

						2010 CONSTRUCTION - STAGE 1			2011 CONSTRUCTION - STAGE 2			
						Sta: 23+00.00 TO 71+66.39			STA: 4+43.16 TO 23+00.00			
LINE NO.	NOTE NO.	SCHEDULE LETTER	SPEC. NO.	ITEM DESCRIPTION	UNIT OF MEASURE	PARTICIPATING QUANTITIES	STORM SEWER QUANTITIES	NON-PARTICIPATING QUANTITIES	PARTICIPATING QUANTITIES	STORM SEWER QUANTITIES	NON-PARTICIPATING QUANTITIES	TOTAL QUANTITY
59	16		2504.601	TEMPORARY WATER SERVICE	LUMP SUM	-	-	0.70	-	-	0.30	1.00
60		OO	2504.602	ADJUST VALVE & BOX	EACH	-	-	-	-	-	5.00	5.00
61		Y	2504.602	0.75" TAPPING TEE WITH ELECTROFUSION SADDLE	EACH	-	-	75.00	-	-	2.00	77.00
62		Y	2504.602	1.0" TAPPING TEE WITH ELECTROFUSION SADDLE	EACH	-	-	44.00	-	-	3.00	47.00
63		Y	2504.602	1.25" TAPPING TEE WITH ELECTROFUSION SADDLE	EACH	-	-	-	-	-	3.00	3.00
64		Y	2504.602	0.75" CURB STOP & BOX	EACH	-	-	75.00	-	-	2.00	77.00
65		Y	2504.602	1.0" CURB STOP & BOX	EACH	-	-	44.00	-	-	3.00	47.00
66		Y	2504.602	1.25" CURB STOP & BOX	EACH	-	-	-	-	-	3.00	3.00
67	17	Z	2504.602	HYDRANT	EACH	-	-	12.00	-	-	-	12.00
68		AA	2504.602	6" GAVE VALVE AND BOX	EACH	-	-	1.00	-	-	1.00	2.00
69		AA	2504.602	8" GATE VALVE AND BOX	EACH	-	-	8.00	-	-	3.00	11.00
70		AA	2504.602	10" GATE VALVE AND BOX	EACH	-	-	7.00	-	-	-	7.00
71		AA	2504.602	CONNECT TO EXISTING WATERMAIN	EACH	-	-	8.00	-	-	4.00	12.00
72		Y	2504.602	CONNECT TO EXISTING WATER SERVICE	EACH	-	-	120.00	-	-	8.00	128.00
73		Y	2504.602	MAGNETIZED TRACER BOX	EACH	-	-	119.00	-	-	8.00	127.00
74		Y	2504.603	0.75" HDPE SDR 11 TAP SERVICE PIPE	LIN FT	-	-	2,451.00	-	-	82.00	2,533.00
75		Y	2504.603	1.0" HDPE SDR 11 TAP SERVICE PIPE	LIN FT	-	-	1,477.00	-	-	107.00	1,584.00
76		Y	2504.603	1.25" HDPE SDR 11 TAP SERVICE PIPE	LIN FT	-	-	-	-	-	123.00	123.00
77		AA	2504.603	8" DIPS HDPE WATERMAIN SDR 11	LIN FT	-	-	2,359.40	-	-	748.50	3,107.90
78		AA	2504.603	10" DIPS HDPE WATERMAIN SDR 11	LIN FT	-	-	2,471.80	-	-	-	2,471.80
79		AA	2504.603	8" DIPS DIRECTIONAL DRILL WATERMAIN SDR 11	LIN FT	-	-	380.00	-	-	-	380.00
80		AA	2504.603	10" DIPS DIRECTIONAL DRILL WATERMAIN SDR 11	LIN FT	-	-	100.00	-	-	-	100.00
81		LL	2504.604	3" POLYSTYRENE INSULATION	SQ YD	-	-	10.80	-	-	32.40	43.20
82	18		2504.608	WATERMAIN FITTINGS	POUND	-	-	576.00	-	-	-	576.00
83	19	TT	2505.603	3" HP POLYETHYLENE GAS MAIN	LIN FT	1,735.00	-	-	440.00	-	-	2,175.00
84	19	TT	2505.603	6" HP POLYETHYLENE GAS MAIN	LIN FT	-	-	-	670.00	-	-	670.00
85		W	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 4007C	LIN FT	-	-	200.90	-	-	77.90	278.80
86		V	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN G	LIN FT	-	110.82	-	-	24.00	-	134.82
87		V	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN F	LIN FT	-	229.60	-	-	88.20	-	317.80
88		V	2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4020	LIN FT	-	11.32	-	-	-	-	11.32
89	20	W & V	2506.516	CASTING ASSEMBLY	EACH	-	71.00	19.00	-	24.00	8.00	122.00
90		W	2506.602	MANHOLE FRAME SEAL	EACH	-	-	19.00	-	-	8.00	27.00
91			2506.602	MANHOLE VACUUM TESTING	EACH	-	-	19.00	-	-	8.00	27.00
92		V	2506.602	CONNECT TO EXISTING STORM SEWER	EACH	-	8.00	-	-	5.00	-	13.00
93	21	WW	2511.501	RANDOM RIP RAP CLASS II	CU YD	-	18.00	-	-	15.00	-	33.00
94		BB	2521.501	4" CONCRETE WALK	SQ FT	41,912.00	-	-	16,449.00	-	-	58,361.00
95		BB	2521.501	6" CONCRETE WALK	SQ FT	2,730.00	-	-	-	-	-	2,730.00
96		CC	2521.501	7" CONCRETE WALK	SQ FT	4,229.70	-	-	1,075.50	-	-	5,305.20
97		PP	2531.501	CONCRETE CURB AND GUTTER DESIGN B624	LIN FT	9,958.70	-	-	4,058.30	-	-	14,017.00
98		DD	2531.507	7" CONCRETE DRIVEWAY PAVEMENT	SQ YD	1,235.50	-	-	364.10	-	-	1,599.60
99	22	RR	2531.521	STRUCTURAL CONCRETE	CU YD	7.20	-	-	-	-	-	7.20
100		CC	2531.618	TRUNCATED DOMES	SQ FT	568.00	-	-	128.00	-	-	696.00
101		EE	2540.602	INSTALL MONUMENT BOX	EACH	2.00	-	-	1.00	-	-	3.00
102			2563.601	TRAFFIC CONTROL	LUMP SUM	0.50	0.05	0.05	0.30	0.05	0.05	1.00
103			2563.601	DETOUR SIGNING	LUMP SUM	0.50	0.05	0.05	0.30	0.05	0.05	1.00
104		FF	2564.533	FURNISH SIGN PANELS TYPE C	SQ FT	185.90	-	-	81.20	-	-	267.10
105		FF	2564.536	INSTALL SIGN PANELS TYPE C	EACH	45.00	-	-	20.00	-	-	65.00
106		U	2564.537	INSTALL SIGN TYPE C	EACH	12.00	-	-	5.00	-	-	17.00
107		OQ	2571.502	DECIDUOUS TREE 2.5" CAL B&B	EACH	172.00	-	-	57.00	-	-	229.00
108		VV	2571.602	TREE PRUNING	EACH	22.00	-	-	5.00	-	-	27.00
109		UU	2572.502	CLEAN ROOT CUTTING	LIN FT	590.00	-	-	145.00	-	-	735.00
110		GG	2573.502	SILT FENCE, TYPE HEAVY DUTY	LIN FT	2,405.00	-	-	635.00	-	-	3,040.00
111		NN	2573.530	STORM DRAIN INLET PROTECTION	EACH	59.00	-	-	17.00	-	-	76.00
112		KK	2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EACH	2.00	-	-	2.00	-	-	4.00
113		SS	2573.602	TEMPORARY SEDIMENT TRAP	EACH	1.00	-	-	1.00	-	-	2.00
114		MM	2575.505	SODDING TYPE LAWN	SQ YD	7,580.00	-	-	3,657.00	-	-	11,237.00
115	23		2580.603	INTERIM PAVEMENT MARKING	LIN FT	15,040.00	-	-	7,560.00	-	-	22,600.00
116			2582.501	PAVT MSSG (RT ARROW) POLY PREFORM (GROUND IN)	EACH	1.00	-	-	-	-	-	1.00
117			2582.501	PAVT MSSG (THRU ARROW) POLY PREFORM (GROUND IN)	EACH	1.00	-	-	-	-	-	1.00
118			2582.502	24" STOP LINE WHITE- POLY PREFORM (GROUND IN)	LIN FT	320.00	-	-	120.00	-	-	440.00
119			2582.502	4" SOLID LINE WHITE- EPOXY	LIN FT	7,520.00	-	-	3,780.00	-	-	11,300.00
120			2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	3,760.00	-	-	1,890.00	-	-	5,650.00
121			2582.502	12" SOLID LINE WHITE POLY PREFORM (GROUND IN)	LIN FT	1,280.00	-	-	400.00	-	-	1,680.00

CONSTRUCTION NOTES:

- 16) THERE ARE (2) DIFFERENT PRESSURE ZONES ALONG GLENWOOD STREET. THESE CAN NOT BE CROSS CONNECTED.
17) HYDRANT ITEM INCLUDES "HYDRANT ASSEMBLY" AS DEFINED IN DULUTH'S 2009 STANDARD CONSTRUCTION SPECIFICATIONS.
18) FITTING WEIGHT BASED ON (1) 8"x6" REDUCER, (1) 6"x6" TEE, (2) 6" CAPS, (1) 6"x8" TEE, (1) 6" SLEEVE & (1) 22.5" BEND.
19) ITEM TO BE USED TO LOWER EXISTING GAS MAIN TO MAINTAIN 3' OF COVER.
20) INCLUDES (78) 5005, (14) 5010, (27) 5020 AND (3) 5200 CASTINGS.
21) TO BE PLACED AT PIPE APRON ENDS AND THE INFILTRATION TRENCH INLETS. LOCATIONS SHOWN ON EROSION CONTROL SHEETS.
22) ITEM TO BE USED TO CONSTRUCT CONCRETE STEPS.
23) ITEM BASED ON (2) APPLICATIONS, ONE AFTER SECOND BASE COURSE AND ONE AFTER WEAR COURSE. INCLUDES 4" DOUBLE SOLID YELLOW LINE.

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


SIGNATURE

DAVID G. BOLF
PRINTED NAME

DATE 4/9/26	2			
REG. NO.	NO	DATE	REVISION	BY

STATEMENT OF ESTIMATED QUANTITIES
GLENWOOD STREET

4				
5				
6				
NO	DATE	REVISION	BY	JOB NO.

SHEET NO. 3R OF 196

E1871
DATE MAR. 2010

S.P.118-162-013

ENGINEERS SURVEYORS PLANNERS

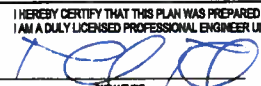
SALO ENGINEERING, INC.
4560 Norway Pines Place • Duluth, Minnesota 55811 • 218/727-8796

						2010 CONSTRUCTION - STAGE 1			2011 CONSTRUCTION - STAGE 2			
						Sta: 23+00.00 TO 71+86.39			STA: 4+43.16 TO 23+00.00			
LINE NO.	NOTE NO.	SCHEDULE LETTER	SPEC. NO.	ITEM DESCRIPTION	UNIT OF MEASURE	PARTICIPATING QUANTITIES	STORM SEWER QUANTITIES	NON-PARTICIPATING QUANTITIES	PARTICIPATING QUANTITIES	STORM SEWER QUANTITIES	NON-PARTICIPATING QUANTITIES	TOTAL QUANTITY
1			2013.601	SURVEY EQUIPMENT	LUMP SUM	-	-	0.74	-	-	0.26	1.00
2			2021.501	MOBILIZATION	LUMP SUM	0.50	0.05	0.05	0.30	0.05	0.05	1.00
3		B	2101.502	CLEARING	TREE	69.00	-	-	14.00	-	-	83.00
4		B	2101.507	GRUBBING	TREE	69.00	-	-	14.00	-	-	83.00
5		A	2101.511	CLEARING AND GRUBBING	LUMP SUM	0.70	-	-	0.30	-	-	1.00
6	1	C	2104.501	REMOVE CURB AND GUTTER	LIN FT	9,814.00	-	-	4,005.00	-	-	13,819.00
7	2	D	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	-	2,884.00	-	-	1,929.00	-	4,813.00
8	3	E	2104.501	REMOVE SEWER PIPE (SANITARY)	LIN FT	-	-	1,285.00	-	-	1,035.00	2,320.00
9	4	F	2104.501	REMOVE WATERMAIN	LIN FT	-	-	408.30	-	-	50.00	458.30
10		G	2104.501	REMOVE FENCE	LIN FT	154.00	-	-	22.00	-	-	176.00
11			2104.501	REMOVE GASMAIN	LIN FT	-	-	540.00	-	-	345.00	885.00
12		H	2104.501	REMOVE CONCRETE STEPS	CU YD	5.90	-	-	-	-	-	5.90
13		I	2104.503	REMOVE CONCRETE SIDEWALK	SQ FT	32,994.00	-	-	3,318.00	-	-	36,312.00
14		J	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	19,397.00	-	-	9,953.00	-	-	29,350.00
15		L	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	277.00	-	-	110.50	-	-	387.50
16		K	2104.505	REMOVE CONCRETE PAVEMENT	SQ YD	19,251.00	-	-	4,057.00	-	-	23,308.00
17		L	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	662.60	-	-	140.60	-	-	803.20
18		M	2104.509	REMOVE HYDRANT	EACH	-	-	5.00	-	-	-	5.00
19		N	2104.509	REMOVE GATE VALVE & BOX	EACH	-	-	12.00	-	-	-	12.00
20		P	2104.509	REMOVE CATCH BASIN	EACH	-	43.00	-	-	12.00	-	55.00
21		O	2104.509	REMOVE MANHOLE	EACH	-	15.00	16.00	-	8.00	5.00	44.00
22		Q	2104.509	REMOVE CURB STOP & BOX	EACH	-	-	126.00	-	-	8.00	134.00
23		R	2104.509	REMOVE SIGN	EACH	33.00	-	-	12.00	-	-	45.00
24		S	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	1,457.80	-	-	209.40	-	-	1,667.20
25		T	2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	1,138.30	-	-	346.60	-	-	1,484.90
26	5	O, P	2104.523	SALVAGE CASTING	EACH	-	58.00	16.00	-	20.00	5.00	99.00
27	6	U	2104.523	SALVAGE SIGN	EACH	12.00	-	-	5.00	-	-	17.00
28		F	2104.603	ABANDON WATER MAIN	LIN FT	-	-	3,410.00	-	-	363.00	3,773.00
29			2105.501	COMMON EXCAVATION (P)	CU YD	22,778.00	-	-	11,053.00	-	-	33,831.00
30			2105.522	SELECT GRANULAR BORROW MOD 7% (CV)	CU YD	13,718.00	-	-	5,823.00	-	-	19,541.00
31			2105.604	GEOTEXTILE FABRIC TYPE V	SQ YD	24,688.00	-	-	10,693.00	-	-	35,381.00
32	7	DD	2211.502	AGGREGATE BASE (LV) CLASS 5	CU YD	1,500.00	-	-	500.00	-	-	2,000.00
33			2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	CU YD	5,486.00	-	-	2,376.00	-	-	7,862.00
34			2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)	TON	2,466.00	-	-	1,081.00	-	-	3,547.00
35			2360.502	TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,C)	TON	5,711.00	-	-	2,422.00	-	-	8,133.00
36	8	DD	2360.505	TYPE SP 9.5 BITUMINOUS MIXTURE FOR PATCHING	TON	109.20	-	-	34.70	-	-	143.90
37	9		2451.503	GRANULAR BACKFILL (CV)	CU YD	-	-	2,000.00	-	-	500.00	2,500.00
38	10		2451.511	COARSE FILTER AGGREGATE (CV)	CU YD	-	-	300.00	-	-	200.00	500.00
39		V	2501.515	12" RC PIPE APRON	EACH	-	1.00	-	-	2.00	-	3.00
40		V	2501.515	15" RC PIPE APRON	EACH	-	1.00	-	-	1.00	-	2.00
41	11	JJ	2502.521	10" PVC PIPE DRAIN	LIN FT	-	1,191.70	-	-	622.70	-	1,814.40
42			2502.541	4" PERFORATED PVC PIPE DRAIN	LIN FT	9,552.00	-	-	3,894.00	-	-	13,446.00
43		XX	2502.541	8" PERFORATED PVC PIPE DRAIN	LIN FT	-	380.00	-	-	-	-	380.00
44	12	JJ	2502.602	10" PVC PIPE DRAIN CLEANOUT	EACH	-	20.00	-	-	8.00	-	28.00
45		JJ	2502.602	YARD DRAIN	EACH	-	16.00	-	-	8.00	-	24.00
46		W	2503.511	8" PVC PIPE SEWER SDR 35	LIN FT	-	-	4,513.00	-	-	1,905.90	6,418.90
47		W	2503.511	12" PVC PIPE SEWER SDR 35	LIN FT	-	-	225.30	-	-	53.60	278.90
48		W	2503.511	15" PVC PIPE SEWER SDR 35	LIN FT	-	-	105.40	-	-	-	105.40
49	13	X	2503.511	6" PVC PIPE SEWER SERVICE SDR 35	LIN FT	-	-	4,720.00	-	-	923.00	5,643.00
50		V	2503.541	12" RC SEWER PIPE DESIGN 3006, CLASS III	LIN FT	-	3,757.10	-	-	1,079.90	-	4,837.00
51		V	2503.541	15" RC SEWER PIPE DESIGN 3006, CLASS III	LIN FT	-	968.50	-	-	43.90	-	1,012.40
52		V	2503.541	18" RC SEWER PIPE DESIGN 3006, CLASS III	LIN FT	-	132.20	-	-	95.10	-	227.30
53		V	2503.541	24" RC SEWER PIPE DESIGN 3006, CLASS III	LIN FT	-	-	-	-	626.20	-	626.20
54	14	X	2503.602	CONNECT TO EXISTING SANITARY SEWER SERVICE	EACH	-	-	122.00	-	-	29.00	151.00
55	15	W	2503.602	CONNECT TO EXISTING SANITARY SEWER	EACH	-	-	6.00	-	-	2.00	8.00
56		X	2503.602	MAGNETIZED TRACER BOX	EACH	-	-	122.00	-	-	29.00	151.00
57		X	2503.602	8" X 6" PVC WYE SDR 35	EACH	-	-	122.00	-	-	29.00	151.00
58		W	2503.603	CONSTRUCT 8" INSIDE DROP	LIN FT	-	-	4.00	-	-	-	4.00

CONSTRUCTION NOTES:

- 1) REMOVE ALL CURB AND GUTTER WITHIN CONSTRUCTION LIMITS.
- 2) ALL EXISTING STORM SEWER IS RC PIPE.
- 3) THIS ITEM TO BE USED WHEN NEW PIPE IS IN A DIFFERENT ALIGNMENT THAN EXISTING. WHERE PIPE IS IN THE SAME TRENCH AS EXISTING, REMOVAL WILL BE CONSIDERED INCIDENTAL.
- 4) THIS ITEM TO BE USED WHEN NEW WATER MAIN IS IN A DIFFERENT ALIGNMENT THAN EXISTING. WHERE PIPE IS IN THE SAME TRENCH AS EXISTING, REMOVAL OF WATER MAIN, GATE VALVE & BOX, AND ABANDONED 4" STEEL GAS WILL BE CONSIDERED INCIDENTAL.
- 5) CONTRACTOR TO SALVAGE CASTING AND DELIVER TO THE CITY OF DULUTH'S COMFORT SYSTEMS YARD.
- 6) CONTRACTOR SHALL SALVAGE, STORE AND REINSTALL SIGNS.
- 7) ITEM TO BE USED FOR TEMPORARY ACCESS TO DRIVEWAYS AND SCHOOL ENTRANCE. ALSO INCLUDED IS 23 CY FOR GRAVEL DRIVEWAY RESTORATION.

- 8) ITEM TO BE USED FOR BITUMINOUS DRIVEWAY RESTORATION. INCLUDES EXCAVATION, 12" OF CLASS 5 AND 2" OF BITUMINOUS.
- 9) ITEM TO BE USED IN SANITARY AND WATER MAIN TRENCHES WHERE NATIVE SOIL IS NOT SUITABLE FOR BACKFILL. ITEM WILL BE DIRECTED BY THE ENGINEER AS TRENCH CONDITIONS WARRANT.
- 10) ITEM TO BE USED FOR BEDDING PIPE OR STRUCTURES IN A WET TRENCH BELOW THE 6" BEDDING MATERIAL.
- 11) EACH 10" CLEANOUT INCLUDES 10"x10" TEE, 4' OF 10" PVC RISER PIPE AND 10" PVC CAP.
- 12) ITEM TO BE INSTALLED ON THE 10" PVC PIPE DRAIN BEHIND SIDEWALKS. INCLUDES (24) 10"x4" WYES, (24) 4' PIECES OF 4" PVC AND (24) 4" PVC CAPS.
- 13) ITEM INCLUDES REMOVAL OF EXISTING SERVICE PIPE FROM MAIN TO ROW.
- 14) ITEM WILL BE USED TO CONNECT NEW 6" PVC SERVICE TO EXISTING CLAY OR PVC SANITARY SEWER SERVICES.
- 15) ITEM TO BE USED TO CONNECT NEW SANITARY SEWER MH's TO EXISTING SANITARY SEWER MAINS.

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.		5/2/10				
	DATE	2				
	40826	3				
	REG. NO.	NO	DATE	REVISION	BY	
DAVID G. BOLF						
PRINTED NAME						

STATEMENT OF ESTIMATED QUANTITIES GLENWOOD STREET

4					
5					
6					
NO	DATE	REVISION	BY	JOB NO.	DATE
				E1871	MAR. 2010

SHEET NO. 2R OF 196

S.P.	118-162-013
ENGINEERS	SURVEYORS
PLANNERS	
SALO ENGINEERING, INC.	
4568 Norway Pines Place - Duluth, Minnesota 55811 - 218/727-8796	