUMINOUS SURFACE	(P)	SQ YD	2774		
36	2232.502	MILL CONCRETE PAVEMENT SURFACE	(P)	SQ YD	2774		
37	2301.538	DOWEL BAR		EACH	54		
38	2301.604	CONCRETE PAVEMENT REPLACEMENT		SQ YD	64		
39	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3C)		TON	2786		
40	2503.541	12" RC PIPE SEWER DES 3006 CLASS V		LIN FT	140		
41	2504.602	HYDRANT		EACH	4		
42	2504.602	FURNISH AND INSTALL HYDRANT ASSEMBLY		EACH	2		
43	2504.602	ADJUST GATE VALVE AND BOX		EACH	30		
44	2504.603	6" WATERMAIN DUCTILE IRON CL 52		LIN FT	96		
45	2505.602	ADJUST VALVE BOX-GAS		EACH	2		
46	2506.502	CONST DRAINAGE STRUCTURE DESIGN C OR G		EACH	8		
47	2506.516	CASTING ASSEMBLY		EACH	9		
48	2506.522	ADJUST FRAME & RING CASTING		EACH	15		
49	2506.602	ADJUST FRAME & RING CASTING DESIGN SPECIAL		EACH	9		
50	2506.601	SAND TRAP STRUCTURE COVER		LUMP SUM	1		
51	2506.602	CONNECT INTO EXISTING DRAINAGE STRUCTURE		EACH	4		
52	2506.602	CONNECT INTO EXISTING STORM SEWER		EACH	4		
53	2521.501	4" CONCRETE WALK		SQ FT	100		
54	2521.501	7" CONCRETE WALK		SQ FT	2060		
55	2521.603	SAWING CONCRETE WALK		LIN FT	127		
56	2521.618	CONCRETE WALK		SQ FT	2304		
57	2531.501	CONCRETE CURB & GUTTER DESIGN B424		LIN FT	4176		
58	2531.501	CONCRETE CURB & GUTTER DESIGN B618		LIN FT	112		
59	2531.501	CONCRETE CURB & GUTTER DESIGN B624		LIN FT	10		
60	2531.507	8" CONCRETE DRIVEWAY PAVEMENT		SQ YD	1801		
61	2531.603	CONCRETE CURB & GUTTER		LIN FT	375		
62	2531.618	TRUNCATED DOMES		SQ FT	1345		
63	2540.602	PARKING METER POST		EACH	15		

64	2545.515	LIGHT BASE DESIGN E		EACH	7		
65	2545.515	LIGHT BASE DESIGN E MODIFIED		EACH	1		
66	2545.523	2" NON-METALLIC CONDUIT		LIN FT	100		
67	2545.531	UNDERGROUND WIRE 1 COND NO 2		LIN FT	1275		
68	2545.531	UNDERGROUND WIRE 1 COND NO 4		LIN FT	50		
69	2545.531	UNDERGROUND WIRE 1 COND NO 6		LIN FT	375		
70	2545.553	HANDHOLE		EACH	6		
71	2545.602	INSTALL LIGHTING UNIT		EACH	8		
72	2545.602	ADJUST HANDHOLE		EACH	8		
73	2557.501	WIRE FENCE DESIGN 72V-9322		LIN FT	280		
74	2557.603	RECONSTRUCT WIRE FENCE		LIN FT	666		
75	2557.603	ORNAMENTAL FENCE DESIGN SPECIAL		LIN FT	2426		
76	2563.601	TRAFFIC CONTROL		LUMP SUM	1		
77	2564.531	SIGN PANELS TYPE C		SQ FT	269		
78	2564.537	INSTALL SIGN TYPE C		EACH	33		
79	2564.537	INSTALL SIGN TYPE SPECIAL		EACH	6		
80	2564.552	HARD MARKER X4-2		EACH	1		
81	2573.502	SILT FENCE TYPE HEAVY DUTY		LIN FT	3541		
82	2573.530	STORM DRAIN INLET PROTECTION	(P)	EACH	33		
83	2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE		EACH	9		
84	2575.501	SEEDING		ACRE	1.7		
85	2575.502	SEED MIXTURE 250	(P)	POUND	116		
86	2575.511	MULCH MATERIAL TYPE 1		TON	3.3		
87	2575.519	DISK ANCHORING		ACRE	1.7		
88	2575.532	FERTILIZER TYPE 3		POUND	578		
89	2575.572	RAPID STABILIZATION METHOD 4		SQ YD	7067		
90	2582.501	PAVEMENT MESSAGE (LT ARROW) EPOXY		EACH	55		
91	2582.502	4" SOLID LINE WHITE - PAINT		LIN FT	6854		
92	2582.502	4" SOLID LINE WHITE - EPOXY		LIN FT	7555		
93	2582.502	24" STOP LINE WHITE - EPOXY		LIN FT	140		
94	2582.502	4" SOLID LINE YELLOW - EPOXY		LIN FT	6030		
95	2582.502	24" SOLID LINE YELLOW - EPOXY		LIN FT	95		
96	2582.502	4" BROKEN LINE YELLOW - EPOXY		LIN FT	1280		
97	2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY		LIN FT	1020		
98	2582.503	CROSSWALK MARKING - POLY PREFORM		SQ FT	2575		
GRAND TOTAL:							

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STATEMENT OF ESTIMATED QUANTITIES										
NOTE	TAB	SHEET NO.	ITEM NO.	ITEM DESCRIPTION		UNIT	TOTAL ESTIMATED QUANTITIES	S.P. 118-090-020 ESTIMATED QUANTITIES	S.P. 118-090-022 ESTIMATED QUANTITIES	NON-PARTICIPATING ESTIMATED QUANTITIES
			2021.501	MOBILIZATION		LUMP SUM	1	0.79	0.16	0.05
	B	9	2101.502	CLEARING		TREE	3	3		
	B	9	2101.507	GRUBBING		TREE	3	3		
		75	2102.502	PAVEMENT MARKING REMOVAL-PERMANENT		LIN FT	9235	9235		
1	A,J,N	9,13,14	2104.501	REMOVE CURB AND GUTTER		LIN FT	555	102	433	20
	A	9	2104.501	REMOVE INTEGRANT CURB		LIN FT	3939	3939		
	E	10	2104.501	REMOVE CHAIN LINK FENCE		LIN FT	2505	2505		
	K	13	2104.501	REMOVE SEWER PIPE (STORM)		LIN FT	170	170		
		86-88	2104.501	REMOVE UNDERGROUND WIRE		LIN FT	175			175
1	A,J	9,13	2104.503	REMOVE CONCRETE WALK		SQ FT	28506	24847	3659	
	A	9	2104.503	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ FT	9733	9733		
3	A	9	2104.505	REMOVE PAVEMENT		SQ YD	3740	3740		
11	H	14	2104.509	REMOVE HYDRANT		EACH	6			6
10	H	14	2104.509	REMOVE GATE VALVE & BOX		EACH	2			2
	K	13	2104.509	REMOVE CATCH BASIN		EACH	8	8		
	K	13	2104.509	REMOVE CASTING		EACH	9	9		
	A	9	2104.509	REMOVE BOULDER		EACH	11	11		
	A	9	2104.509	REMOVE BOLLARDS		EACH	5	5		
		86-88	2104.509	REMOVE LIGHT BASE FOUNDATION		EACH	8			8
3	A	9	2104.513	SAWING CONCRETE PAVEMENT (FULL DEPTH)		LIN FT	4331	4331		
	A	9	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)		LIN FT	273	161	112	
		86-88	2104.523	SALVAGE LIGHTING UNIT		EACH	8			8
		75	2104.523	SALVAGE SIGN TYPE C		EACH	38	31	7	
		75	2104.523	SALVAGE SIGN TYPE SPECIAL		EACH	6	6		
	A	9	2104.602	RELOCATE BENCH		EACH	2			2
	J,N	13,14	2104.603	REMOVE AND REPLACE BITUMINOUS PAVEMENT		LIN FT	439	102	317	20
		8	2105.501	COMMON EXCAVATION	(P)	CU YD	6075	4378	1697	
		8	2105.525	TOPSOIL BORROW (CV)		CU YD	492	358	134	
	D	10	2112.501	SUBGRADE PREPARATION 6"-12"		ROAD STA	144	94	50	
8			2123.610	STREET SWEEPER (WITH PICK UP BROOM)		HOUR	70	40	30	
7			2131.502	CALCIUM CHLORIDE SOLUTION		GALLON	3399	2214	1185	
	D	10	2201.501	CONCRETE BASE		SQ YD	466	466		
9	D	10	2211.502	AGGREGATE BASE (LV) CLASS 5		CU YD	135	135		
	D,N	10,14	2211.503	AGGREGATE BASE (CV) CLASS 5	(P)	CU YD	3466	2174	1280	12
4	C	9	2232.501	MILL BITUMINOUS SURFACE	(P)	SQ YD	2774	2774		
5	C	9	2232.502	MILL CONCRETE PAVEMENT SURFACE	(P)	SQ YD	2774	2774		
		24	2301.538	DOWEL BAR		EACH	54	54		
		24	2301.604	CONCRETE PAVEMENT REPLACEMENT		SQ YD	64	64		
6	D,N	10,14	2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)		TON	2786	2016	759	11
	K	13	2503.541	12" RC PIPE SEWER DES 3006 CLASS V		LIN FT	140	140		
	H	14	2504.602	HYDRANT		EACH	4			4
2	H	14	2504.602	FURNISH AND INSTALL HYDRANT ASSEMBLY		EACH	2			2
	I	12	2504.602	ADJUST GATE VALVE AND BOX		EACH	30			30
	H	14	2504.603	6" WATERMAIN DUCTILE IRON CL 52		LIN FT	96			96
	I	12	2505.602	ADJUST VALVE BOX-GAS		EACH	2			2
	K	13	2506.502	CONST DRAINAGE STRUCTURE DESIGN C OR G		EACH	8	8		
	K	13	2506.516	CASTING ASSEMBLY		EACH	9	9		
	I	12	2506.522	ADJUST FRAME & RING CASTING		EACH	15			15

NOTES:	
1	SAWCUTS ARE INCIDENTAL.
2	INCLUDES ALL MATERIALS - TEE, HYDRANT LEAD, GATE VALVE (IF NEEDED), BOX, AND HYDRANT.
3	EXISTING PAVEMENT APPROXIMATELY 3.5" BITUMINOUS OVER 8" CONCRETE.
4	MILL BITUMINOUS PAVEMENT APPROXIMATELY 3.5".
5	MILL CONCRETE PAVEMENT VARIABLE, APPROXIMATELY 1.0".
6	COMPUTED AT A RATE OF 120 LBS./SQ. YD./IN.
7	APPLIED AT A RATE OF 0.15 GAL./SQ. YD. AS DIRECTED BY THE ENGINEER.
8	TO BE USED AS DIRECTED BY THE ENGINEER.
9	COMPUTED AT 3.5" x 3.0' x LIN. FT. OF CURB & GUTTER.
10	HYDRANT ISOLATION VALVES TO BE INSPECTED BY THE CITY AND REPLACED AS DIRECTED BY THE ENGINEER.
11	ALL HYDRANTS TO BE DELIVERED TO CITY OF DULUTH GARFIELD AVENUE BUILDING.

DRAWN BY: ACO	Δ	JCK	7/16/13	QUANTITY CHANGES PER ADDENDUM ITEMS	I HEREBY CERTIFY THAT THIS PLAN 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.	 PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	ESTIMATED QUANTITIES	FILE NO. DULUT 109680	5 115
DESIGNER: JCK					 Matthew J. Bolf P.E. Lic. No. 43913					
CHECKED BY: MJB					Date: 07/19/2013					
DESIGN TEAM	NO.	BY	DATE	REVISIONS						

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STATEMENT OF ESTIMATED QUANTITIES										
NOTE	TAB	SHEET NO.	ITEM NO.	ITEM DESCRIPTION		UNIT	TOTAL ESTIMATED QUANTITIES	S.P. 118-090-020 ESTIMATED QUANTITIES	S.P. 118-090-022 ESTIMATED QUANTITIES	NON-PARTICIPATING ESTIMATED QUANTITIES
	I	12	2506.602	ADJUST FRAME & RING CASTING DESIGN SPECIAL		EACH	9			9
		23	2506.601	SAND TRAP STRUCTURE COVER		LUMP SUM	1	1		
	K	13	2506.602	CONNECT INTO EXISTING DRAINAGE STRUCTURE		EACH	4	4		
	K	13	2506.602	CONNECT INTO EXISTING STORM SEWER		EACH	4	4		
6	G	11,12	2521.501	4" CONCRETE WALK		SQ FT	100			100
2	G	11,12	2521.501	7" CONCRETE WALK		SQ FT	2060	2060		
	J	13	2521.603	SAWING CONCRETE WALK		LIN FT	127	37	90	
2	J,N	13,14	2521.618	CONCRETE WALK		SQ FT	2304	496	1686	122
	G	11,12	2531.501	CONCRETE CURB & GUTTER DESIGN B424		LIN FT	4176	4176		
	G	11,12	2531.501	CONCRETE CURB & GUTTER DESIGN B618		LIN FT	112		112	
	G	11,12	2531.501	CONCRETE CURB & GUTTER DESIGN B624		LIN FT	10		10	
1	G	11,12	2531.507	8" CONCRETE DRIVEWAY PAVEMENT		SQ YD	1801	1801		
	J,N	13,14	2531.603	CONCRETE CURB & GUTTER		LIN FT	375	78	277	20
	G,J,N	11-14	2531.618	TRUNCATED DOMES		SQ FT	1345	763	550	32
4	F	10	2540.602	PARKING METER POST		EACH	15			15
		86-88	2545.515	LIGHT BASE DESIGN E		EACH	7			7
3		86-88	2545.515	LIGHT BASE DESIGN E MODIFIED		EACH	1			1
		86-88	2545.523	2" NON-METALLIC CONDUIT		LIN FT	100			100
		86-88	2545.531	UNDERGROUND WIRE 1 COND NO 2		LIN FT	1275			1275
		86-88	2545.531	UNDERGROUND WIRE 1 COND NO 4		LIN FT	50			50
		86-88	2545.531	UNDERGROUND WIRE 1 COND NO 6		LIN FT	375			375
		86-88	2545.553	HANDHOLE		EACH	6			6
		86-88	2545.602	INSTALL LIGHTING UNIT		EACH	8			8
5		86-88	2545.602	ADJUST HANDHOLE		EACH	8			8
7	E	10	2557.501	WIRE FENCE DESIGN 72V-9322		LIN FT	280	280		
	E	10	2557.603	RECONSTRUCT WIRE FENCE		LIN FT	666		666	
	E	10	2557.603	ORNAMENTAL FENCE DESIGN SPECIAL		LIN FT	2426	2426		
		65-74	2563.601	TRAFFIC CONTROL		LUMP SUM	1	0.79	0.16	0.05
		75	2564.531	SIGN PANELS TYPE C		SQ FT	269	194	75	
		75	2564.537	INSTALL SIGN TYPE C		EACH	33	26	7	
		75	2564.537	INSTALL SIGN TYPE SPECIAL		EACH	6	6		
		75	2564.552	HAZARD MARKER X4-2		EACH	1	1		
	L	14	2573.502	SILT FENCE, TYPE HEAVY DUTY		LIN FT	3541	3541		
	L	14	2573.530	STORM DRAIN INLET PROTECTION		EACH	33	22	11	
	L	14	2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE		EACH	9	4	5	
	M	14	2575.501	SEEDING	(P)	ACRE	1.7	1.2	0.5	
	M	14	2575.502	SEED MIXTURE 250		POUND	116	81	35	
	M	14	2575.511	MULCH MATERIAL TYPE 1		TON	3.3	2.3	1.0	
	M	14	2575.519	DISK ANCHORING		ACRE	1.7	1.2	0.5	
	M	14	2575.532	FERTILIZER TYPE 3		POUND	578	403	175	
	L	14	2575.572	RAPID STABILIZATION METHOD 4		SQ YD	7067	4647	2420	
		75	2582.501	PAVEMENT MESSAGE (LT ARROW) EPOXY		EACH	55	55		
		75	2582.502	4" SOLID LINE WHITE - PAINT		LIN FT	6854	5205	1649	
		75	2582.502	4" SOLID LINE WHITE - EPOXY		LIN FT	7555	7555		
		75	2582.502	24" STOP LINE WHITE - EPOXY		LIN FT	140	140		
		75	2582.502	4" SOLID LINE YELLOW - EPOXY		LIN FT	6030	6030		
		75	2582.502	24" SOLID LINE YELLOW - EPOXY		LIN FT	95	95		
		75	2582.502	4" BROKEN LINE YELLOW - EPOXY		LIN FT	1280	1280		
		75	2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY		LIN FT	1020	1020		
		75	2582.503	CROSSWALK MARKING - POLY PREFORM		SQ FT	2575	1080	1495	

NOTES:	
1	12" AGGREGATE BASE (CV) CLASS 5 INCIDENTAL.
2	6" AGGREGATE BASE (CV) CLASS 5 INCIDENTAL.
3	FIELD VERIFY ANCHOR BOLT ORIENTATION AND SIZE FOR ORNAMENTAL LIGHT BASE BEFORE POURING NEW BASE.
4	CITY FORCES TO REMOVE PARKING METERS. CONTRACTOR TO COORDINATE FINAL LOCATIONS WITH CITY STAFF.
5	INCLUDES CONCRETE PAD.
6	QUANTITY FOR REPLACING CONCRETE WALK FOR SALVAGING & INSTALLING LIGHT AT 22ND AVE. W.
7	VINYL COATING SHALL BE BLACK.

DRAWN BY: ACO	Δ JCK	7/16/13	QUANTITY CHANGES PER ADDENDUM ITEMS	
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.	
	Matthew J. Bolf P.E.
Date: 07/19/2013	Lic. No. 43913



PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
www.sehinc.com

CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

ESTIMATED QUANTITIES

FILE NO. DULUT 109680

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STANDARD PLATES	
THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007D	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3145G	CONCRETE PIPE OR PRECAST CULVERT TIES
4002F	MANHOLE OR CATCH BASIN - DESIGN C
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGN G AND H
4010H	CONCRETE SHORT CONE & ADJUSTING RING
4011E	PRECAST CONCRETE BASE
7035N	CONCRETE WALK AND CURB RETURN AT ENTRANCES
7038A	DETECTABLE WARNING SURFACE (TRUNCATED DOMES)
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS
8000I	STANDARD BARRICADES
8114A	P.V.C. HANDHOLE/PULLBOX
8127C	LIGHT FOUNDATION - DESIGN E
9000E	APPROACHES AND ENTRANCES

TOTAL PROJECT EXCAVATION	6075	COMMON (CV)	6075	③
(CU YD)		(CU YD)		

S.P. 118-090-020 EXCAVATION	4378	COMMON (CV)	4378	
(CU YD)		(CU YD)		

S.P. 118-090-022 EXCAVATION	1697	COMMON (CV)	1697	
(CU YD)		(CU YD)		

EARTHWORK NOTES:

- ① THIS PROJECT REQUIRES 884 CU. YD. OF TOPSOIL, ALL BUT 492 CU. YD. COMES FROM EXCAVATED MATERIALS.
- ② ALL TOPSOIL WILL BE USED ONSITE AS DIRECTED BY THE ENGINEER. NO TOPSOIL WILL BE REMOVED FROM THE PROJECT SITE.
- ③ INCLUDES APPROXIMATELY 392 CU. YD. OF TOPSOIL.
- ④ THIS PROJECT REQUIRES 378 CU. YD. OF COMMON EMBANKMENT MATERIAL, ALL OF WHICH COMES FROM EXCAVATED MATERIALS.

EXISTING UTILITIES	
COMPANY	SERVICE
GOPHER STATE ONE CALL	LOCATORS
CITY OF DULUTH	STREET LIGHTS, SIGNALS, WATER, GAS, SANITARY SEWER AND STORM SEWER
MINNESOTA DEPARTMENT OF TRANSPORTATION	STREET LIGHTS
MINNESOTA POWER	ELECTRIC POWER
DULUTH STEAM CO-OP ASSOCIATION	STEAM
NORTHEAST SERVICE COOPERATIVE	FIBER OPTIC
CENTURY LINK	TELEPHONE
CHARTER COMMUNICATIONS	CABLE TV

	COMMON	378	REQUIRED 378
	(CU YD)		378-5325=-4947 ④

TOTAL EMBANKMENT	1654	TOPSOIL	884	① ②
(CU YD)		(CU YD)		

TOPSOIL BORROW	492	① ②
(CU YD)		

	COMMON	354	REQUIRED 354
	(CU YD)		354-3762=-3408

S.P. 118-090-020 EMBANKMENT	1228	TOPSOIL	616	
(CU YD)		(CU YD)		

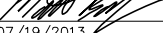
TOPSOIL BORROW	358	
(CU YD)		

	COMMON	24	REQUIRED 24
	(CU YD)		24-1563=-1539

S.P. 118-090-022 EMBANKMENT	426	TOPSOIL	268	
(CU YD)		(CU YD)		

TOPSOIL BORROW	134	
(CU YD)		

DRAWN BY: ACO	Δ	JCK	7/16/13	QUANTITY CHANGES PER ADDENDUM ITEMS
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.	
	Matthew J. Bolf P.E.
Date: 07/19/2013	Lic. No. 43913



PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
www.sehinc.com

CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

EARTHWORK, EXISTING
UTILITIES AND STANDARD PLATES

FILE NO.
DULUT 109680

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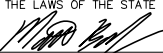
A - REMOVALS & SAWCUTS											
		SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104	SPEC. 2104
STATION TO STATION	LOCATION	SAWING CONCRETE PAVEMENT (FULL DEPTH)	SAWING BIT PAVEMENT (FULL DEPTH)	REMOVE CURB AND GUTTER	REMOVE INTEGRANT CURB	REMOVE CONCRETE WALK	REMOVE CONCRETE DRIVEWAY PAVEMENT	REMOVE PAVEMENT	REMOVE BOLLARDS	REMOVE BOULDER	RELOCATE BENCH
		LIN FT	LIN FT	LIN FT	LIN FT	SQ FT	SQ FT	SQ YD	EACH	EACH	EACH
SUPERIOR STREET											
55+27.4 - 74+99.6	RT. (CARLTON ST. TO 27TH AVE. W.)	2068						1694			
55+33.2 - 65+64.5	RT. (CARLTON ST. TO 29TH AVE. W.)				1066	1750	1034				
65+67.3 - 66+07.3	RT. (29TH AVE. W.)		40								
66+09.8 - 70+36.1	RT. (29TH AVE. W. TO 28TH AVE. W.)				437	1628	1116				
70+37.4 - 70+69.4	RT. (28TH AVE. W.)		32								
70+72.2 - 74+92.9	RT. (28TH AVE. W. TO 27TH AVE. W.)				386	1703	955				
75+39.6 - 97+54.0	RT. (27TH AVE. W. TO 22ND AVE. W.)	2263						2046			
75+46.0 - 79+74.0	RT. (27TH AVE. W. TO 26TH AVE. W.)				406	1815	1108				
79+76.0 - 79+97.0	RT. (26TH AVE. W.)		21								
79+99.0 - 84+34.2	RT. (26TH AVE. W. TO 25TH AVE. W.)				405	1980	1144				
84.72.2 - 89+03.4	RT. (25TH AVE. W. TO 24TH AVE. W.)				428	1648	1423				
89+03.6 - 89+35.6	RT. (24TH AVE. W.)		32								
89+35.6 - 93+66.8	RT. (24TH AVE. W. TO 23RD AVE. W.)				449	2881	1564				
93+68.1 - 94+04.1	RT. (23RD AVE. W.)		36								
94+05.7 - 97+50.9	RT. (23RD AVE. W. TO 22ND AVE. W.)				362	3357	293				
CROSS CITY TRAIL											
44+24.0	LT. & RT.									4	1
45+58.1	LT. & RT.									4	
47+29.4	LT. & RT.									3	
59+53.0 - 60+05.0	LT. (ALONG SAND TRAP/MICHIGAN ST.)								5		
85+76.0 - 99+27.5	LT. & RT. (EAST SIDE OF MICHIGAN ST.)					7702					
90+11.5 - 94+45.6	LT. & RT. (EAST SIDE OF MICHIGAN ST.)						1096				
94+93.9	RT. (BUS STOP BENCH & LIGHT RELOCATION)					100					1
S.P. 118-090-020 ITEM TOTALS		4331	161	0	3939	24564	9733	3740	5	11	0
CROSS CITY TRAIL											
146+84.6 - 149+50.4	LT. (SIDEWALK ALONG RAILROAD ST.)					1481					
149+81.3 - 151+44.1	LT. (SIDEWALK ALONG RAILROAD ST.)					906					
153+01.6 - 153+08.8	LT. (PORKCHOP ISLAND)			8							
156+66.8 - 157+75.0	LT. (EXISTING PARKING LOT)		112	112							
S.P. 118-090-022 ITEM TOTALS		0	112	120	0	2387	0	0	0	0	0
NON-PARTICIPATING ITEM TOTALS											2
PROJECT ITEM TOTALS		4331	273		3939		9733	3740	5	11	2

B - CLEARING AND GRUBBING			
		SPEC. 2101	SPEC. 2101
STATION TO STATION	LOCATION	CLEARING	GRUBBING
		TREE	TREE
CROSS CITY TRAIL			
55+38.8	RT.	1	1
57+55.8	C/L	1	1
67+93.7	RT.	1	1
S.P. 118-090-020 ITEM TOTALS		3	3
PROJECT ITEM TOTALS		3	3

C - MILLING PAVEMENT			
		SPEC. 2232	SPEC. 2232
STATION TO STATION	LOCATION	MILL BITUMINOUS SURFACE	MILL CONCRETE PAVEMENT SURFACE
		SQ YD	SQ YD
SUPERIOR STREET			
55+27.4 - 74+99.6	RT. (CARLTON ST. TO 27TH AVE. W.)	1312	1312
75+39.6 - 97+54.0	RT. (27TH AVE. W. TO 22ND AVE. W.)	1462	1462
S.P. 118-090-020 ITEM TOTALS		2774	2774
PROJECT ITEM TOTALS		2774	2774

DRAWN BY: ACO	Δ	JCK	7/16/13	QUANTITY CHANGES PER ADDENDUM ITEMS
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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Matthew J. Bolf P.E.
Date: 07/19/2013 Lic. No. 43913



CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

TABULATIONS

FILE NO.
DULUT 109680

9
115

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D - BITUMINOUS AND AGGREGATE						
STATION TO STATION	LOCATION	SPEC. 2112	SPEC. 2201	SPEC. 2211	SPEC. 2211	SPEC. 2360
		SUBGRADE PREPARATION 6" - 12"	CONCRETE BASE	AGGREGATE BASE (LV) CLASS 5	AGGREGATE BASE (CV) CLASS 5	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C)
		ROAD STA	SQ YD	CU YD	CU YD	TON
SUPERIOR STREET						
55+31.8 - 66+23.9	RT. PARKING LANE (INCLUDES 29TH AVE. W.)		122	35	21	179
55+31.8 - 66+23.9	RT. (PARKING LOT RESTORATION)				52	24
66+23.9 - 70+86.4	RT. PARKING LANE (INCLUDES 28TH AVE. W.)		52	14	18	81
70+86.4 - 74+99.6	RT. PARKING LANE (INCLUDES S.W. SIDE OF 27TH AVE. W.)		46	14		65
75+39.6 - 80+09.0	RT. PARKING LANE (INCLUDES 26TH AVE. W.)		52	15	13	82
80+09.0 - 84+87.2	RT. PARKING LANE		53	15		67
84+87.2 - 89+65.6	RT. PARKING LANE (INCLUDES 24TH AVE. W.)		53	15	35	98
89+65.6 - 94+21.1	RT. PARKING LANE (INCLUDES 23RD AVE. W.)		51	15	20	81
94+21.1 - 97+54.0	RT. PARKING LANE		37	12		46
CROSS CITY TRAIL						
5+04.3 - 99+27.6		94				
5+04.3 - 6+67.0	10' TRAIL				30	27
5+04.3 - 6+67.0	LT. & RT. (2' SHOULDERS)				18	
6+67.0 - 11+46.6	10' TRAIL				49	44
6+67.0 - 11+46.6	LT. (SUPERIOR ST. REMOVAL AREA)				15	
6+67.0 - 11+46.6	RT. (2' SHOULDER)				24	
11+46.6 - 16+12.7	10' TRAIL				44	40
11+46.6 - 16+12.7	LT. (SUPERIOR ST. REMOVAL AREA)				14	
11+46.6 - 16+12.7	RT. (2' SHOULDER)				22	
16+12.7 - 20+78.9	10' TRAIL				46	41
16+12.7 - 20+78.9	LT. (SUPERIOR ST. REMOVAL AREA)				14	
16+12.7 - 20+78.9	RT. (2' SHOULDER)				22	
20+78.9 - 25+45.8	10' TRAIL				48	44
20+78.9 - 25+45.8	LT. (SUPERIOR ST. REMOVAL AREA)				14	
20+78.9 - 25+45.8	RT. (2' SHOULDER)				22	
25+45.8 - 30+12.5	10' TRAIL				54	49
25+45.8 - 30+12.5	LT. (SUPERIOR ST. REMOVAL AREA)				16	
25+45.8 - 30+12.5	RT. (2' SHOULDER)				23	
30+12.5 - 34+78.9	10' TRAIL				45	41
30+12.5 - 34+78.9	LT. (SUPERIOR ST. REMOVAL AREA)				13	
30+12.5 - 34+78.9	RT. (2' SHOULDER)				22	
34+78.9 - 39+45.4	10' TRAIL				39	35
34+78.9 - 39+45.4	LT. (SUPERIOR ST. REMOVAL AREA)				11	
34+78.9 - 39+45.4	RT. (SHOULDER)				17	15
39+45.4 - 43+41.5	10' TRAIL				50	45
39+45.4 - 43+41.5	LT. (SUPERIOR ST. REMOVAL AREA)				11	
39+45.4 - 43+41.5	RT. (SHOULDER)				20	18
44+22.0 - 52+39.3	10' TRAIL				144	129
44+22.0 - 52+39.3	LT. & RT. (2' SHOULDERS)				82	
52+39.3 - 78+43.7	8' TRAIL				386	348
52+39.3 - 78+43.7	LT. (2' SHOULDER)				97	87
52+39.3 - 78+43.7	RT. (2' SHOULDER)				137	
78+43.7 - 87+90.6	10' TRAIL				175	157
78+43.7 - 87+90.6	LT. & RT. (2' SHOULDERS)				100	
87+90.6 - 91+65.1	8' TRAIL				47	42
87+90.6 - 91+65.1	RT. (2' SHOULDER)				14	13
91+65.1 - 95+11.6	10' TRAIL				44	40
91+65.1 - 95+11.6	LT. & RT. (2' SHOULDERS)				24	22
95+11.6 - 99+27.6	8' TRAIL				62	56
S.P. 118-090-020 ITEM TOTALS		94	466	135	2174	2016

D - BITUMINOUS AND AGGREGATE (CONTINUED)						
STATION TO STATION	LOCATION	SPEC. 2112	SPEC. 2201	SPEC. 2211	SPEC. 2211	SPEC. 2360
		SUBGRADE PREPARATION 6" - 12"	CONCRETE BASE	AGGREGATE BASE (LV) CLASS 5	AGGREGATE BASE (CV) CLASS 5	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C)
		ROAD STA	SQ YD	CU YD	CU YD	TON
CROSS CITY TRAIL						
107+70.6 - 157+77.4		50				
107+70.6 - 122+48.8	10' TRAIL				268	241
107+70.6 - 122+48.8	LT. & RT. (2' SHOULDERS)				156	
122+94.1 - 131+69.3	10' TRAIL				148	133
122+94.1 - 131+69.3	LT. & RT. (2' SHOULDERS)				82	
131+92.6 - 137+48.4	10' TRAIL				103	93
131+92.6 - 137+48.4	LT. & RT. (2' SHOULDERS)				53	
138+16.8 - 146+06.6	10' TRAIL				148	133
138+16.8 - 146+06.6	LT. & RT. (2' SHOULDERS)				81	
146+93.2 - 149+46.9	10' TRAIL				47	42
146+93.2 - 149+46.9	LT. (2' SHOULDER)				11	10
146+93.2 - 149+46.9	RT. (2' SHOULDER)				14	
149+84.9 - 151+28.9	10' TRAIL				27	24
149+84.9 - 151+28.9	LT. (2' SHOULDER)				7	6
149+84.9 - 151+28.9	RT. (2' SHOULDER)				8	
153+01.6 - 157+77.4	10' TRAIL				84	75
153+01.6 - 157+77.4	LT. & RT. (2' SHOULDERS)				40	
156+65.2 - 157+76.7	LT. (2' SHOULDER)				3	2
S.P. 118-090-022 ITEM TOTALS		50	0	0	1280	759
PROJECT ITEM TOTALS		144	466	135		

E - FENCE					
STATION TO STATION	LOCATION	SPEC. 2104	SPEC. 2557	SPEC. 2557	SPEC. 2557
		REMOVE CHAIN LINK FENCE	RECONSTRUCT WIRE FENCE	ORNAMENTAL FENCE DESIGN SPECIAL	WIRE FENCE DESIGN 72V-9322
		LIN FT	LIN FT	LIN FT	LIN FT
CROSS CITY TRAIL					
5+10.0 - 6+50.0	LT.				140
5+10.0 - 6+50.0	RT.				140
45+58.1	LT. & RT.	40			
46+39.4	LT. & RT.	20			
52+54.3 - 59+49.3	C/L & RT.	695			
52+54.3 - 59+60.2	8.0' RT. - 8.0' RT.			706	
59+99.8 - 61+29.0	RT.	130			
60+02.2 - 61+29.0	16.0' RT. - 14.0' RT.			127	
61+59.9 - 65+88.9	C/L & RT.	435			
61+59.9 - 65+88.9	8.0' RT. - 8.0' RT.			429	
66+06.9 - 71+20.3	C/L & RT.	520			
66+07.6 - 71+20.3	8.0' RT. - 8.0' RT.			513	
72+30.9 - 78+87.9	LT. & RT.	665			
72+30.9 - 78+80.7	8.0' RT. - 8.0' RT.			651	
S.P. 118-090-020 ITEM TOTALS		2505	0	2426	280
CROSS CITY TRAIL					
99+27.6 - 102+53.7	5.0' LT.		326		
99+27.6 - 102+60.5	5.0' RT.		340		
S.P. 118-090-022 ITEM TOTALS		0	666	0	0
PROJECT ITEM TOTALS		2505	666	2426	280

F - PARKING METERS		
STATION TO STATION	LOCATION	SPEC. 2540
		PARKING METER POST EACH
CROSS CITY TRAIL		
147+81.9 - 149+24.4	RT.	9
156+74.2 - 157+64.4	LT.	6
NON-PARTICIPATING ITEM TOTALS		15
PROJECT ITEM TOTALS		15

DRAWN BY: ACO

DESIGNER: JCK

CHECKED BY: MJB

DESIGN TEAM

JCK

7/16/13

QUANTITY CHANGES PER ADDENDUM ITEMS

NO.

BY

DATE

REVISIONS

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43913

SEH

PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
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CITY OF DULUTH

CITY PROJECT NO. 0568TR

S.P. 118-090-020

S.P. 118-090-022

TABULATIONS

FILE NO.

DULUT 109680

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G - CONCRETE									
		SPEC. 2521	SPEC. 2521	SPEC. 2531	SPEC. 2531	SPEC. 2531	SPEC. 2531	SPEC. 2531	
STATION TO STATION	LOCATION	4" CONCRETE WALK	7" CONCRETE WALK	CONCRETE CURB & GUTTER DESIGN B424	CONCRETE CURB & GUTTER DESIGN B618	CONCRETE CURB & GUTTER DESIGN B624	8" CONCRETE DRIVEWAY PAVEMENT	TRUNCATED DOMES	CURB RAMP DEISGN
		SQ FT	SQ FT	LIN FT	LIN FT	LIN FT	SQ YD	SQ FT	
SUPERIOR STREET									
55+31.8 - 65+65.3	RT.			1076					
56+34.8 - 56+84.8	RT. (COMMERCIAL ENTRANCE)						56		
57+17.5 - 57+67.5	RT. (COMMERCIAL ENTRANCE)						56		
57+98.5 - 58+48.5	RT. (COMMERCIAL ENTRANCE)						56		
59+56.5 - 60+06.5	RT. (COMMERCIAL ENTRANCE)						56		
66+09.3 - 70+35.4	RT.			444					
70+71.4 - 74+93.6	RT.			445					
75+45.6 - 79+74.0	RT.			455					
79+99.0 - 89+03.6	RT.			935					
89+35.6 - 93+66.1	RT.			457					
94+06.1 - 97+51.4	RT.			364					
CROSS CITY TRAIL									
6+67.0 - 6+99.0	LT. & RT. (COMMERCIAL ENTRANCE)						44		
7+62.3 - 7+86.3	LT. & RT. (COMMERCIAL ENTRANCE)						34		
7+93.1 - 8+17.1	LT. & RT. (COMMERCIAL ENTRANCE)						34		
8+88.0 - 9+14.0	LT. & RT. (COMMERCIAL ENTRANCE)						37		
9+83.0 - 10+07.0	LT. & RT. (COMMERCIAL ENTRANCE)						34		
10+70.9 - 10+90.9	LT. & RT. (COMMERCIAL ENTRANCE)						29		
11+09.6 - 11+22.4	S.E. CORNER 29TH AVE. W.		140					44	DEPRESSED CORNER
11+70.8 - 11+83.6	N.E. CORNER 29TH AVE. W.		140					44	DEPRESSED CORNER
12+27.1 - 12+79.3	LT. & RT. (COMMERCIAL ENTRANCE)						75		
13+04.8 - 13+36.8	LT. & RT. (COMMERCIAL ENTRANCE)						46		
14+29.9 - 14+53.9	LT. & RT. (COMMERCIAL ENTRANCE)						35		
14+64.0 - 14+88.0	LT. & RT. (COMMERCIAL ENTRANCE)						34		
15+79.7 - 15+92.5	S.E. CORNER 28TH AVE. W.		140					44	DEPRESSED CORNER
16+33.0 - 16+45.8	N.E. CORNER 29TH AVE. W.		140					44	DEPRESSED CORNER
16+61.6 - 16+85.6	LT. & RT. (COMMERCIAL ENTRANCE)						34		
17+31.8 - 17+55.8	LT. & RT. (COMMERCIAL ENTRANCE)						34		
18+14.8 - 18+38.8	LT. & RT. (COMMERCIAL ENTRANCE)						34		
19+47.0 - 19+83.0	LT. & RT. (COMMERCIAL ENTRANCE)						51		
20+27+9 - 20+45.7	S.E. CORNER 27TH AVE. W.		194					52	DEPRESSED CORNER
21+12.1 - 21+29.9	N.E. CORNER 27TH AVE. W.		194					52	DEPRESSED CORNER
21+35.1 - 21+59.1	LT. & RT. (COMMERCIAL ENTRANCE)						34		
22+86.3 - 23+10.3	LT. & RT. (COMMERCIAL ENTRANCE)						34		
23+63.7 - 23+91.7	LT. & RT. (COMMERCIAL ENTRANCE)						49		
24+73.0 - 25+01.0	LT. & RT. (COMMERCIAL ENTRANCE)						51		
25+03.3 - 25+32.5	S.E. CORNER 26TH AVE. W.		100					36	DEPRESSED CORNER
25+59.1 - 25+68.3	N.E. CORNER 26TH AVE. W.		100					36	DEPRESSED CORNER
26+41.8 - 26+65.8	LT. & RT. (COMMERCIAL ENTRANCE)						43		
27+43.9 - 27+61.9	LT. & RT. (COMMERCIAL ENTRANCE)						32		
27+81.3 - 27+97.3	LT. & RT. (COMMERCIAL ENTRANCE)						28		
28+75.8 - 29+03.8	LT. & RT. (COMMERCIAL ENTRANCE)						50		
30+58.3 - 30+86.3	LT. & RT. (COMMERCIAL ENTRANCE)						52		
31+45.1 - 31+69.1	LT. & RT. (COMMERCIAL ENTRANCE)						44		
32+78.8 - 33+42.8	LT. & RT. (COMMERCIAL ENTRANCE)						112		
34+32.9 - 34+52.5	S.E. CORNER 24TH AVE. W.		210					56	DEPRESSED CORNER
35+05.3 - 35+24.9	N.E. CORNER 24TH AVE. W.		295					64	DEPRESSED CORNER
36+61.4 - 38+11.4	LT. & RT. (COMMERCIAL ENTRANCE)						272		
39+10.4 - 39+23.0	S.E. CORNER 23RD AVE. W.		134					44	DEPRESSED CORNER
39+67.9 - 39+80.4	N.E. CORNER 23RD AVE. W.		134					44	DEPRESSED CORNER
41+78.6 - 42+02.6	LT. & RT. (COMMERCIAL ENTRANCE)						45		
42+84.2 - 42+98.3	S.E. CORNER 22ND AVE. W.	100	139					36	ONE-WAY DIRECTIONAL
CONTINUED ON NEXT PAGE									

DRAWN BY: ACO	JKC	7/16/13	QUANTITY CHANGES PER ADDENDUM ITEMS	I HEREBY CERTIFY THAT THIS PLAN 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.	 PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	TABULATIONS	FILE NO. DULUT 109680	11 115
DESIGNER: JCK				Matthew J. Bolf P.E.					
CHECKED BY: MJB				Date: 07/19/2013 Lic. No. 43913					
DESIGN TEAM	NO.	BY	DATE	REVISIONS					

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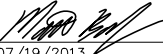
G - CONCRETE (CONTINUED)									
		SPEC. 2521	SPEC. 2521	SPEC. 2531	SPEC. 2531	SPEC. 2531	SPEC. 2531	SPEC. 2531	
STATION TO STATION	LOCATION	4" CONCRETE WALK	7" CONCRETE WALK	CONCRETE CURB & GUTTER DESIGN B424	CONCRETE CURB & GUTTER DESIGN B618	CONCRETE CURB & GUTTER DESIGN B624	8" CONCRETE DRIVEWAY PAVEMENT	TRUNCATED DOMES	CURB RAMP DEISGN
		SQ FT	SQ FT	LIN FT	LIN FT	LIN FT	SQ YD	SQ FT	
90+11.6 - 90+43.6	LT. & RT. (COMMERCIAL ENTRANCE)						28		
91+31.9 - 91+59.9	LT. & RT. (COMMERCIAL ENTRANCE)						28		
92+20.9 - 92+74.9	LT. & RT. (COMMERCIAL ENTRANCE)						60		
93+89.9 - 94+43.9	LT. & RT. (COMMERCIAL ENTRANCE)						60		
S.P. 118-090-020 ITEM TOTALS		100	2060	4176	0	0	1801	596	
CROSS CITY TRAIL									
153+01.6 - 153+08.8	LT. (PORKCHOP ISLAND)					10			
156+65.2 - 157.76.7	6.3' LT. - 6.3' LT.				112				
S.P. 118-090-022 ITEM TOTALS		0	0	0	112	10	0	0	
PROJECT ITEM TOTALS		100	2060	4176	112	10	1801		

I - UTILITY ADJUSTMENTS					
		SPEC. 2504	SPEC. 2505	SPEC. 2506	
STATION TO STATION	LOCATION	ADJUST GATE VALVE AND BOX	ADJUST VALVE BOX-GAS	ADJUST FRAME & RING CASTING	ADJUST FRAME & RING CASTING DESIGN SPECIAL
		EACH	EACH	EACH	EACH
SUPERIOR STREET					
56+15.3	16.9' RT.	1			
56+21.0	16.5' RT.	1			
58+36.4	23.4' RT.				
61+29.1	17.9' RT.	1			
63+36.5	22.1' RT.				1
65+81.7	27.8' RT.				1
65+91.9	20.0' RT.	1			
70+30.0	17.7' RT.	1			
74+90.8	16.9' RT.	1			
78+35.9	22.5' RT.				1
79+62.6	18.6' RT.	1			
83+35.4	22.2' RT.				1
84+20.9	17.0' RT.	1			
84+46.8	27.3' RT.				1
84+65.4	23.5' RT.	1			
84+66.6	20.5' RT.				1
89+12.7	26.2' RT.				1
89+27.6	41.4' RT.	1			
89+31.9	17.8' RT.	1			
89+53.6	16.1' RT.	1			
93+35.1	22.3' RT.				1
93+80.4	27.1' RT.				1

I - UTILITY ADJUSTMENTS (CONTINUED)					
		SPEC. 2504	SPEC. 2505	SPEC. 2506	SPEC. 2506
STATION TO STATION	LOCATION	ADJUST GATE VALVE AND BOX	ADJUST VALVE BOX-GAS	ADJUST FRAME & RING CASTING	ADJUST FRAME & RING CASTING DESIGN SPECIAL
		EACH	EACH	EACH	EACH
CROSS CITY TRAIL					
12+40.0	1.3' LT.	1			
14+51.6	1.3' LT.	1			
15+45.7	1.3' LT.	1			
15+55.6	0.8' LT.	1			
20+38.3	6.2' RT.			1	
21+95.9	0.5' LT.	1			
22+42.4	0.5' LT.	1			
26+16.0	1.4' LT.	1			
31+33.6	0.5' RT.	1			
34+27.6	1.2' LT.	1			
34+43.5	4.7' LT.	1			
36+15.3	1.7' LT.	1			
38+03.8	2.4' LT.	1			
38+98.1	2.7' LT.	1			
40+27.6	2.8' LT.	1			
40+69.1	2.5' LT.	1			
45+60.7	2.3' LT.			1	
46+36.7	4.6' LT.			1	
56+70.8	7.1' RT.			1	
57+61.0	3.2' LT.			1	
61+11.9	0.9' LT.	1			
61+26.6	4.0' RT.			1	
63+45.6	1.6' LT.			1	
73+18.2	6.3' RT.			1	
98+40.0	0.9' RT.			1	
123+21.1	3.3' LT.	1			
129+47.7	2.5' RT.			1	
130+33.0	2.6' RT.		1		
132+08.9	0.3' RT.			1	
132+18.8	C/L	1			
141+93.2	0.7' LT.			1	
142+14.8	0.5' LT.		1		
144+50.5	4.4' LT.			1	
149+91.7	4.3' LT.			1	
153+06.5	6.0' RT.			1	
NON-PARTICIPATING ITEM TOTALS		30	2	15	9
PROJECT ITEM TOTALS		30	2	15	9

DRAWN BY: ACO	JCK	7/16/13	QUANTITY CHANGES PER ADDENDUM ITEMS
DESIGNER: JCK			
CHECKED BY: MJB			
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

 Matthew J. Bolf P.E.
Date: 07/19/2013 Lic. No. 43913



CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

TABULATIONS

FILE NO.
DULUT 109680

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115

L - TEMPORARY EROSION CONTROL

STATION TO STATION	LOCATION	SPEC. 2573	SPEC. 2573	SPEC. 2573	SPEC. 2575
		SILT FENCE, TYPE HEAVY DUTY	STORM DRAIN INLET PROTECTION	TEMPORARY ROCK CONSTRUCTION ENTRANCE	RAPID STABILIZATION METHOD 4
		LIN FT	EACH	EACH	SQ YD
SUPERIOR STREET					
55+31.8 - 97+60.0	RT. (INCLUDES 30TH AVE. W.)				1065
55+51.4	22.0' RT.		1		
56+85.7	22.0' RT.		1		
61+53.8	22.0' RT.		1		
66+25.4	22.0' RT.		1		
74+75.4	22.9' RT.		1		
79+60.0	22.0' RT.		1		
84+18.2	22.0' RT.		1		
88+72.6	22.0' RT.		1		
96+85.5	27.2' RT.		1		
97+54.3	47.8' RT.		1		
CROSS CITY TRAIL					
4+37.7 - 99+27.6	LT. & RT.				
4+32.8	8.3' RT.		1		
5+01.1	40.1' RT.		1		
5+02.4	LT. & RT.			1	
42+40.8 - 43+16.8	RT.	79			
44+22.0 - 99+27.6	LT. & RT.				3582
46+11.6	29.5' RT.		1		
51+30.2	LT.			1	
52+53.2 - 59+63.1	RT.	709			
56+71.0	6.7' LT.		1		
59+99.9 - 61+34.7	RT.	135			
61+39.5	7.2' LT.		1		
61+44.4	LT. & RT.			1	
61+55.8 - 65+90.3	RT.	434			
66+05.2	7.6' LT.		1		
66+07.5 - 80+56.1	RT.	1458			
70+75.1	6.9' LT.		1		
75+57.2	7.4' LT.		1		
80+30.8	18.0' LT.		1		
80+56.1	LT. & RT.			1	
80+66.6 - 87+99.6	RT.	726			
94+39.2	7.9' LT.		1		
98+20.1	6.2' LT.		1		
98+77.3	6.4' LT.		1		
S.P. 118-090-020 ITEM TOTALS		3541	22	4	4647
CROSS CITY TRAIL					
99+27.6 - 158+52.0	LT. & RT.				
107+70.6 - 158+52.0	LT. & RT.				2420
122+52.9	LT. & RT.			1	
122+91.2	LT. & RT.			1	
130+65.8	34.4' RT.		1		
133+28.1	12.1' LT.		1		
133+81.7	14.7' LT.		1		
137+32.2	13.4' LT.		1		
137+55.4	LT. & RT.			1	
137+67.3	22.9' RT.		1		
138+12.1	23.5' RT.		1		
138+45.8	18.4' LT.		1		
145+78.2	16.8' LT.		1		
146+10.4	LT. & RT.			1	
148+45.8	8.1' LT.		1		
150+51.1	8.9' LT.		1		
154+49.2	LT.			1	
158+43.6	10.6' LT.		1		
S.P. 118-090-022 ITEM TOTALS		0	11	5	2420
PROJECT ITEM TOTALS		3541	33	9	7067

M - TURF ESTABLISHMENT

STATION TO STATION	LOCATION	SPEC. 2575	SPEC. 2575	SPEC. 2575	SPEC. 2575	SPEC. 2575
		SEEDING	SEED MIXTURE 250	MULCH MATERIAL TYPE 1	DISK ANCHORING	FERTILIZER TYPE 3
		ACRE	POUND	TON	ACRE	POUND
SUPERIOR STREET						
55+31.8 - 97+60.0	RT. (INCLUDES 30TH AVE. W.)	0.41	29	0.82	0.41	144
CROSS CITY TRAIL						
44+22.0 - 99+27.6	LT. & RT.	0.74	52	1.48	0.74	259
S.P. 118-090-020 ITEM TOTALS		1.15	81	2.30	1.15	403
CROSS CITY TRAIL						
107+70.6 - 158+52.0	LT. & RT.	0.50	35	1.00	0.50	175
S.P. 118-090-022 ITEM TOTALS		0.50	35	1.00	0.50	175
PROJECT ITEM TOTALS		1.65	116	3.30	1.65	578

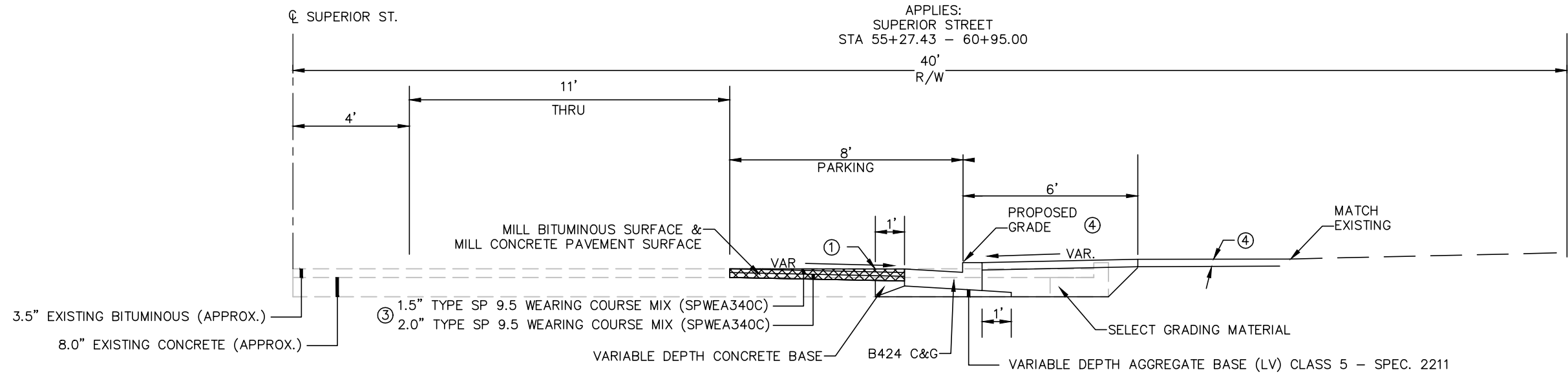
N - BITUMINOUS WALK

STATION TO STATION	LOCATION	SPEC. 2104	SPEC. 2104	SPEC. 2211	SPEC. 2360	SPEC. 2521	SPEC. 2531	SPEC. 2531	
		REMOVE CURB AND GUTTER	REMOVE AND REPLACE BITUMINOUS PAVEMENT	AGGREGATE BASE (CV) CLASS 5	TYPE SP 9.5 WEARING COURSE MIXTURE (SPWEA340C)	CONCRETE WALK	CONCRETE CURB & GUTTER	TRUNCATED DOMES	CURB RAMP DEISGN
		LIN FT	LIN FT	CU YD	TON	SQ FT	LIN FT	SQ FT	
CROSS CITY TRAIL									
156+25.7	LT.	10	10			82	10	20	PARALLEL
				12	11				
156+50.2	LT.	10	10			40	10	12	ONE-WAY DIRECTIONAL
NON-PARTICIPATING ITEM TOTALS		20	20	12	11	122	20	32	

H - HYDRANTS

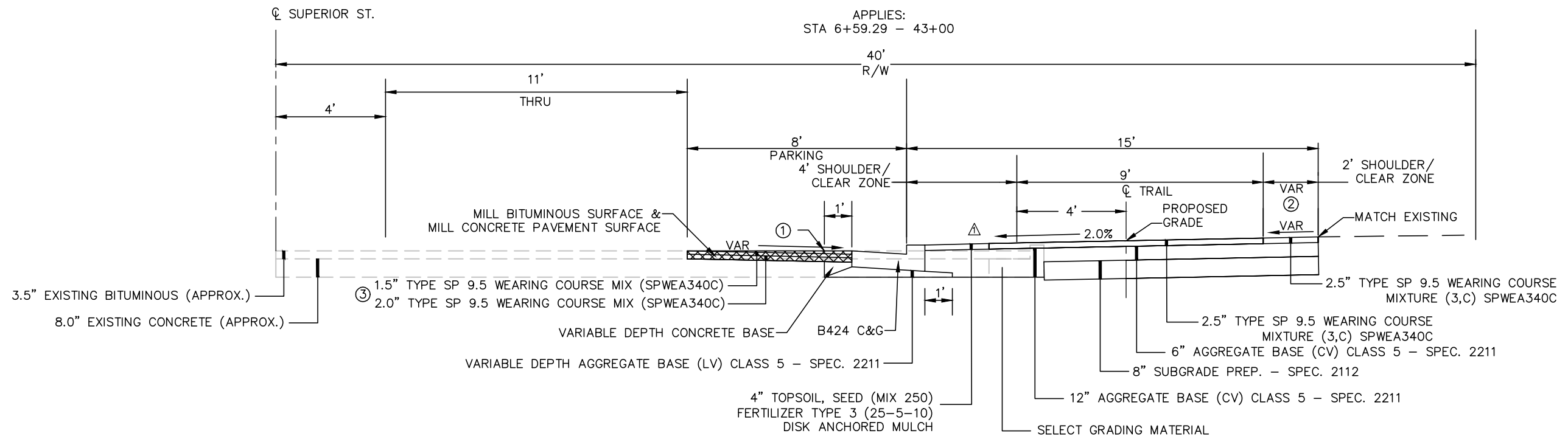
STATION TO STATION	LOCATION	SPEC. 2104	SPEC. 2104	SPEC. 2504	SPEC. 2504	SPEC. 2504
		REMOVE HYDRANT	REMOVE GATE VALVE & BOX	HYDRANT	FURNISH AND INSTALL HYDRANT ASSEMBLY	6" WATERMAIN DUCTILE IRON CL 52
		EACH	EACH	EACH	EACH	LIN FT
SUPERIOR STREET						
65+43.0	39.6' RT. (29TH AVE. W.)	1			1	
65+59.3	16.2' RT.		1			
79+50.3	39.3' RT. (26TH AVE. W.)	1		1		21
84+85.5	39.3' RT. (25TH AVE. W.)	1		1		21
93+48.8	31.8' RT. (23RD AVE. W.)	1	1			
93+60.6	49.0' RT. (23RD AVE. W.)				1	
98+20.8	44.2' RT. (22ND AVE. W.)	1		1		26
CROSS CITY TRAIL						
94+85.7	8.0' RT.	1		1		28
NON-PARTICIPATING ITEM TOTALS		6	2	4	2	96
PROJECT ITEM TOTALS		6	2	4	2	96

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NOTES:

- ① SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
- ② BITUMINOUS PAVEMENT TO BUILDING FACE:
STA. 35+14.4 - 36+62.4
STA. 38+11.4 - 39+12.6
STA. 39+78.0 - 41+14.6
- ③ VARIABLE DEPTH, 3.5" MINIMUM.
- ④ REPLACE EXISTING BITUMINOUS, GRAVEL, OR TURF



DRAWN BY: ACO
DESIGNER: JCK
CHECKED BY: MJB

NO.	BY	DATE
1	ACO	7/16/13

CHANGED SHOULDER TO SEEDED TOPSOIL FROM BITUMINOUS
CHANGED SHOULDER WIDTH FROM 3' TO 4'
CHANGED TRAIL WIDTH FROM 10' TO 9'

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

Matthew J. Bolf P.E.
Lic. No. 43913

Date: 07/19/2013



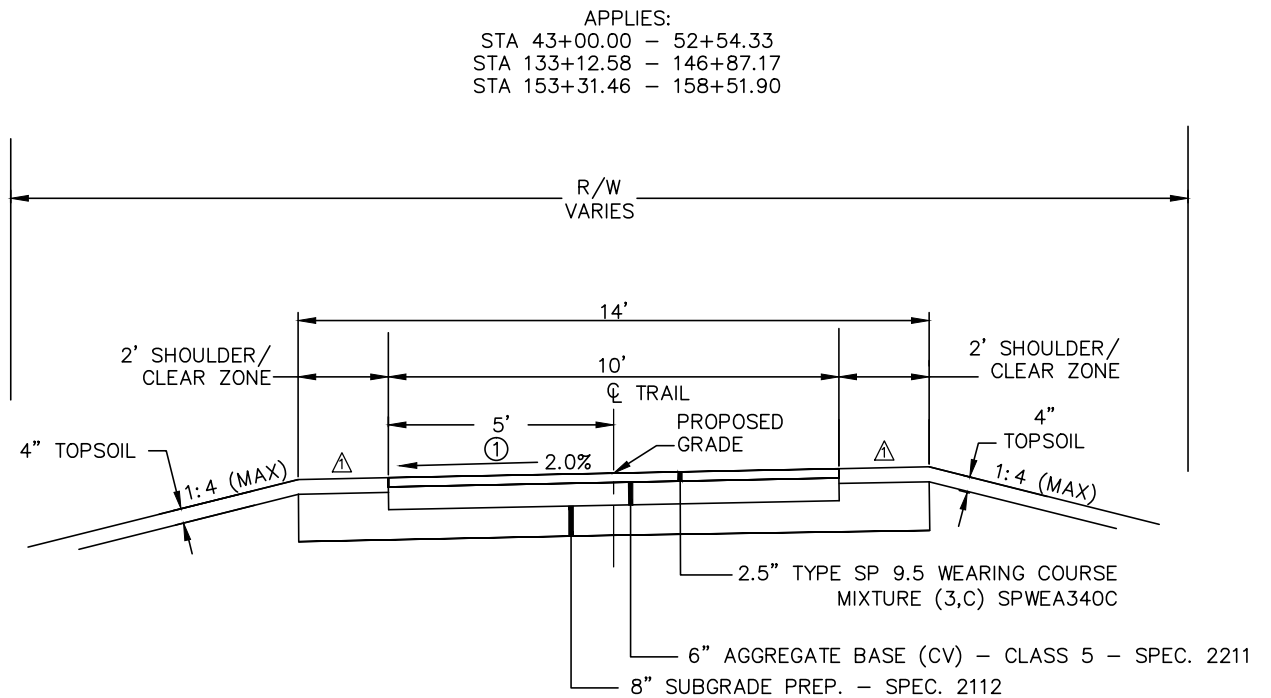
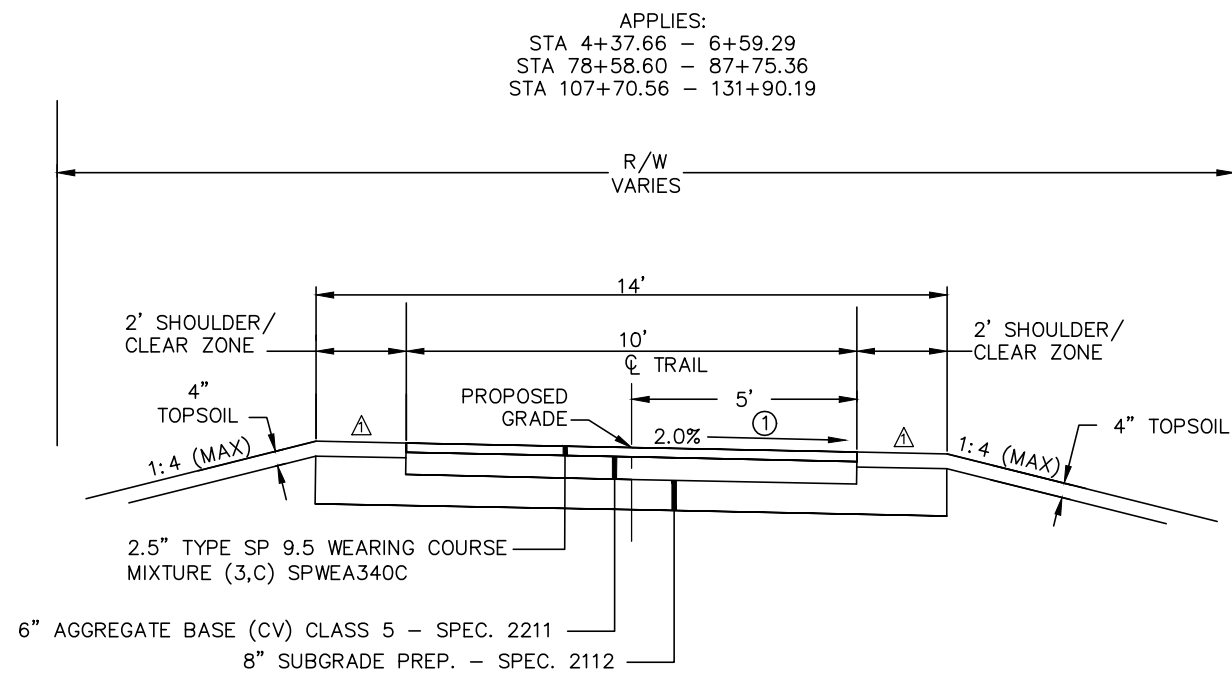
PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
www.sehinc.com

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CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

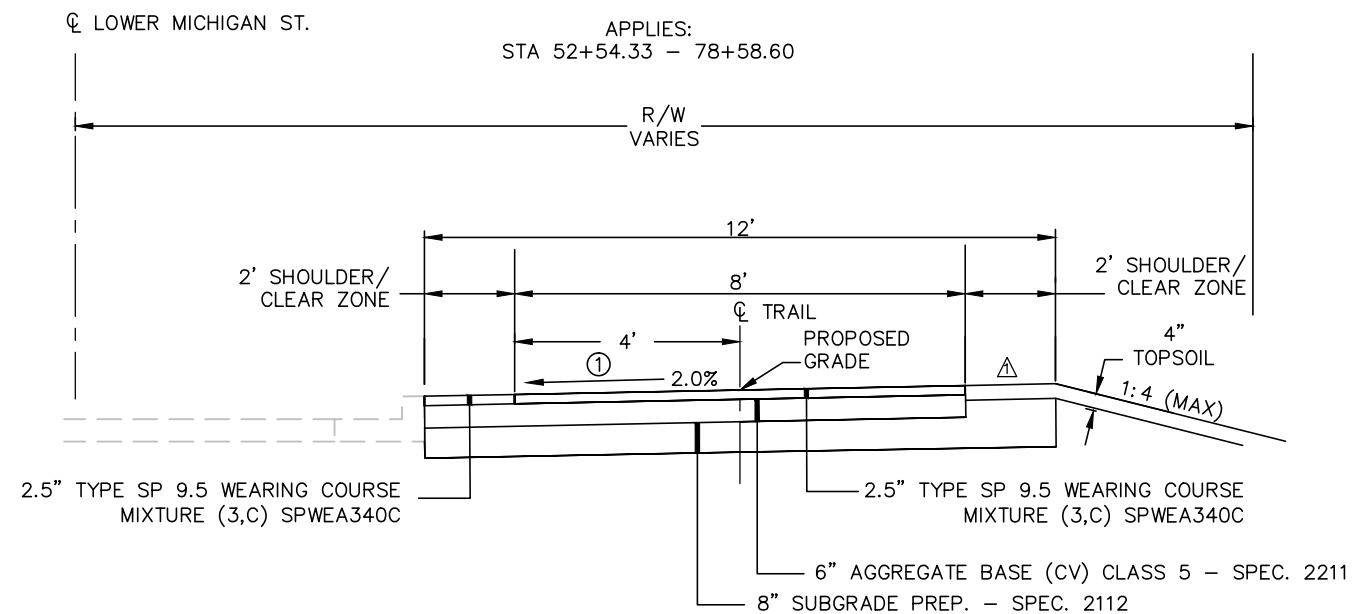
TYPICAL SECTIONS

FILE NO.
DULUT 109680

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115



- NOTES:
- ① SEE CROSS SECTIONS FOR CROSS SLOPE DIRECTION



DRAWN BY: ACO
 DESIGNER: JCK
 CHECKED BY: MJB

NO. BY DATE

CHANGED SHOULDER TO SEEDED TOPSOIL FROM CLASS 5

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

Matthew J. Bolt P.E.
 Lic. No. 43913

Date: 07/19/2013



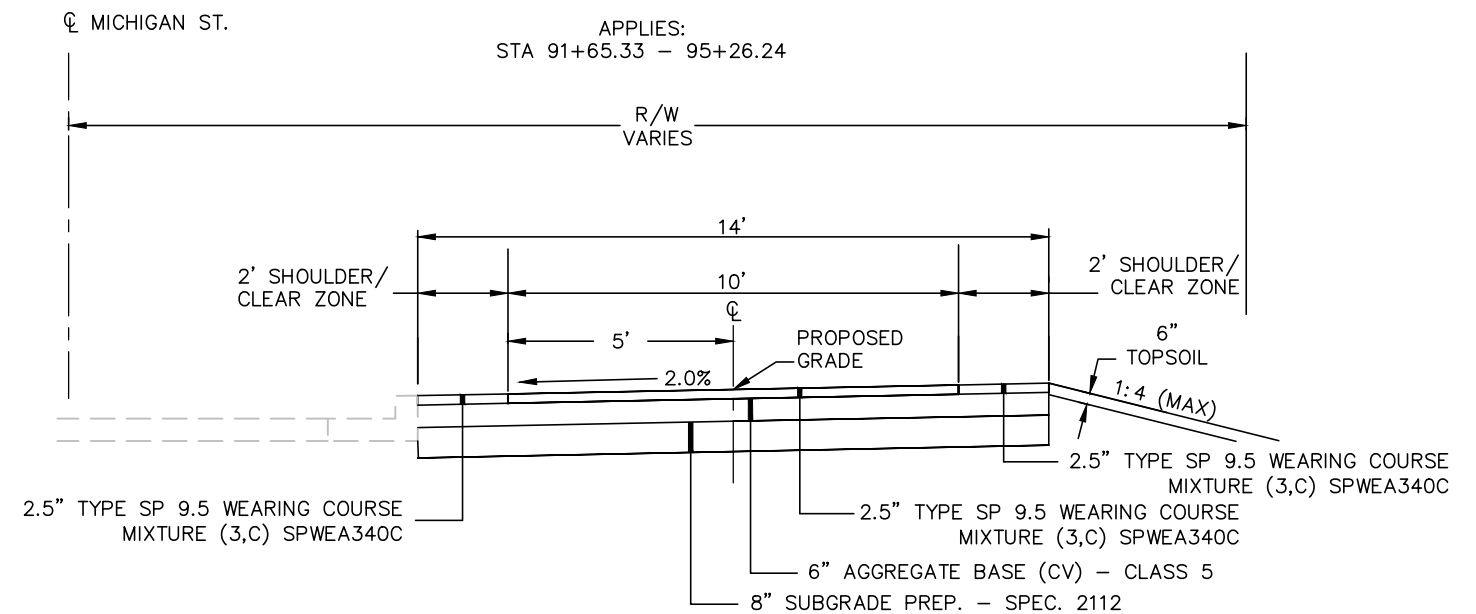
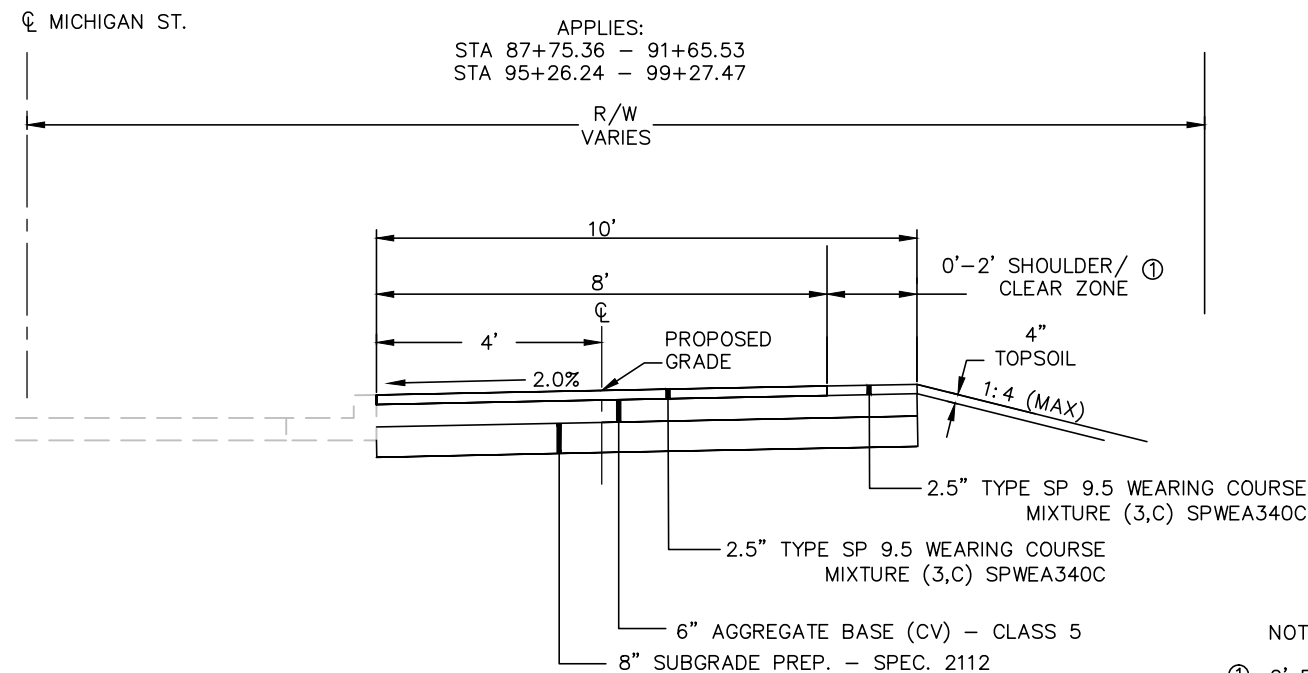
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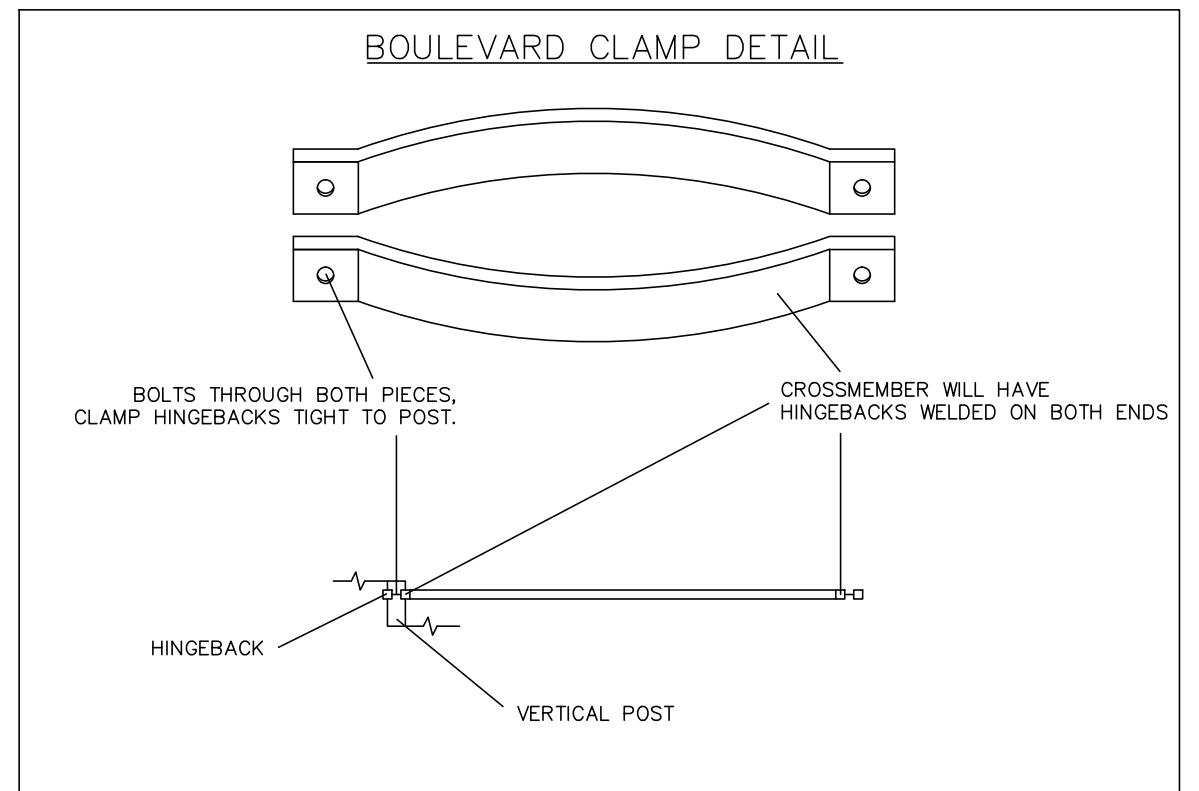
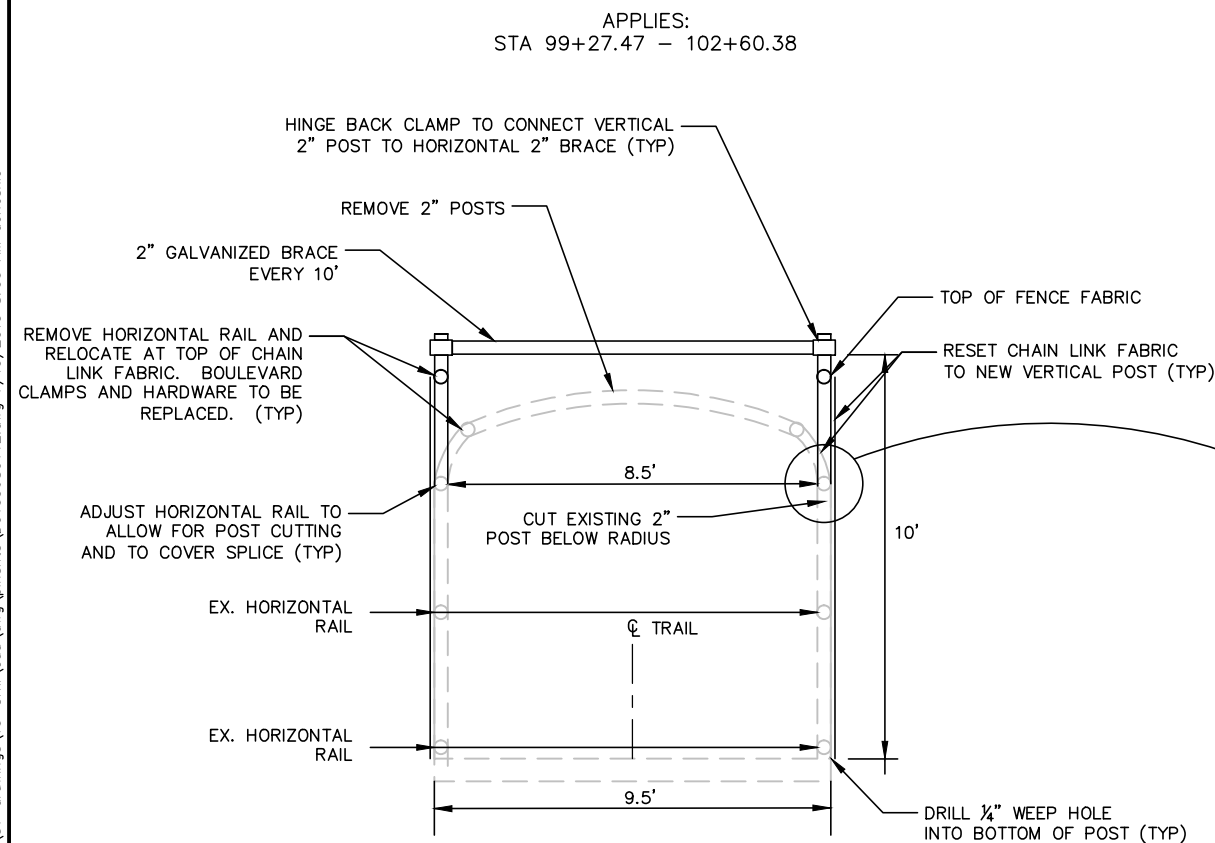
TYPICAL SECTIONS

FILE NO.
 DULUT 109680

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- NOTES:
- ① 2' BIT SHLD.
87+75.36 - 95+75.23
0' SHLD.
95+75.23 - 99+27.47



PAID FOR AS RECONSTRUCT WIRE FENCE

DRAWN BY: ACO	NO.	BY	DATE	REVISIONS
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM				

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Matthew J. Bolt P.E.
Date: 07/19/2013 Lic. No. 43913

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CITY PROJECT NO. 0568TR
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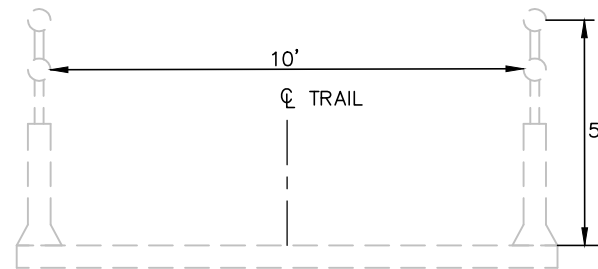
TYPICAL SECTIONS

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DULUT 109680

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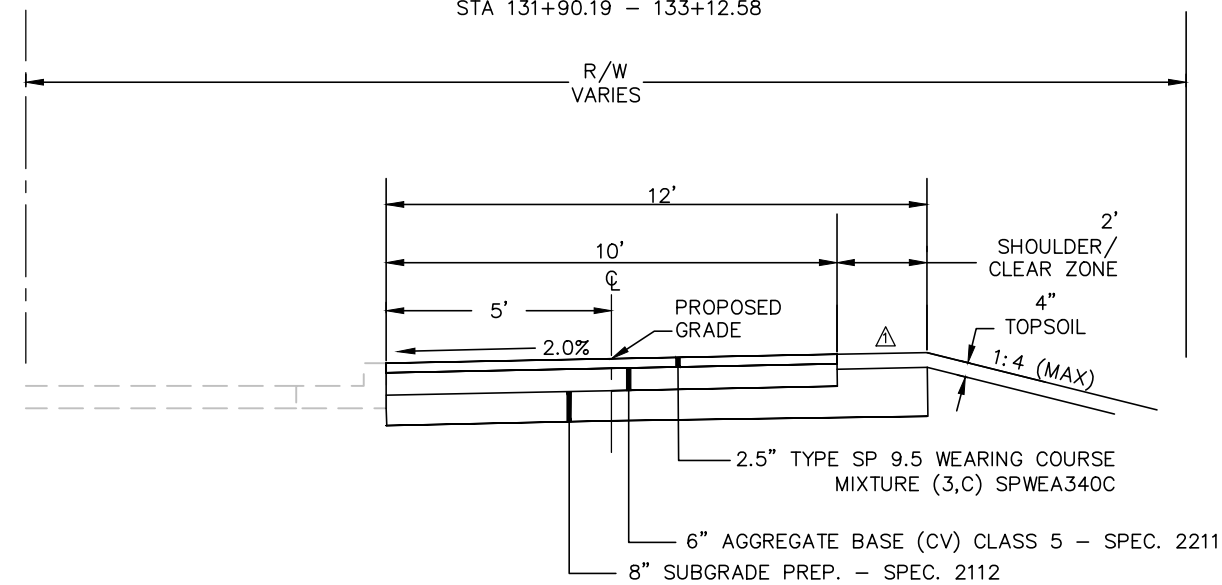
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APPLIES:
STA 102+60.38 - 107+70.56



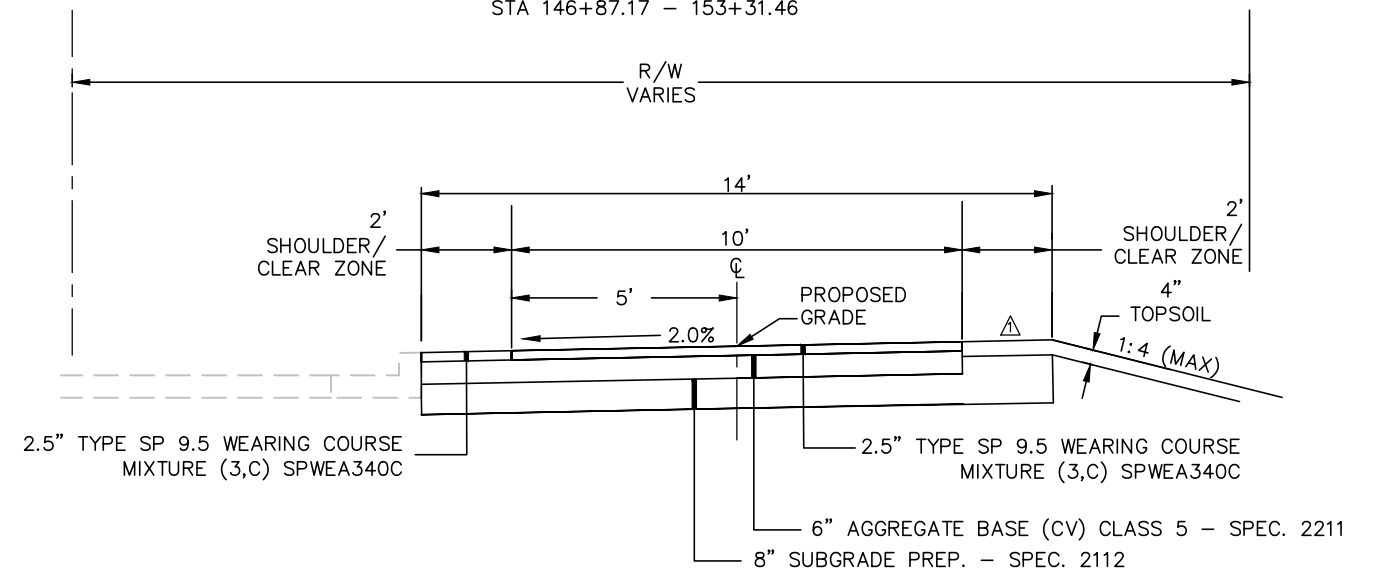
CL RAILROAD ST.

APPLIES:
STA 131+90.19 - 133+12.58



CL RAILROAD ST.

APPLIES:
STA 146+87.17 - 153+31.46



DRAWN BY: ACO	ACO	7/16/13	CHANGED SHOULDER TO SEEDED TOPSOIL FROM CLASS 5
DESIGNER: JCK			
CHECKED BY: MJB			
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

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Matthew J. Bolt P.E.
Date: 07/19/2013 Lic. No. 43913



CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
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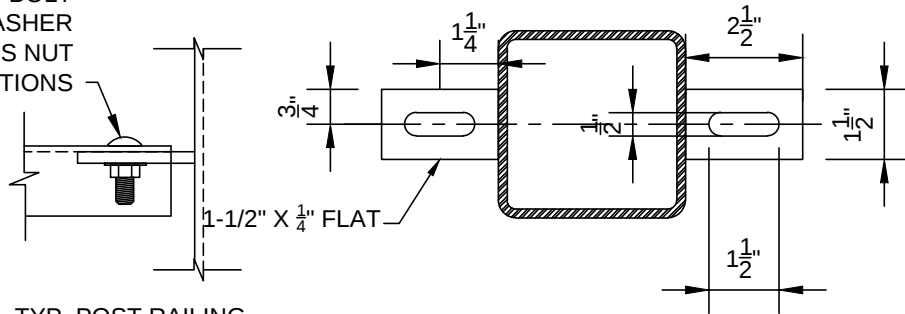
TYPICAL SECTIONS

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DULUT 109680

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3/8" SS ROUND HEAD BOLT
WITH FLAT WASHER
AND SS NUT
TYP ALL CONNECTIONS



TYP. POST RAILING
CONNECTION

GENERAL NOTES:

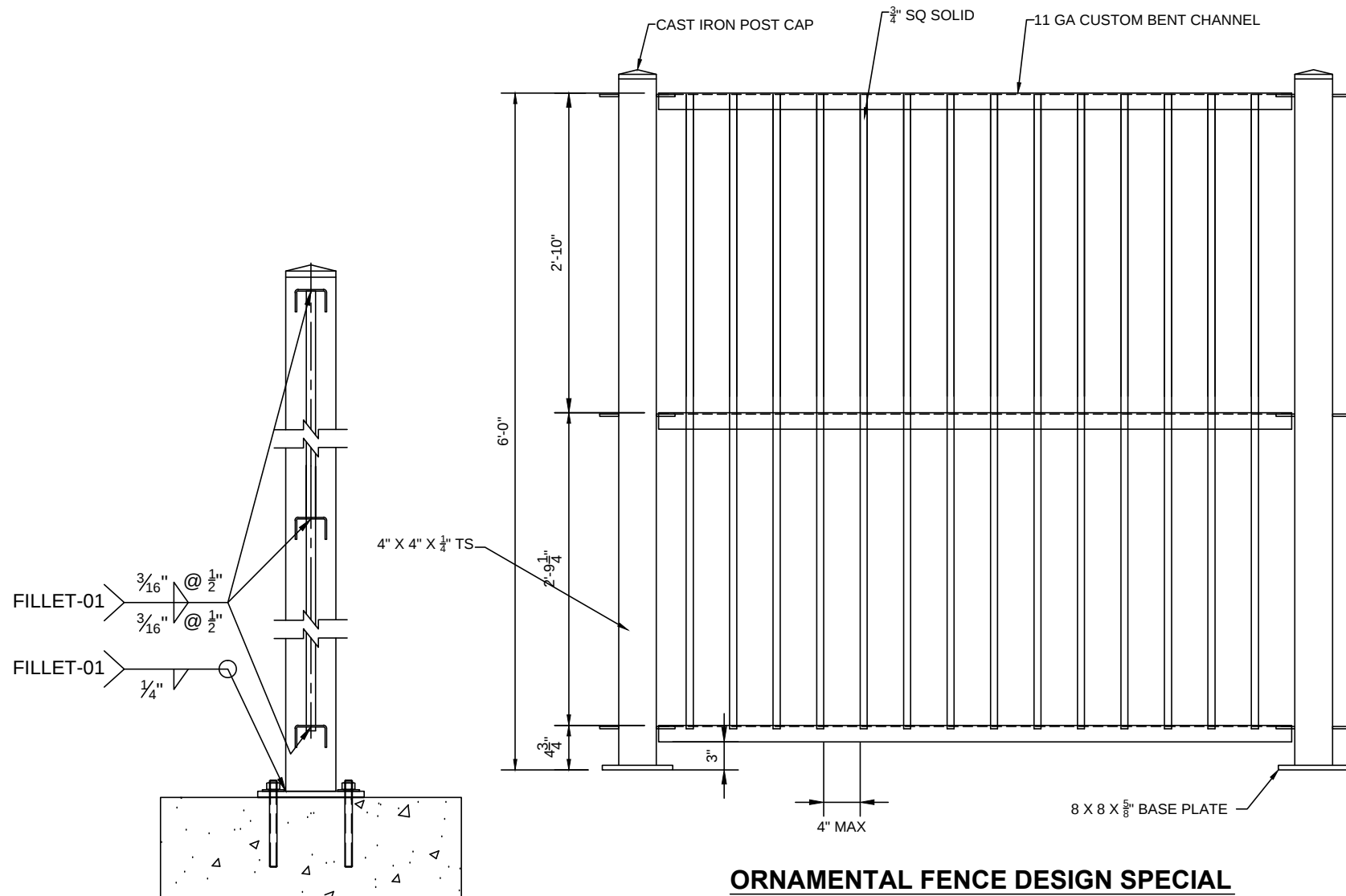
ALL WELDING TO BE DONE IN ACCORDANCE WITH AWS D1.1 AND SPECIAL PROVISIONS
ALL STRUCTURAL STEEL TUBING IN RAIL SHALL BE ASTM A500 GRADE B OR BETTER
STRUCTURAL STEEL SHALL CONFORM TO MNDOT SPEC 3306
GALVANIZE ALL OTHER STRUCTURAL STEEL PER MNDOT SPEC 3394 AFTER FABRICATION.
ALL RAILING TO BE PAINTED (DUPLEX COATED) AS PER SPECIAL PROVISIONS AND HAVE A
FINISH COLOR OF FED STD 595B NO. 27038 (SEMI-GLOSS BLACK).

FENCE SHALL BE PROVIDED AND INSTALLED ACCORDING TO STD. PLATE 9322
WITH THE FOLLOWING EXCEPTIONS:

1. A TOP AND BOTTOM RAIL SHALL BE PROVIDED THE ENTIRE LENGTH OF EACH FENCE.
2. STRETCHER BARS SHALL BE PROVIDED AT EACH END POST AND ALONG THE TOP AND BOTTOM RAILS.
3. ALL END POSTS AND INTERMEDIATE (LINE) POSTS SHALL BE 2" NOM. DIAMETER AS DETAILED AND NOTED ABOVE.
4. ALL FENCE COMPONENTS EXCEPT BASE PLATE ANCHORS SHALL BE BLACK, VINYL COATED.

PAYMENT FOR FURNISHING AND INSTALLING FENCES AS DETAILED AND NOTED
ABOVE SHALL BE INCLUDED IN PRICE BID FOR ITEM "WIRE FENCE DES. 72V-9322"

* ANCHORS MAY BE INSTALLED INTO SOUND CMU AS APPROVED BY THE ENGINEER.



ORNAMENTAL FENCE DESIGN SPECIAL

1 1/2" NOM. Ø GALV. AND
VINYL COATED STEEL TOP RAIL

VINYL COATED
CHAIN LINK FABRIC

2" (NOM.) O.D. GALV. AND VINYL
COATED METAL FENCE POST (TYP.)

6'-0" (POST LENGTH)

1 1/2" NOM. Ø GALV. AND
VINYL COATED STEEL BOT. RAIL

VINYL WIRE FENCE

DRAWN BY: ACO
DESIGNER: JCK
CHECKED BY: MJB

DESIGN TEAM

NO.

BY

DATE

REVISIONS

NO.

BY

DATE

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REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.
Date: 07/19/2013 Matthew J. Bolf P.E.
Lic. No. 43913



PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
www.sehinc.com

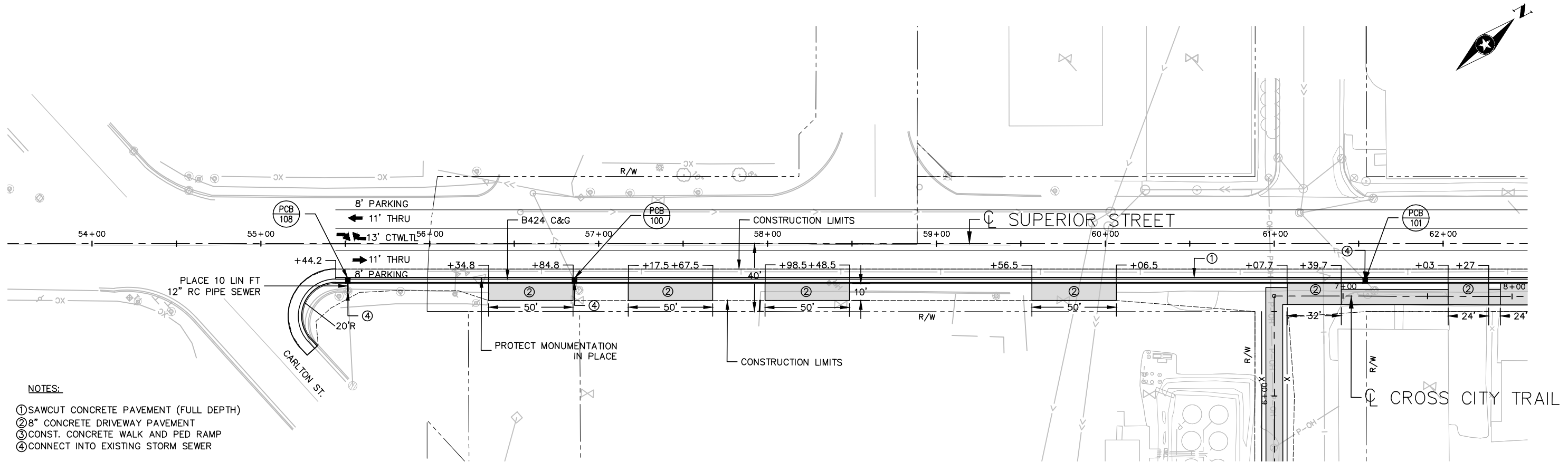
CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

CONSTRUCTION DETAILS

FILE NO.
DULUT 109680

25
115

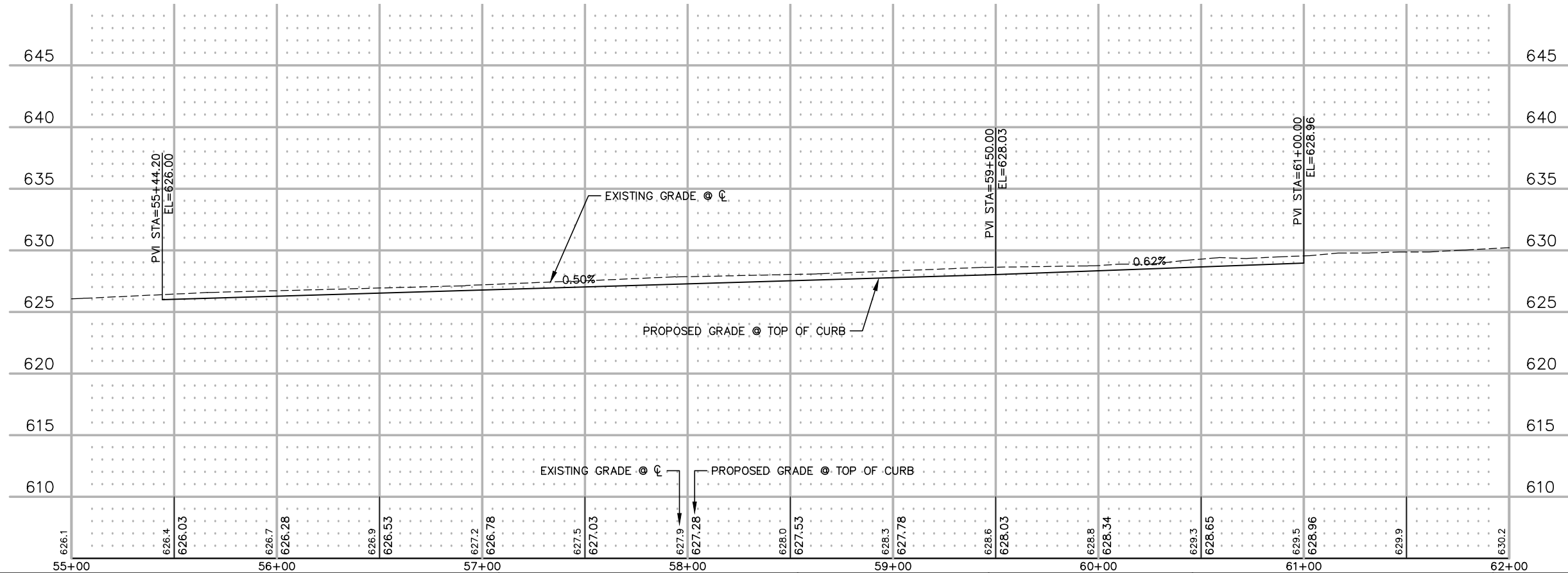
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NOTES:

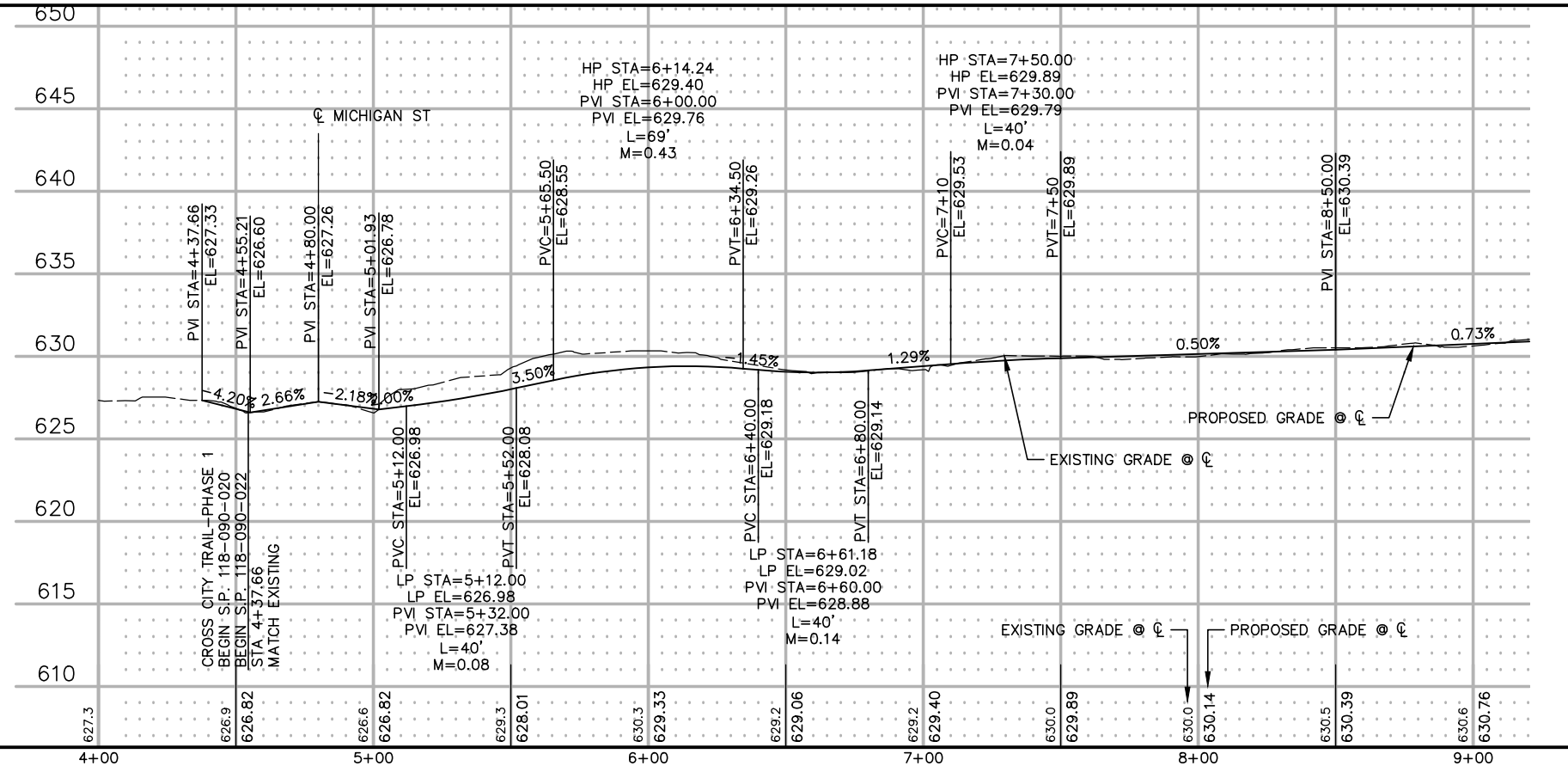
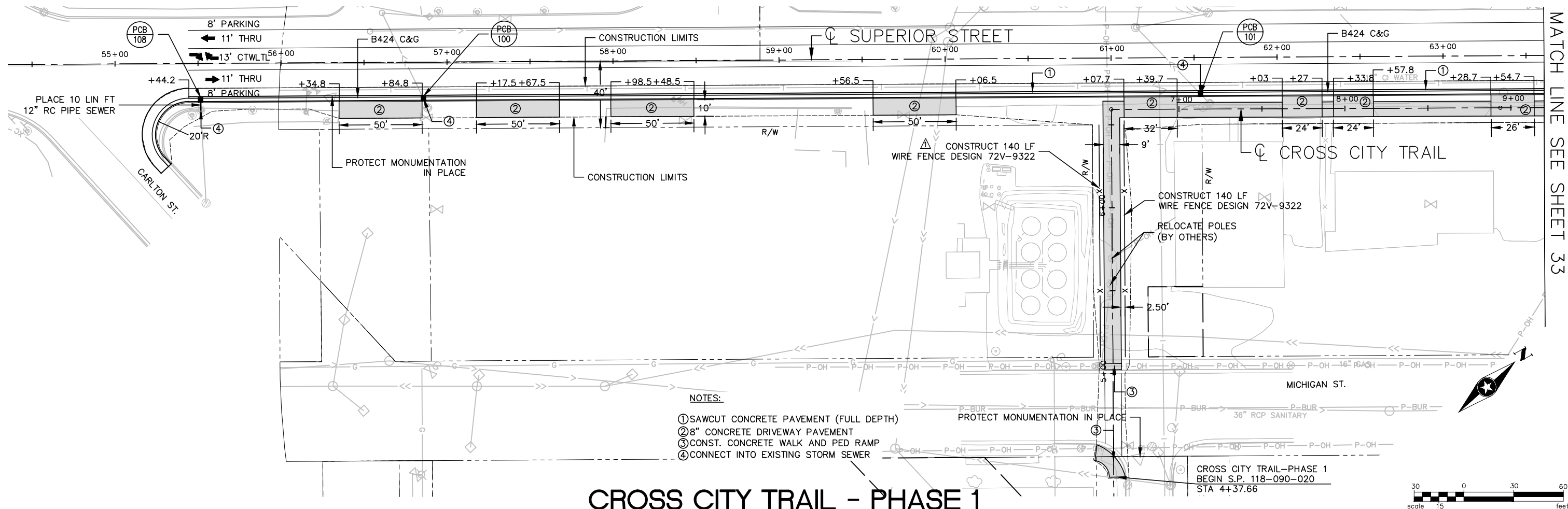
- ① SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
- ② 8" CONCRETE DRIVEWAY PAVEMENT
- ③ CONST. CONCRETE WALK AND PED RAMP
- ④ CONNECT INTO EXISTING STORM SEWER

CROSS CITY TRAIL - PHASE 1



DRAWN BY: ACO	7/16/13	CHANGED TRAIL WIDTH FROM 10' TO 9'	I HEREBY CERTIFY THAT THIS PLAN 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. Matthew J. Bolf P.E. Date: 07/19/2013 Lic. No. 43913		CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	PLAN AND PROFILE SUPERIOR STREET	FILE NO. DULUT 109680	31 115
DESIGNER: JCK		CHANGED SHOULDER WIDTH FROM 3' TO 4'						
CHECKED BY: MJB		ADDED WIRE FENCE DESIGN 72V-9322						
DESIGN TEAM	NO.	BY	DATE	REVISIONS				

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SAVED: 7/22/2013 12:35 PM
corleskie PLOTTED: 7/22/2013 12:54 PM

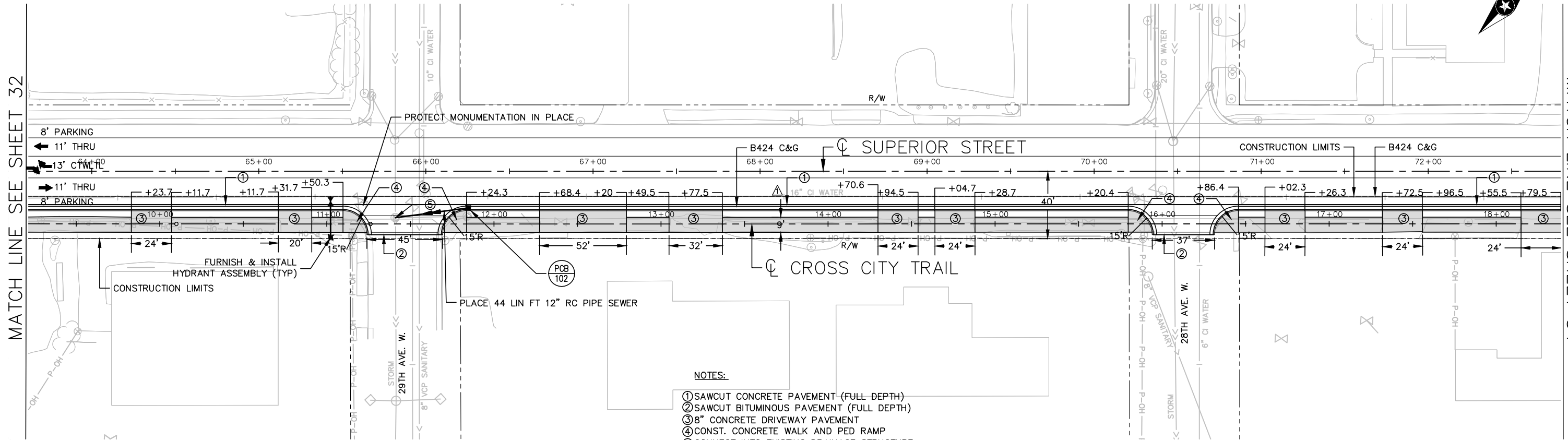


DRAWN BY: ACO	DESIGNER: JCK	CHECKED BY: MJB	DESIGN TEAM	NO.	BY	DATE	REVISIONS	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. Date: 07/19/2013 Matthew J. Bolt, P.E. Lic. No. 43913	SEH PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	PLAN AND PROFILE	FILE NO. DULUT 109680	32 115
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MATCH LINE SEE SHEET 32

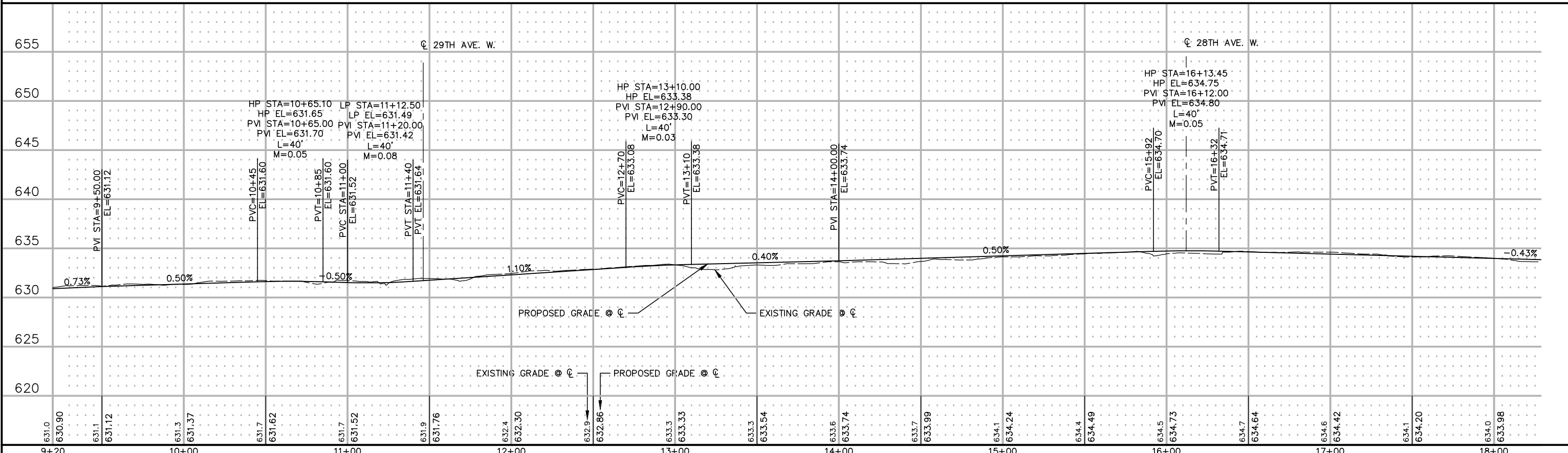
MATCH LINE SEE SHEET 34



NOTES:

- ① SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
- ② SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
- ③ 8" CONCRETE DRIVEWAY PAVEMENT
- ④ CONST. CONCRETE WALK AND PED RAMP
- ⑤ CONNECT INTO EXISTING DRAINAGE STRUCTURE

CROSS CITY TRAIL - PHASE 1



DRAWN BY: ACO	NO.	BY	DATE	REVISIONS
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM				

ACO	7/16/13	CHANGED TRAIL WIDTH FROM 10' TO 9'
		CHANGED SHOULDER WIDTH FROM 3' TO 4'

I HEREBY CERTIFY THAT THIS PLAN 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.

Matthew J. Bolt
Matthew J. Bolt, P.E.
Date: 07/19/2013 Lic. No. 43913

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www.sehinc.com

CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

PLAN AND PROFILE

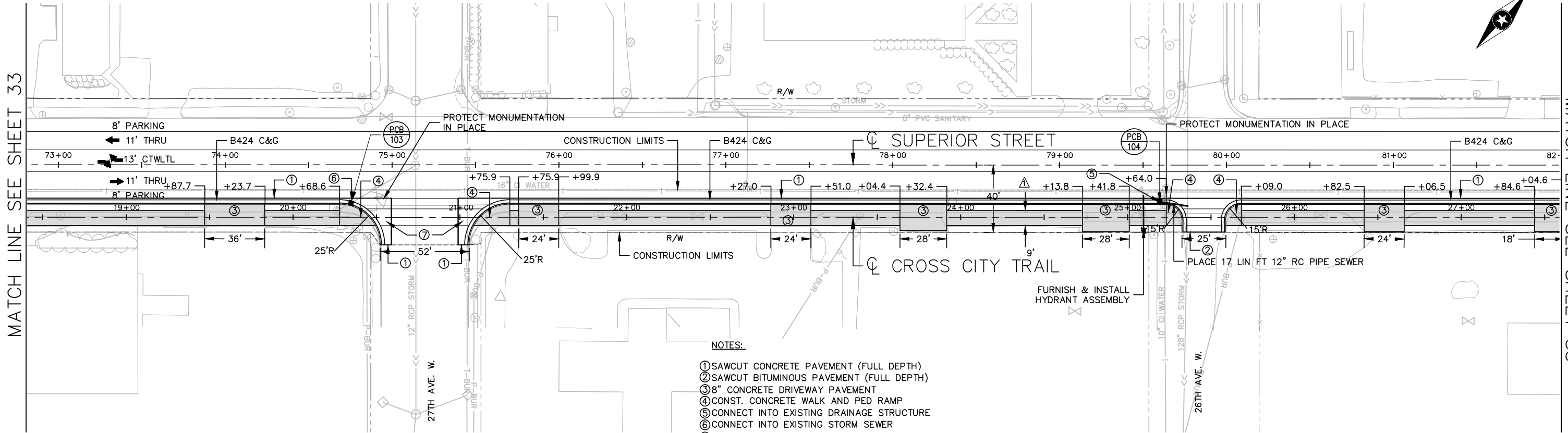
FILE NO.
DULUT 109680

33
115

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SAVED: 7/19/2013 10:55 AM
corleskie PLOTTED: 7/22/2013 12:56 PM

MATCH LINE SEE SHEET 33

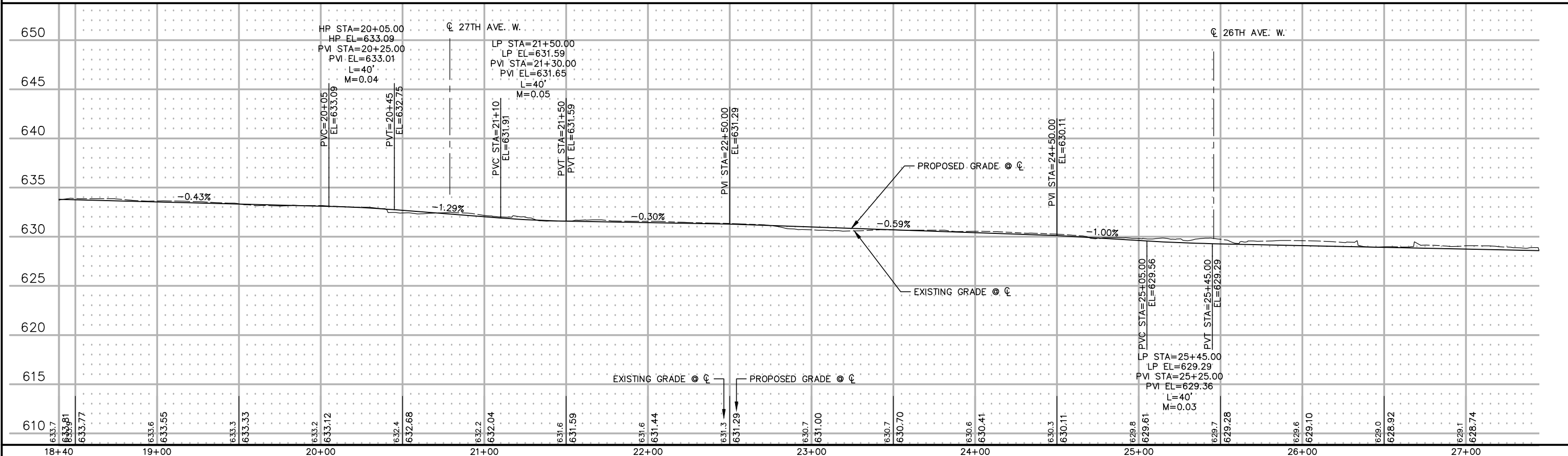
MATCH LINE SEE SHEET 35



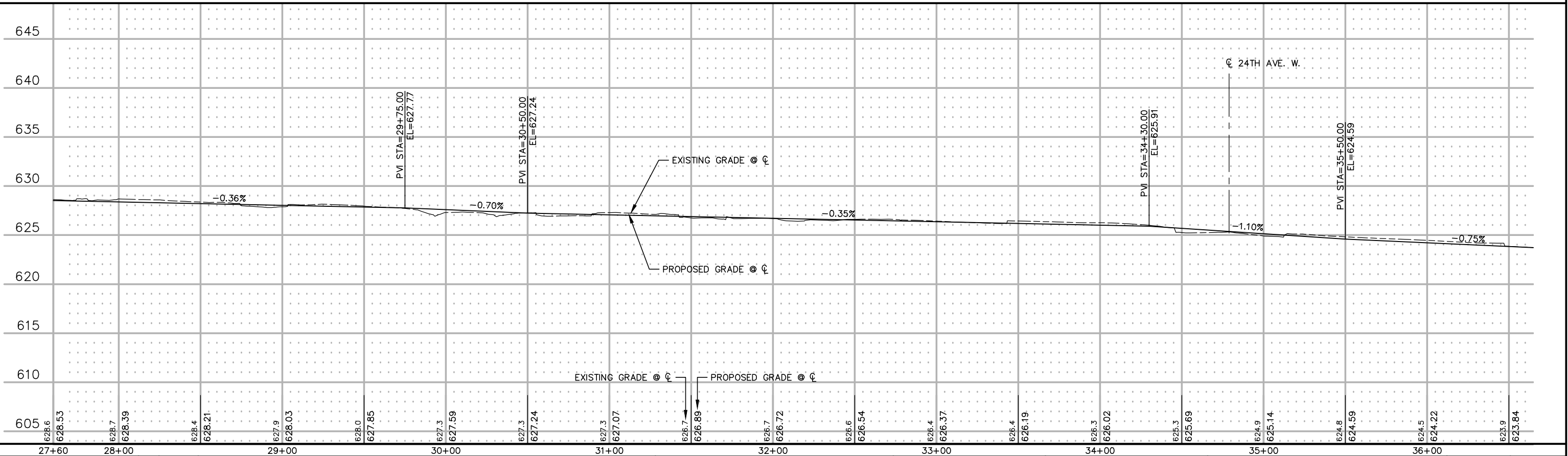
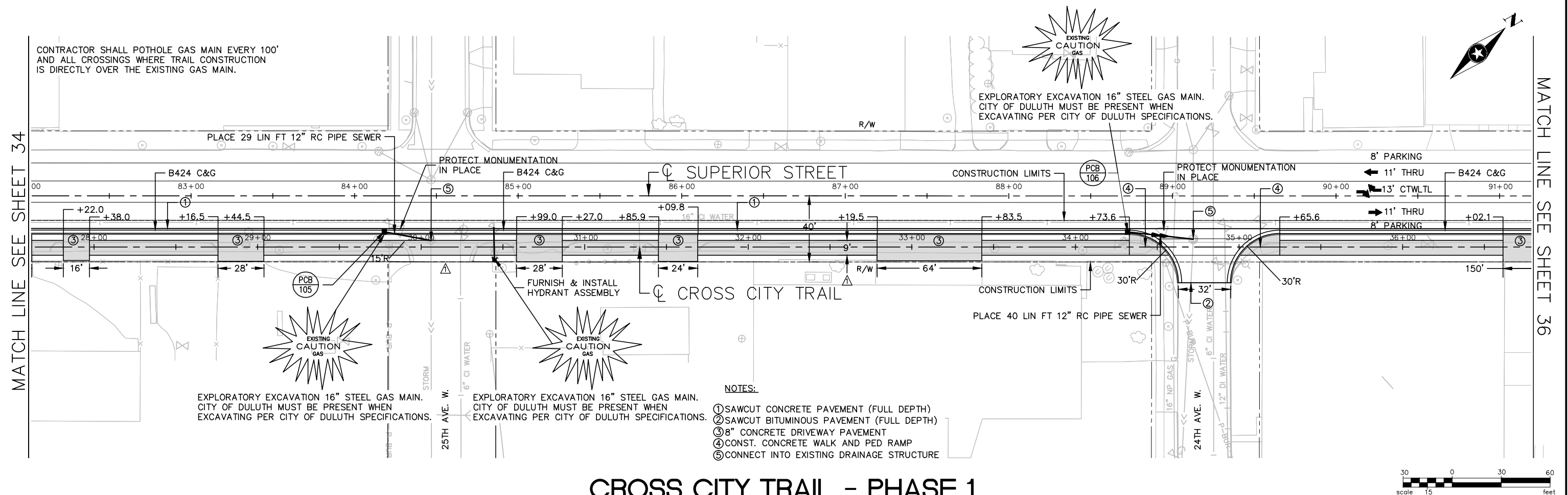
NOTES:

- ① SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
- ② SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
- ③ 8" CONCRETE DRIVEWAY PAVEMENT
- ④ CONST. CONCRETE WALK AND PED RAMP
- ⑤ CONNECT INTO EXISTING DRAINAGE STRUCTURE
- ⑥ CONNECT INTO EXISTING STORM SEWER
- ⑦ SEE DETAIL ON SHEET NO. 24

CROSS CITY TRAIL - PHASE 1

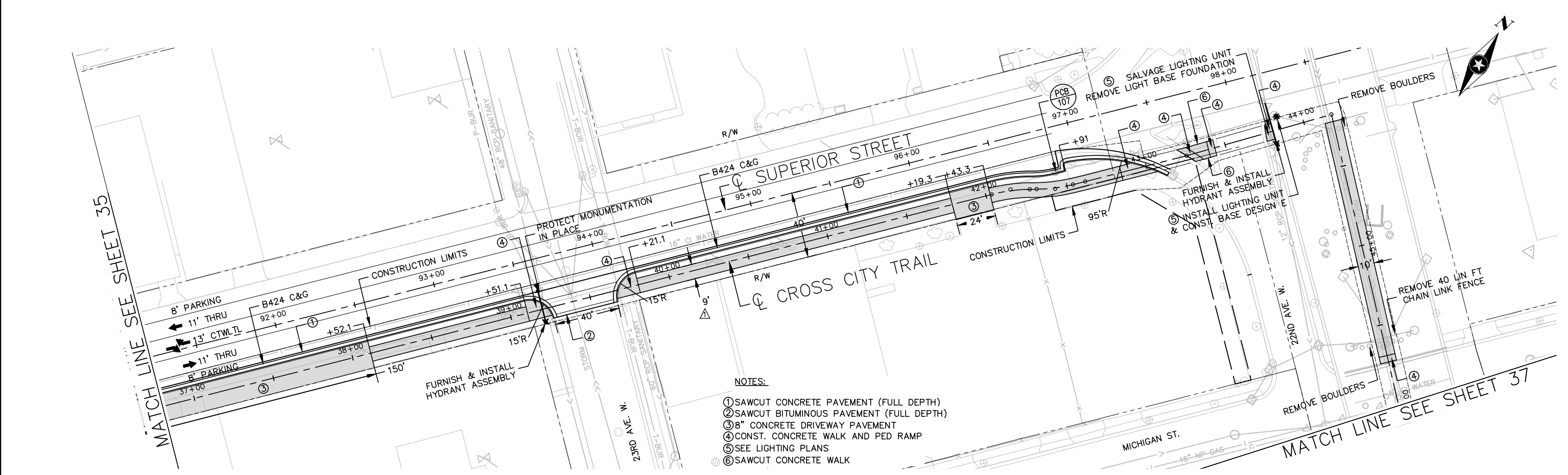


DRAWN BY: ACO		DESIGNER: JCK		CHECKED BY: MJB		DESIGN TEAM		NO. BY DATE		REVISIONS		I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. Matthew J. Bolt, P.E. Date: 07/19/2013 Lic. No. 43913		CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022		PLAN AND PROFILE		FILE NO. DULUT 109680		34 115	
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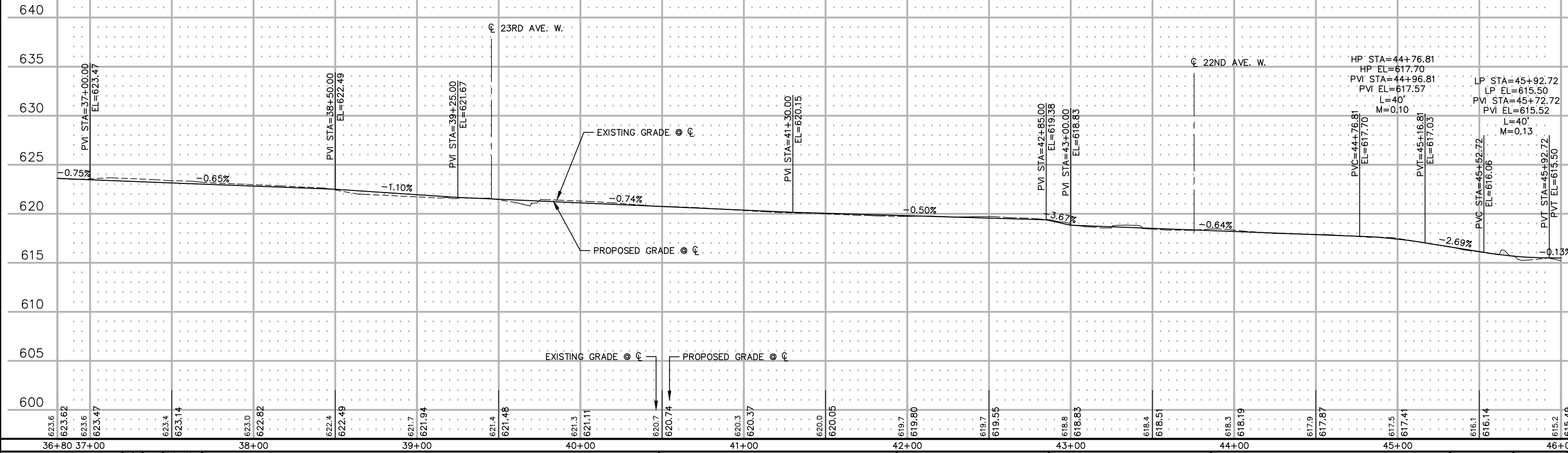
DRAWN BY: ACO	ACO 7/16/13	INTERSECTION TO BE ELIMINATED. TRAIL UNINTERRUPTED.	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  Matthew J. Balf, P.E. Date: 07/19/2013 Lic. No. 43913	 PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	PLAN AND PROFILE	FILE NO. DULUT 109680	35 115
DESIGNER: JCK		CHANGED TRAIL WIDTH FROM 10' TO 9'						
CHECKED BY: MJB		CHANGED SHOULDER WIDTH FROM 3' TO 4'						
DESIGN TEAM	NO. BY DATE	REVISIONS						

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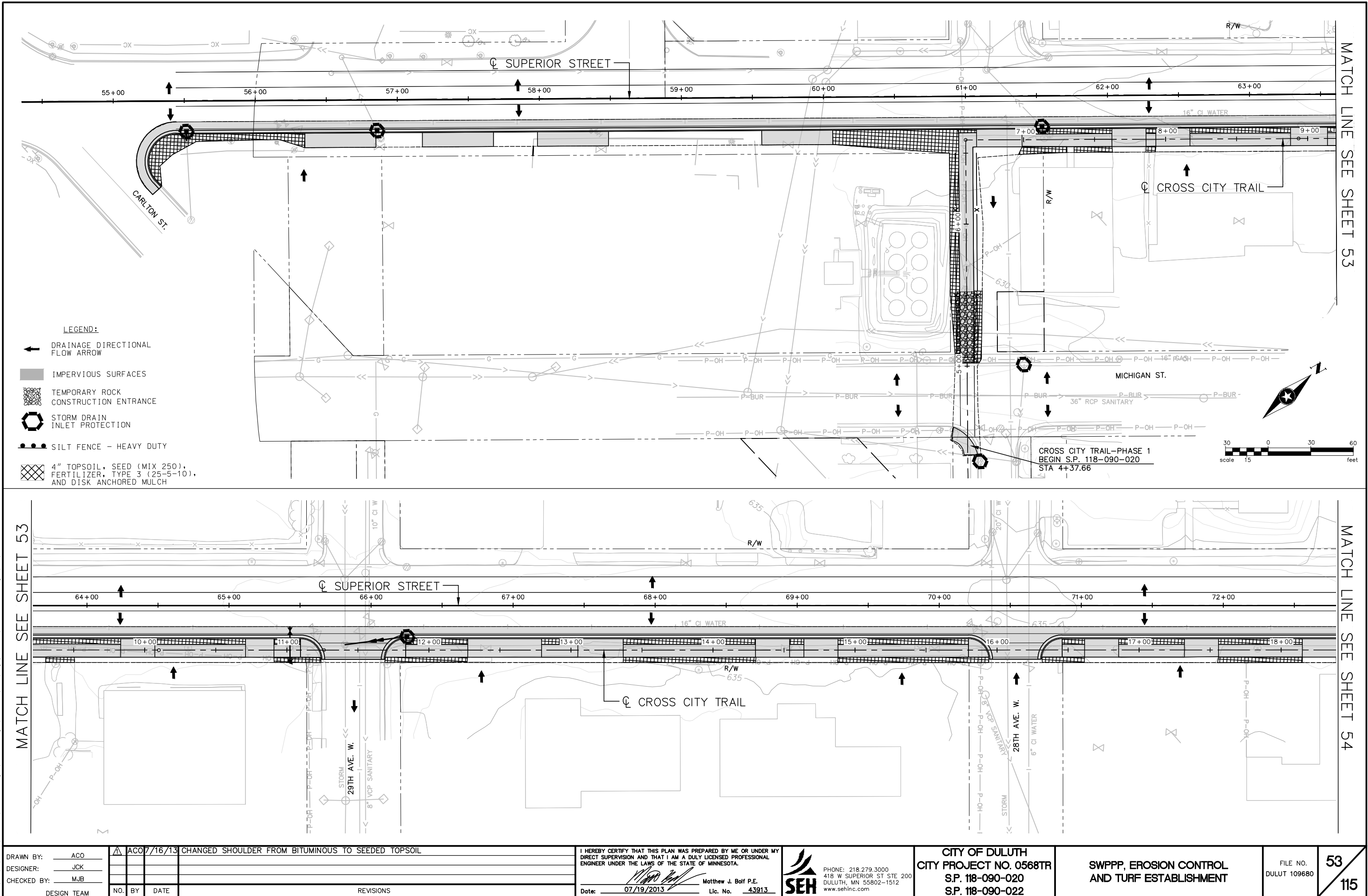
- NOTES:
- ① SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
 - ② SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
 - ③ 8" CONCRETE DRIVEWAY PAVEMENT
 - ④ CONST. CONCRETE WALK AND PED RAMP
 - ⑤ SEE LIGHTING PLANS
 - ⑥ SAWCUT CONCRETE WALK

CROSS CITY TRAIL - PHASE 1



DRAWN BY: ACO		DESIGNER: JCK		CHECKED BY: MJB		DESIGN TEAM		NO. BY DATE		REVISIONS		I HEREBY CERTIFY THAT THIS PLAN 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.		CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022		PLAN AND PROFILE		FILE NO. DULUT 109680		36 115	
												Date: 07/19/2013		Matthew J. Bolt, P.E. Lic. No. 43913							

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DRAWN BY:	ACO	ACO 7/16/13	CHANGED SHOULDER FROM BITUMINOUS TO SEEDED TOPSOIL
DESIGNER:	JCK		
CHECKED BY:	MJB		
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

Matthew J. Bolf
Matthew J. Bolf P.E.
Date: 07/19/2013 Lic. No. 43913

SEH
PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
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CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

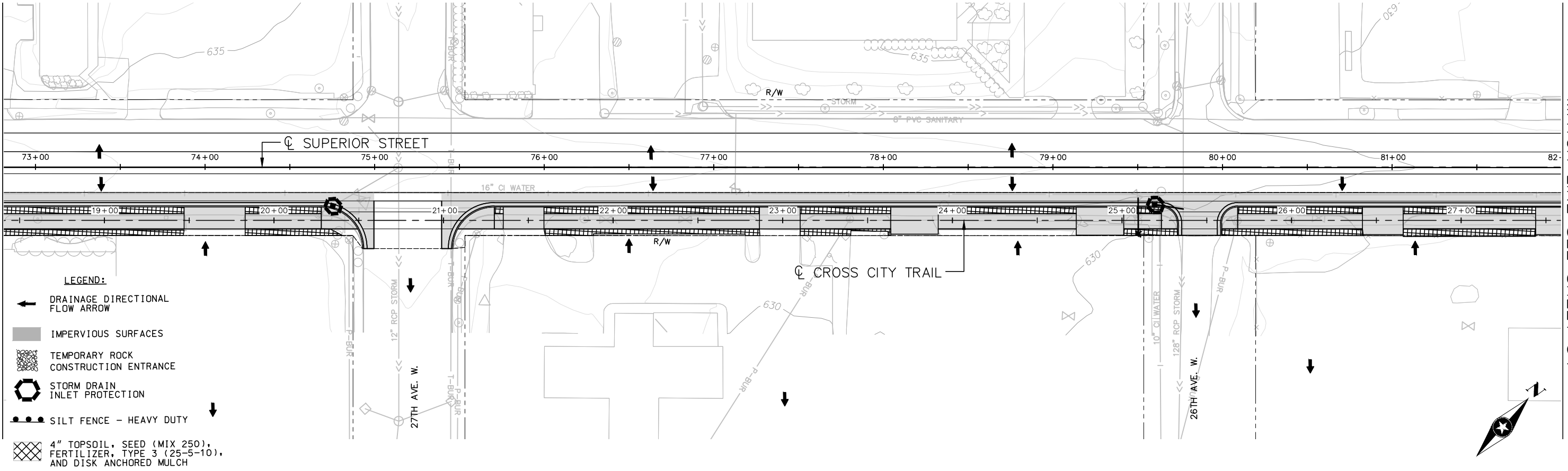
**SWPPP, EROSION CONTROL
AND TURF ESTABLISHMENT**

FILE NO.
DULUT 109680

53
115

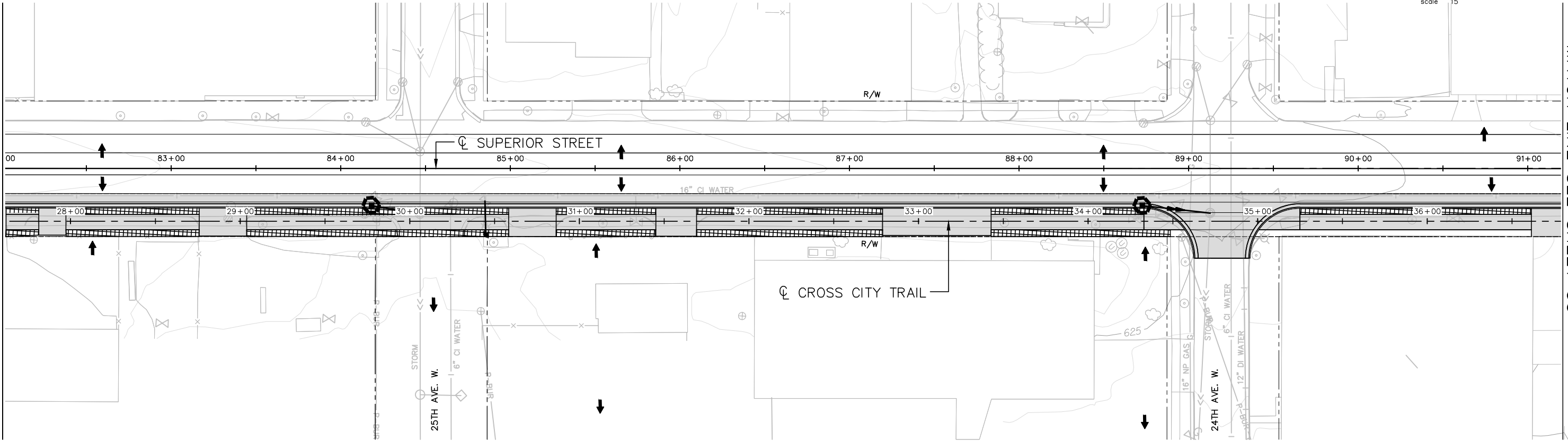
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MATCH LINE SEE SHEET 53



MATCH LINE SEE SHEET 54

MATCH LINE SEE SHEET 54



MATCH LINE SEE SHEET 55

DRAWN BY:	ACO	ACO 7/16/13 CHANGED SHOULDER FROM BITUMINOUS TO SEEDED TOPSOIL	
DESIGNER:	JCK		
CHECKED BY:	MJB		
DESIGN TEAM			
NO.	BY	DATE	REVISIONS

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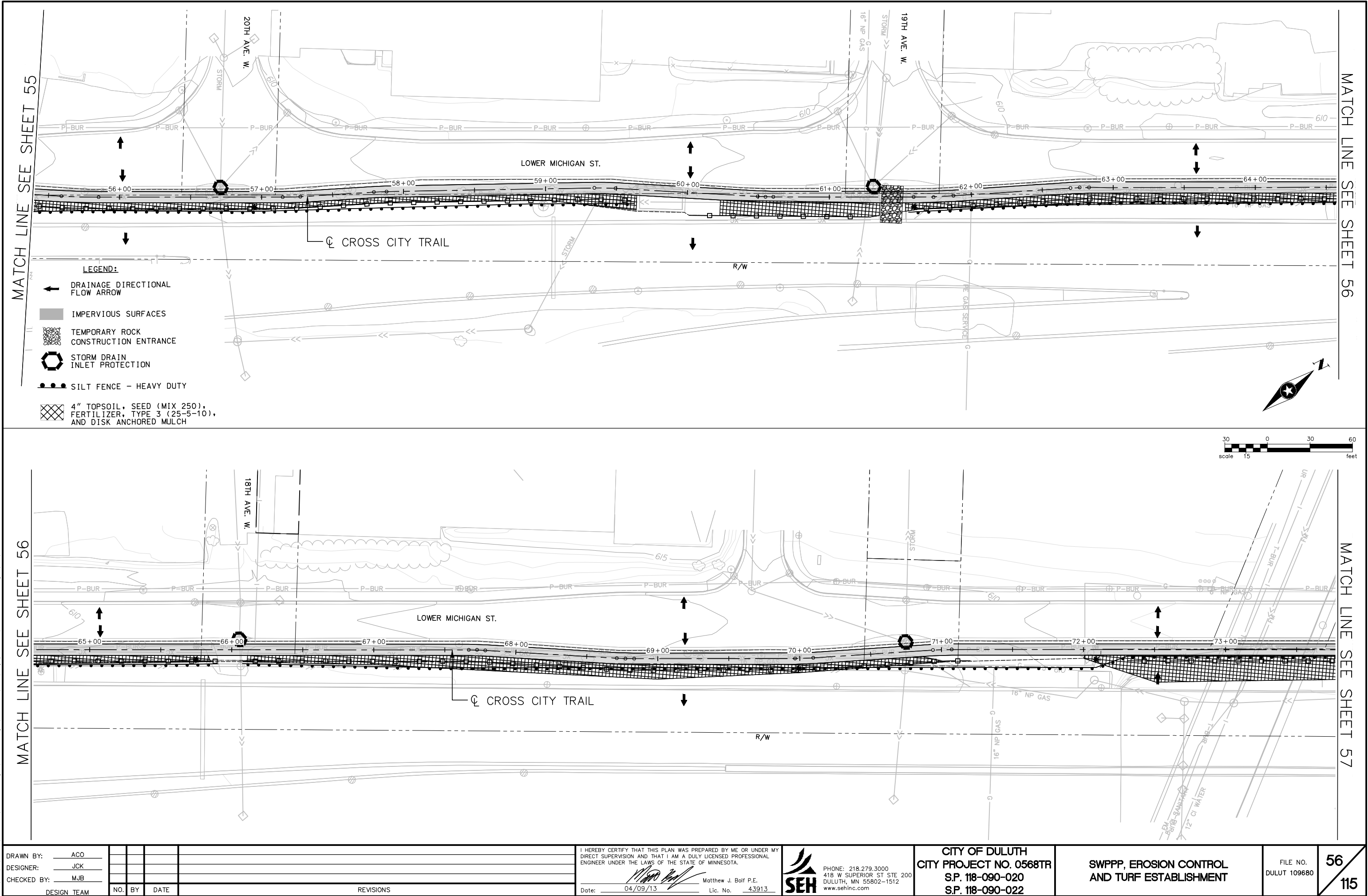
CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

**SWPPP, EROSION CONTROL
AND TURF ESTABLISHMENT**

FILE NO.
DULUT 109680

54
115

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DRAWN BY:	ACO				
DESIGNER:	JCK				
CHECKED BY:	MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS	

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Matthew J. Bolf
Matthew J. Bolf P.E.
Date: 04/09/13 Lic. No. 43913

SEH
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CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

SWPPP, EROSION CONTROL
AND TURF ESTABLISHMENT

FILE NO.
DULUT 109680

56
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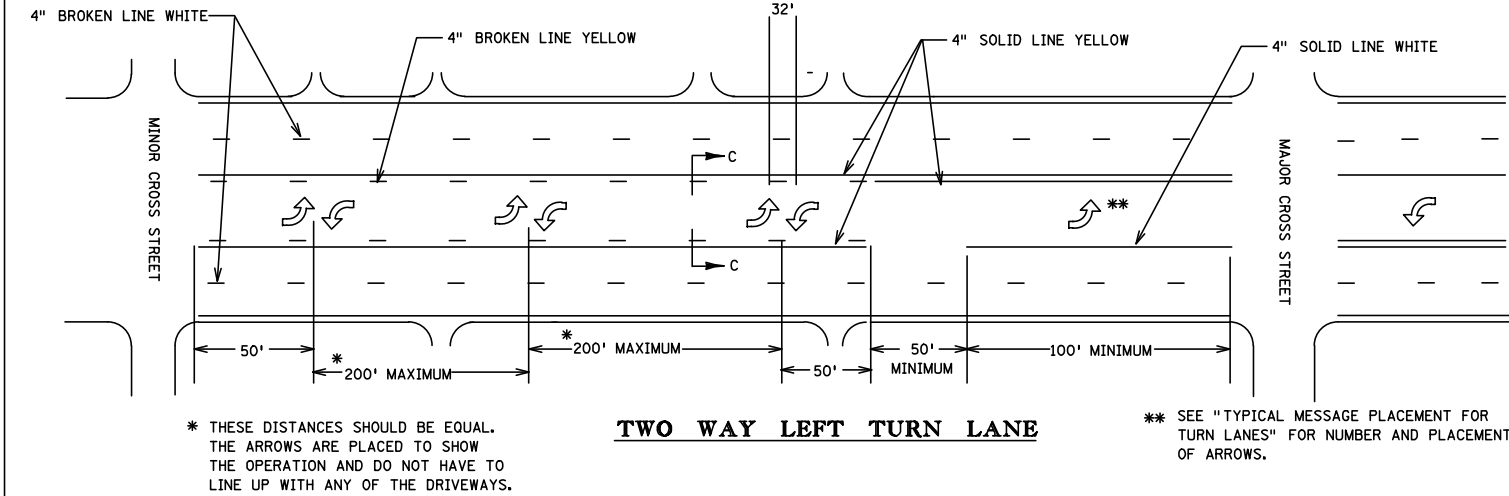
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SALVAGE & INSTALL SIGN TYPE C											
SIGN NO.	S.P. 118-090-020 QUANT.	S.P. 118-090-022 QUANT.	TOTAL QUANT.	POSTS			MTG HT. (FT.) (1)	PANEL SIZE (IN.)	PANEL LEGEND		
				NO. & TYPE	KNEE BRACES QUANT.	LEN. (FT.)					
(2) C-201	1		1	1-U	-	13	7	24 x 18	TRUCK ROUTE		
								21 x 15	LEFT-UP ARROW		
(2) C-202	1		1	1-U	-	13	7	12 x 18	NO PARKING, 2AM - 6AM, NOV 1-MAY 31		
								12 x 24	TRUCK LOADING ZONE		
								12 x 6	END		
(2) C-203	2		2	1-U	-	13	7	12 x 24	DTA BUS STOP		
(2) C-204	1		1	1-U	-	15	7	24 x 30	SPEED LIMIT 30		
								12 x 18	NO PARKING, 2AM - 6AM, NOV 1-MAY 31		
(2) C-205	4		4	1-U	-	12	7	12 x 18	NO PARKING, 2AM - 6AM, NOV 1-MAY 31		
(2) C-206	1		1	1-U	-	14	7	12 x 24	DTA BUS STOP		
								12 x 18	NO PARKING, BUS STOP, HERE TO CORNER		
(2) C-207	1		1	1-U	-	15	7	30 x 30	RIGHT LANE MUST TURN RIGHT		
								12 x 18	NO PARKING, 2AM - 6AM, NOV 1-MAY 31		
C-208	9		9	1-U	-	12	7	12 x 18	NO STOPPING OR STANDING		
C-209	3		3	2-U	-	13	7	48 x 24	DOUBLE ARROW		
C-210	1		1	1-U	-	15	7	24 x 30	SPEED LIMIT 30		
								12 x 18	NO STOPPING OR STANDING		
C-211	1		1	1-U	-	13	7	24 x 18	BIKE ROUTE		
								12 x 9	UP ARROW		
C-212	1		1	1-U	-	13	7	12 x 24	DTA BUS STOP		
C-213		1	1	1-U	-	16	7	24 x 30	PUBLIC PARKING, LEFT ARROW		
								24 x 30	PUBLIC PARKING, RIGHT ARROW		
C-214		1	1	1-U	-	13	7	12 x 24	DTA BUS STOP		
C-215		1	1	1-U	-	13	7	30 x 30	STOP		
C-216		1	1	1-U	-	12	7	12 x 16	PORT TOWN TROLLEY BOARD HERE		
C-217	1		1	1-U	-	13	7	24 x 18	BIKE ROUTE		
								24 x 12	LEFT ARROW LAKEWALK, CANAL PARK RIGHT ARROW		
								12 x 9	LEFT ARROW		
C-218		1	1	1-U	-	12	7	24 x 12	ARENA, LEFT ARROW		
(5) C-219		1	1	1-O	-	-	7	12 x 24	DTA BUS STOP		
TOTAL		26	7	33							

(3)

SALVAGE SIGN TYPE C (4)	
	S.P. 118-090-020 QUANTITY
TOTAL	5

MARKERS		
TYPE	S.P. 118-090-020	LOCATION
(6) (7) X4-2	1	BELOW SIGN C-6



S & I SIGN PANELS TYPE SPECIAL (SNS)				
SIGN NO.	S.P. 118-090- 020 QUANT.	POSTS		PANEL LEGEND
		NO. & TYPE	LEN. (FT.)	
S-201	1	1-O	10	W Superior St
S-202	1	1-O	12	9th Av W
				W Superior St
S-203	1	1-O	10	20th Ave West
				Lower Michigan St
S-204	1	1-O	10	19th Ave West
				Lower Michigan St
S-205	1	1-O	10	18th Ave West
				Lower Michigan St
S-206	1	1-O	10	W Michigan St
				W Superior St
TOTAL	6			

PAVEMENT MARKING TABULATION				
ITEM	UNIT	S.P. 118-090-020 QUANT.	S.P. 118-090-022 QUANT.	TOTAL QUANT.
PAVEMENT MARKING REMOVAL-PERMANENT	LF	9235		9235
PAVEMENT MESSAGE (LEFT ARROW) - EPOXY	EACH	55		55
4" SOLID LINE WHITE - PAINT	LIN FT	5205	1649	6854
4" SOLID LINE WHITE - EPOXY	LIN FT	7555		7555
24" STOP LINE WHITE - EPOXY	LIN FT	140		140
4" SOLID LINE YELLOW - EPOXY	LIN FT	6030		6030
24" SOLID LINE YELLOW - EPOXY	LIN FT	95		95
4" BROKEN LINE YELLOW - EPOXY	LIN FT	1280		1280
4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	1020		1020
① CROSSWALK MARKING-POLYPREFORM	SQ FT	1080	1495	2575

PAVEMENT MARKING NOTE:

① MARKINGS SHALL BE 3M POLY PREFORM TAPE GROUND-IN OR IN-LAY.

SPECIFIC NOTES:

- (1) MOUNTING HEIGHT IS MINIMUM. SEE MNDOT TRAFFIC ENGINEERING MANUAL (TEM) FIGURE 6.1 FOR TYPICAL MOUNTING..
- (2) MOUNT IN BITUMINOUS. SEE CITY OF DULUTH STANDARD DETAILS FOR TYPICAL INSTALLATION.
- (3) MOUNT BACK TO BACK.
- (4) NOT FOR RE-USE ON THIS PROJECT. SALVAGE TO THE CITY OF DULUTH.
- (5) MOUNT BELOW SNS S-202, ON SNS POST.
- (6) FLOURESCENT YELLOW ON NON-REFLECTORIZED BLACK.
- (7) SEE STANDARD SIGNS MANUAL FOR HAZARD MARKER (X4-2).

GENERAL NOTES:

1. POST LENGTHS ARE APPROXIMATE AND INCLUDE EMBEDMENT, BUT DO NOT INCLUDE ADDITIONAL LENGTH REQUIRED FOR SPLICE.
2. SEE STANDARD SIGN MANUAL FOR PUNCHING CODES AND DETAILED DRAWINGS OF TYPE C SIGNS.
3. SEE MNDOT TRAFFIC ENGINEERING MANUAL (TEM) FIGURES 6.3A-C FOR STRUCTURAL DETAILS.

DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

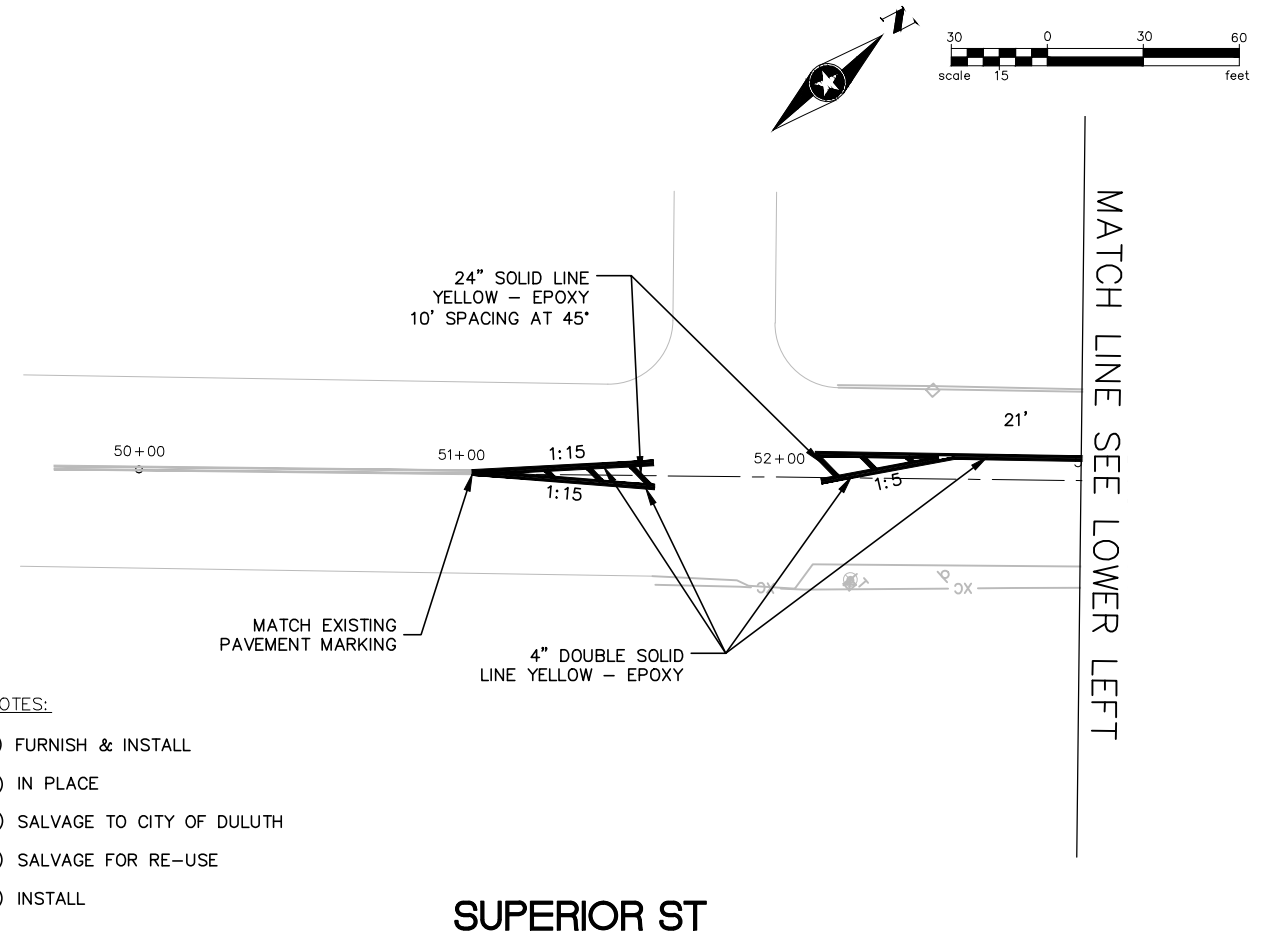
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Michael P. McCurdy, P.E.
Date: 07/19/13 Lic. No. 45902



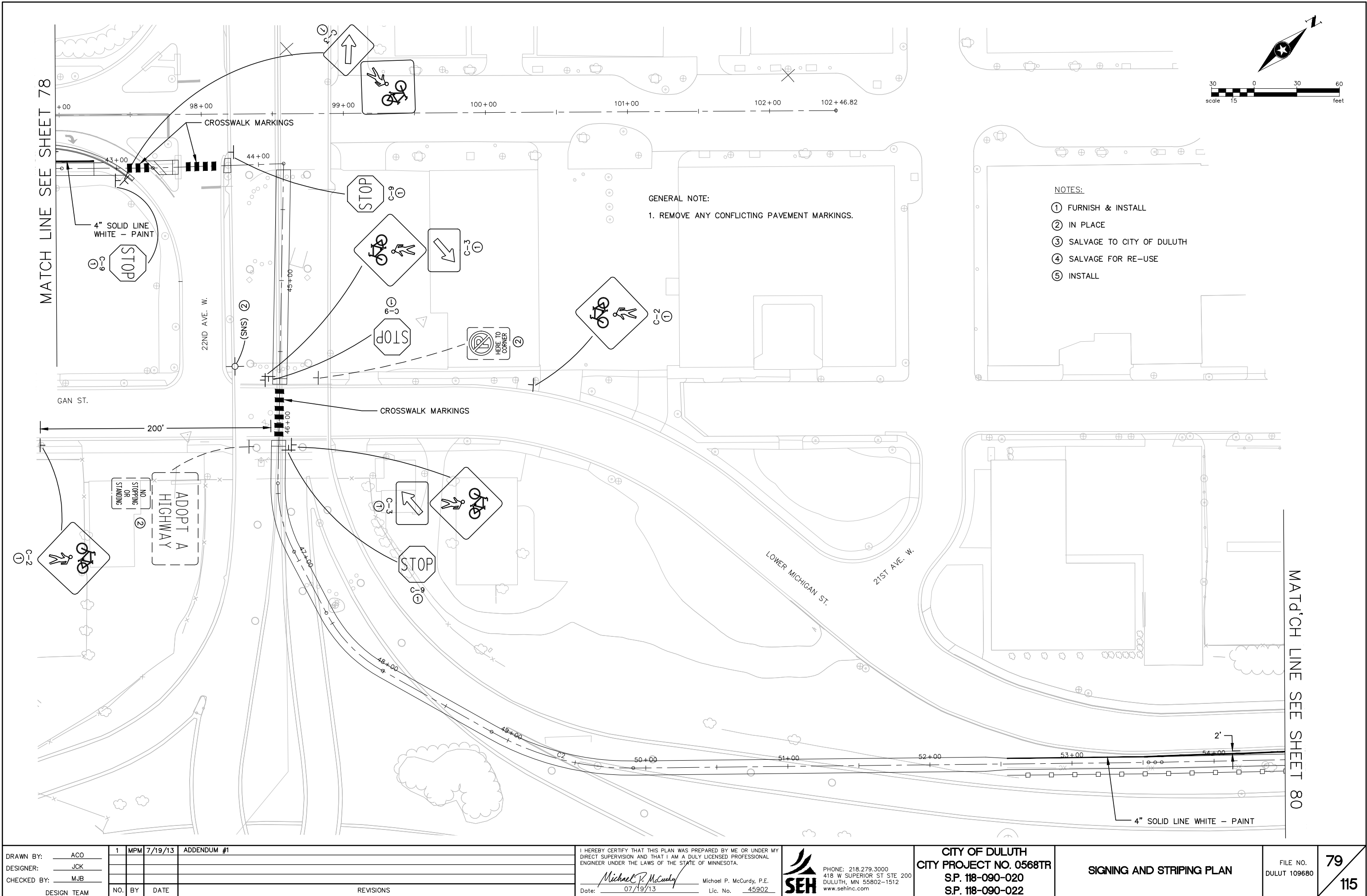
CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

SIGNING AND STRIPING TABULATION		FILE NO. DULUT 109680	75 115
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DRAWN BY: <u>ACO</u>	1	MPM	7/19/13	ADDENDUM #1	I HEREBY CERTIFY THAT THIS PLAN 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.  Michael P. McCurdy, P.E. Date: <u>07/19/13</u> Lic. No. <u>45902</u>	 PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	SIGNING AND STRIPING PLAN	FILE NO. DULUT 109680	76 115
DESIGNER: <u>JCK</u>										
CHECKED BY: <u>MJB</u>										
DESIGN TEAM	NO.	BY	DATE	REVISIONS						

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DRAWN BY: ACO
DESIGNER: JCK
CHECKED BY: MJB
DESIGN TEAM

NO.	BY	DATE	REVISIONS
1	MPM	7/19/13	ADDENDUM #1

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Michael P. McCurdy
Date: 07/19/13
Michael P. McCurdy, P.E.
Lic. No. 45902

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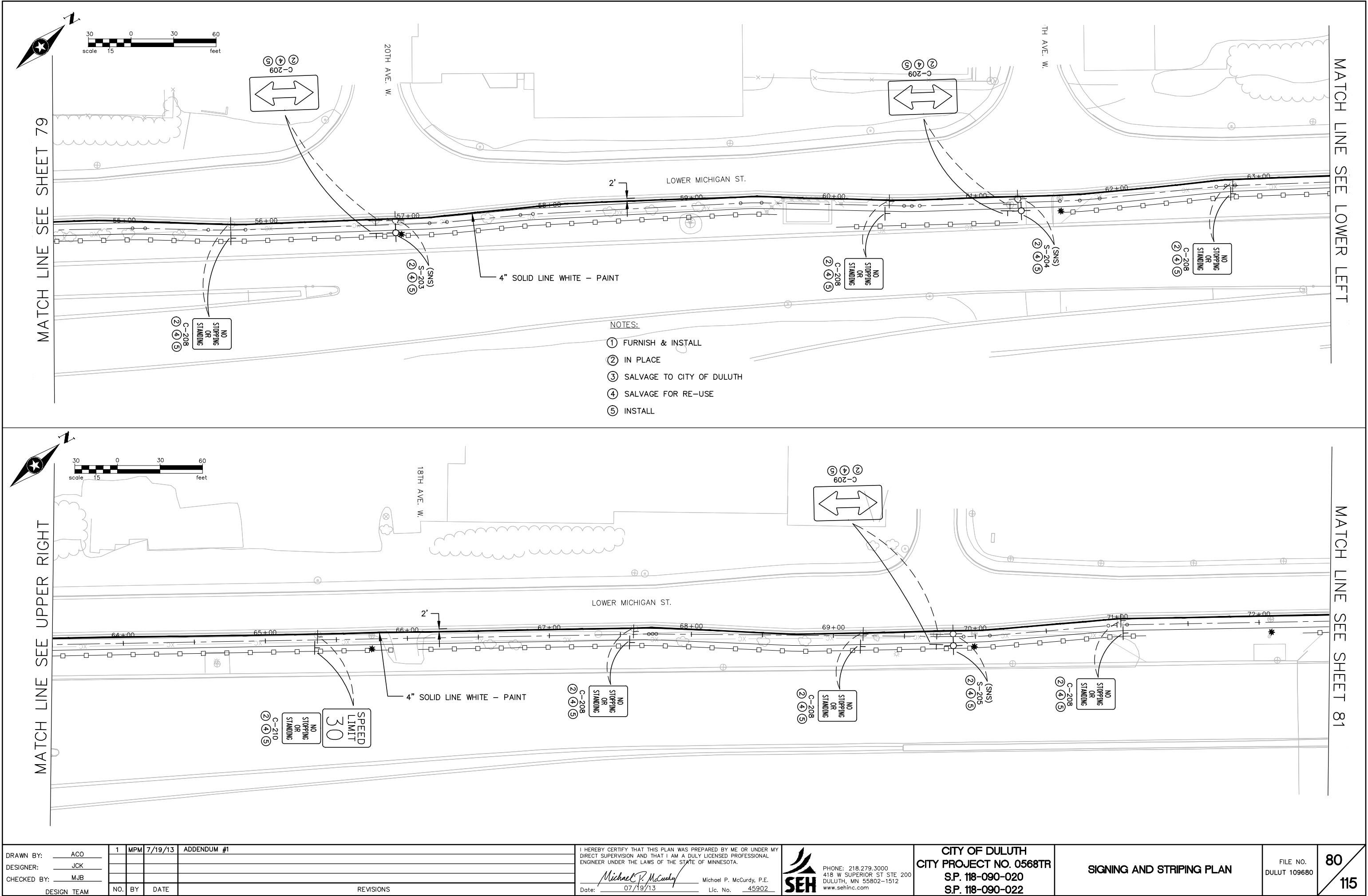
CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

SIGNING AND STRIPING PLAN

FILE NO.
DULUT 109680

79
115

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DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

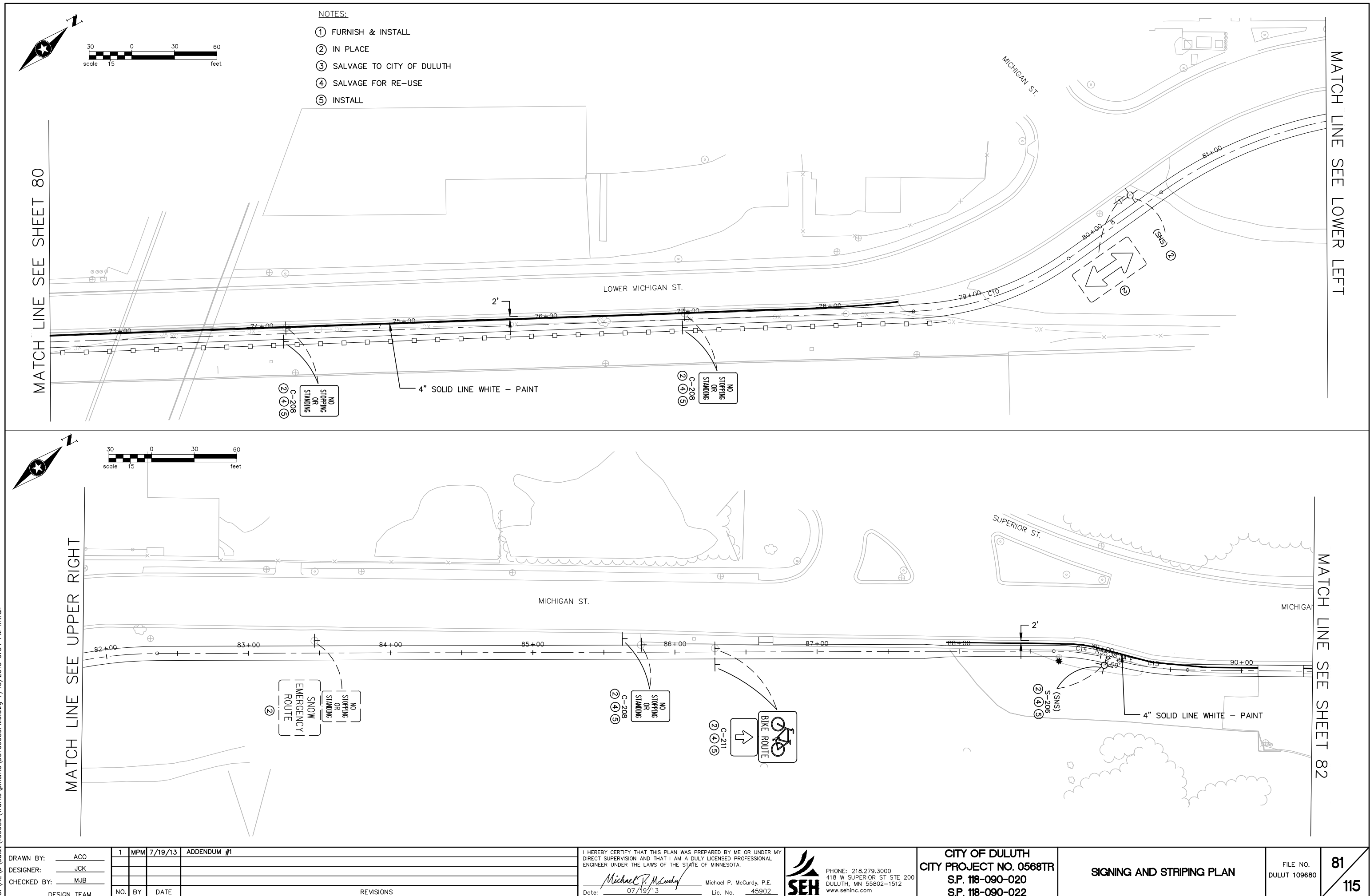
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Michael P. McCurdy
Date: 07/19/13
Michael P. McCurdy, P.E.
Lic. No. 45902



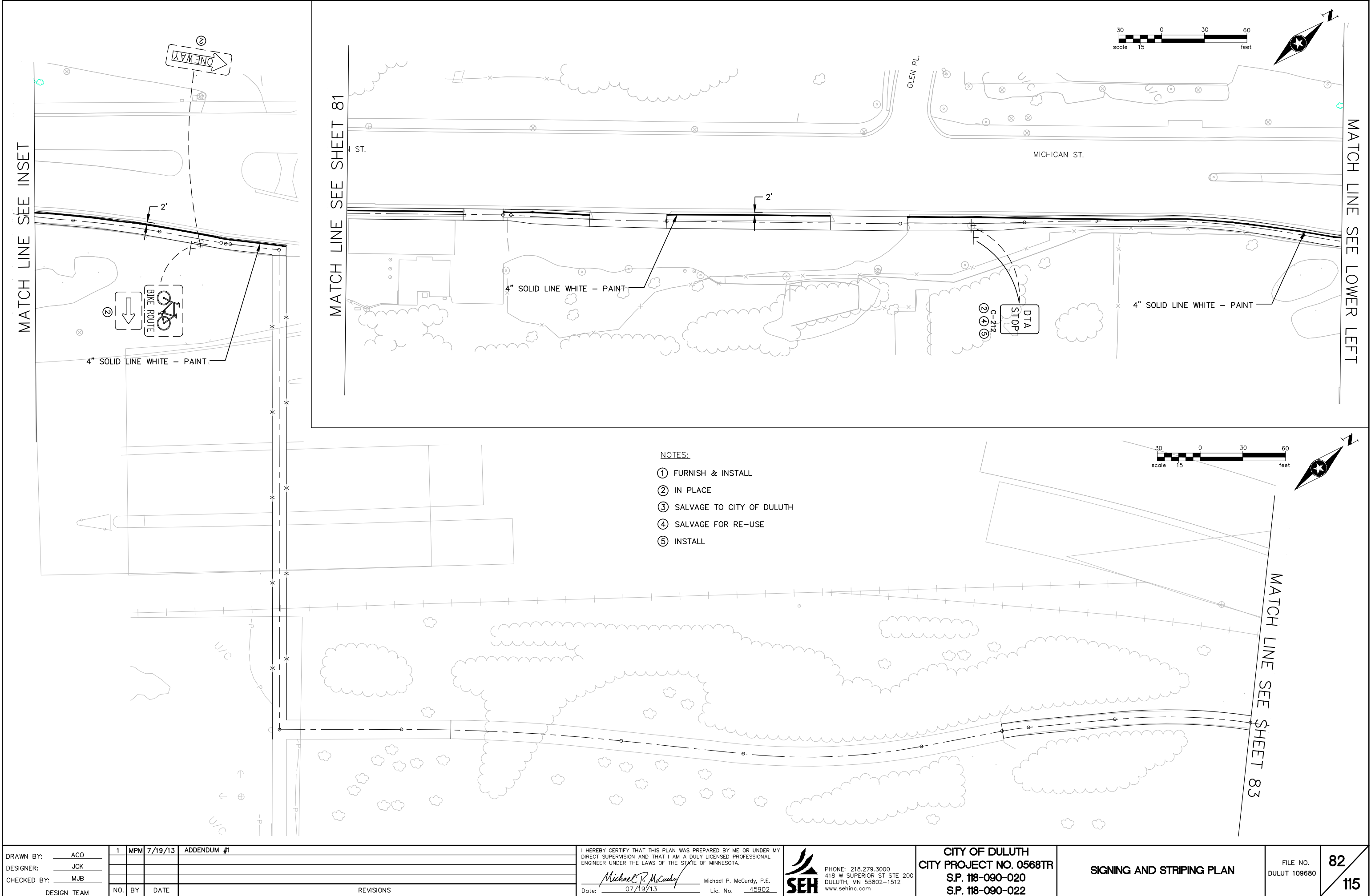
CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

SIGNING AND STRIPING PLAN



DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1	I HEREBY CERTIFY THAT THIS PLAN 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.  Michael P. McCurdy, P.E. Date: 07/19/13 Lic. No. 45902	 PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 SP. 118-090-022	SIGNING AND STRIPING PLAN	FILE NO. DULUT 109680	81 115
DESIGNER: JCK										
CHECKED BY: MJB										
DESIGN TEAM	NO.	BY	DATE	REVISIONS						

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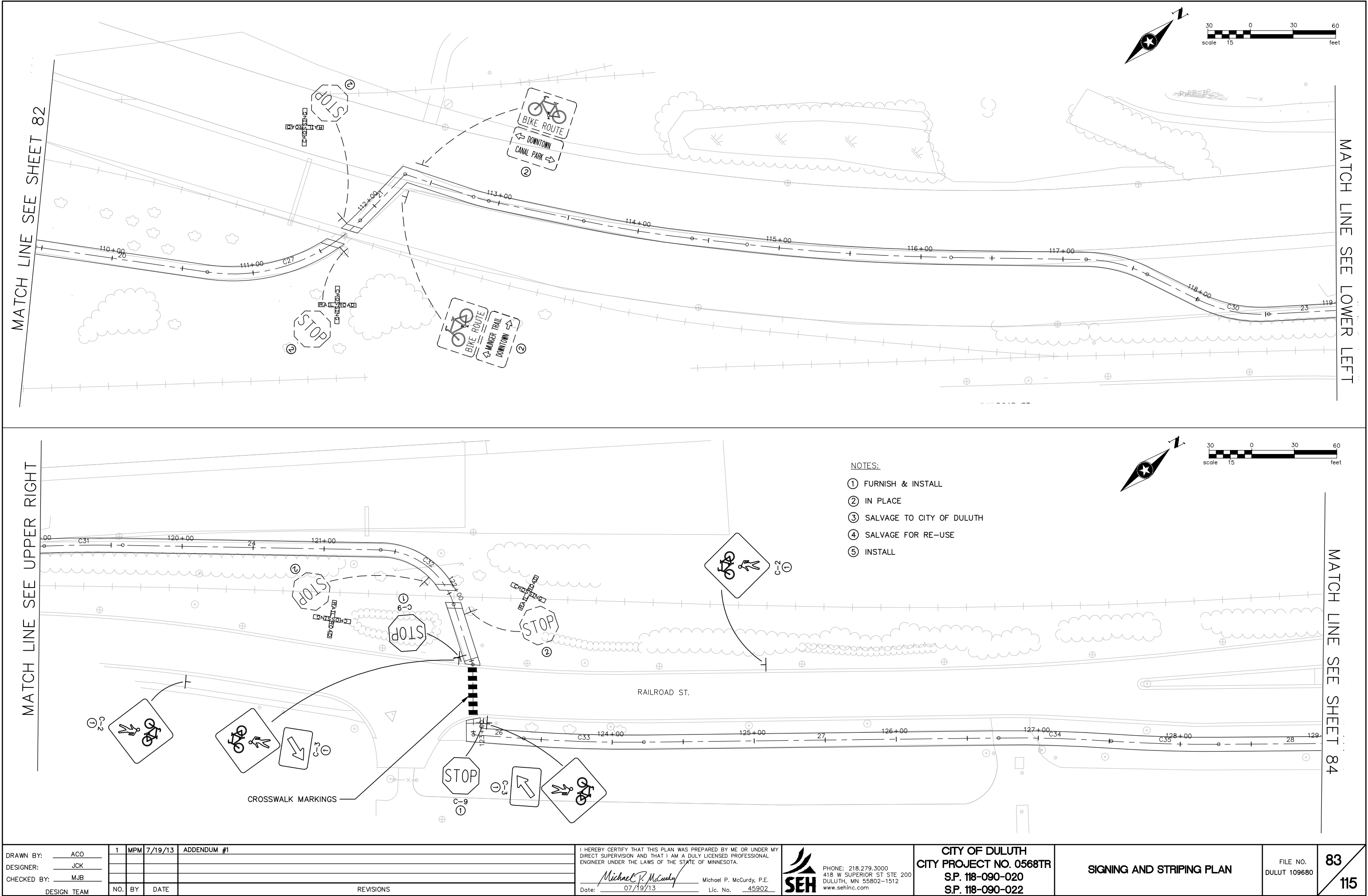
DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1
DESIGNER: JCK				
CHECKED BY: MJB				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

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Michael P. McCurdy
Date: 07/19/13
Michael P. McCurdy, P.E.
Lic. No. 45902

SEH
PHONE: 218.279.3000
418 W SUPERIOR ST STE 200
DULUTH, MN 55802-1512
www.sehinc.com

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DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1
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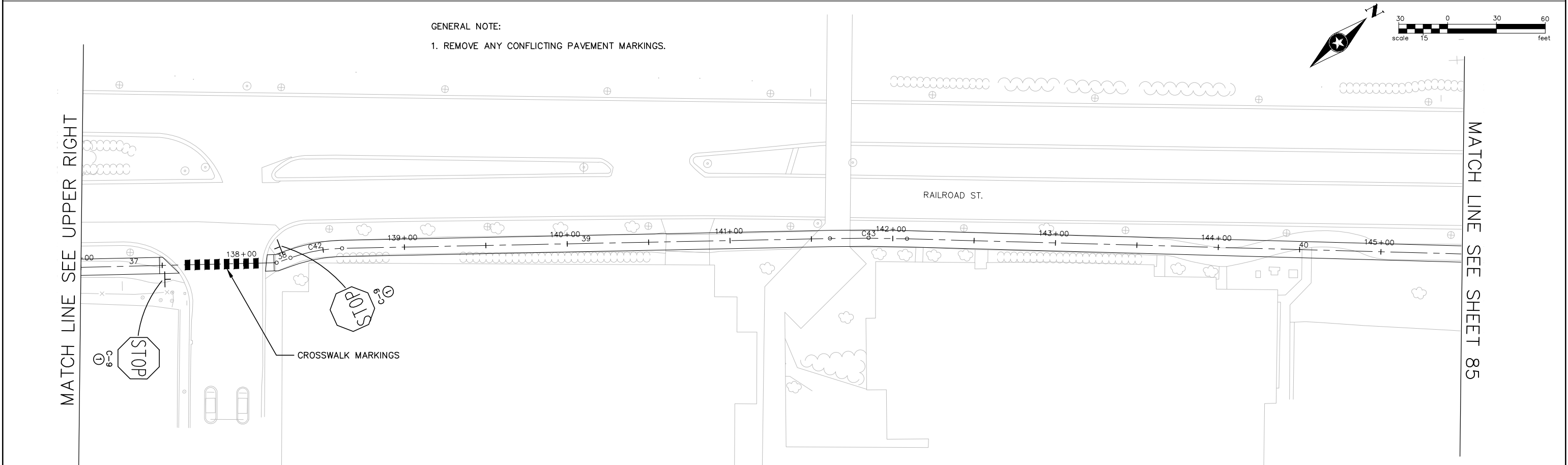
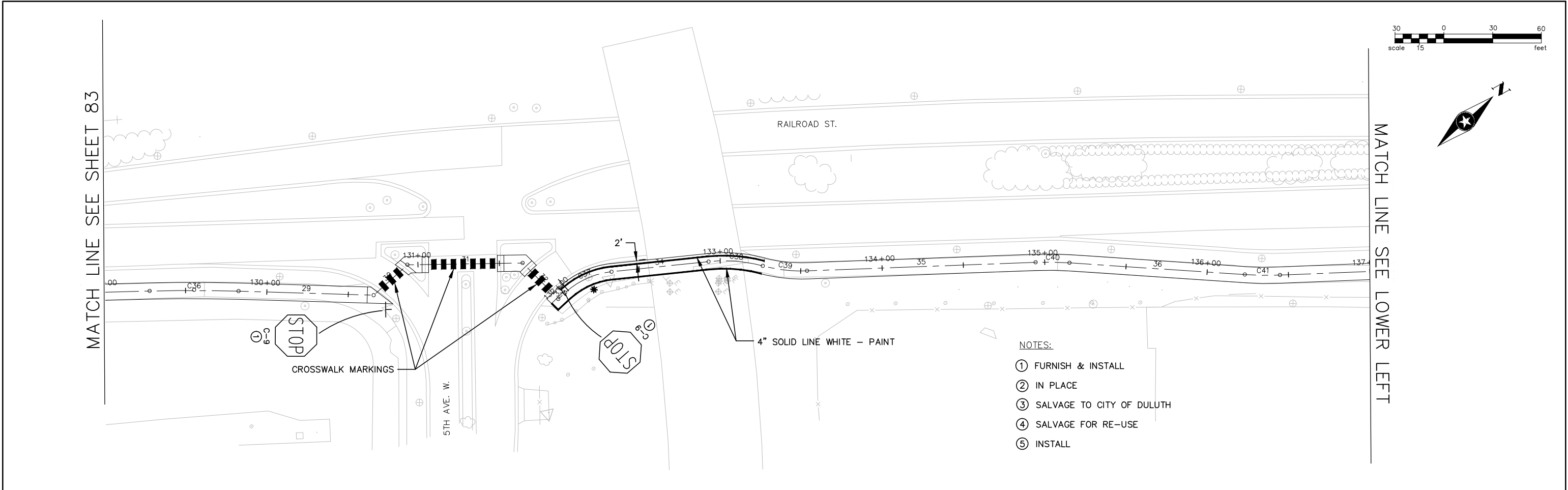
CITY OF DULUTH
CITY PROJECT NO. 0568TR
S.P. 118-090-020
S.P. 118-090-022

SIGNING AND STRIPING PLAN

FILE NO.
DULUT 109680

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115

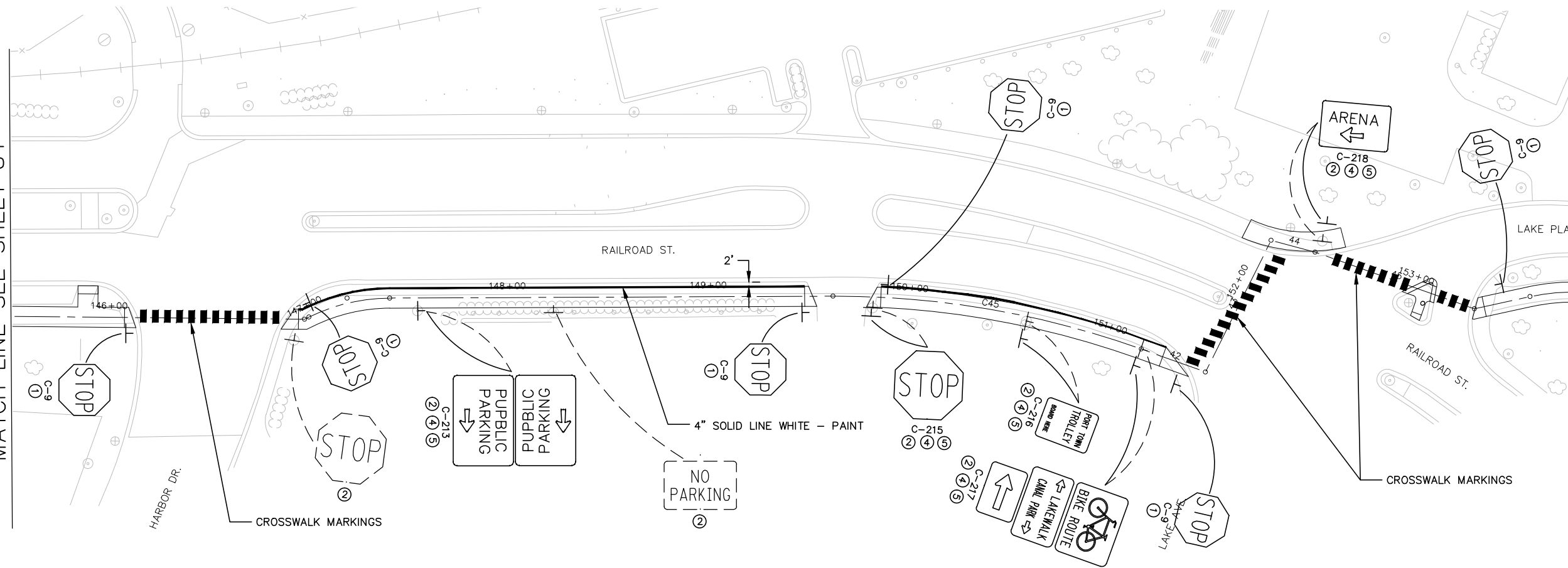
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DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. <i>Michael P. McCurdy</i> Michael P. McCurdy, P.E. Date: 07/19/13 Lic. No. 45902 SEH PHONE: 218.279.3000 418 W SUPERIOR ST STE 200 DULUTH, MN 55802-1512 www.sehinc.com	CITY OF DULUTH CITY PROJECT NO. 0568TR S.P. 118-090-020 S.P. 118-090-022	SIGNING AND STRIPING PLAN	FILE NO. DULUT 109680	84 115
DESIGNER: JCK									
CHECKED BY: MJB									
DESIGN TEAM	NO.	BY	DATE	REVISIONS					

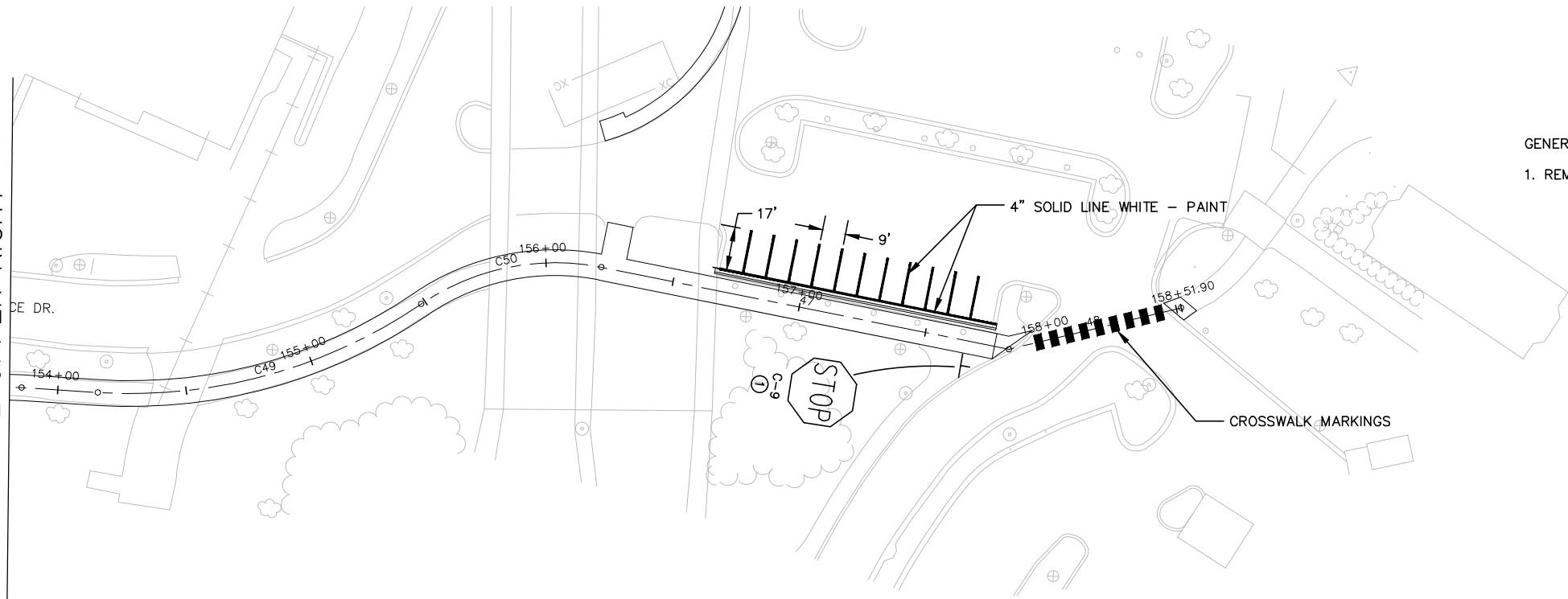
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MATCH LINE SEE SHEET 84



MATCH LINE SEE LOWER LEFT

MATCH LINE SEE UPPER RIGHT



GENERAL NOTE:
1. REMOVE ANY CONFLICTING PAVEMENT MARKINGS.

- NOTES:
- ① FURNISH & INSTALL
 - ② IN PLACE
 - ③ SALVAGE TO CITY OF DULUTH
 - ④ SALVAGE FOR RE-USE
 - ⑤ INSTALL

DRAWN BY: ACO	1	MPM	7/19/13	ADDENDUM #1
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FILE NO.
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115