

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, AGG. BASE, BITUMINOUS SURFACING, DRAINAGE, CURB & GUTTER AND SIGNAL SYSTEM

LOCATED ON C.S.A.H. 11 BETWEEN 117TH AVE NW AND BITTERSWEET ST NW

LOCATED ON C.S.A.H. 18 BETWEEN BURLINGTON NORTHERN RR AND 117TH LN NW

STATE PROJ. NO. 002-611-033

STATE PROJ. NO. 002-618-031

C.S.A.H. 11

C.S.A.H. 18

GROSS LENGTH	1248.07 FEET	0.236 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	1248.07 FEET	0.236 MILES

GROSS LENGTH	1252.84 FEET	0.237 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	1252.84 FEET	0.237 MILES

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

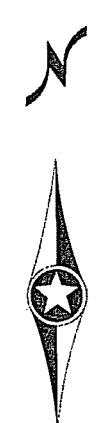
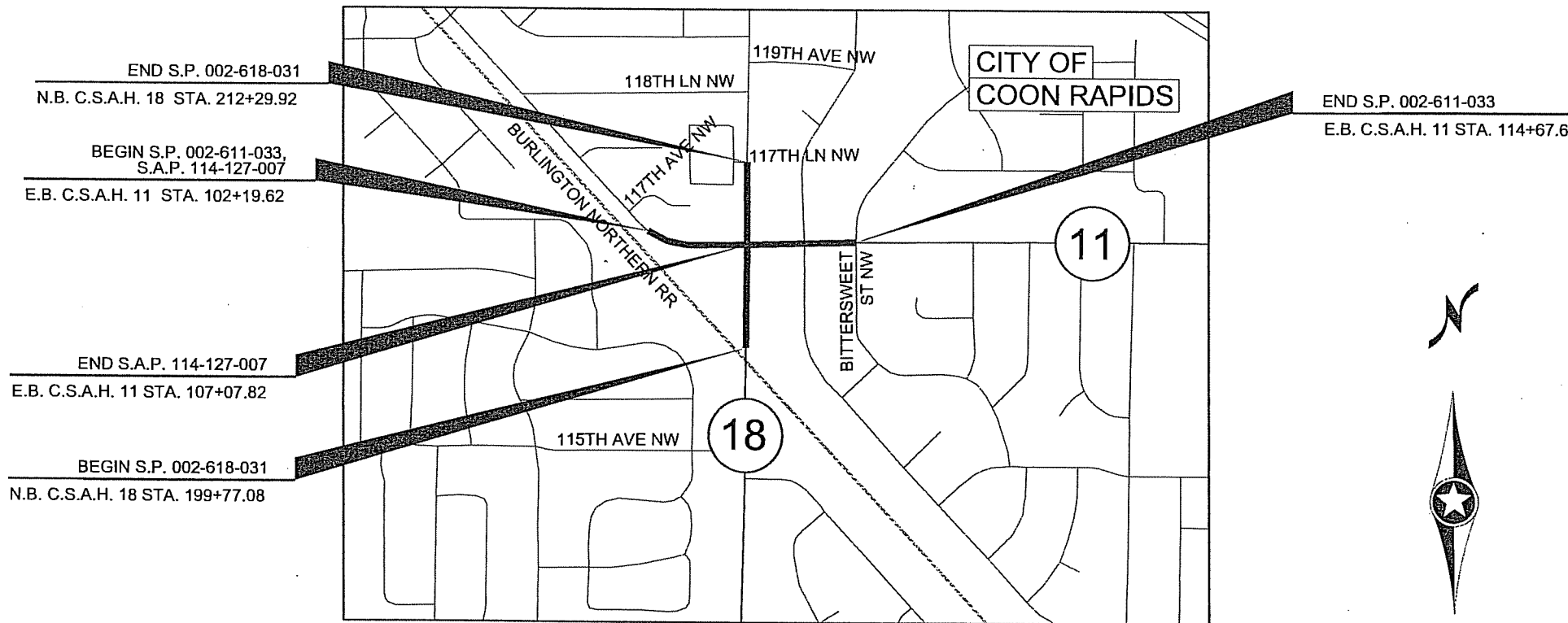
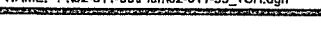
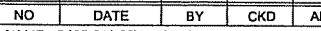
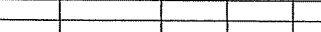
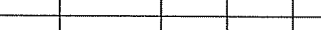
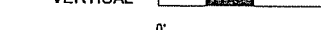
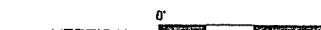
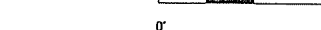
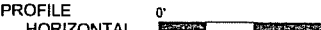
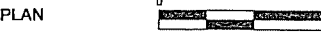
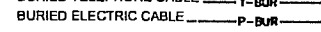
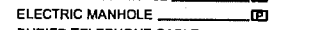
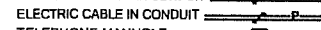
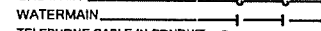
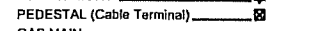
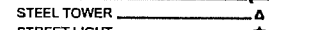
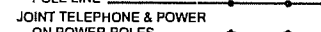
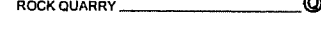
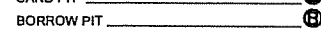
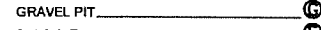
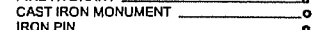
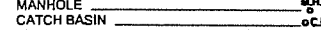
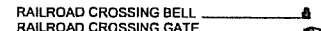
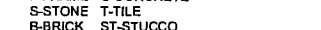
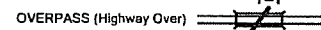
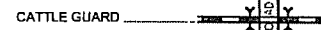
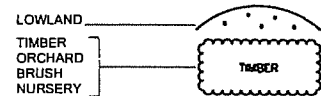
INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3 - 4	STATEMENT OF ESTIMATED QUANTITIES
5	SOILS AND CONSTRUCTION NOTES
6	STANDARD PLATES & BASIS OF QUANTITIES
7 - 8	TABULATIONS
9	EARTHWORK TABULATION AND SUMMARY
10 - 12	INPLACE UTILITY TABULATIONS AND PLANS
13 - 14	TYPICAL SECTIONS
15	EXISTING SIGNING & STRIPING
16	SIGN REMOVAL TAB
17 - 21	PEDESTRIAN CURB RAMP DETAILS
22 - 29	STAGING PLAN
30 - 36	TRAFFIC CONTROL PLAN & STAGING SIGN QUANTITIES
37 - 38	ALIGNMENT TABULATION AND PLAN
39 - 40	INPLACE TOPOGRAPHY AND REMOVAL PLAN
41 - 46	CONSTRUCTION AND DRAINAGE PLAN & TABULATION
47	INTERSECTION DETAILS
48 - 49	SWPPP NARRATIVE
50 - 51	EROSION CONTROL AND TURF ESTABLISHMENT PLAN
52 - 55	EROSION CONTROL DETAILS
56 - 63	SIGNING & STRIPING PLAN, TAB, & DETAILS
64 - 74	TRAFFIC SIGNAL PLANS
75 - 98	CROSS SECTIONS

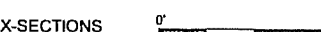
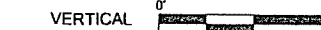
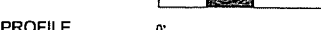
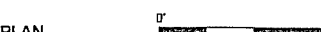
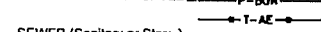
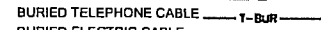
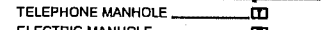
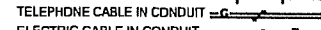
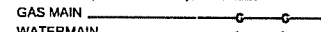
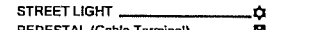
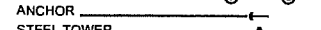
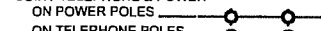
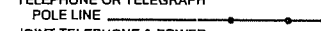
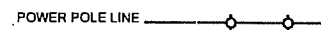
THIS PLAN CONTAINS 98 SHEETS

PLAN SYMBOLS

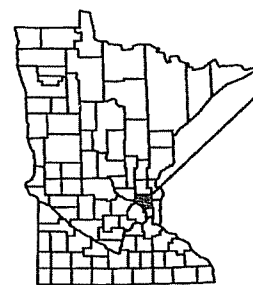
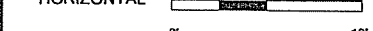
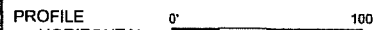
- COUNTY LINE _____
- TOWNSHIP OR RANGE LINE _____
- SECTION LINE _____
- QUARTER LINE _____
- SIXTEENTH LINE _____
- RIGHT OF WAY LINE _____
- SLOPE EASEMENT _____
- EXISTING RIGHT OF WAY _____
- PROPERTY LINE _____
- CORPORATE OR CITY LIMITS _____
- RETAINING WALL _____
- RAILROAD _____
- RAILROAD RIGHT OF WAY _____
- RIVER OR CREEK _____
- DRAINAGE DITCH _____
- CULVERT _____
- DROP INLET _____
- GUARD RAIL _____
- BARBED WIRE FENCE _____
- WOVEN WIRE FENCE _____
- CHAIN LINK FENCE _____
- WOOD FENCE _____
- STONE WALL OR FENCE _____
- HEDGE _____



UTILITY SYMBOLS

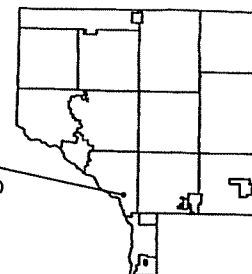


SCALES



PROJECT LOCATION

CITY OF COON RAPIDS
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 9,16
TOWNSHIP 31 NORTH
RANGE 24 WEST



DESIGN DESIGNATION

ESAL 20	1222888 (11), 598775 (18)
R VALUE	45
ADT (2013) =	10714 (11), 5246 (18)
Proj. ADT (2033) =	16071 (11), 7869 (18)
Proj. HCADT (2033) =	627 (11), 307 (18)
Soil Factor	NA
10 TON DESIGN	

Functional Classification MAJOR COLLECTOR
 No. of Traffic Lanes 2 No. of Parking Lanes 0
 Design Speed 35 MPH
 Based on Stopping Sight Distance N/A
 Height of eye 3.5' Height of object 2.0'
 Design Speed not achieved at:
 STA. _____ TO STA. _____ MPH _____

Approved 5/16/2013
ANOKA COUNTY ENGINEER

Approved 5/16/2013
CITY OF COON RAPIDS

6/18/2013
DISTRICT STATE AID ENGINEER

6/18/2013
STATE AID ENGINEER

Approved for State Aid AND FEDERAL AID FUNDING

NO	DATE	BY	CKD	APPR	REVISION

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.
 PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: DATE: 5-16-13 LICENSE NO. 24755

DRAWN BY DF DATE 03-14-13
 DESIGN BY DF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13




ANOKA COUNTY
HIGHWAY DEPT.

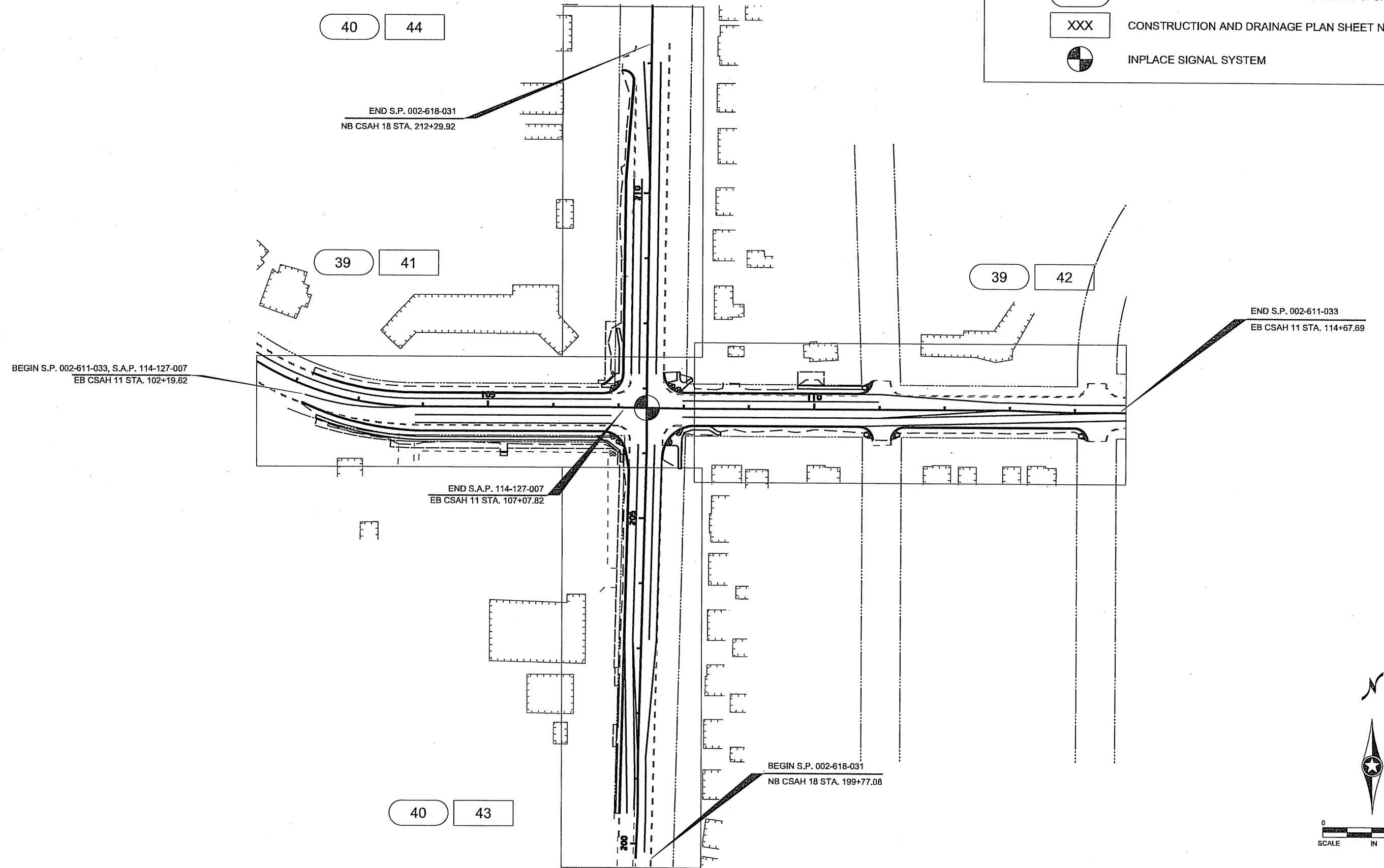
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

TITLE SHEET

Sheet 1 of 98 Sheets

LEGEND

- XXX INPLACE TOPOGRAPHY AND REMOVAL PLAN SHEET NUMBER
- XXX CONSTRUCTION AND DRAINAGE PLAN SHEET NUMBER
-  INPLACE SIGNAL SYSTEM



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_GL1.dgn 05/09/2013 12:20:48 PM

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.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

GENERAL LAYOUT

Sheet 2 of 98 Sheets

TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING			
					ANOKA COUNTY SP 002-611-033 ROADWAY QUANTITIES ESTIMATED	ANOKA COUNTY SP 002-618-031 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS SP 114-020-048 ROADWAY QUANTITIES ESTIMATED	SP 002-611-033 DRAINAGE QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1	0.446	0.279	.275	
A	2101.502	CLEARING	TREE	8	7	1		
A	2101.507	GRUBBING	TREE	8	7	1		
M	2102.502	PAVEMENT MARKING REMOVAL	LIN FT	9610	5400	4210		
M	2102.603	PAVEMENT MARKING REMOVAL-SPECIAL	LIN FT	360	151	209		
C/(1)	2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	648	279	369		
B/(1)	2104.501	REMOVE CURB AND GUTTER	LIN FT	3157	2141	1016		
B/(1)	2104.503	REMOVE CONCRETE WALK	SQ FT	5406	5055	351		
B/(1)	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	2248	1282	966		
B/(1)	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	175	87	88		
B/(1)	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	200	167	33		
B/(1)	2104.509	REMOVE CONCRETE FLUME	EACH	1	1			
C/(1)	2104.509	REMOVE DRAINAGE STRUCTURE	EACH	12	8	4		
	2104.509	REMOVE SIGN TYPE C	EACH	24	16	8		
B/(1)	2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	55	50	5		
B/(1)	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	2977	1909	1068		
K	2104.523	SALVAGE SIGN TYPE C	EACH	6	4	2		
K	2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	4	4			
	2105.501	COMMON EXCAVATION (EV)(P)	CU YD	2349	1245	1104		
	2105.507	SUBGRADE EXCAVATION (EV)(P)	CU YD	1390	689	701		
	2105.522	SELECT GRANULAR BORROW (LV)	CU YD	1786	1075	711		
	2123.509	DOZER	HOUR	10	5	5		
	2130.501	WATER	M GALLONS	100	50	50		
E,N	2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	CU YD	432	182	250		
B/(1)	2232.501	MILL BITUMINOUS SURFACE (2.0")	SQ YD	8900	3921	4979		
B/(1)	2331.604	BITUMINOUS PAVEMENT RECLAMATION	SQ YD	2237	2237			
E	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1004	605	399		
N	2360.501	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	24	24			
E	2360.501	TYPE SP 12.5 WEARING COURSE MIX (3,F)	TON	2307	1390	917		
E	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON	645	473	172		
(5)	2502.602	CONNECT TO EXISTING STRUCTURE	EACH	3	1.4	0.8	0.8	
I	2503.541	12" RC PIPE SEWER DES 3006	LIN FT	10				10
I	2503.541	15" RC PIPE SEWER DES 3006	LIN FT	1003				1003
I	2503.541	18" RC PIPE SEWER DES 3006	LIN FT	44				44
I	2503.541	21" RC PIPE SEWER DES 3006	LIN FT	57				57
I	2503.541	24" RC PIPE SEWER DES 3006	LIN FT	233				233
I	2503.541	27" RC PIPE SEWER DES 3006	LIN FT	123				123
I	2503.602	CONNECT TO EXISTING STORM SEWER	EACH	3				3
BB	2504.602	ADJUST GATE VALVE	EACH	1	1			
I	2506.501	CONST. DRAINAGE STRUCTURE DESIGN G	LIN FT	24.3				24.3
I	2506.501	CONST. DRAINAGE STRUCTURE DESIGN H	LIN FT	18.3				18.3
I	2506.501	CONST. DRAINAGE STRUCTURE DES 48-4020	LIN FT	17.9				17.9
I	2506.501	CONST. DRAINAGE STRUCTURE DES 60-4020	LIN FT	9.9				9.9
I	2506.501	CONST. DRAINAGE STRUCTURE DES 72-4020	LIN FT	12.4				12.4
I	2506.516	CASTING ASSEMBLY	EACH	20				20
CC	2506.522	ADJUST FRAME & RING CASTING	EACH	1	1			
D	2521.501	4" CONCRETE WALK	SQ FT	4870	3544	1326		
D	2521.501	6" CONCRETE WALK	SQ FT	1735	1315	420		
D	2531.501	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	3106	1048	505	1553	
N	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	160	71	89		

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_SEQ.dgn					
05/09/2013 12:20:55 PM					

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.

PRINT NAME: CURT KOBLARCSIK

SIGNATURE: *Curt Koblarcsik*

DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13

DESIGN BY: DFF DATE: 03-14-13

CHECKED BY: GMP DATE: 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

STATEMENT OF ESTIMATED QUANTITIES

Sheet 3 of 98 Sheets

TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	PARTICIPATING			
					ANOKA COUNTY SP 002-611-033 ROADWAY QUANTITIES ESTIMATED	ANOKA COUNTY SP 002-618-031 ROADWAY QUANTITIES ESTIMATED	CITY OF COON RAPIDS SP 114-020-048 ROADWAY QUANTITIES ESTIMATED	SP 002-611-033 DRAINAGE QUANTITIES ESTIMATED
D	2531.618	TRUNCATED DOMES	SQ FT	64	48	16		
	2563.601	TRAFFIC CONTROL (STAGE 1)	LUMP SUM	1	0.446	0.279	.275	
	2563.601	TRAFFIC CONTROL (STAGE 2)	LUMP SUM	1	0.446	0.279	.275	
M(2)	2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	342	153	95	94	
	2563.610	POLICE OFFICER	HOUR	90	40	25	25	
L(4)	2564.531	SIGN PANELS TYPE C	SQ FT	152	80	72		
L(4)	2564.537	INSTALL SIGN TYPE C	EACH	6	4	2		
L(4)	2564.537	INSTALL SIGN TYPE SPECIAL	EACH	4	4			
L(3)	2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	SIGS	1	0.125	0.125	0.75	
(3)	2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1			1	
(3)	2565.602	SIGNAL SERVICE CABINET	EACH	1	0.125	0.125	0.75	
(3)	2565.602	PVC HANDHOLE	EACH	3	0.375	0.375	2.25	
(3)	2565.603	2" RIGID STEEL CONDUIT	LIN FT	450	56.25	56.25	337.5	
G	2573.530	STORM DRAIN INLET PROTECTION	EACH	28	17	11		
G	2575.505	SODDING TYPE SALT RESISTANT	SQ YD	2456	1901	555		
G	2575.511	MULCH MATERIAL TYPE 3	TON	1.10	0.8	0.3		
M(2)	2581.501	REMOVABLE PREFORMED PLASTIC MARKING	LIN FT	2570	1146	717	707	
M	2581.602	PAVEMENT MESSAGE (LT ARROW) PREFORMED THERMOPLASTIC	EACH	8	4	4		
M	2581.602	PAVEMENT MESSAGE (RT ARROW) PREFORMED THERMOPLASTIC	EACH	8	4	4		
M	2581.602	PAVEMENT MESSAGE (RR XING) PREFORMED THERMOPLASTIC	EACH	1		1		
M	2582.502	24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	152	76	76		
M	2582.502	24" SOLID LINE YELLOW - PREFORMED THERMOPLASTIC	LIN FT	414	302	112		
M	2582.503	CROSSWALK MARKING - PREFORMED THERMOPLASTIC	SQ FT	684	342	342		
M(2)	2582.502	4" SOLID LINE WHITE - PAINT	LIN FT	7266	3241	2027	1998	
M(2)	2582.502	4" SOLID LINE YELLOW - PAINT	LIN FT	9796	4369	2733	2694	
M	2582.502	4" SOLID LINE WHITE-EPOXY	LIN FT	7100	3800	3300		
M	2582.502	4" BROKEN LINE WHITE-EPOXY	LIN FT	110	110			
M	2582.502	4" SOLID LINE YELLOW-EPOXY	LIN FT	500	500			
M	2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	3400	1900	1500		

GENERAL NOTES:

- (1) SEE REMOVAL PLAN SHEETS 39-40
- (2) FOR TEMPORARY TRAFFIC CONTROL
- (3) SEE TRAFFIC SIGNAL PLAN SHEETS 64-74
- (4) SEE PERMANENT SIGNING TAB SHEET 58 (STREET SIGNS PAID FOR AS ITEM 2564.537)
- (5) TEMPORARY CONNECTIONS; FOR USE DURING CONSTRUCTION

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_SEQ.dgn 05/09/2013 12:21:01 PM					

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

STATEMENT OF ESTIMATED QUANTITIES
 Sheet 4 of 98 Sheets

SOILS AND CONSTRUCTION NOTES:

1. TOP OF THE GRADING SUBGRADE (GRADING GRADE) IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE LAYER.
2. BOTTOM OF SUBBASE GRADE SHALL BE DEFINED AS THE BOTTOM OF THE 1' SUBGRADE EXCAVATION.
3. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL GRANULAR AND FINER GRAINED SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, PEAT, MUCK, ORGANIC MATERIAL, AND OTHER UNSTABLE MATERIAL.
4. NO OVER EXCAVATION WILL BE ALLOWED.
5. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3149.2B2.
6. ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE COMMON EXCAVATION.
7. COMMON BORROW - SELECT GRANULAR MATERIAL SHALL BE USED TO BACK FILL THE EMBANKMENT UNDER THE NEW ROADWAY CORE, UP TO THE TOP OF THE GRADING SUBGRADE.
8. WHENEVER THE WORD "INCIDENTAL" IS USED IN THIS PLAN, IT SHALL MEAN THIS WORK WILL BE INCIDENTAL FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.
9. TOPSOIL SHALL BE DEFINED AS EXISTING SOILS WHICH MEET MN/DOT SPECIFICATION 3877 THAT WOULD BE SUITABLE FOR REUSE.
10. SUITABLE GRADING MATERIAL OBTAINED FROM COMMON EXCAVATION NOT MEETING THE REQUIREMENTS OF MN/DOT SPEC 3149.2B1, SHALL BE USED AS EMBANKMENT MATERIAL ON THE PROJECT AS APPROVED BY THE ENGINEER.
11. UNSUITABLE MATERIALS ARE TOPSOILS, PAVEMENT OR CONCRETE DEBRIS, PEAT, MUCK AND ORGANIC OR OTHER UNSTABLE SOILS.
12. EXCESS TOPSOIL AND MUCK MATERIAL SHALL BE USED THROUGHOUT THE PROJECT AND AS DIRECTED BY THE ENGINEER.
13. REGULAR EMBANKMENT SHALL BE DEFINED AS ALL GRADING MATERIALS THAT ARE APPROPRIATE FOR REUSE ON THE PROJECT BUT THAT MAY NOT MEET THE REQUIREMENTS OF SUITABLE GRADING MATERIALS. REGULAR EMBANKMENT MAY CONSIST OF GRADING SOILS NOT MEETING GRANULAR SPECIFICATIONS AND THEREFORE NOT SUITABLE FOR REUSE UNDER ROAD CORE. REGULAR EMBANKMENT MAY CONSIST OF TOPSOIL AND ORGANIC SOILS; UNLESS THE ENGINEER DETERMINES THESE SOILS IS NOT REUSABLE, IN WHICH CASE THE CONTRACTOR SHALL REMOVE THEM FROM THE PROJECT LIMITS. REGULAR EMBANKMENT SHALL NOT CONSIST OF DEBRIS.
14. SLOPE DRESSING ON THE PROJECT IS DEFINED AS THE TOPSOIL OR OTHER SOIL PLACED DURING PRIOR CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF.
15. IN ALL AREAS OF NEW MAINLINE ROADWAY RECONSTRUCTION (PERMANENT AND TEMPORARY), PROVIDE FOR A MINIMUM 12 INCH COMPACTION SUBCUT UNLESS OTHERWISE NOTED. BACKFILL WITH SUITABLE GRADING MATERIAL. ANY UNCONTAMINATED SUITABLE GRANULAR MATERIAL REMOVED FROM THE EXISTING SUBGRADE AREA MAY BE USED IN OTHER AREAS DESIGNATED FOR THE SAME MATERIAL.
16. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE THE RIGHT-OF-WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
17. UNLESS OTHERWISE REQUIRED, IN ALL TREATMENTS, THE CONTRACTOR SHOULD STRIVE TO SUBSTANTIALLY MATCH THE SOILS INPLACE IN THE UPPER 5.0 FEET OF THE ROADWAY.
18. WHERE CONNECTING NEW SURFACING ADJACENT TO ANY INPLACE PAVEMENTS TO BE WIDENED, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT 1:2 SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
19. WHERE CONNECTING TO THE INPLACE ROADWAYS AT THE TERMINI OF PROPOSED NEW CONSTRUCTION, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.

20. WHERE MATCHING INTO INPLACE CROSSROADS, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1:4 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
21. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON THE EXISTING PAVEMENT. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GALLONS/SQ. YD. BETWEEN BITUMINOUS LAYERS AND 0.07 TO 0.10 GALLONS/SQ. YD. ON CONCRETE OR MILLED BITUMINOUS SURFACES PRIOR TO BEING OVERLAID. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY) OR MC AND RC LIQUID ASPHALTS. THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPECIFICATION 2357.
22. PROVIDE A SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT.
23. SLOPE DRESSING. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 4 INCHES.
24. EMBANKMENT QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE PROPOSED GRADING GRADE OF ALL PERMANENT ROADWAYS. QUANTITIES REQUIRED ABOVE THE GRADING GRADE OR FOR TEMPORARY CONSTRUCTION ARE PROVIDED IN DETAIL ON THE BITUMINOUS SUMMARY TAB.
25. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.
26. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
27. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
28. UNSUITABLE SOILS NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MN/DOT SPECIFICATIONS.
29. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPECIFICATION 2105.3D.
30. INPLACE BITUMINOUS PAVEMENT RANGES FROM 4" TO 6" THICK. (AVERAGE 5"). FOR INFORMATION ONLY, CONTRACTOR TO VERIFY PAVEMENT DEPTH PRIOR TO PLACING BID.
31. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3138, CLASS 5.

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_SCN.dgn					
05/09/2013 12:21:02 PM					

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



ANOKA COUNTY
 HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

SOILS AND CONSTRUCTION NOTES
 Sheet 5 of 98 Sheets

INDEX OF TABULATION CHARTS		
TAB.	DESCRIPTION	SHEET NO.
	EARTHWORK SUMMARY	9
	EARTHWORK BALANCE	9
A	CLEAR AND GRUB	7
B	REMOVALS	7
C	REMOVE EXISTING STORM SEWER	7
D	CONCRETE	7
E	BITUMINOUS SUMMARY	8
G	TURF ESTABLISHMENT AND EROSION CONTROL	8
H	STAGING	36
I	DRAINAGE TABULATION	46
K	SIGN REMOVAL	16
L	PERMANENT SIGN	57
M	TEMPORARY AND PERMANENT PAVEMENT MARKINGS	56
N	DRIVEWAYS	8
AA	PRIVATE UTILITY OWNERS	10
BB	WATERLINE	10
CC	SANITARY SEWER	10
DD	GAS - CENTERPOINT ENERGY	10
EE	POWER - CONNEXUS ENERGY	10
FF	POWER - XCEL ENERGY	10
GG	TELEPHONE - CENTURYLINK	10

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007D	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3145G	CONCRETE PIPE TIES
4006L	MANHOLE OR CATCH BASIN PRECAST - DESIGNS G AND H
4010H	CONCRETE SHORT CONE & ADJUSTING RING (SECTIONAL CONCRETE)
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS)
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4125D	CATCH BASIN FRAME CASTING (FOR SQUARE GRATE) - CASTING NO. 806
4134A	CURB BOX CASTING FOR CATCH BASIN (FOR DESIGN B CURBS)- CASTING NO. 825
4154B	CATCH BASIN GRATE CASTING - CASTING NO. 816
4180J	MANHOLE OR CATCH BASIN STEP
7035N	CONCRETE WALK & CURB RETURNS AT ENTRANCES
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
8000I	STANDARD BARRICADES
8110E	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8114A	P.V.C. HANDHOLE/PULLBOX (NO VEHICLE LOAD)
8118D	SERVICE EQUIPMENT & POLE TRAFFIC CONTROL SIGNALS
8119C	GROUND MOUNTED CABINET FOUNDATION
8121G	TRANSFORMER BASE AND POLE BASE PLATE (PA85M, PA90 AND PA100)
8123G	POLE AND MAST ARM - LUMINAIRES AND TRAFFIC LIGHTS ASSEMBLY
8126K	POLE FOUNDATION (PA90 AND PA100)

BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2123.610	STREET SWEEPER (WITH PICKUP BROOM)	PROJECT LENGTH / 3 MPH FOR 90 DAYS
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD / LIFT
2360.501	TYPE SP12.5 WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2360.502	TYPE SP12.5 NON-WEARING COURSE MIXTURE	115 LBS / SQ YD / IN

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_TAB.dgn 05/09/2013 12:21:16 PM

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.

PRINT NAME: CURT KOBILARCSIK
SIGNATURE: *Curt Kobilarsik*
DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY DFF DATE 03-14-13
DESIGN BY DFF DATE 03-14-13
CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

STANDARD PLATES &
BASIS OF QUANTITIES

Sheet 6 of 98 Sheets

CLEARING & GRUBBING					A	NOTES
SPEC (2101)						
ALIGNMENT	STATION	OFFSET	CLEARING (TREE)	GRUBBING (TREE)		
CSAH 11	103+10	47.5 RT	1	1		
CSAH 11	103+51	46.1 RT	1	1		
CSAH 11	104+00	55.0 RT	1	1		
CSAH 11	104+79	52.9 RT	1	1		
CSAH 11	105+21	53.4 RT	1	1		
CSAH 11	105+50	54.5 RT	1	1		
CSAH 11	105+94	54.8 RT	1	1		
CSAH 18	207+89	60.7 LT	1	1		
PROJECT TOTAL			8	8		

NOTES:

TREES WITHIN THE CONSTRUCTION LIMITS WILL BE DESIGNATED FOR REMOVAL BY THE ENGINEER.

REMOVAL OF MISCELLANEOUS SHRUBS AND LANDSCAPING SHALL BE CONSIDERED INCIDENTAL

REMOVALS, SAWING, MILLING AND RECLAMATION													B	NOTES	
ALIGNMENT	STATION TO STATION	OFFSET	REMOVE (SPEC. 2104)						BITUMINOUS PAVEMENT RECLAMATION (SPEC. 2331)	SAWING BIT. PAVEMENT (SPEC. 2104)	SAWING CONCRETE PAVEMENT (SPEC. 2104)	MILL BIT. SURFACE (2.0") (SPEC. 2232)			
			BIT. PAVEMENT	CONCRETE DRIVEWAY PAVEMENT	BITUMINOUS DRIVEWAY PAVEMENT	CONC. WALK	CONC. CURB & GUTTER	CONC. FLUME							
			(SQ YD)	(SQ YD)	(SQ YD)	(SQ FT)	(LIN FT)	(EACH)					(SQ YD)	(LIN FT)	(LIN FT)
EB	102+20 - 107+23	RT	407	39	52	2465	571	1							
EB	102+20 - 107+08	LT	77	29		468	511		2237	93	5				
EB	107+08 - 108+16													915	[1]
EB	107+64 - 114+20	RT	422		55	1229	700			781	15				
EB	107+66 - 110+92	LT	376	19	60	893	359			411	20			3006	
NB	199+77 - 205+78	LT	240	67			532			538	5			2871	
NB	206+89 - 212+02	LT	726	21	33	351	484			530				2108	
NB	207+25 - 212+02														
PROJECT TOTAL			2248	175	200	5406	3157	1	2237	2977	55			8900	

NOTES:

[1] INCLUDES QUANTITY FOR MILLING AREA BETWEEN NB STA 205+78 AND NB STA 206+89

REMOVE EXISTING STORM SEWER									C	NOTES
ALIGNMENT	STATION TO STATION	OFFSET	REMOVE (SPEC 2104)			DRAINAGE STRUCTURE (EACH)	CASTING (EACH)	STORM SEWER PIPE (LIN FT)		
			FROM	TO						
			EB	106+94.44 - 107+22.74	28 RT 36 RT				2	2
EB	106+94.53 - 107+17.22	21 LT 16 LT	2	2	23					
EB	107+17.22 - 107+92.76	16 LT 22 LT	1	1	76					
EB	107+18.72 - 107+22.74	52 RT 36 RT	1	1	17					
EB	107+22.74 - 107+68.52	36 RT 51 RT	1	1	48					
EB	107+68.52 - 107+91.41	51 LT 27 LT	1	1	34					
EB	107+17.22 - 107+22.74	16 LT 36 RT			52					
NB	206+86.14 - 207+63.83	26 LT 28 LT	1	1	78					
NB	207+63.83 - 209+25.30	28 LT 26 LT	1	1	162					
NB	209+25.30 - 209+69.69	26 LT 26 LT	1	1	44					
NB	209+69.69 - 210+37.12	26 LT 27 LT	1	1	68					
NB	210+36.91 - 210+37.12	45 LT 27 LT			17					
PROJECT TOTAL			12	12	648					

CONCRETE							D	TRUNCATED DOMES
STATION		ALIGNMENT	OFFSET	CONCRETE CURB & GUTTER DESIGN B618	4" CONCRETE WALK	6" CONCRETE WALK (1)		
BEGIN	END							
102+20	107+23	EB	RT	558	2342	325	16	
102+20	107+08	EB	LT	498				
107+64	114+20	EB	RT	690	501	673	16	
107+66	110+92	EB	LT	350	701	317	16	
199+77	205+78	NB	LT	530	906			
206+89	212+02	NB	LT	480	420	420	16	
PROJECT TOTAL				3106	4870	1735	64	

NOTES:

(1) 6" CONCRETE WALK FOR PEDESTRIAN RAMPS

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_TAB.dgn 05/09/2013 12:21:21 PM

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.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

TABULATIONS

TURF ESTABLISHMENT AND EROSION CONTROL					G
LOCATION		MULCH MATERIAL TYPE 3	STORM DRAIN INLET PROTECTION	SODDING TYPE SALT RESISTANT	
STATION TO	STATION	TON	EACH	SQ YD	
102+20	- 107+23 RT	0.3	6	718	
102+20	- 107+08 LT	0.2	2	444	
107+64	- 114+20 RT	0.2	6	494	
107+66	- 110+92 LT	0.1	3	245	
199+77	- 205+78 LT	0.1	4	182	
206+89	- 212+02 LT	0.2	7	373	
PROJECT TOTAL		1.1	28	2,456	

NOTES:
 - QUANTITIES ARE BASED ON 110% OF THE COMPUTED AREA.
 - SEE BASIS OF QUANTITIES FOR APPLICATION RATES

BITUMINOUS SUMMARY							E
ALIGNMENT	STATION TO STATION	BITUMINOUS			AGGREGATE BASE CLASS 5	NOTES	
		2360 TYPE SP 12.5 WEAR (3,F)	2360 TYPE SP 12.5 NON-WEAR (3,B)	2357 BIT. TACK COAT			
		TON	TON	GALLON	CU YD		
EB	102+20 - 107+23	201	101	88		[1]	
EB	102+20 - 107+08	514	257	224		[2]	
EB	107+08 - 108+16	99		43		[3],[4]	
EB	107+64 - 114+20	122	61	53	88	[1]	
EB	107+66 - 110+92	108	54	47	78	[1]	
EB	108+16 - 114+68	346		150		[3]	
NB	199+77 - 205+78	55	27	24	40	[1]	
NB	200+00 - 205+78	330		144		[3]	
NB	206+89 - 212+02	290	145	126	210	[1]	
NB	207+25 - 212+02	242		105		[3]	
PROJECT TOTAL		2307	645	1004	416		

NOTES:
 [1] QUANTITY FOR NEW CONSTRUCTION
 [2] QUANTITY FOR RECLAIM AREA
 [3] QUANTITY FOR MILL & OVERLAY AREA
 [4] INCLUDES QUANTITY FOR AREA BETWEEN NB STA 205+78 AND NB STA 206+89

DRIVEWAYS							N
APRON CENTERLINE STATION	OFFSET	DRIVEWAY TYPE	APRON WIDTH	4 INCH AGGREGATE BASE CLASS 5	TYPE SP 12.5 WEARING COURSE MIX (2,B) [1]	6" CONCRETE DRIVEWAY PAVEMENT	NOTES
			FEET	CU YD	TON	SQ YD	
103+74.49	LT	CONCRETE	24			29	
103+76.73	RT	CONCRETE/BIT	24	3	4	24	
108+72.61	LT	BITUMINOUS	25	5	7		[2]
109+03.78	RT	BITUMINOUS	20	2	3		
109+75.22	RT	BITUMINOUS	16	2	3		
109+96.49	LT	BITUMINOUS/CONC	17	1	2	18	
112+31.38	RT	BITUMINOUS	16	2	3		
113+15.48	RT	BITUMINOUS	14	1	2		
201+65.24	LT	CONCRETE	24			20	
202+58.08	LT	CONCRETE	24			19	
204+07.08	RT	CONCRETE	30			31	
208+84.44	LT	CONCRETE	26			19	
TOTAL				16	24	160	

NOTES:
 [1] 3 INCH DEPTH

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_TAB.dgn 05/09/2013 12:21:26 PM

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
 HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

TABULATIONS
 Sheet 8 of 98 Sheets

EARTHWORK SUMMARY						
STATION EB CSAH 11	EXCAVATION TOTALS			EMBANKMENT VOLUMES		
	COMMON (C.Y.)	SUBGRADE (C.Y.)	MUCK (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)	COMMON (C.Y.)
102+50.00	0	0	0	0	0	0
103+00.00	68	42	0	5	79	0
103+50.00	75	47	0	5	85	0
103+78.00	42	21	0	1	50	0
104+50.00	71	27	0	4	121	0
105+00.00	71	27	0	5	79	0
105+27.67	43	15	0	3	44	0
105+50.00	40	12	0	2	35	0
106+00.00	92	27	0	6	79	0
106+50.00	98	33	0	7	79	0
106+80.19	88	34	0	4	47	0
107+00.00	50	24	0	4	33	0
108+00.00	106	85	0	16	215	0
108+50.00	43	40	0	5	105	0
108+75.00	22	20	0	2	39	0
109+00.00	21	20	0	1	36	0
109+50.00	43	40	0	2	71	0
109+75.00	27	20	0	1	36	0
110+00.00	27	20	0	2	36	0
110+50.00	44	41	0	2	74	0
110+72.29	9	9	0	2	34	0
111+00.00	7	4	0	3	42	0
111+50.00	22	13	0	2	39	0
112+00.00	22	13	0	2	31	0
112+31.00	13	8	0	2	37	0
112+50.00	8	5	0	1	22	0
113+00.00	22	13	0	1	58	0
113+16.00	6	4	0	1	19	0
113+50.00	13	9	0	1	40	0
114+00.00	10	7	0	1	58	0
SUBTOTAL EB	1203	680	0	93	1723	0

EARTHWORK SUMMARY						
STATION NB CSAH 18	EXCAVATION TOTALS			EMBANKMENT VOLUMES		
	COMMON (C.Y.)	SUBGRADE (C.Y.)	MUCK (C.Y.)	TOPSOIL (C.Y.)	SEL. GRAN. (C.Y.)	COMMON (C.Y.)
200+50.00	0	0	0	0	0	0
200+62.00	3	2	0	0	6	0
201+00.00	7	6	0	0	17	0
201+41.00	17	13	0	1	22	0
201+50.00	4	3	0	0	6	0
201+65.00	7	5	0	0	9	0
202+00.00	18	11	0	1	21	0
202+23.00	13	7	0	0	15	0
202+50.00	15	9	0	0	17	0
203+00.00	28	16	0	1	32	0
203+07.00	4	2	0	0	5	0
203+50.00	25	14	0	2	31	0
203+92.00	27	13	0	2	32	0
204+00.00	6	3	0	0	6	0
204+50.00	33	16	0	1	35	0
205+00.00	30	16	0	3	36	0
205+27.00	16	9	0	2	20	0
205+50.00	14	7	0	1	17	0
206+00.00	35	20	0	2	35	0
207+22.14	151	89	0	14	148	0
207+50.00	50	27	0	4	42	0
207+70.14	36	20	0	2	25	0
207+91.50	33	21	0	3	25	0
208+00.00	11	8	0	1	10	0
208+23.00	28	23	0	1	27	0
208+50.00	32	27	0	1	31	0
208+85.00	44	34	0	1	38	0
209+00.00	19	15	0	0	17	0
209+50.00	71	49	0	3	55	0
209+77.00	43	27	0	2	29	0
210+00.00	34	23	0	1	25	0
210+50.00	58	48	0	2	55	0
211+00.00	50	43	0	2	51	0
211+35.00	33	27	0	1	32	0
211+50.00	11	11	0	1	13	0
212+00.00	33	41	0	1	46	0
SUBTOTAL NB	1039	705	0	56	1031	0
TOTAL	2242	1385	0	149	2754	0

EARTHWORK BALANCE

EXCAVATION (CY)	
COMMON (EV) (P) (1) 2,242	COMMON 1,482 (EV) / 1.2 = 1,235 (CV)
	EXISTING TOPSOIL 760 (EV) / 1.2 = 633 (CV)
SUBGRADE EXCAVATION (EV) (P) (2) 1,385	SUBGRADE 1,385 (EV) / 1.2 = 1,154 (CV) (3)
EMBANKMENT (CY)	
TOPSOIL 149 (CV)	149 (CV)
SELECT GRANULAR 2,754 (CV)	2,754 (CV) (4)
EXCESS (CY)	
COMMON 1,235 (CV)	1,235 (CV) (5)
TOPSOIL 633 (CV) - 149 (CV) = 484 (CV) (6)	
BORROW (CY)	
SELECT GRANULAR 2,754 (CV) - 1,154 (CV) = 1,600 (CV) *1.4 = 2,240 (LV) (7)	

- (1) TOTAL COMMON EXCAVATION FOR PROJECT (INCLUDING TOPSOIL)
- (2) TOTAL SUBGRADE EXCAVATION FOR PROJECT
- (3) ALL SUBGRADE EXCAVATION ASSUMED TO MEET REQUIREMENTS FOR SELECT GRANULAR BORROW AND SHALL BE USED ON THE PROJECT.
- (4) SELECT GRANULAR QUANTITY
- (5) TOTAL COMMON EXCESS FOR THIS PROJECT
- (6) TOTAL TOPSOIL EXCESS FOR PROJECT
- (7) TOTAL SELECT GRANULAR BORROW FOR PROJECT

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_EW1.dgn					
05/09/2013 12:21:32 PM					

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.

PRINT NAME: CURT KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*

DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13

DESIGN BY: DFF DATE: 03-14-13

CHECKED BY: GMP DATE: 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

UTILITY OWNERS		AA
CITY OF COON RAPIDS 11155 ROBINSON DR NW COON RAPIDS, MN 55433 CONTACT BOB MOBERG CITY ENGINEER TEL: 763-767-6465		XCEL ENERGY 8701 MONTICELLO LANE MAPLE GROVE, MN 55369 CONTACT ROBERT M. TORRES DESIGNER TEL 763-493-1671
CENTURYLINK 425 MONROE ANOKA, MN 55303 CONTACT BILL BYERS TEL. 763-712-5006		CENTERPOINT ENERGY 700 WEST LINDEN AVE P.O. BOX 1165 MINNAPOLIS, MN 55440-1165 CONTACT STEVE GUHANICK TEL 612-321-5421
CONNEXUS ENERGY 14601 RAMSEY BLVD RAMSEY, MN 55303 MAT RAUSCHENDORFER TEL. 763-323-4259		

WATERLINE					BB
ALIGN	STATION	OFFSET FROM ALIGN	REMARKS	ELEV	NOTES
EB		LT	GATE VALVE		ADJUST
EB	107+18.35	23 RT	GATE VALVE	868.67	LEAVE AS-IS
EB	107+65.20	22 RT	GATE VALVE	868.52	LEAVE AS-IS
EB	108+88.59	45 LT	GATE VALVE	869.25	LEAVE AS-IS
EB	110+92.12	40 LT	GATE VALVE	866.9	LEAVE AS-IS
EB	114+23.17	39 RT	GATE VALVE	867.97	LEAVE AS-IS
EB	114+64.90	22 RT	GATE VALVE	868.25	LEAVE AS-IS
NB	200+48.47	50 RT	CURB STOP	872.00	LEAVE AS-IS
NB	200+92.18	50 RT	CURB STOP	871.80	LEAVE AS-IS
NB	201+77.60	50 RT	CURB STOP	871.54	LEAVE AS-IS
NB	202+57.89	50 RT	CURB STOP	871.31	LEAVE AS-IS
NB	203+42.48	50 RT	CURB STOP	871.00	LEAVE AS-IS
NB	204+27.14	50 RT	CURB STOP	870.78	LEAVE AS-IS
NB	209+56.24	51 RT	GATE VALVE	867.91	LEAVE AS-IS
NB	209+56.63	53 RT	HYDRANT	870.55	LEAVE AS-IS

SANITARY SEWER					CC
ALIGN	STATION	OFFSET FROM ALIGN	REMARKS	ELEV	NOTES
EB		LT	SANITARY MH		RECONSTRUCT
EB	107+82.63	8 LT	SANITARY MH	868.20	LEAVE AS-IS
EB	111+04.77	8 LT	SANITARY MH	867.53	LEAVE AS-IS
EB	114+32.03	12 LT	SANITARY MH	868.58	LEAVE AS-IS
NB	200+26.81	34 RT	SANITARY MH	872.79	LEAVE AS-IS
NB	203+49.97	36 RT	SANITARY MH	870.24	LEAVE AS-IS
NB	210+02.21	38 RT	SANITARY MH	867.72	LEAVE AS-IS

GAS - CENTERPOINT ENERGY				DD
STATION		OFFSET FROM LNB	REMARKS	SIZE & ITEM
BEGIN	END			
107+74.03	114+67.69	26 LT TO 26 LT	ADJUST	8" STEEL
107+74.03		26 LT	ADJUST	GAS VALVE
107+74.27		40 RT	LEAVE AS-IS	GAS VALVE
107+74.27	114+67.69	39 RT TO 39 LT	LEAVE AS-IS	4" STEEL
108+02.56		39 RT	LEAVE AS-IS	GAS VENT
111+27.98		37 RT	LEAVE AS-IS	GAS VALVE
111+27.98		37 RT TO 38 LT	LEAVE AS-IS	2" STEEL
114+14.34		35 RT	LEAVE AS-IS	GAS VALVE
114+14.34		35 RT TO 38 LT	LEAVE AS-IS	3" STEEL
200+00.00	206+95.46	30 RT	LEAVE AS-IS	4" STEEL
202+62.00		30 RT TO 34 LT	LEAVE AS-IS	
206+95.46	212+09.08	33 RT TO 33 RT	LEAVE AS-IS	4" STEEL
208+81.54		32 LT	ADJUST	GAS VALVE
208+81.54		33 RT TO 32 LT	LEAVE AS-IS	4" STEEL

POWER - CONNEXUS ENERGY			EE
STATION TO STATION	OFFSET	INPLACE ITEM	REMARKS
106+94.58 TO 114+67.69	36 LT	BURIED POWER	
205+05.77 TO 212+09.08	48 LT	BURIED POWER	

POWER - XCEL ENERGY				FF
ALIGN	STATION TO STATION	OFFSET	INPLACE ITEM	REMARKS
EB	102+19.62	107+87.34	33 LT	BURIED POWER
EB	106+98.15		43 RT	POWER POLE RELOCATE
EB	107+85.74		45 RT	POWER POLE LEAVE AS-IS
EB	107+87.34		34 LT	POWER POLE LEAVE AS-IS
EB	109+36.90		31 LT	POWER POLE LEAVE AS-IS
EB	109+40.17		32 RT	POWER POLE LEAVE AS-IS
EB	112+38.09		30 LT	POWER POLE LEAVE AS-IS
EB	112+67.82		33 RT	POWER POLE LEAVE AS-IS
EB	114+63.04		31 RT	POWER POLE LEAVE AS-IS
EB	116+52.09		30 RT	POWER POLE LEAVE AS-IS
NB	201+27.81		43 RT	POWER POLE LEAVE AS-IS
NB	202+85.60		43 RT	POWER POLE LEAVE AS-IS
NB	204+59.55		43 RT	POWER POLE LEAVE AS-IS
NB	207+87.18		45 RT	POWER POLE LEAVE AS-IS
NB	207+97.50		52 LT	POWER POLE LEAVE AS-IS
NB	209+24.41		38 LT	SPLICE BOX RELOCATE

TELEPHONE - CENTURYLINK				GG
STATION		OFFSET	INPLACE ITEM	REMARKS
BEGIN	END			
109+15.90		30 RT	TELEPHONE MANHOLE	LEAVE AS-IS
109+22.76		30 RT	TELEPHONE MANHOLE	LEAVE AS-IS
109+36.75		42 LT	SPLICE BOX	LEAVE AS-IS
116+38.62		27 RT	TELEPHONE MANHOLE	LEAVE AS-IS

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_UT_TAB.dgn 05/09/2013 12:21:37 PM

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.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13

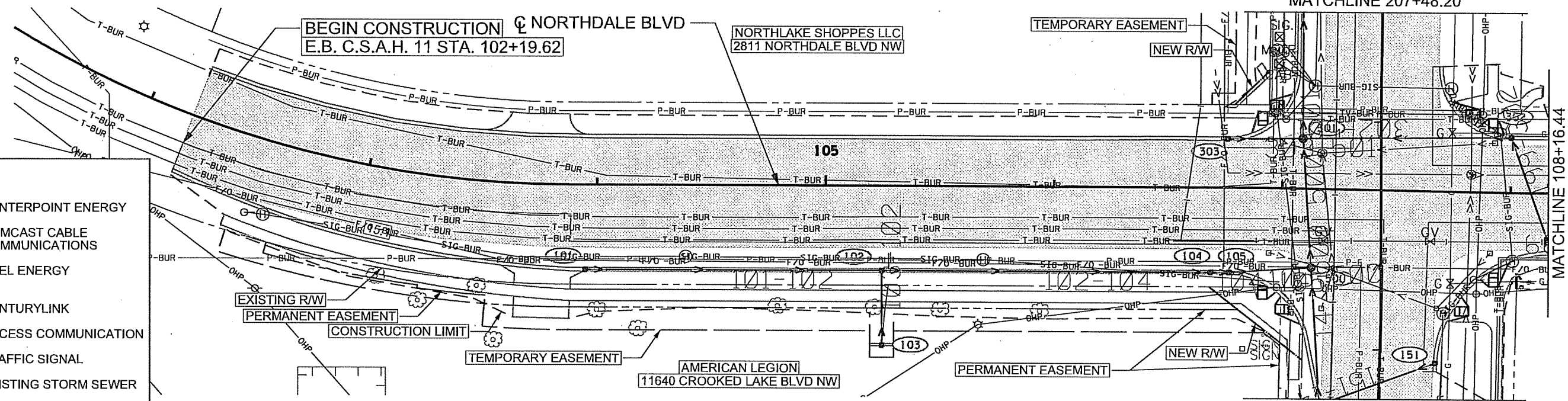


ANOKA COUNTY
 HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

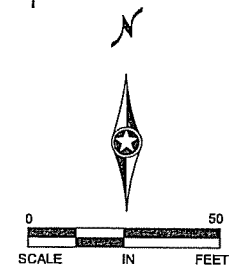
UTILITY TABULATION
 Sheet 10 of 98 Sheets

SEE SHEET 12
MATCHLINE 207+48.20

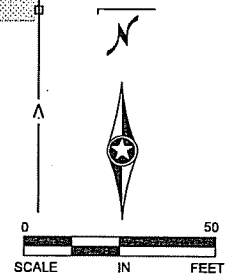
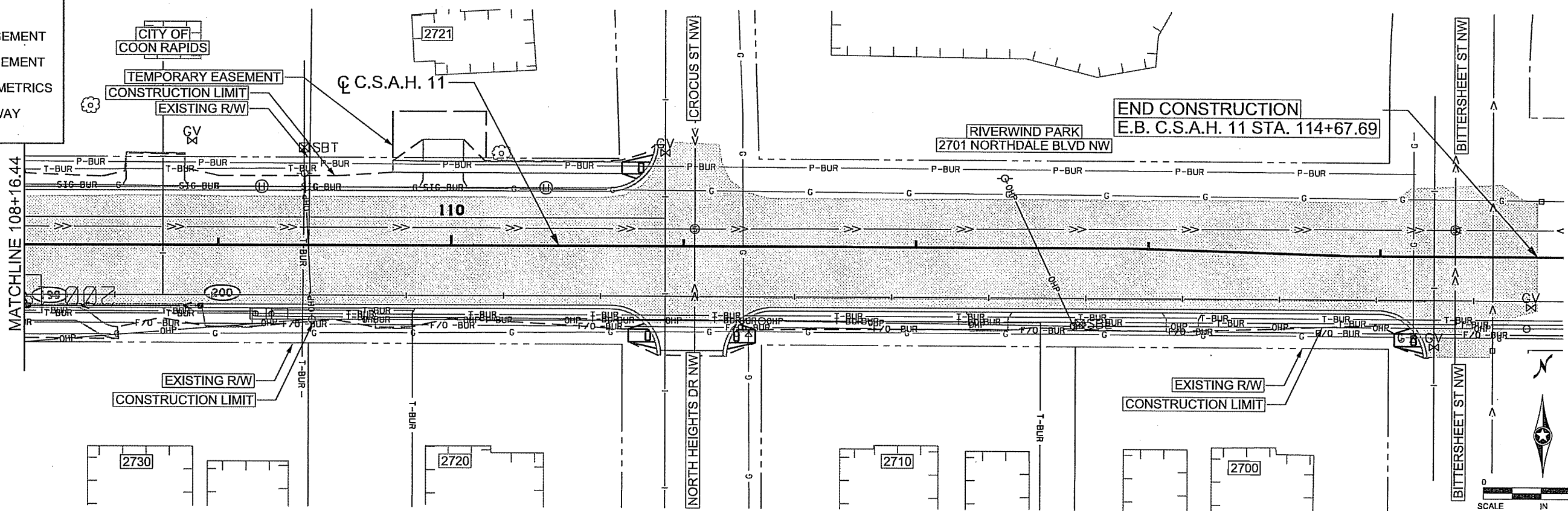


LEGEND

- G — CENTERPOINT ENERGY
- TV-BUR — COMCAST CABLE COMMUNICATIONS
- P-BUR — XCEL ENERGY
- OHP — CENTURYLINK
- T-BUR — ACCESS COMMUNICATION
- F/O-BUR — TRAFFIC SIGNAL
- SIG-BUR — EXISTING STORM SEWER
- < — EXISTING SAN SEWER
- | — EXISTING WATER MAIN
- ● — PROPOSED STORM DRAIN
- - - - - EXISTING RW
- — — — — PROPOSED RW
- - - - - TEMPORARY EASEMENT
- - - - - PERMANENT EASEMENT
- - - - - PROPOSED GEOMETRICS
- ▨ — EXISTING ROADWAY



MATCHLINE 205+78.25
SEE SHEET 12



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_UT1.dgn 05/09/2013 12:21:39 PM

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.

PRINT NAME: CURT KOBILARCSIK
SIGNATURE: *Curt Kobilarsik*
DATE: 5-2-13 LICENSE NO. 24755

DRAWN BY: DFF DATE: 03-14-13
DESIGN BY: DFF DATE: 03-14-13
CHECKED BY: GMP DATE: 03-18-13



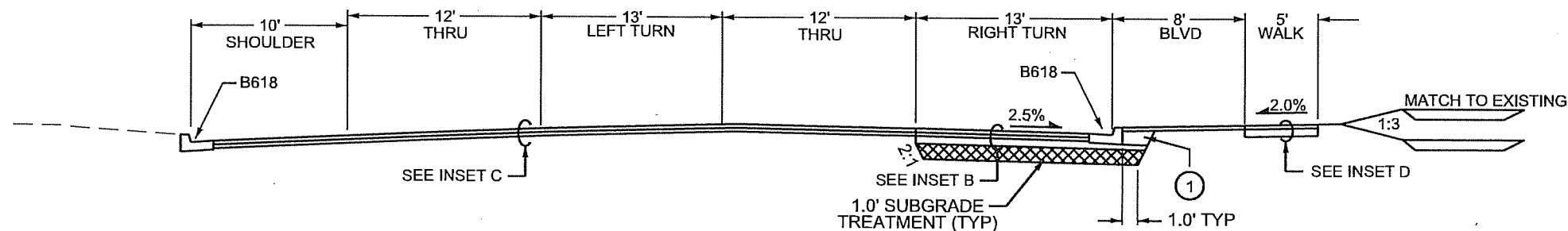
**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

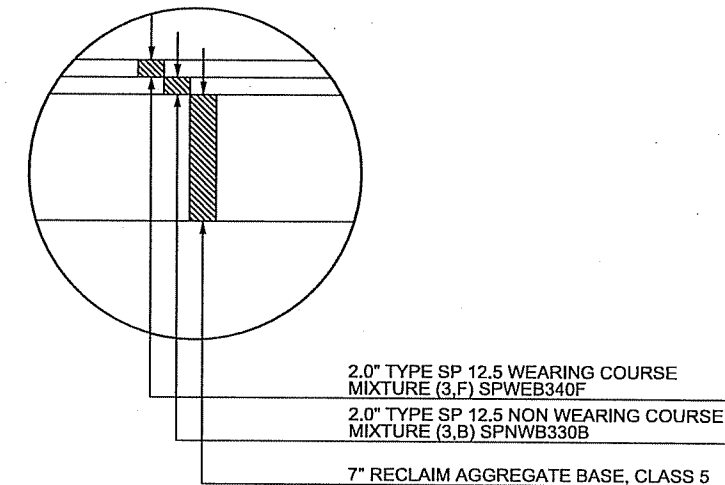
INPLACE UTILITY PLAN
STA 102+19.62 TO 108+16.44
Sheet 11 of 98 Sheets

C.S.A.H. 11 (NORTHDALE BLVD)

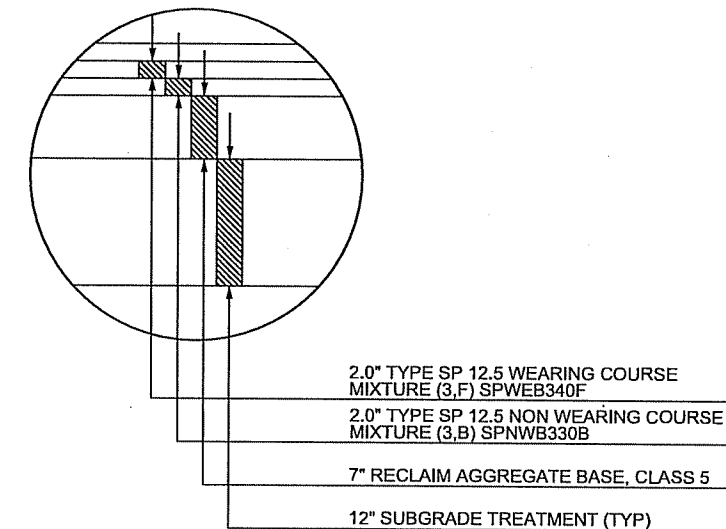
STA. 102+19.72 - STA. 107+17.68



INSET "C" RECLAIM DESIGN

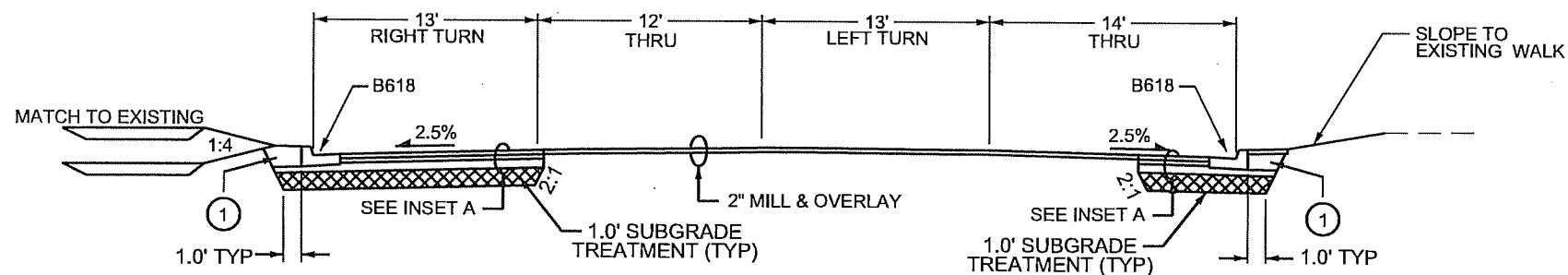


INSET "B" PAVEMENT DESIGN



C.S.A.H. 11 (NORTHDALE BLVD)

STA. 107+68.27 - STA. 114+67.69 (RT)
 STA. 107+68.63 - STA. 110+89.06 (LT)



SPECIFIC NOTES:

- ① SUITABLE EXCAVATED MATERIAL

GENERAL NOTES:

- SEE CONSTRUCTION PLANS FOR TAPER AND TURN LANE LOCATIONS.
- UNLESS OTHERWISE SPECIFIED, THE GRADING GRADE CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.
- UNLESS OTHERWISE SPECIFIED, CLASS 5 AGGREGATE WILL EXTEND 1' BEYOND BACK OF CURB.
- SUBGRADE TREATMENT IS PAID FOR AS SUBGRADE EXCAVATION
- 2" MILL & OVERLAY FROM EB STA 107+17.68 TO EB STA 107+68.27, NB STA 199+77.08 TO NB STA 200+45.68, AND FROM NB STA 205+78.25 TO NB STA 207+22.14

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_TS_P1.dgn 05/09/2013 12:21:41 PM

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.

PRINT NAME: CURT KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*

DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13

DESIGN BY: DFF DATE: 03-14-13

CHECKED BY: GMP DATE: 03-18-13



ANOKA COUNTY
 HIGHWAY DEPT.

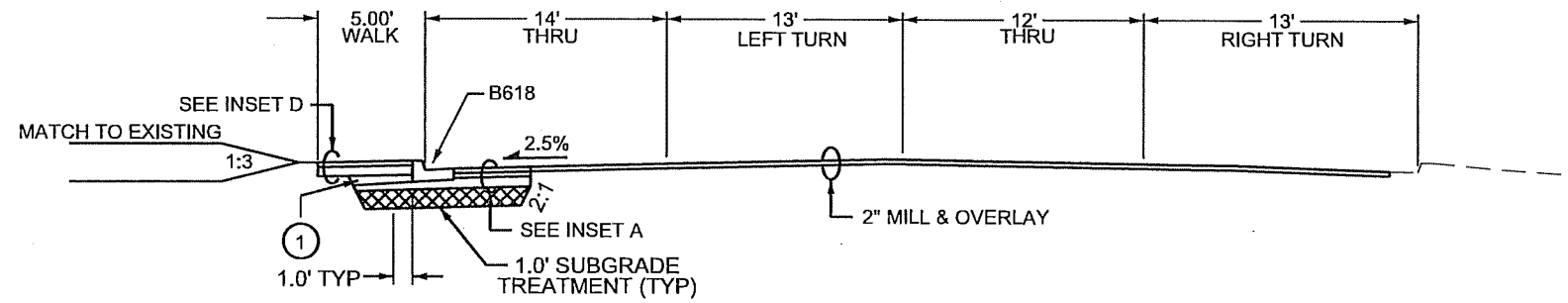
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

TYPICAL SECTIONS
 CSAH 11/NORTHDALE BLVD

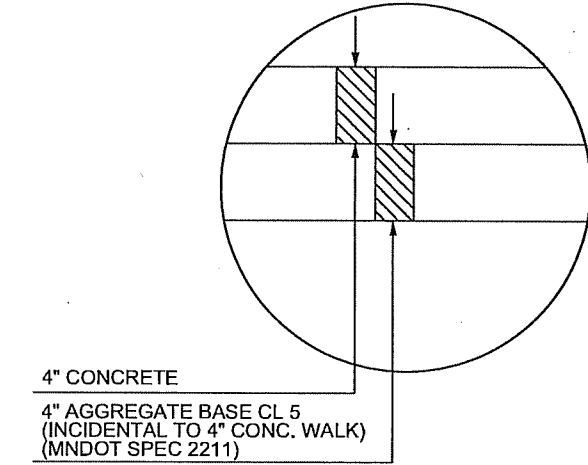
Sheet 13 of 98 Sheets

C.S.A.H. 18 (CROOKED LAKE BLVD)

STA. 200+45.68 - STA. 205+78.25

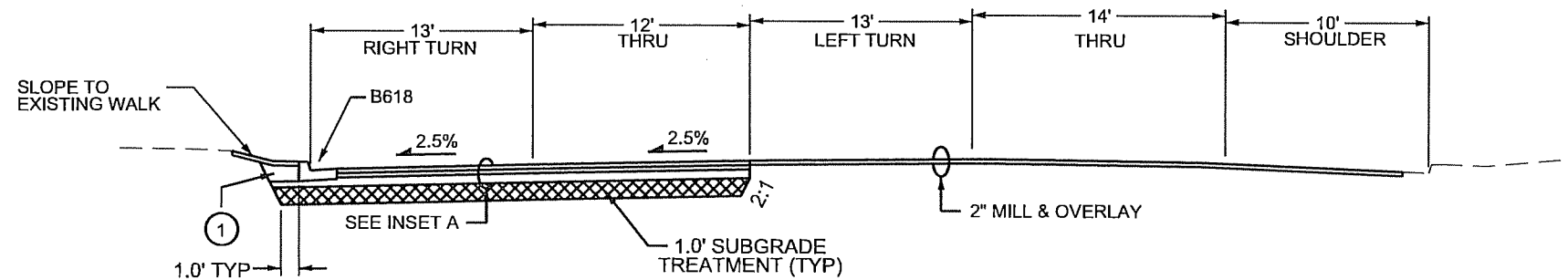


INSET "D" CONCRETE SIDEWALK

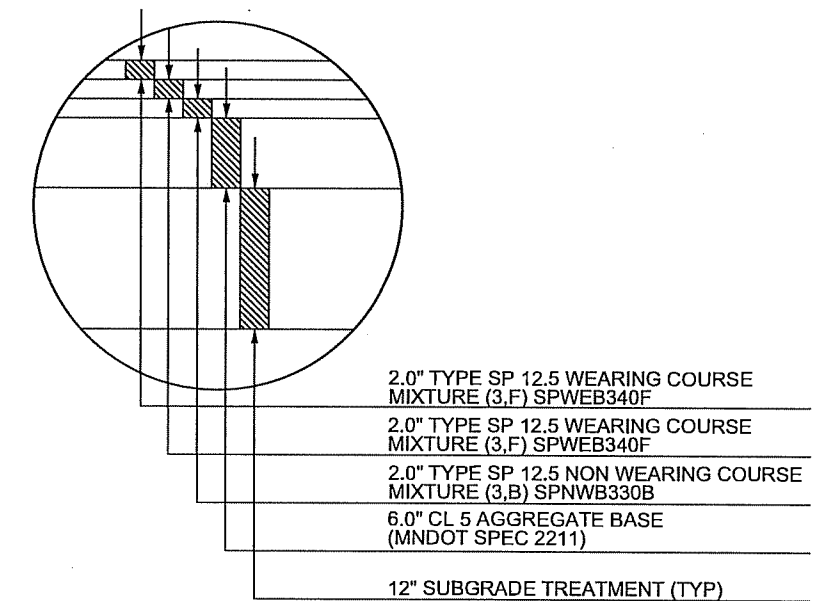


C.S.A.H. 18 (CROOKED LAKE BLVD)

STA. 207+22.14 - STA. 212+29.83



INSET "A" PAVEMENT DESIGN



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_TS_P1.dgn 05/09/2013 12:21:41 PM

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13

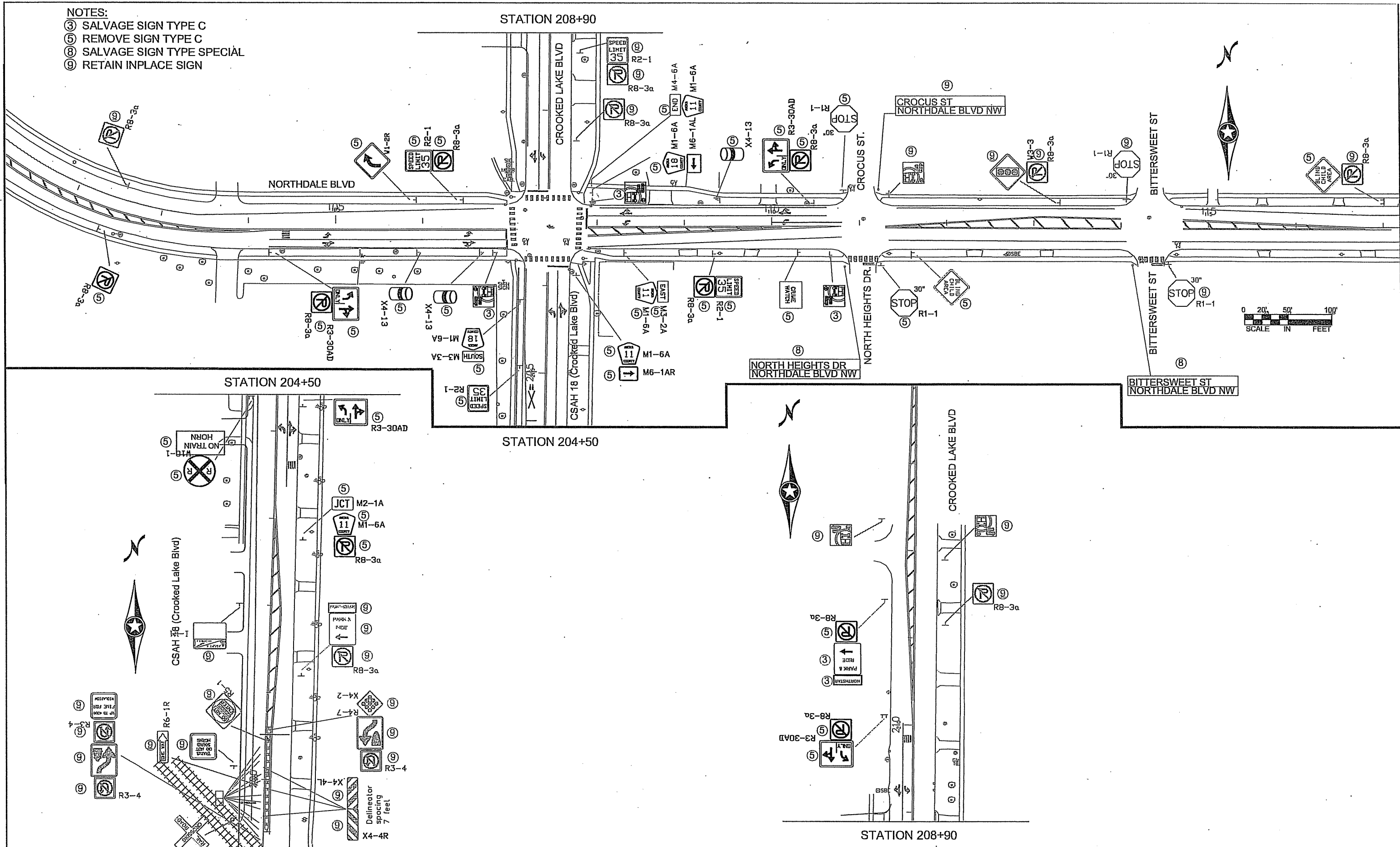


ANOKA COUNTY
 HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

TYPICAL SECTIONS
 CSAH 18/CROOKED LAKE BLVD
 Sheet 14 of 98 Sheets

- NOTES:
 ③ SALVAGE SIGN TYPE C
 ⑤ REMOVE SIGN TYPE C
 ⑧ SALVAGE SIGN TYPE SPECIAL
 ⑨ RETAIN INPLACE SIGN




NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Baset\TRAFFIC\0261133 EXISTING SIGNING & STRIPING.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *Curt A. Kobilarsik*
 DATE: 5-16-13 REG. NO. 24756

DRAWN BY: MTH DATE 09/21/12
 DESIGN BY: MTH DATE 09/21/12
 CHECKED BY: JR DATE 02/25/13

ANOKA COUNTY
HIGHWAY DEPT.



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048

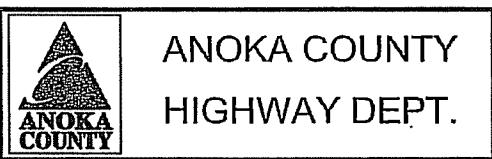
K SIGN REMOVAL TAB								
STATION	ADDRESS/ DESCRIPTION (NOTES)	REMOVE SIGN TYPE C	SALVAGE SIGN TYPE C	SALVAGE SIGN TYPE SPECIAL	INSTALL SIGN TYPE C	INSTALL SIGN TYPE SPECIAL [1]	SIGN NUMBER	SIGN LEGEND
		EACH	EACH	EACH	EACH	EACH		
102+30	Rt	1					R8-3a	No Parking
104+25	Rt	1					R3-30AD	Lane Designation
105+90	Lt	1					W1-2R	Right Curve
106+00	Rt	1					delineator	
106+50	Lt	1					R2-1	SL 35
106+60	Rt	1					R8-3a	No Parking
106+75	Rt		1		1		bus stop	
107+00	Lt			1		1	Street Sign	
107+90	Lt		1		1		bus stop	
107+90	Lt	1					M1-6A	
107+90	Lt	1					M6-1AL	
107+90	Lt	1					M4-6A	
107+90	Lt	1					M1-6A	
108+00	Rt			1		1	Street Sign	
108+30	Rt	1					M3-2A	
108+30	Rt	1					M1-6A	
109+35	Rt	1					R2-1	Speed Limit
109+40	Lt	1					R8-3a	No Parking
109+40	Lt	1					delineator	
110+30	Rt		1		1		Crime Watch	
110+50	Lt	1					R3-30AD	Lane Designation
110+50	Lt	1					R8-3a	No Parking
110+65	Rt		1		1		MTC	BUS STOP
110+80	Rt			1		1	Street Sign	NORTH HEIGHTS DR
110+85	Lt	1					R1-1	Stop
111+25	Rt	1					R1-1	Stop
111+60	Rt	1					Wx-x	Blind Child Area
114+05	Rt			1		1	Street Sign	BITTERSWEET ST
117+00	Lt	1					Wx-x	Blind Child Area
202+80	Rt	1					M2-1A	Jct
202+80	Rt	1					M1-6A	11
202+80	Rt	1					R3-8a	No Parking
204+30	Rt	1					R3-30AD	Lane Designation
204+40	Lt	1					W10-1	CrossBuck
204+40	Lt	1						No Train Horn
205+16	Lt	1					R2-1	SL 35
205+82	Lt	1					M3-3A	South
205+82	Lt	1					M1-6A	18
206+10	Rt	1					M1-6A	11
206+10	Rt	1					M6-1AR	Right
210+10	Lt	1					R3-30AD	Lane Designation
210+10	Lt	1					R8-3a	No Parking
211+45	Lt		1		1			North Star
211+45	Lt		1		1			Park & Ride
211+45	Lt	1					R8-3a	No Parking
TOTAL		24	6	4	6	4		

CONSTRUCTION NOTES:
1. FOR RELOCATING TRAFFIC SIGNS DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER. RELOCATION INCIDENTAL TO TRAFFIC CONTROL.

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Base\TRAFFIC\0261133_EXISTING SIGNING & STRIPING.dwg					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: CURT A. KOBILARCSIK
SIGNATURE: *Curt Kobilarsik*
DATE: 5-16-13 REG. NO. 24756

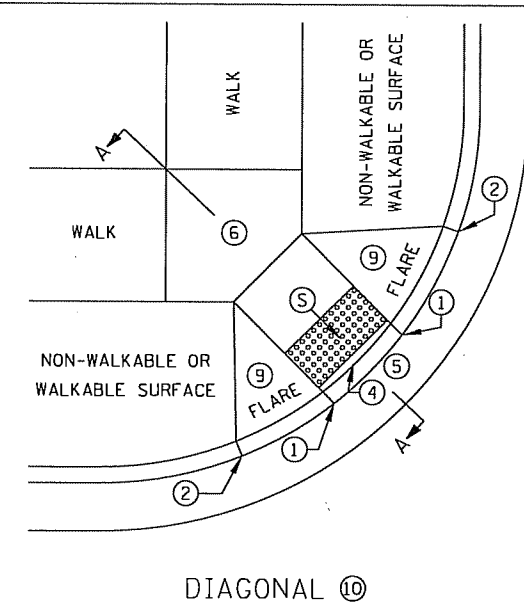
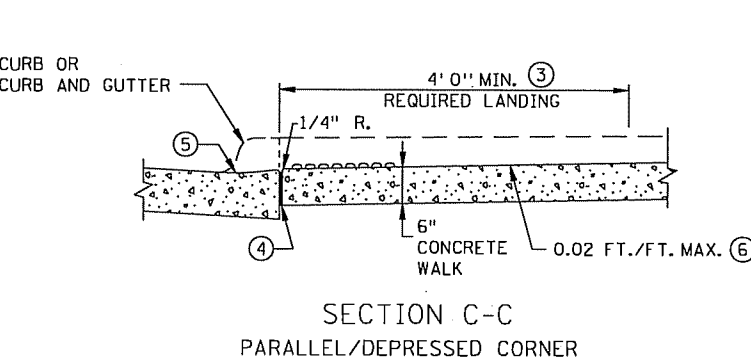
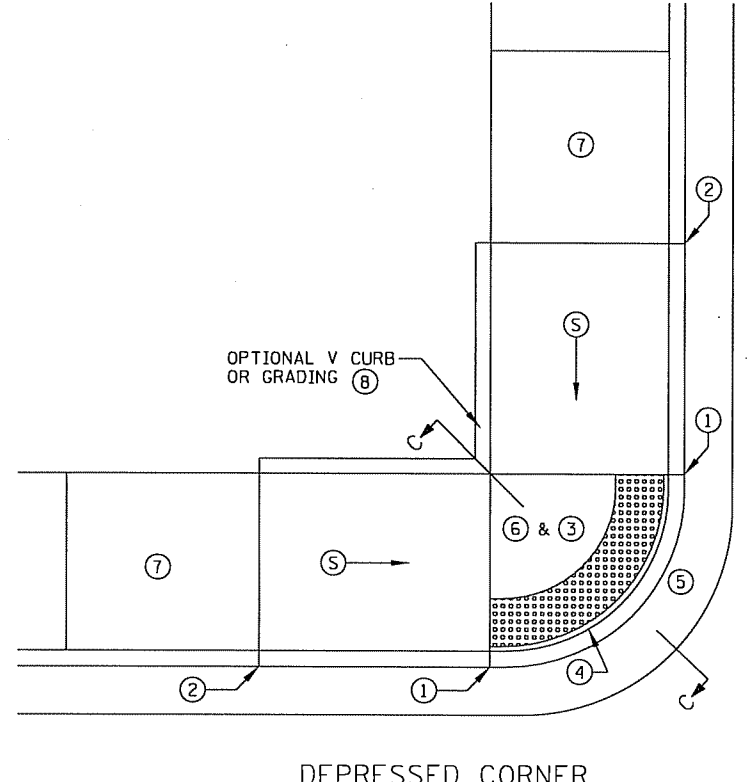
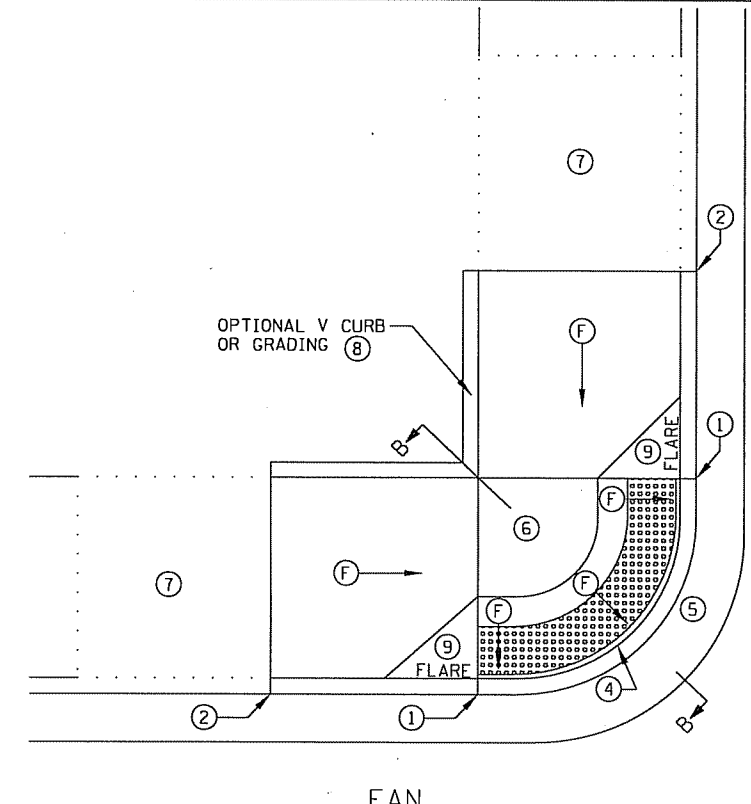
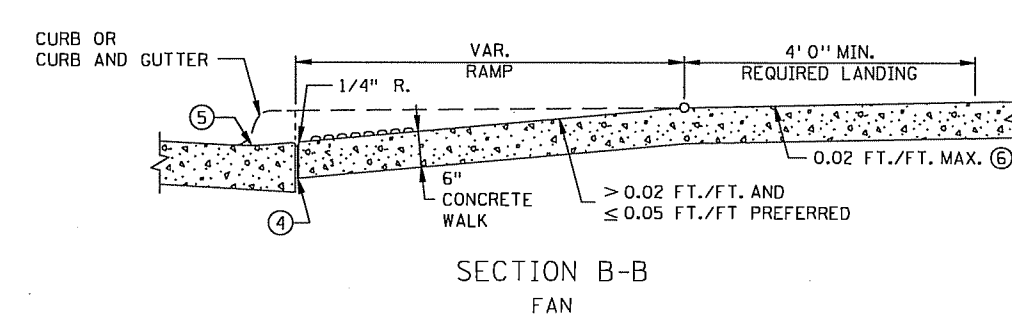
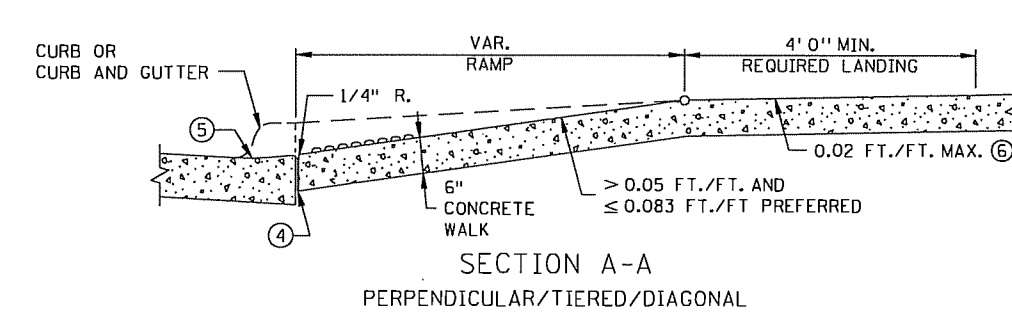
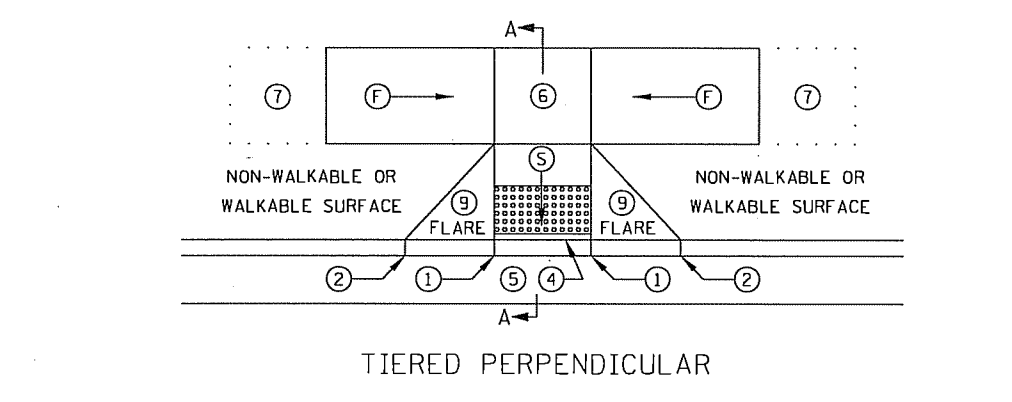
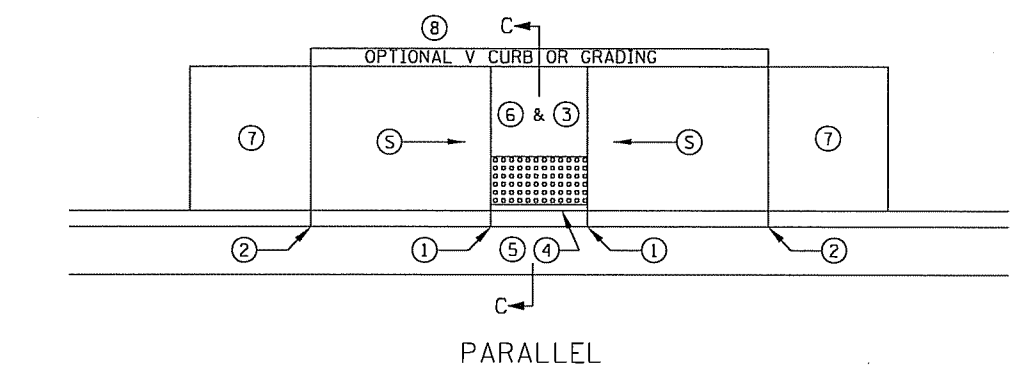
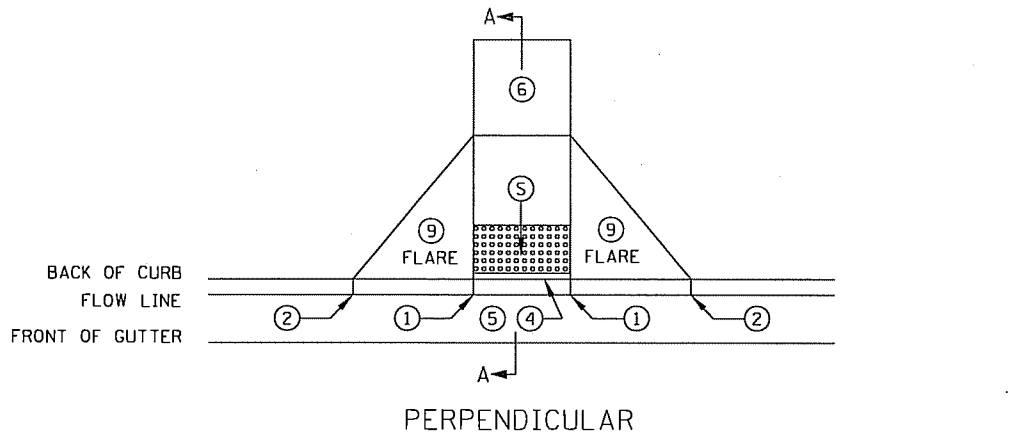
DRAWN BY: MTH DATE 09/21/12
DESIGN BY: MTH DATE 09/21/12
CHECKED BY: JR DATE 02/25/13



S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.A.P. 114-020-048

PLOTTED/REVISED:
05/09/2013

DISTRICT #:
USER NAME: dffrey
PATH & FILENAME: P:\02-611-033\Plan\Standard_Plans\250_L_spn.dgn
FILE NAME:
250_L_spn.dgn



- NOTES:
- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
 - INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.
 - SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.
 - CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.
 - ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.
 - TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.
 - ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.
 - TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
 - 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.
 - SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
 - ① 0" CURB HEIGHT.
 - ② FULL CURB HEIGHT.
 - ③ DETECTABLE WARNINGS MAY BE PART OF 4' X 4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
 - ④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
 - ⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
 - ⑥ 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
 - ⑦ IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
 - ⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.
 - ⑨ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
 - ⑩ DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

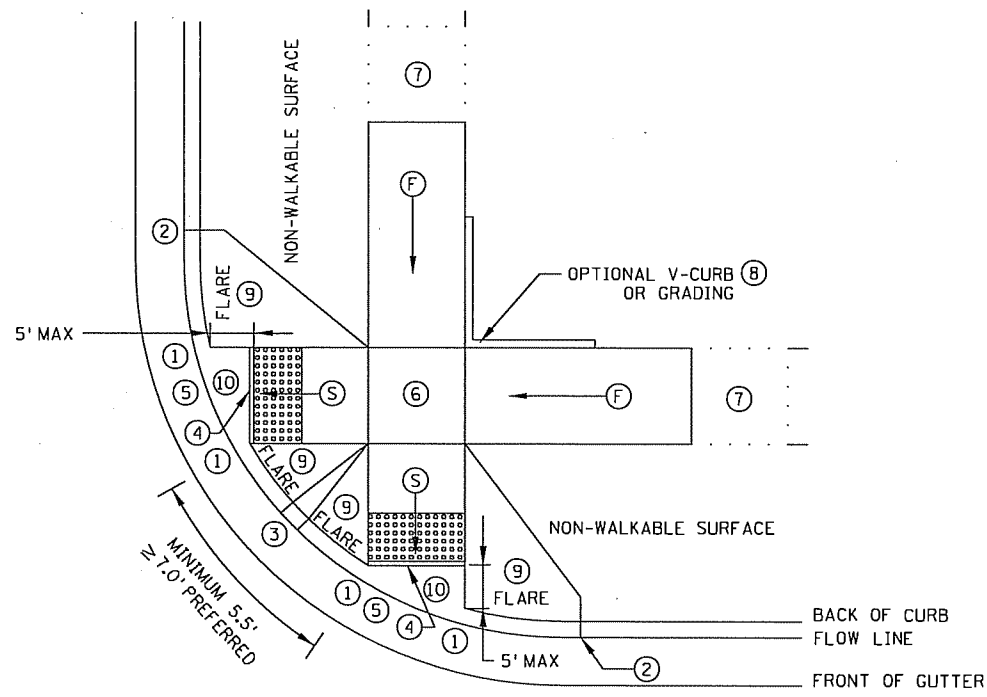
LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
⑤	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%
⑥	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

STANDARD PLAN SHEET NO.
5-297.250 (1 OF 5)
STANDARD APPROVED:
APRIL 10, 2013
S.P. 002-611-033 S.A.P. 114-127-007
S.P. 002-618-031 S.A.P. 114-020-048

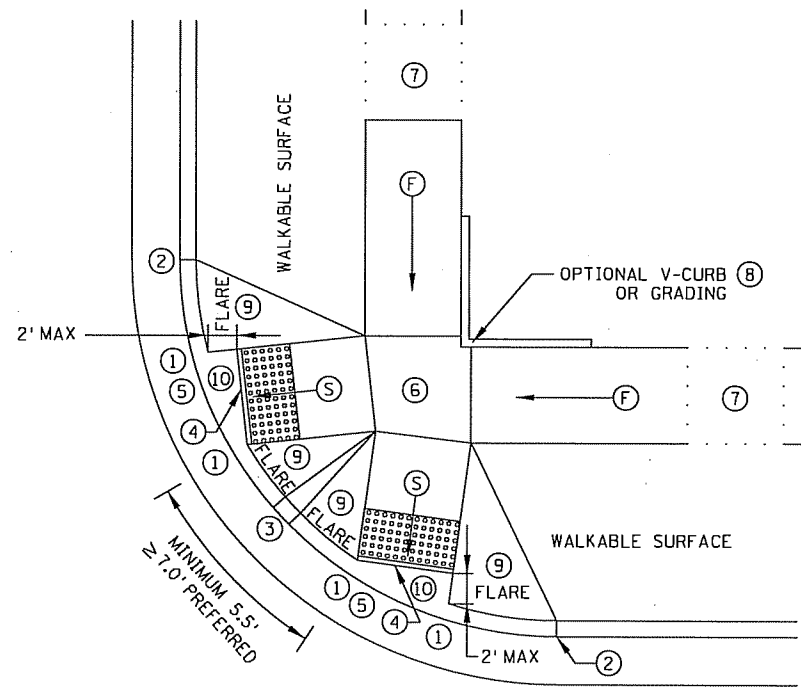
PEDESTRIAN CURB RAMP DETAILS

PLOTTED/REVISED:
05/09/2013

DISTRICT #: USER NAME: dffrey
PATH & FILENAME: P:\02-611-33\PlanStandard_Plans\250-2_spn.dgn
FILE NAME: s250_2_spn.dgn

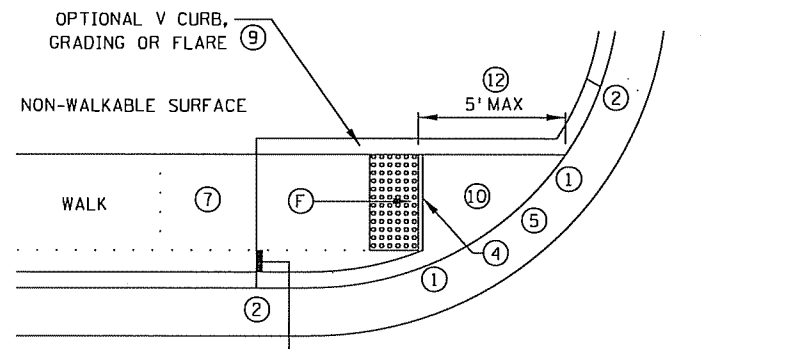


ADJACENT TO NON-WALKABLE SURFACE



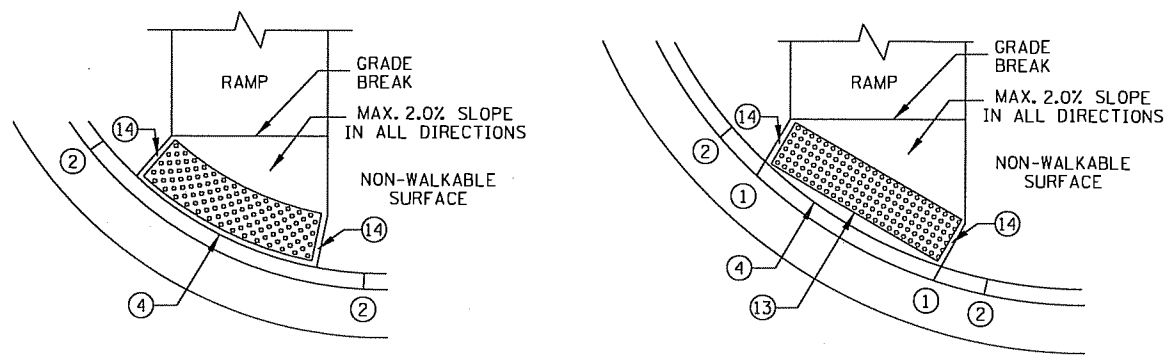
ADJACENT TO WALKABLE SURFACE

COMBINED DIRECTIONAL ⑮

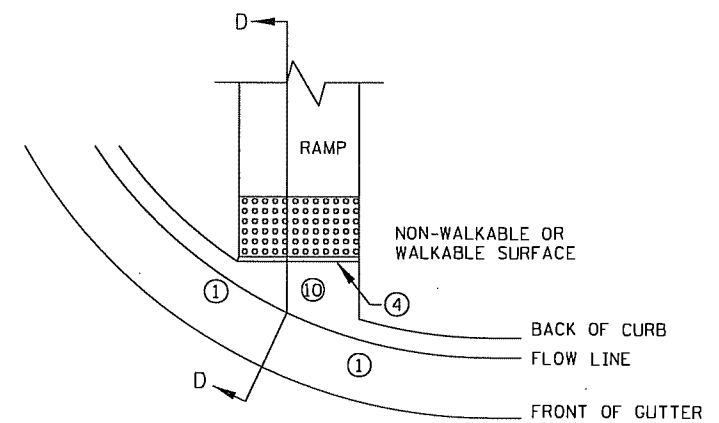


ONE-WAY DIRECTIONAL

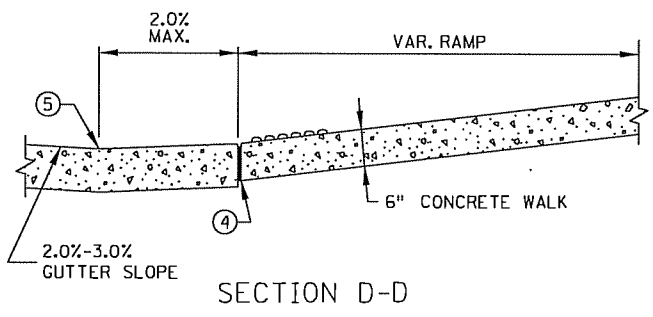
IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED



CURB FOR DIRECTIONAL RAMPS ⑪



SECTION D-D

NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.
- TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.
- ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.
- SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 3" MINIMUM CURB HEIGHT, 4" PREFERRED.
- ④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MIN. TO 6" MAX. FROM THE BACK OF CURB.
- ⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
- ⑥ 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
- ⑦ IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
- ⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- ⑨ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- ⑩ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- ⑪ TO BE USED FOR ALL DIRECTIONAL RAMPS.
- ⑫ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- ⑬ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
- ⑭ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑮ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER

LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
Ⓢ	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%
Ⓣ	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

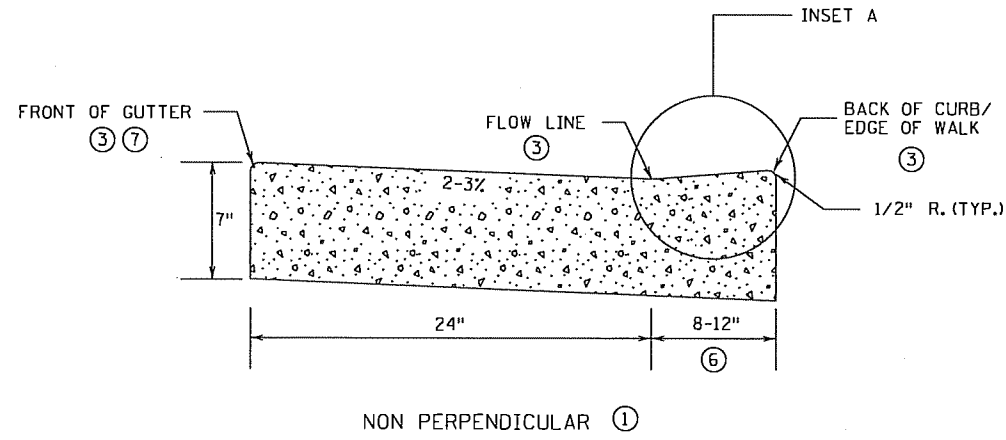
STANDARD PLAN SHEET NO. 5-297.250 (2 OF 5)
STANDARD APPROVED: APRIL 10, 2013
S.P. 002-611-033 S.A.P. 114-127-007 S.P. 002-618-031 S.P. 114-020-048

PEDESTRIAN CURB RAMP DETAILS

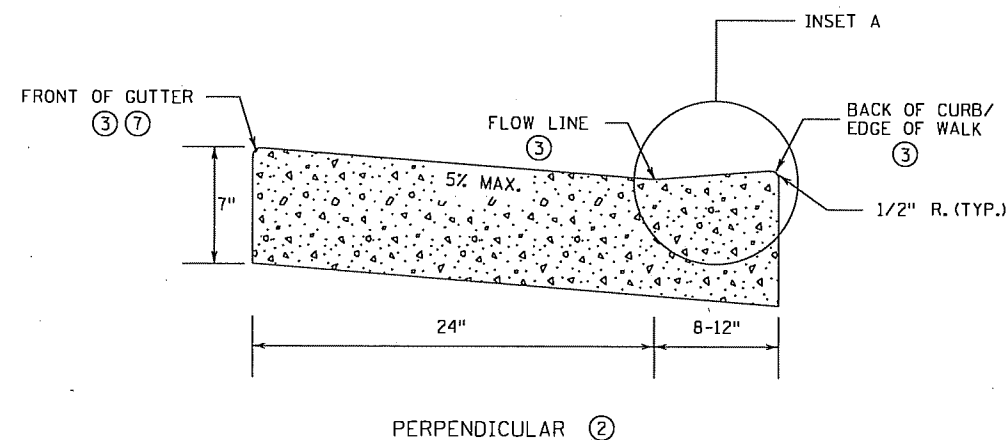
PLOTTED/REVISED:
05/09/2013

DISTRICT #: dffrey
USER NAME: dffrey
PATH & FILENAME: P:\02-611-33\PlanStandard_Plans\250_3_spn.dgn

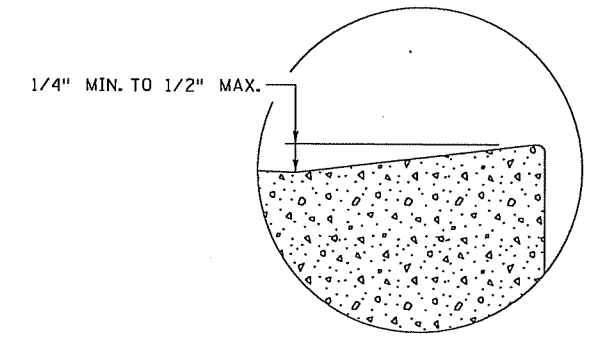
FILE NAME:
s250_3_spn.dgn



NON PERPENDICULAR ①

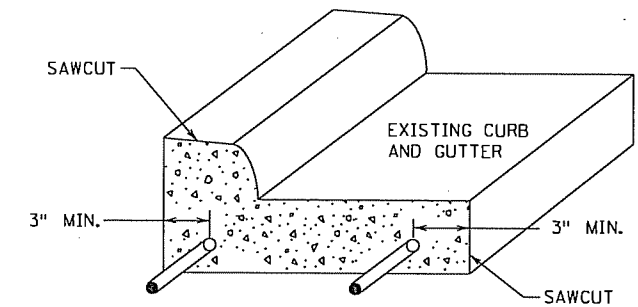
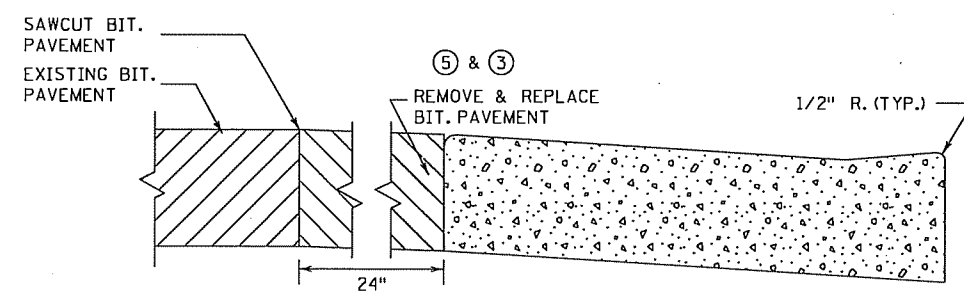
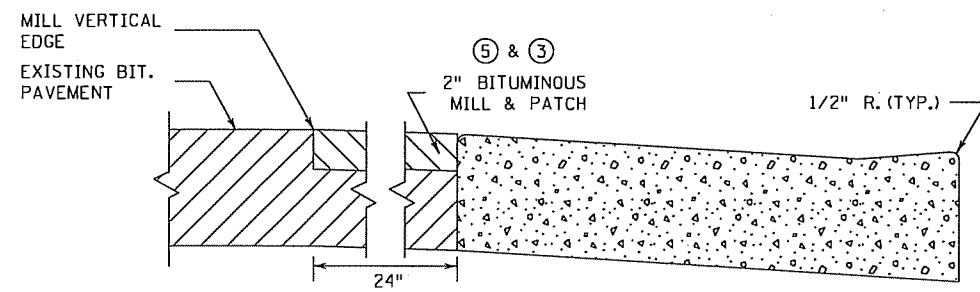


PERPENDICULAR ②

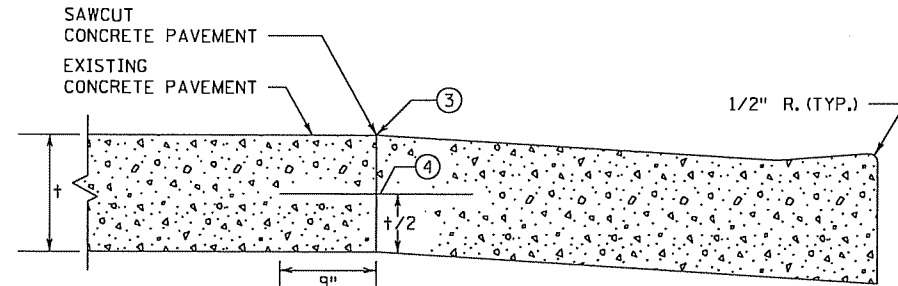
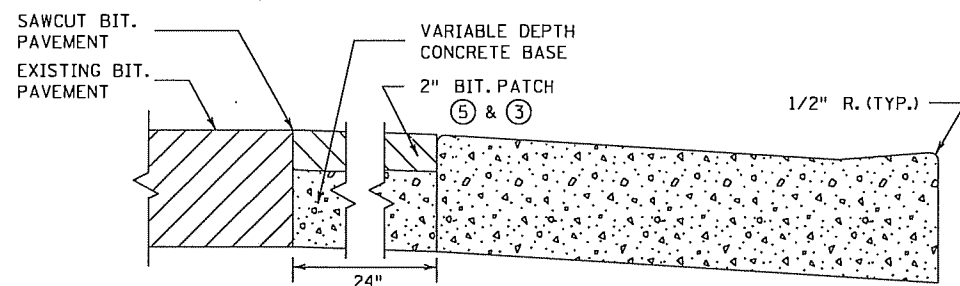


INSET A

PEDESTRIAN ACCESS ROUTE
CURB & GUTTER DETAIL



CURB AND GUTTER REINFORCEMENT ⑧
FOR USE ON CURB RAMP RETROFITS



PAVEMENT TREATMENT OPTIONS
IN FRONT OF CURB & GUTTER
FOR USE ON CURB RAMP RETROFITS

- NOTES:
- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.
 - NO PONDING SHALL BE PRESENT IN THE PAR.
 - ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
 - ① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND COMBINED DIRECTIONALS.
 - ② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.
 - ③ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4\".
 - ④ DRILL AND GROUT NO. 4 EPOXY-COATED 18\" LONG TIE BARS AT 30\" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.
 - ⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
 - ⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS.
 - ⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. PAR GUTTER SHALL NOT BE OVERLAID.
 - ⑧ WHERE PLAN SPECIFIES, DRILL AND GROUT 2 - NO. 4 X 12\" LONG REINFORCEMENT BARS (EPOXY COATED).

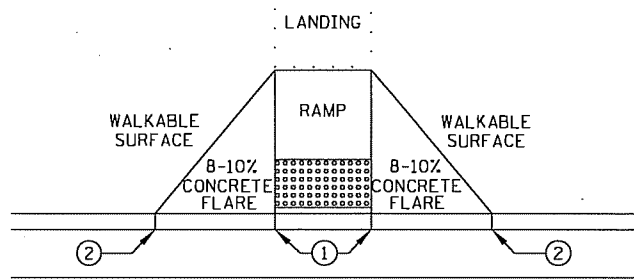
STANDARD PLAN SHEET NO.
5-297.250 (3 OF 5)

STANDARD APPROVED:
APRIL 10, 2013

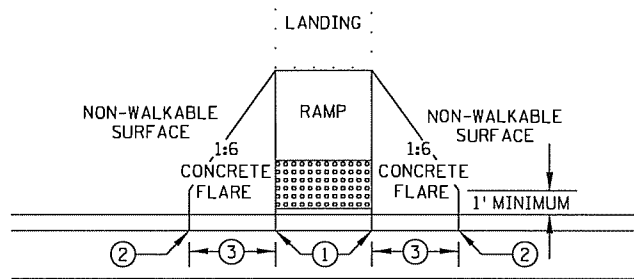
S.P. 002-611-033 S.A.P. 114-127-007
S.P. 002-618-031 S.P. 114-020-048

PEDESTRIAN CURB RAMP DETAILS

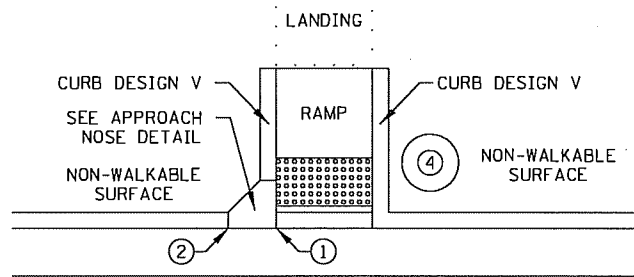
PLOTTED/REVISED:
05/09/2013



PAVED FLARES
ADJACENT TO WALKABLE SURFACE

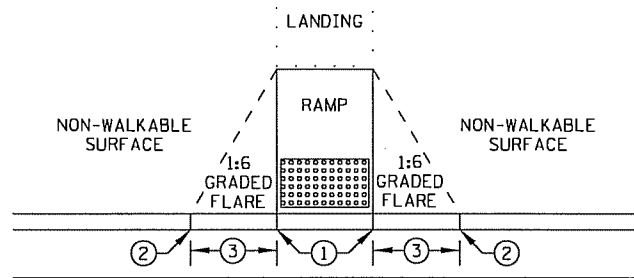


PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE



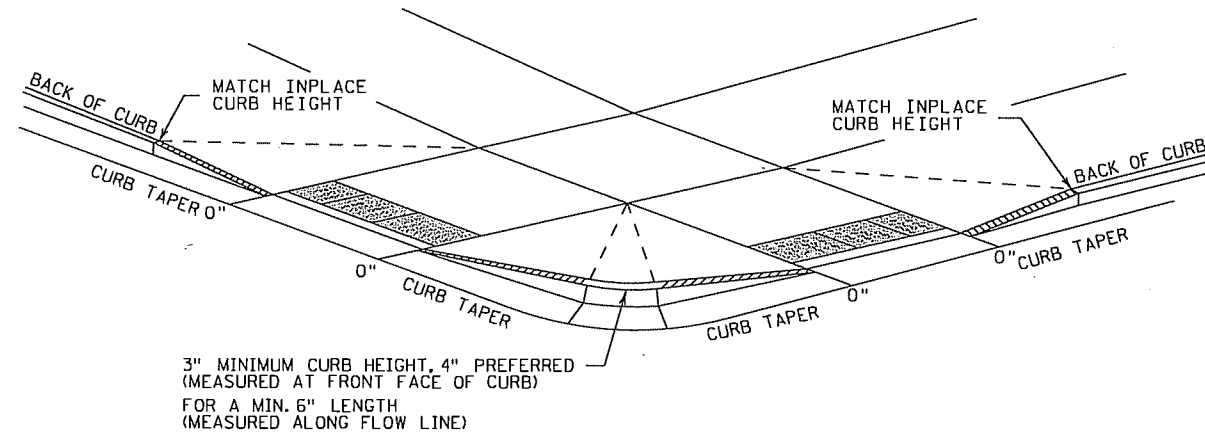
DIRECTION OF TRAFFIC

RETURNED CURB



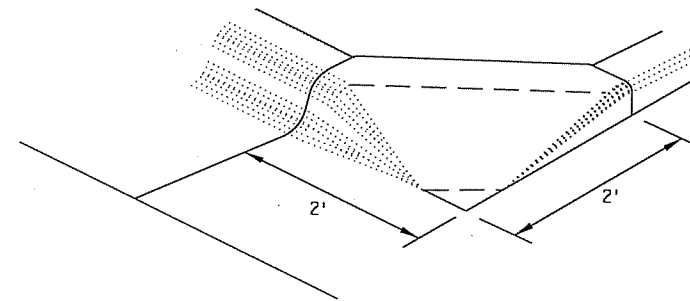
GRADED FLARES

TYPICAL SIDE TREATMENT OPTIONS ⑤



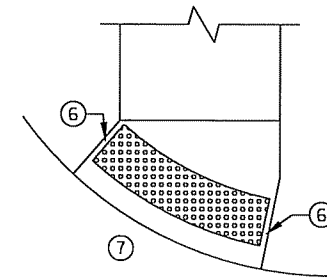
3" MINIMUM CURB HEIGHT, 4" PREFERRED
(MEASURED AT FRONT FACE OF CURB)
FOR A MIN. 6" LENGTH
(MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH
CURB AND GUTTER ⑧

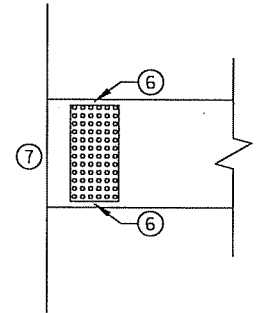


SECTION A-A

APPROACH NOSE DETAIL
FOR DOWNSTREAM SIDE OF TRAFFIC



RADIAL DETECTABLE WARNING



RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

NOTES:

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER. CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 2' - 3' FLARE.
- ④ IMMOVABLE OBJECT OR OBSTRUCTION.
- ⑤ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED ON ALL RAMPS AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
- ⑥ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑦ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE VISUAL CONTRAST.
- ⑧ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

STANDARD PLAN SHEET NO.
5-297.250 (4 OF 5)

STANDARD APPROVED:
APRIL 10, 2013

S.P. 002-611-033 S.A.P. 114-127-007
S.P. 002-618-031 S.P. 114-020-048

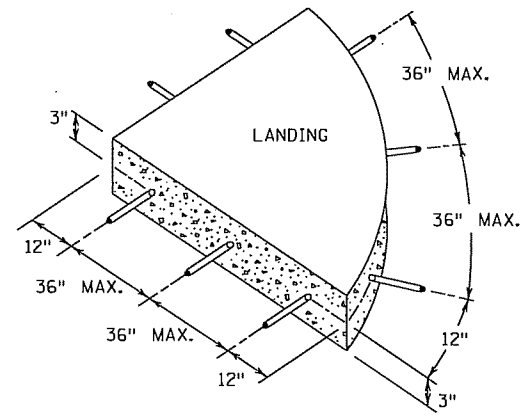
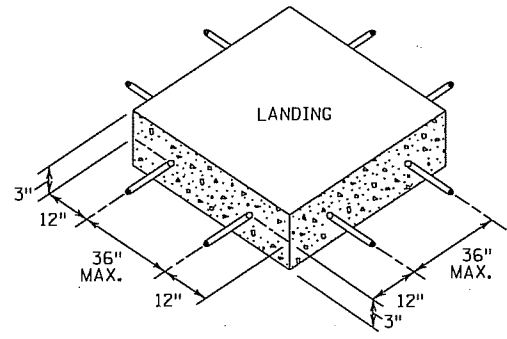
PEDESTRIAN CURB RAMP DETAILS

DISTRICT #: USER NAME: dffrey PATH & FILENAME: P:\02-611-33\PlanStandard_Plans\250_4_spn.dgn FILE NAME: s250_4_spn.dgn

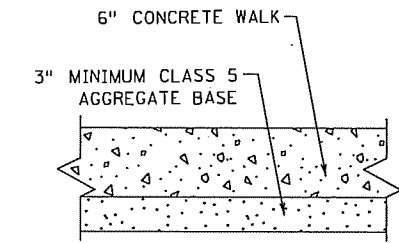
PLOTTED/REVISED:
05/09/2013

DISTRICT #: USER NAME: dffrey
PATH & FILENAME: P:\02-611-33\Plan\Standard_Plans\250_5_spn.dgn

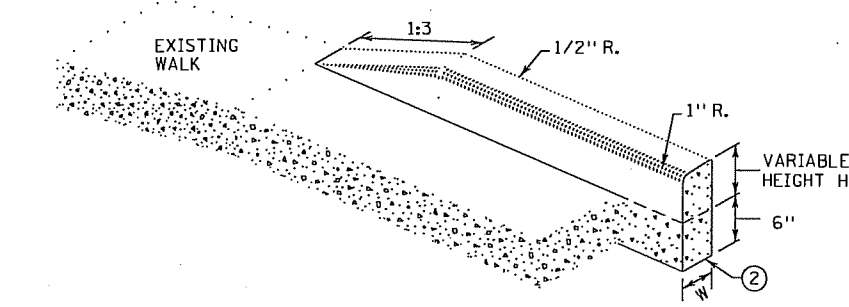
FILE NAME:
s250_5_spn.dgn



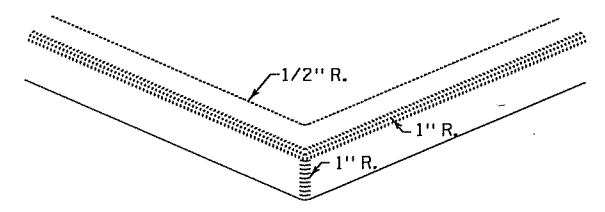
SIDEWALK REINFORCEMENT ⑤ ⑥



TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER

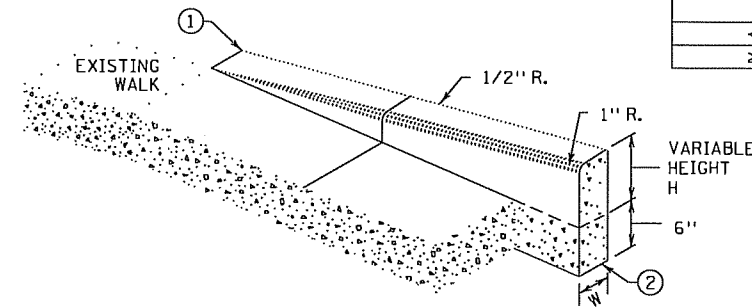


V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS

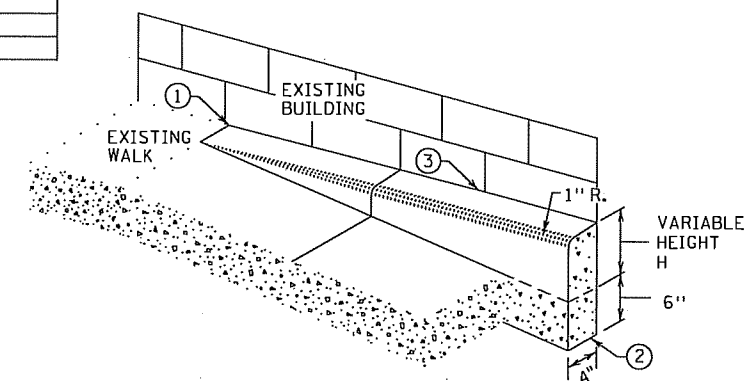


V CURB INTERSECTION

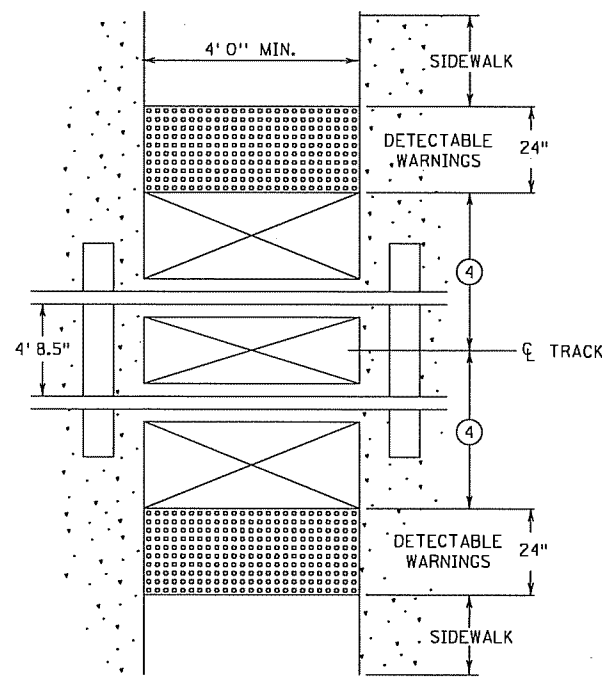
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



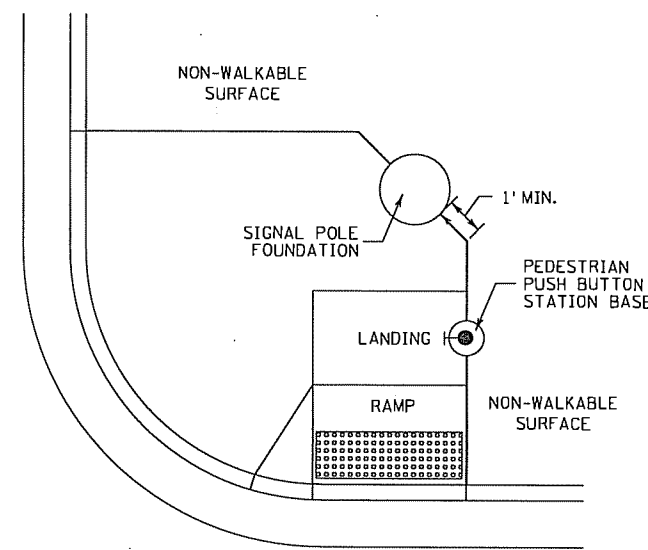
V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS



V CURB ADJACENT TO BUILDING
OR BARRIER



RAILROAD CROSSING
PLAN VIEW



CONCRETE WALK EDGES ADJACENT
TO CONCRETE STRUCTURES

NOTES:

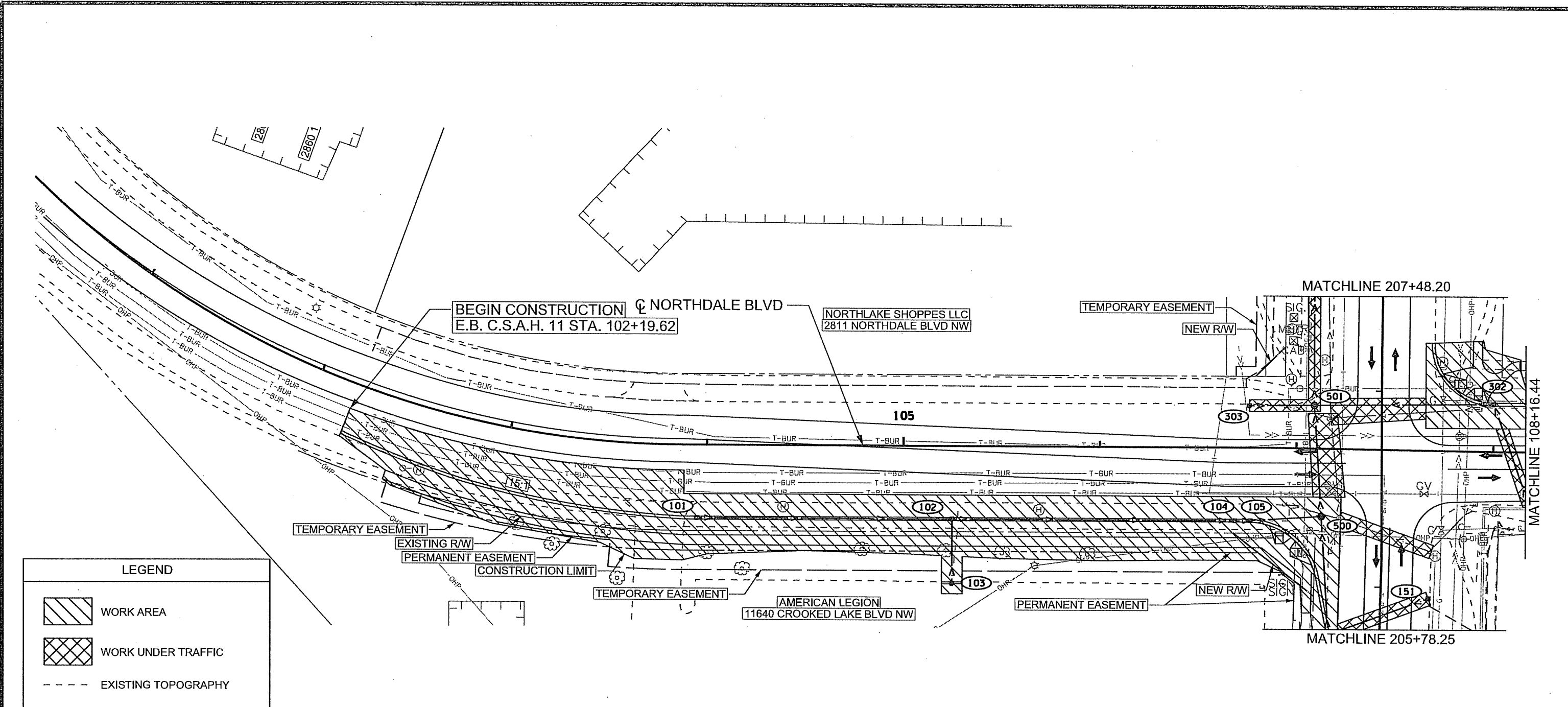
- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- ① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- ③ EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.
- ④ EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 15' MAXIMUM FROM THE CENTERLINE OF THE TRACK. WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 17" - 19" FROM THE APPROACHING SIDE OF THE GATE ARM.
- ⑤ WHEN PLAN SPECIFIES, DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS AT 36" MAX. CENTER TO CENTER (EPOXY COATED).
- ⑥ TO ENSURE RAMP AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET WHEN LANDINGS ARE CAST SEPARATELY.

STANDARD PLAN SHEET NO.
5-297.250 (5 OF 5)

STANDARD APPROVED:
APRIL 10, 2013

S.P. 002-611-033 S.A.P. 114-127-007
S.P. 002-618-031 S.P. 114-020-048

PEDESTRIAN CURB RAMP DETAILS



LEGEND

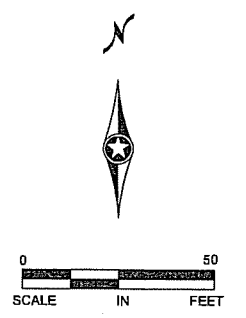
- WORK AREA
- WORK UNDER TRAFFIC
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES

STAGE 1 CONSTRUCTION NOTES:

SIGNAL TO BE REMOVED.
 CONSTRUCT SOUTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 SOUTH OF CSAH 11.
 CONSTRUCT THE NORTH SIDE OF CSAH 11 EAST OF CSAH 18.
 STORM SEWER REMOVED AND REPLACED UNDER TRAFFIC.
 MAKE SURE STORM SEWER FUNCTIONS UNTIL REPLACED.

STAGE 1 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.
 WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE NORTH. TRAFFIC IS THEN SHIFTED TO THE SOUTH SIDE EAST OF CSAH 18.
 SOUTH OF CSAH 11, CSAH 18 IS SHIFTED SLIGHTLY TO THE EAST. NORTH OF CSAH 11, IT REMAINS AS IS.



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_STG1_P1.dgn 05/09/2013 12:21:47 PM					

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

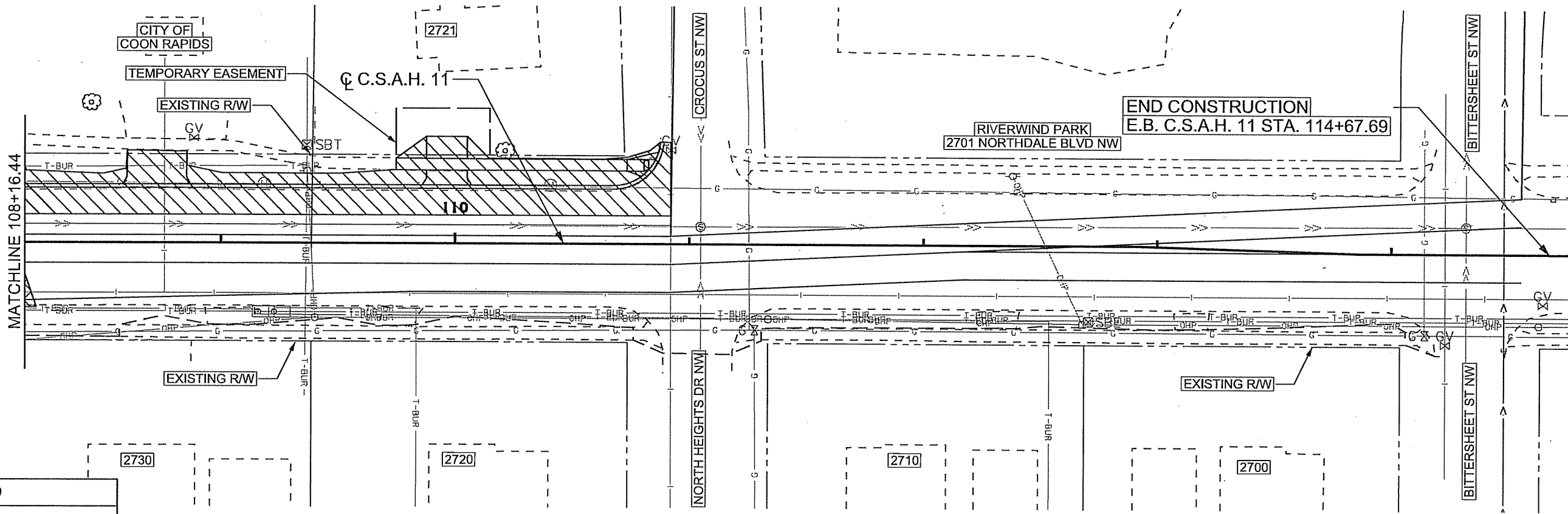
DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

1 OF 4
**STAGING PLAN
 STAGE 1**
 Sheet 22 of 98 Sheets



LEGEND

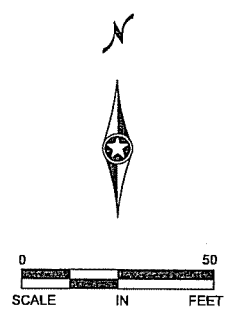
- WORK AREA
- WORK UNDER TRAFFIC
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES

STAGE 1 CONSTRUCTION NOTES:

SIGNAL TO BE REMOVED.
 CONSTRUCT SOUTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 SOUTH OF CSAH 11.
 CONSTRUCT THE NORTH SIDE OF CSAH 11 EAST OF CSAH 18.
 STORM SEWER REMOVED AND REPLACED UNDER TRAFFIC.
 MAKE SURE STORM SEWER FUNCTIONS UNTIL REPLACED.

STAGE 1 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.
 WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE NORTH. TRAFFIC IS THEN SHIFTED TO THE SOUTH SIDE EAST OF CSAH 18.
 SOUTH OF CSAH 11, CSAH 18 IS SHIFTED SLIGHTLY TO THE EAST. NORTH OF CSAH 11, IT REMAINS AS IS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_STG1_P2.dgn 05/09/2013 12:21:48 PM

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.
 PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



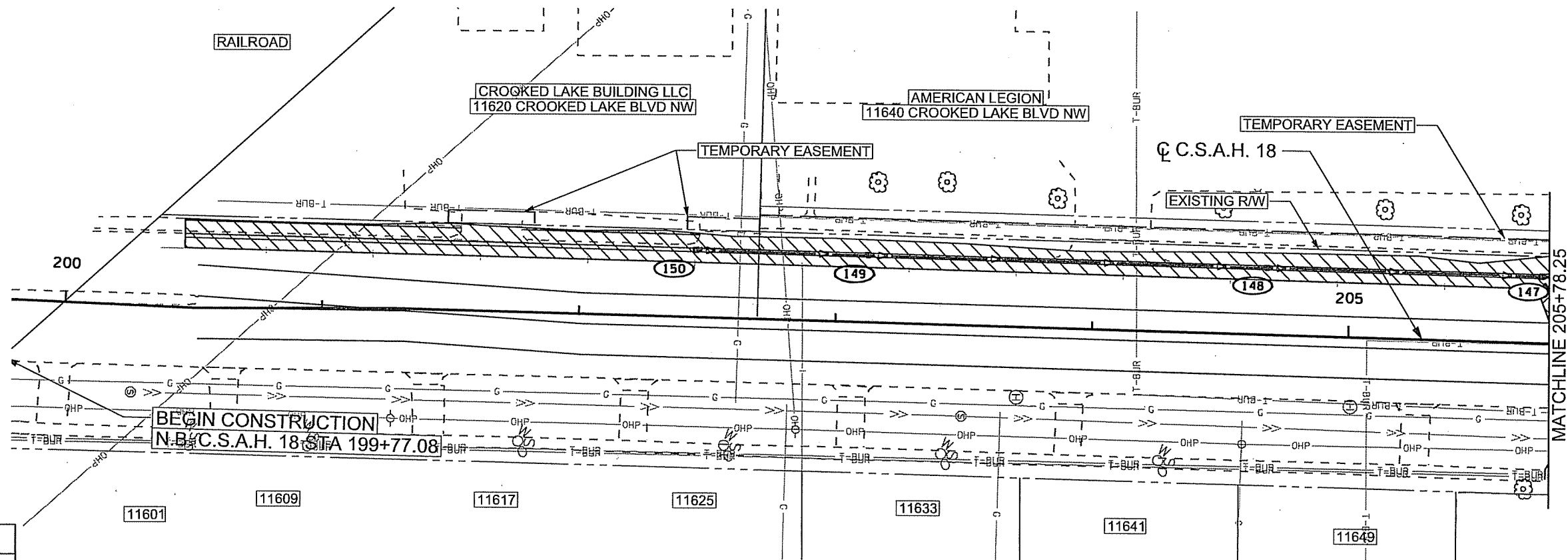
**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

2 OF 4

**STAGING PLAN
 STAGE 1**

Sheet 23 of 98 Sheets



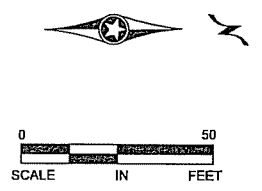
LEGEND	
	WORK AREA
	WORK UNDER TRAFFIC
	EXISTING TOPOGRAPHY
	CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
	COMPLETED CONSTRUCTION
	TRAFFIC SHIFT LANES
	TRAFFIC FLOW DIRECTION
	DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
	INPLACE DRAINAGE PIPES

STAGE 1 CONSTRUCTION NOTES:

SIGNAL TO BE REMOVED.
 CONSTRUCT SOUTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 SOUTH OF CSAH 11.
 CONSTRUCT THE NORTH SIDE OF CSAH 11 EAST OF CSAH 18.
 STORM SEWER REMOVED AND REPLACED UNDER TRAFFIC.
 MAKE SURE STORM SEWER FUNCTIONS UNTIL REPLACED.

STAGE 1 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.
 WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE NORTH. TRAFFIC IS THEN SHIFTED TO THE SOUTH SIDE EAST OF CSAH 18.
 SOUTH OF CSAH 11, CSAH 18 IS SHIFTED SLIGHTLY TO THE EAST. NORTH OF CSAH 11, IT REMAINS AS IS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_STG1_P3.dgn 05/09/2013 12:21:48 PM

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



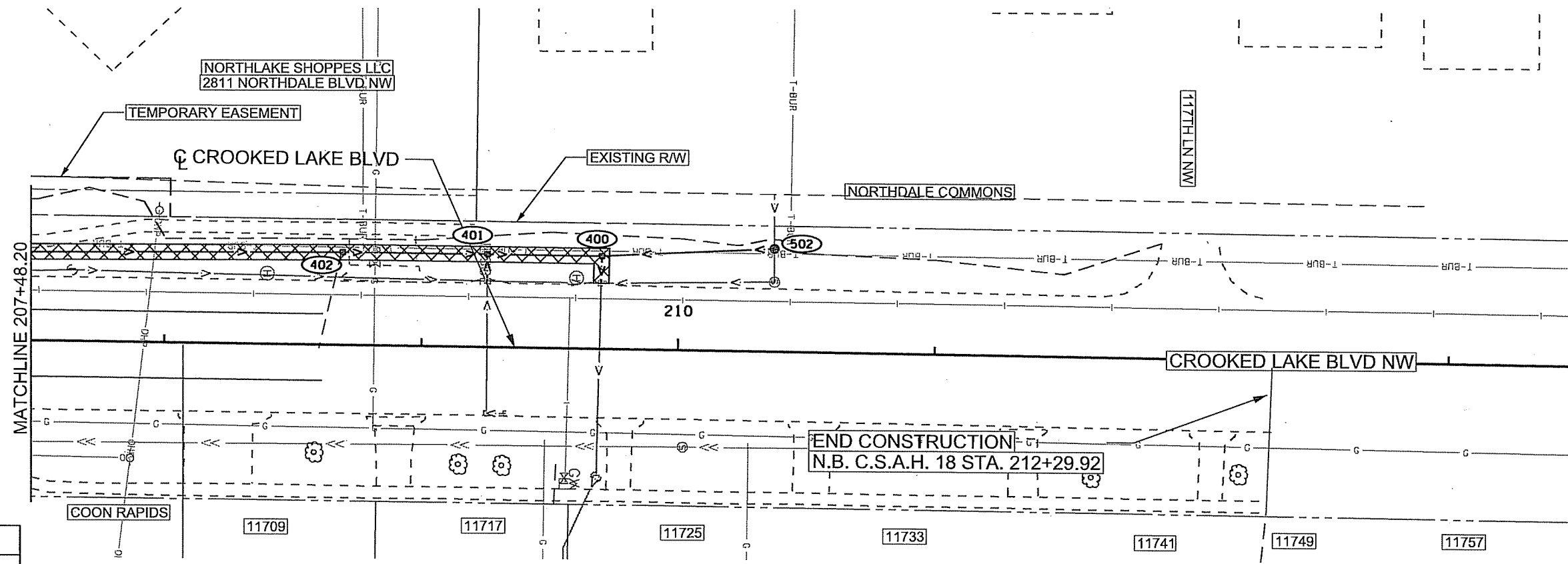
**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048










3 OF 4

STAGING PLAN
 STAGE 1

Sheet 24 of 98 Sheets



LEGEND

-  WORK AREA
-  WORK UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES

STAGE 1 CONSTRUCTION NOTES:

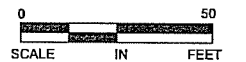
SIGNAL TO BE REMOVED.
 CONSTRUCT SOUTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 SOUTH OF CSAH 11.
 CONSTRUCT THE NORTH SIDE OF CSAH 11 EAST OF CSAH 18.
 STORM SEWER REMOVED AND REPLACED UNDER TRAFFIC.
 MAKE SURE STORM SEWER FUNCTIONS UNTIL REPLACED.

STAGE 1 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.

WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE NORTH. TRAFFIC IS THEN SHIFTED TO THE SOUTH SIDE EAST OF CSAH 18.

SOUTH OF CSAH 11, CSAH 18 IS SHIFTED SLIGHTLY TO THE EAST. NORTH OF CSAH 11, IT REMAINS AS IS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_STG1_P4.dgn 05/09/2013 12:21:49 PM

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.
 PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: *Curt Kobiarcsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13

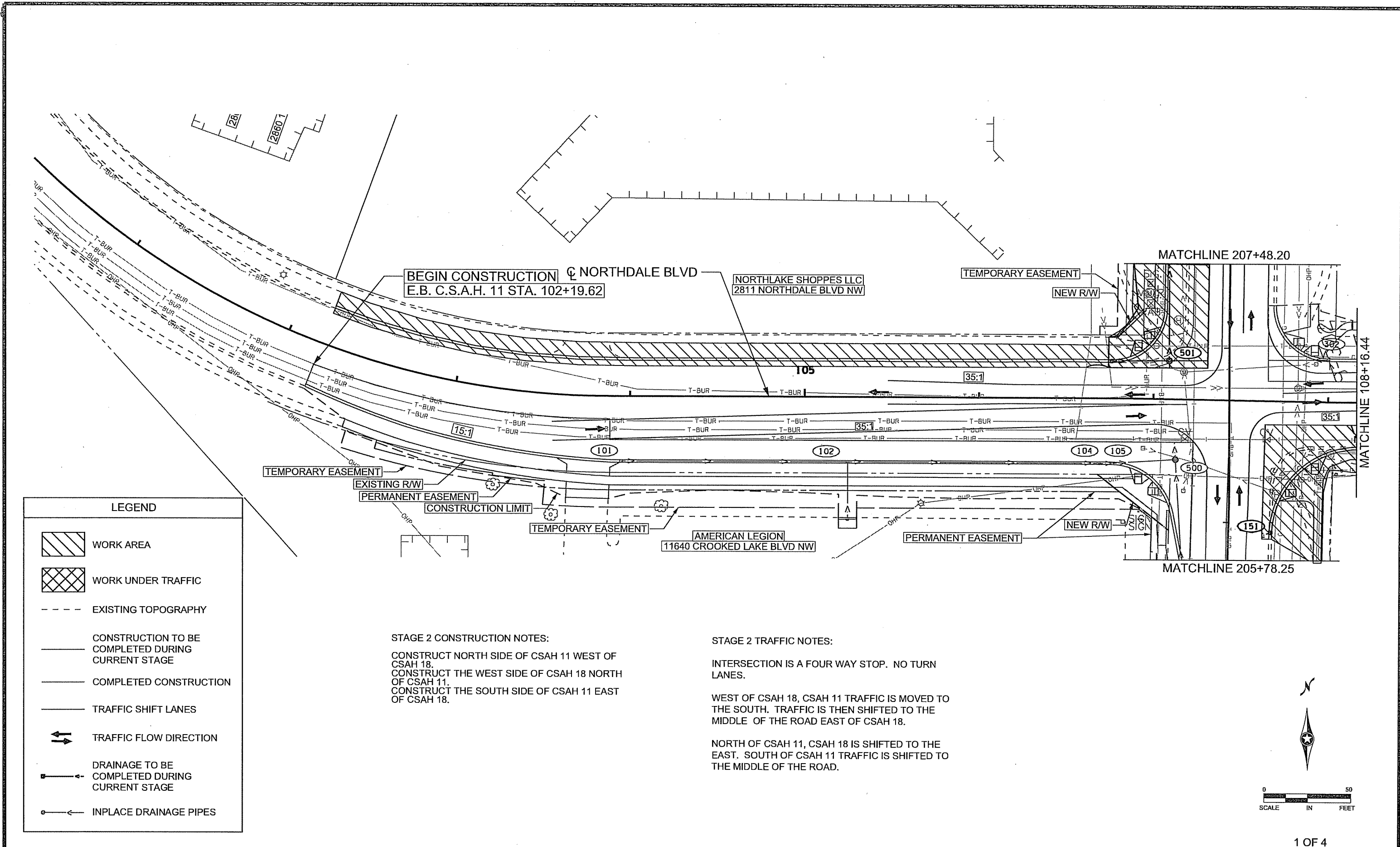


**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

**STAGING PLAN
 STAGE 1**

Sheet 25 of 98 Sheets



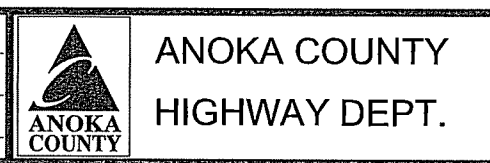
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_STG2_P1.dgn 05/09/2013 12:21:50 PM

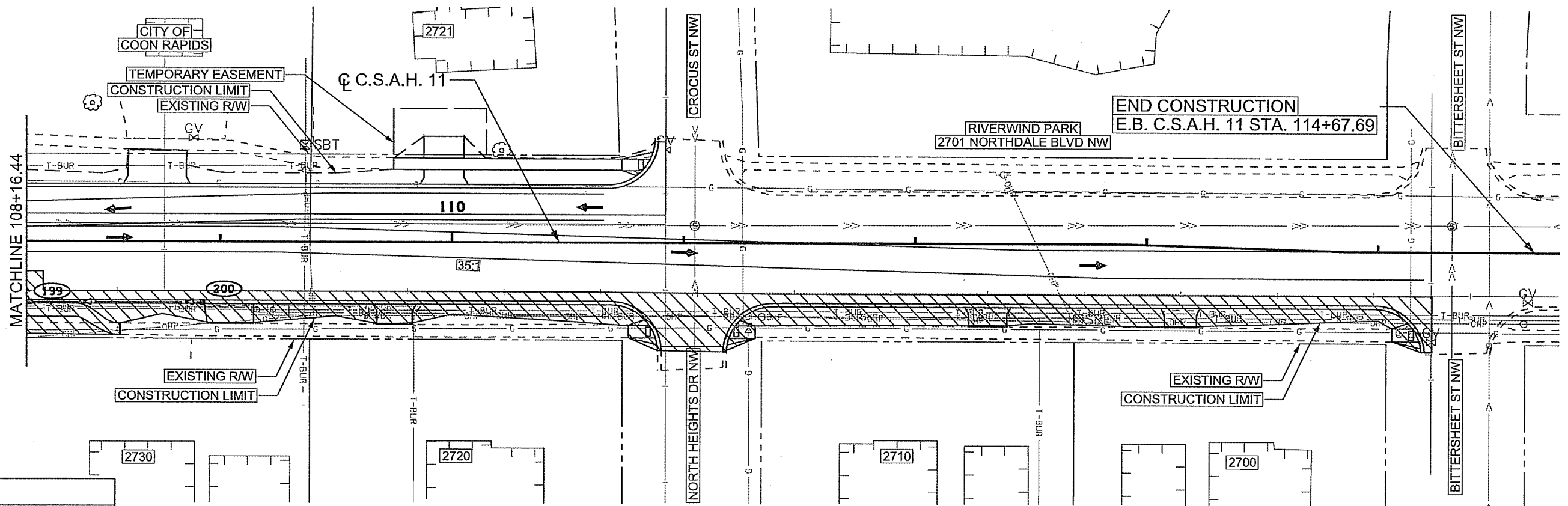
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756










DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048



LEGEND

-  WORK AREA
-  WORK UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES

STAGE 2 CONSTRUCTION NOTES:

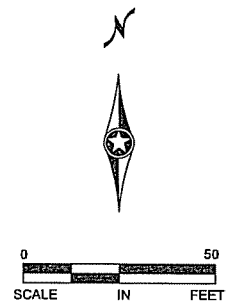
CONSTRUCT NORTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 NORTH OF CSAH 11.
 CONSTRUCT THE SOUTH SIDE OF CSAH 11 EAST OF CSAH 18.

STAGE 2 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.

WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE SOUTH. TRAFFIC IS THEN SHIFTED TO THE MIDDLE OF THE ROAD EAST OF CSAH 18.

NORTH OF CSAH 11, CSAH 18 IS SHIFTED TO THE EAST. SOUTH OF CSAH 11 TRAFFIC IS SHIFTED TO THE MIDDLE OF THE ROAD.



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_STG2_P2.dgn 05/09/2013 12:21:50 PM					

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24755

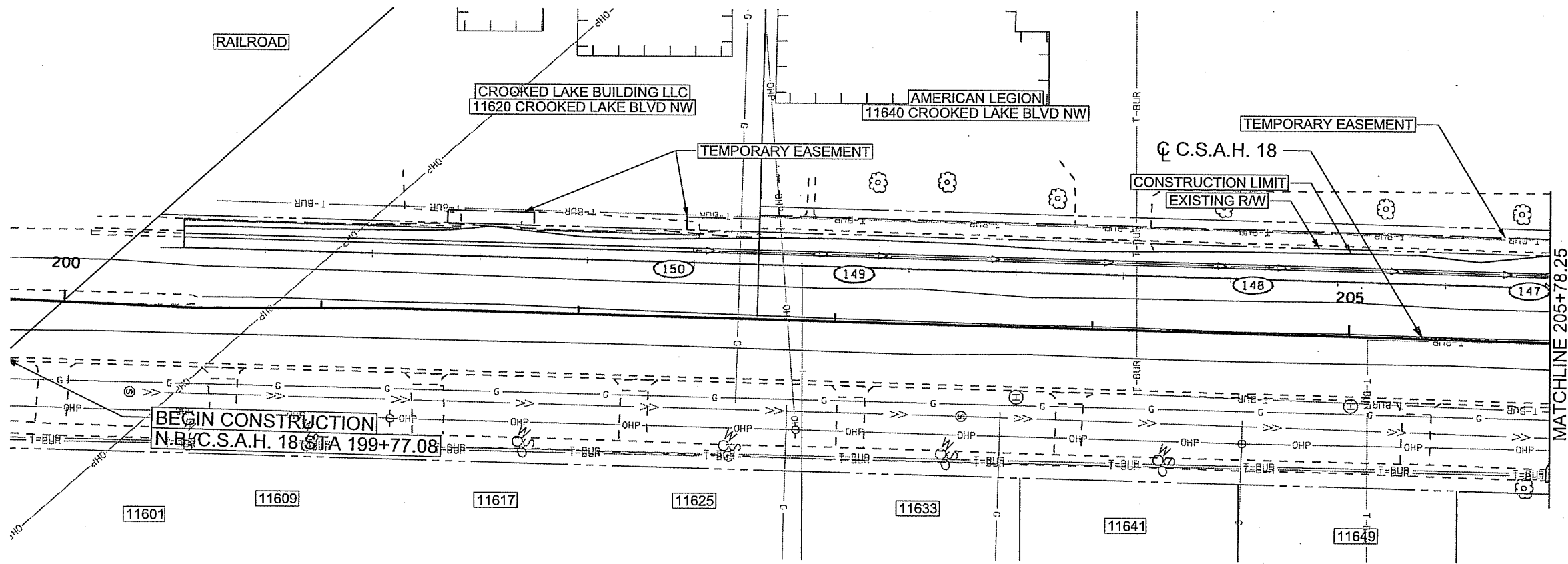
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

**STAGING PLAN
 STAGE 2**
 Sheet 27 of 98 Sheets



LEGEND

- WORK AREA
- WORK UNDER TRAFFIC
- EXISTING TOPOGRAPHY
- CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
- COMPLETED CONSTRUCTION
- TRAFFIC SHIFT LANES
- TRAFFIC FLOW DIRECTION
- DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
- INPLACE DRAINAGE PIPES

STAGE 2 CONSTRUCTION NOTES:

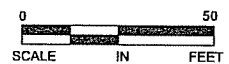
CONSTRUCT NORTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 NORTH OF CSAH 11.
 CONSTRUCT THE SOUTH SIDE OF CSAH 11 EAST OF CSAH 18.

STAGE 2 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.

WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE SOUTH. TRAFFIC IS THEN SHIFTED TO THE MIDDLE OF THE ROAD EAST OF CSAH 18.

NORTH OF CSAH 11, CSAH 18 IS SHIFTED TO THE EAST. SOUTH OF CSAH 11 TRAFFIC IS SHIFTED TO THE MIDDLE OF THE ROAD.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_STG2_P3.dgn 05/09/2013 12:21:51 PM

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.

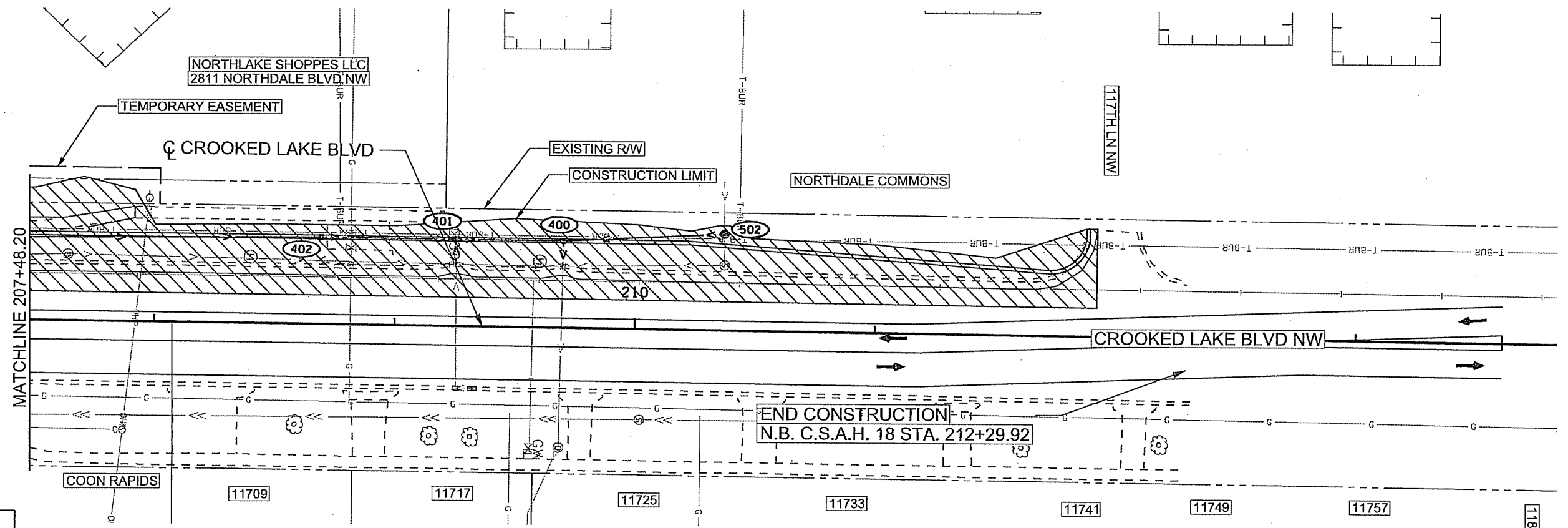
PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: *[Signature]*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13












**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048



LEGEND

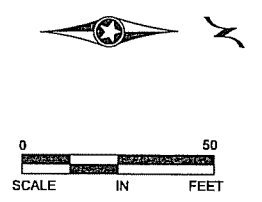
-  WORK AREA
-  WORK UNDER TRAFFIC
-  EXISTING TOPOGRAPHY
-  CONSTRUCTION TO BE COMPLETED DURING CURRENT STAGE
-  COMPLETED CONSTRUCTION
-  TRAFFIC SHIFT LANES
-  TRAFFIC FLOW DIRECTION
-  DRAINAGE TO BE COMPLETED DURING CURRENT STAGE
-  INPLACE DRAINAGE PIPES

STAGE 2 CONSTRUCTION NOTES:

CONSTRUCT NORTH SIDE OF CSAH 11 WEST OF CSAH 18.
 CONSTRUCT THE WEST SIDE OF CSAH 18 NORTH OF CSAH 11.
 CONSTRUCT THE SOUTH SIDE OF CSAH 11 EAST OF CSAH 18.

STAGE 2 TRAFFIC NOTES:

INTERSECTION IS A FOUR WAY STOP. NO TURN LANES.
 WEST OF CSAH 18, CSAH 11 TRAFFIC IS MOVED TO THE SOUTH. TRAFFIC IS THEN SHIFTED TO THE MIDDLE OF THE ROAD EAST OF CSAH 18.
 NORTH OF CSAH 11, CSAH 18 IS SHIFTED TO THE EAST. SOUTH OF CSAH 11 TRAFFIC IS SHIFTED TO THE MIDDLE OF THE ROAD.



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_STG2_P4.dgn 05/09/2013 12:21:52 PM

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



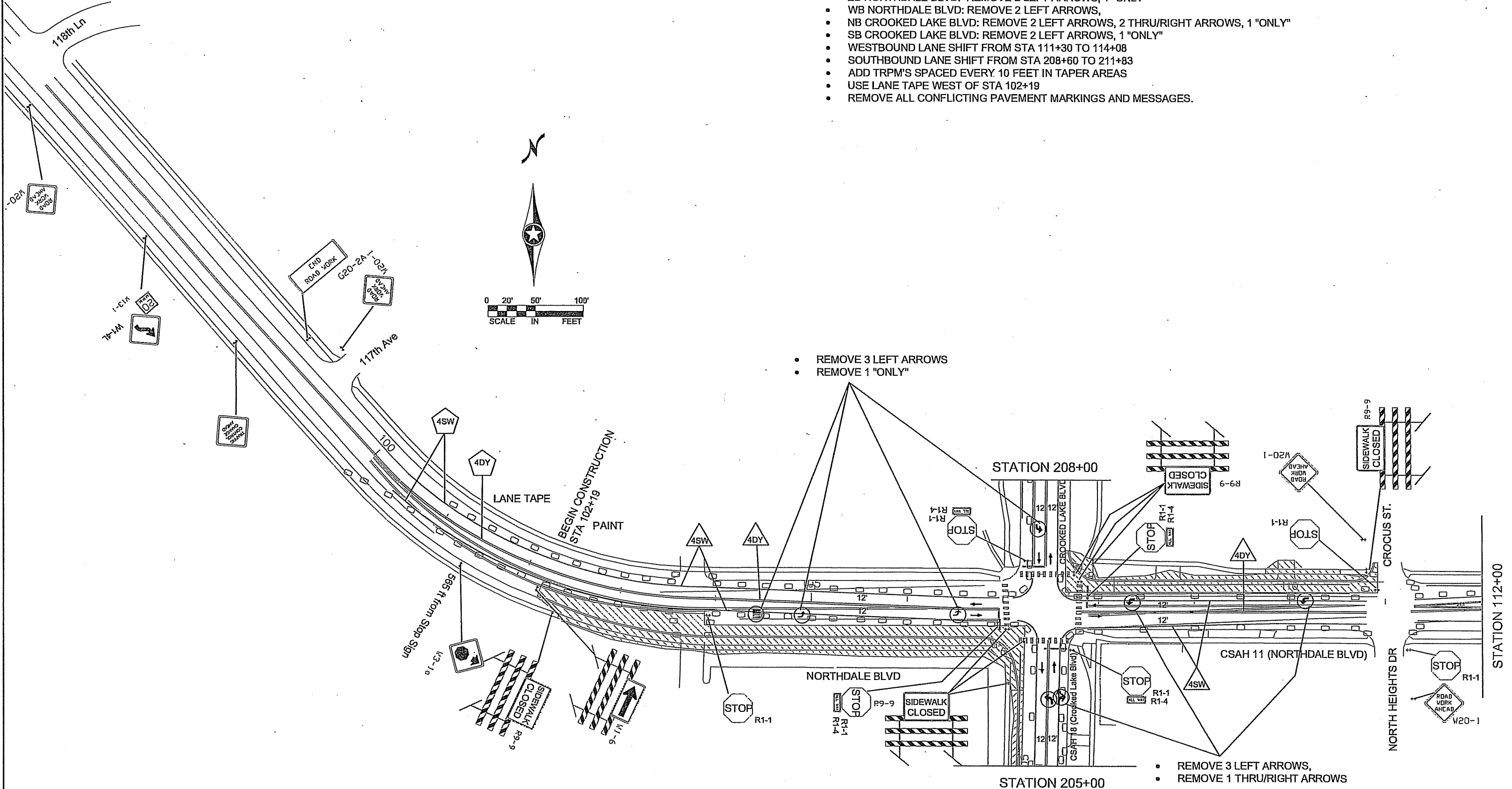
**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

**STAGING PLAN
 STAGE 2**
 Sheet 29 of 98 Sheets

STAGE 1 TRAFFIC CONTROL NOTES:

- SIGNAL IS TURNED OFF AND TAKEN DOWN
- INTERSECTION IS CONVERTED TO AN ALL WAY STOP CONDITION.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND RESIDENCE.
- EB NORTHDAL BLVD: REMOVE 2 LEFT ARROWS, 1 "ONLY"
- WB NORTHDAL BLVD: REMOVE 2 LEFT ARROWS,
- NB CROOKED LAKE BLVD: REMOVE 2 LEFT ARROWS, 2 THRU/RIGHT ARROWS, 1 "ONLY"
- SB CROOKED LAKE BLVD: REMOVE 2 LEFT ARROWS, 1 "ONLY"
- WESTBOUND LANE SHIFT FROM STA 111+30 TO 114+08
- SOUTHBOUND LANE SHIFT FROM STA 208+60 TO 211+83
- ADD TRPM'S SPACED EVERY 10 FEET IN TAPER AREAS
- USE LANE TAPE WEST OF STA 102+19
- REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND MESSAGES.

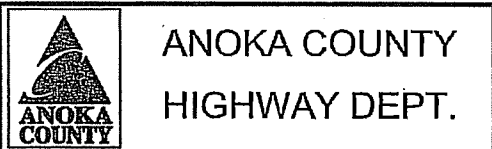


NO	DATE	BY	CHKD	APPR	REVISION

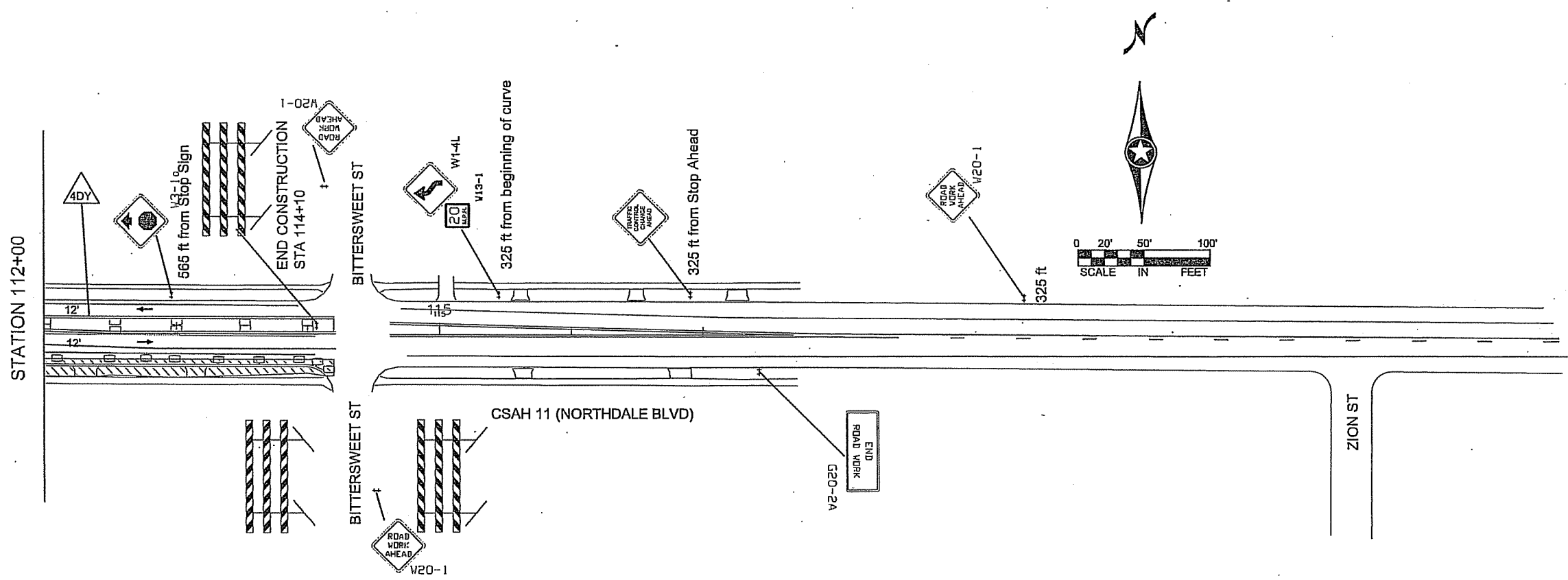
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CURT A KOBILARCSIK
 SIGNATURE: *[Signature]*
 DATE: 5-16-13 REG. NO. 24756

DRAWN BY: MTH DATE: 09/20/12
 DESIGN BY: MTH DATE: 09/20/12
 CHECKED BY: JR DATE: 02/25/13



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048



STAGE 2 TRAFFIC CONTROL NOTES:

- INTERSECTION REMAINS AN ALL WAY STOP CONDITION.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND RESIDENCE.
- EASTBOUND LANE SHIFT FROM STA 103+50 TO 106+00
- WESTBOUND LANE SHIFT FROM STA 108+75 TO 110+80
- SOUTHBOUND LANE SHIFT FROM STA 211+17 TO 213+60
- ADD TRPM'S (SPACED EVERY 10 FEET) IN LANE SHIFTS
- USE LANE TAPE WEST OF STA 102+19 AND NORTH OF 212+00
- REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND MESSAGES.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-33\Bose\TRAFFIC\02-611-33_STG2.dwg

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

PRINT NAME: **CURT A KOBILARCSIK**

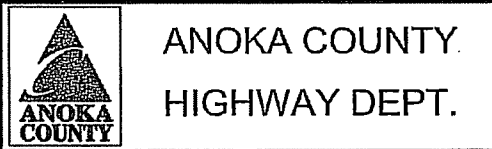
SIGNATURE: *Curt Kobilarcsik*

DATE: **5-16-13** REG. NO. **24756**

DRAWN BY: **MTH** DATE: **09/20/12**

DESIGN BY: **MTH** DATE: **09/20/12**

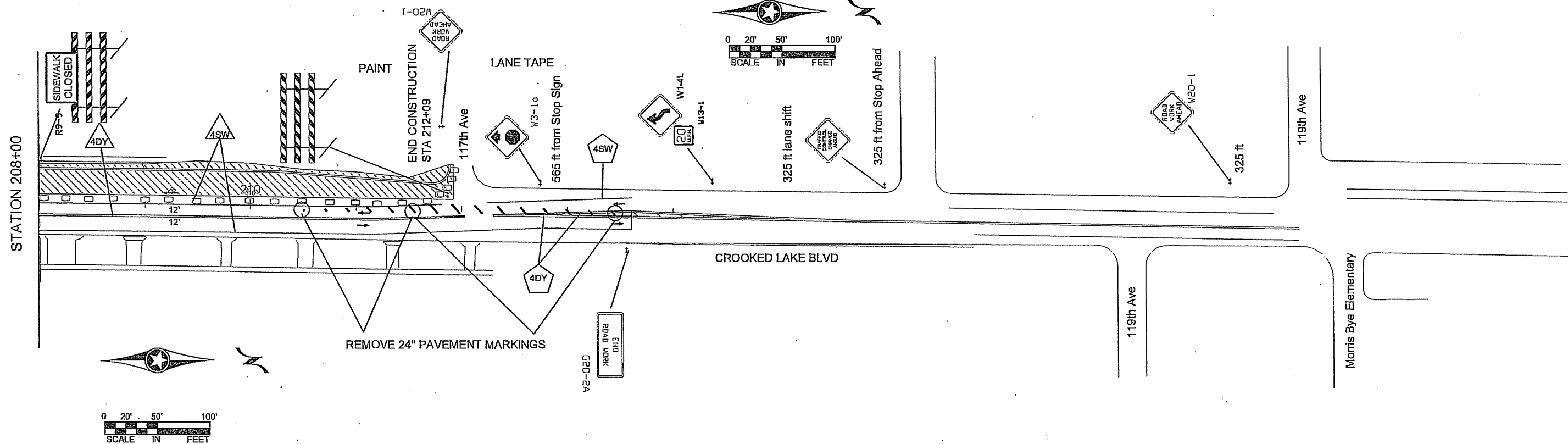
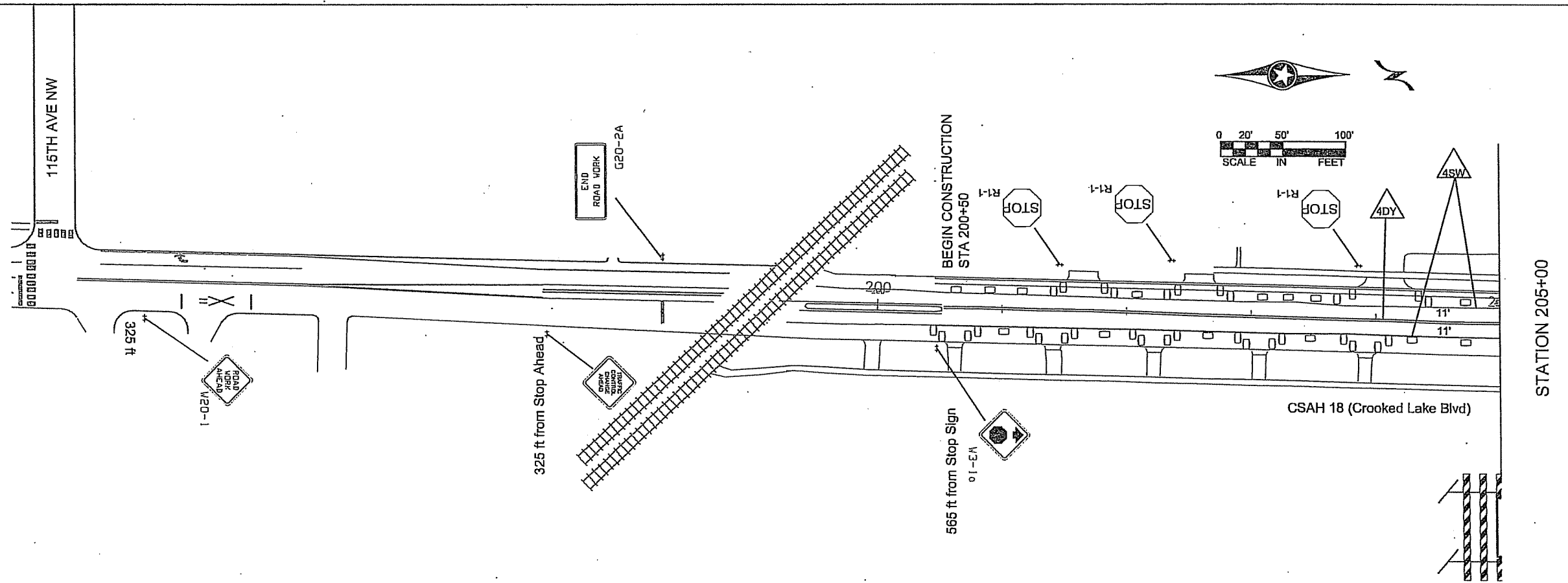
CHECKED BY: **JR** DATE: **02/25/13**



S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.A.P. 114-020-048

STAGE 2 TRAFFIC CONTROL NOTES:

- INTERSECTION REMAINS AN ALL WAY STOP CONDITION.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND RESIDENCE.
- EASTBOUND LANE SHIFT FROM STA 103+50 TO 106+00
- WESTBOUND LANE SHIFT FROM STA 108+75 TO 110+80
- SOUTHBOUND LANE SHIFT FROM STA 211+17 TO 213+60
- ADD TRPM'S (SPACED EVERY 10 FEET) IN LANE SHIFTS
- USE LANE TAPE WEST OF STA 102+19 AND NORTH OF 212+00
- REMOVE ALL CONFLICTING PAVEMENT MARKINGS AND MESSAGES.

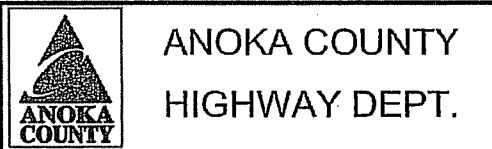


NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: CURT A KOBILARCSIK
 SIGNATURE: *Curt Kobilarcsik*
 DATE: 5-16-13 REG. NO. 24756

DRAWN BY: MTH DATE 09/20/12
 DESIGN BY: MTH DATE 09/20/12
 CHECKED BY: JR DATE 02/25/13



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2
R1-1	48" x 48"		10	11
R1-4	18" x 6"		4	4
W1-4L	48" x 48"		3	3
W13-1	30" x 30"		3	3
W8-1a	48" x 48"		AS NEEDED	
W20-1	48" x 48"		10	10
W3-1a	48" x 48"		4	4
W3-X5	48" x 48"		4	4
REFLECTORIZED REBOUNDABLE DRUM			165	160
G20-2A	48" x 24"		4	4

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2
W1-6	48" x 24"		2	1
TYPE III	8 FOOT		2	1
R9-9	48" x 24"		8	4
TYPE III	8 FOOT		8	4
TYPE III	8 FOOT		X	5
TYPE III	8 FOOT		X	X

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), AND PART IV, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.

NO	DATE	BY	CHKD	APPR	REVISION

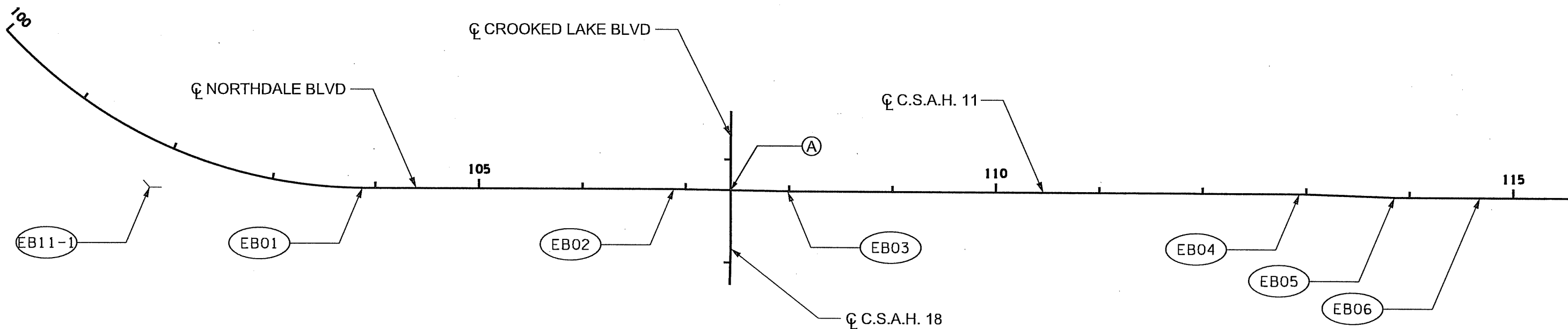
NAME: P:\02-611-33\Bases\TRAFFIC\0261133_STGQTY.dwg

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.
 PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE:
 DATE: 5-16-13 REG. NO. 24756

DRAWN BY: MTH DATE 9/21/12
 DESIGN BY: MTH DATE 9/21/12
 CHECKED BY: JR DATE 2/25/13

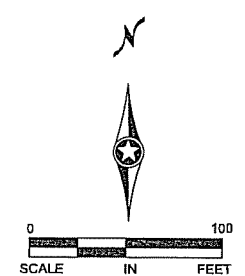
ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048



ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N		
C C.S.A.H. 11 <P_EB11>											
	PC	C C.S.A.H. 11	100+00.000						480,947.1312	154,048.0230	S 42° 18' 45.33" E
EB11-1	PI		102+05.757	47° 38' 47.53" LT	12° 17' 42.83"	466.000'	205.757'	387.520'	481,085.6414	153,895.8694	PI
	CC								481,291.7304	154,361.7225	
EB01	PT		103+87.520						481,291.3980	153,895.7227	S 89° 57' 32.86" E
EB02	POT		106+88.348						481,592.2259	153,895.5081	S 89° 08' 16.76" E
EB03	POT		107+98.396						481,702.2607	153,893.8525	S 89° 59' 09.25" E
EB04	POT		112+93.396						482,197.2607	153,893.7307	S 88° 17' 53.91" E
EB05	POT		113+85.236						482,289.0601	153,891.0034	S 89° 56' 06.00" E
EB06	POT		114+67.686						482,371.5100	153,890.9099	

(A) EB C.S.A.H. 11 STA. 107+43.37 = NB C.S.A.H. 18 STA 206+70.02



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_AL_P1.dgn 05/09/2013 12:21:52 PM					

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.
 PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *[Signature]*
 DATE: 5-16-13 LICENSE NO. 24756

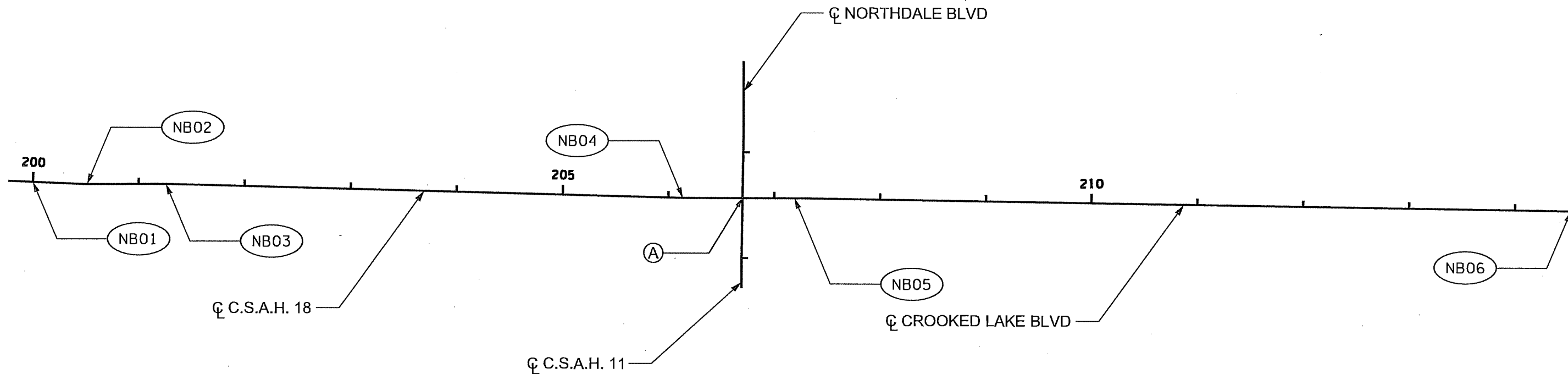
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



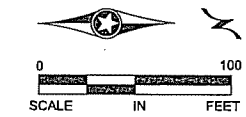
**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

ALIGNMENT PLAN
 CSAH 11/NORTHDALE BLVD
 Sheet 37 of 98 Sheets



ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
☐ C.S.A.H. 18 <P_NB18>										
NB01	POT	☐ C.S.A.H. 18	199+77.084					481,631.9454	153,201.9714	N 2° 32' 10.84" E
NB02	POT		200+51.143					481,635.2227	153,275.9571	N 0° 11' 59.79" E
NB03	POT		201+25.651					481,634.9627	153,350.4651	N 1° 26' 11.89" E
NB04	POT		206+13.571					481,647.1956	153,838.2314	N 0° 01' 07.51" E
NB05	POT		207+22.138					481,647.2311	153,946.7986	N 0° 42' 40.55" E
NB06	POT		214+52.790					481,656.3011	154,677.3944	



(A) EB C.S.A.H. 11 STA. 107+43.37 = NB C.S.A.H. 18 STA 206+70.02

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_AL_P2.dgn 05/09/2013 12:21:53 PM

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.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

ALIGNMENT PLAN
 CSAH 18/CROOKED LAKE BLVD
 Sheet 38 of 98 Sheets

REMOVAL NOTES

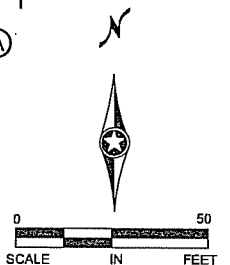
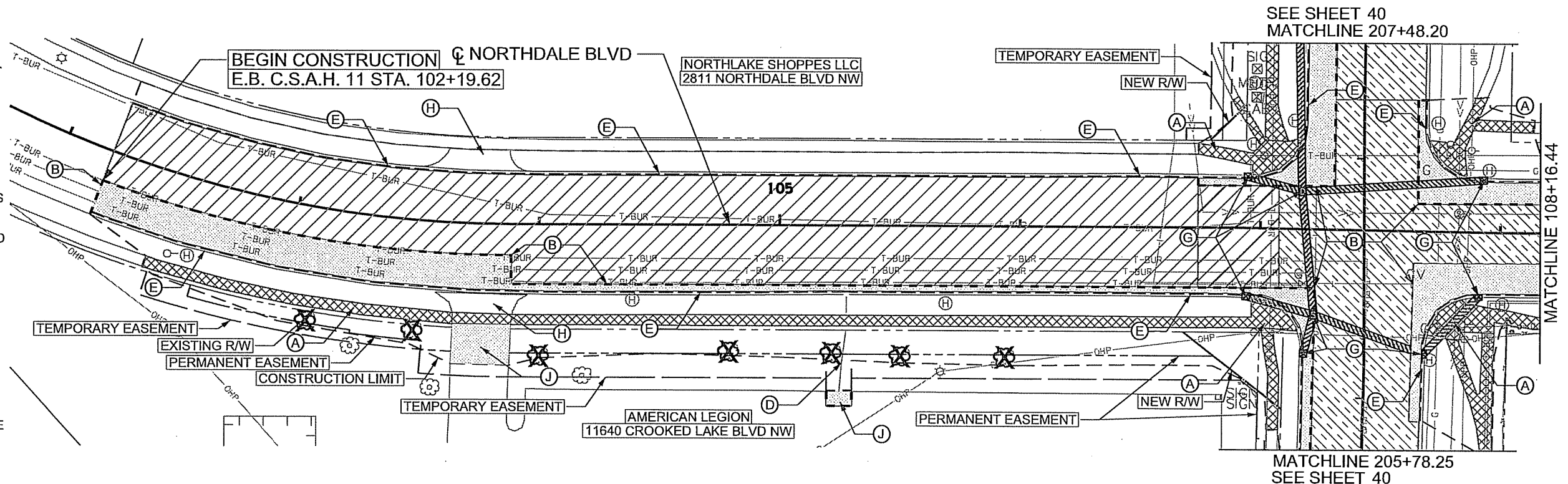
REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED AND MARKED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

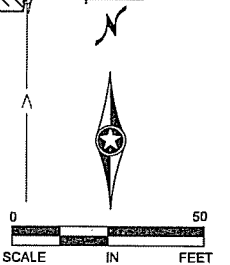
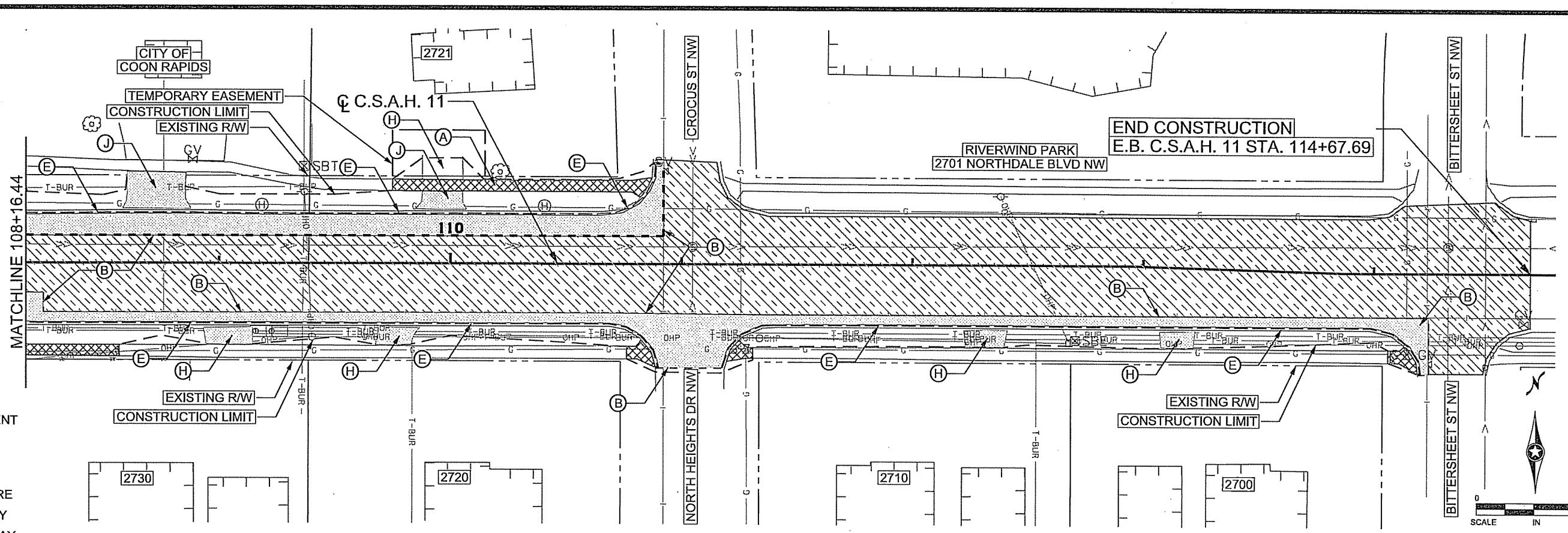
ALL MANHOLES AND CATCH BASINS WILL BE PAID FOR AS "REMOVE DRAINAGE STRUCTURE" ITEM 2104.509 CALLED OUT IN REMOVAL PLANS AS MH AND CB. FOR INFORMATION PURPOSES ONLY.

ALL PRIVATE UTILITIES TO BE RELOCATED BY OTHERS AS REQUIRED. SEE IN PLACE UTILITY TABULATION FOR MORE INFORMATION.

ALL ROADWAY SIGNS WITHIN THE CONSTRUCTION LIMITS AND CONFLICTING SIGNS SHALL BE SALVAGED BY THE CONTRACTOR.



LEGEND	
	REMOVE BIT. PAVEMENT
	REMOVE CONC. SIDEWALK
	MILL AND OVERLAY BIT. PAVEMENT
	RECLAIM AND OVERLAY BIT. PAVEMENT
	REMOVE CURB AND GUTTER
	TREE REMOVAL BY EACH
	SAWING BIT. PAVEMENT
	CONSTRUCTION LIMIT
	REMOVE PIPE
	REMOVE DRAINAGE STRUCTURE



- NOTES:**
- (A) REMOVE SIDEWALK
 - (B) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
 - (D) REMOVE CONCRETE FLUME
 - (E) REMOVE CURB AND GUTTER
 - (C) REMOVE DRAINAGE STRUCTURE
 - (H) REMOVE CONCRETE DRIVEWAY
 - (J) REMOVE BITUMINOUS DRIVEWAY PAVEMENT

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_RM1.dgn 05/09/2013 12:21:54 PM

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.

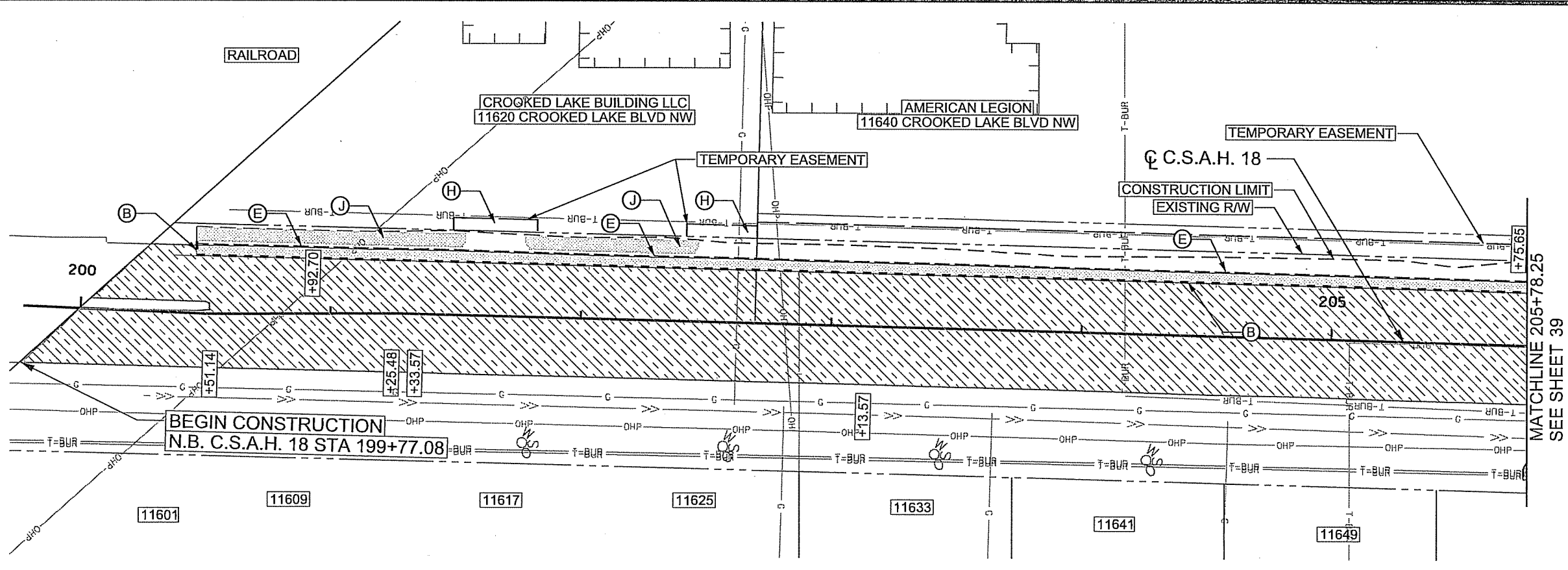
PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24755

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13

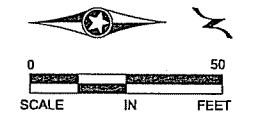
ANOKA COUNTY HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

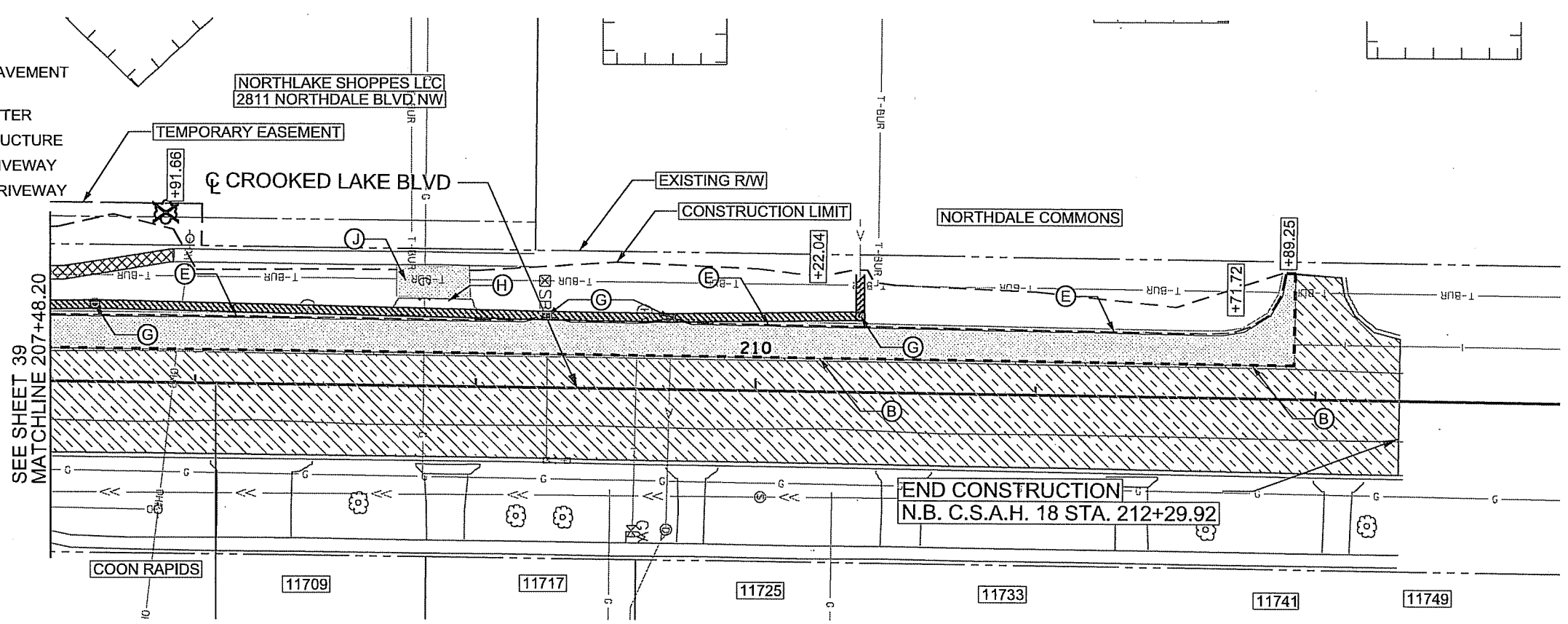
REMOVAL PLAN
 STA 102+19.62 TO 114+67.69
 Sheet 39 of 98 Sheets



LEGEND	
	REMOVE BIT. PAVEMENT
	REMOVE CONC. SIDEWALK
	MILL AND OVERLAY BIT. PAVEMENT
	RECLAIM AND OVERLAY BIT. PAVEMENT
	REMOVE CURB AND GUTTER
	TREE REMOVAL BY EACH
	SAWING BIT. PAVEMENT
	CONSTRUCTION LIMIT
	REMOVE PIPE
	REMOVE DRAINAGE STRUCTURE



- NOTES:**
- (A) REMOVE SIDEWALK
 - (B) SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)
 - (E) REMOVE CURB AND GUTTER
 - (G) REMOVE DRAINAGE STRUCTURE
 - (H) REMOVE CONCRETE DRIVEWAY
 - (J) REMOVE BITUMINOUS DRIVEWAY PAVEMENT



REMOVAL NOTES

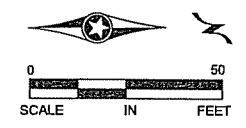
REFER TO TRAFFIC SIGNAL PLANS FOR TRAFFIC SIGNAL REMOVALS.

THE CONTRACTOR SHALL PERFORM ALL CLEARING AND GRUBBING AS DIRECTED AND MARKED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL OTHERWISE PROTECT ALL EXISTING TREES NOT SPECIFICALLY MARKED FOR REMOVAL.

ALL MANHOLES AND CATCH BASINS WILL BE PAID FOR AS "REMOVE DRAINAGE STRUCTURE" ITEM 2104.509 CALLED OUT IN REMOVAL PLANS AS MH AND CB. FOR INFORMATION PURPOSES ONLY.

ALL PRIVATE UTILITIES TO BE RELOCATED BY OTHERS AS REQUIRED. SEE IN PLACE UTILITY TABULATION FOR MORE INFORMATION.

ALL ROADWAY SIGNS WITHIN THE CONSTRUCTION LIMITS AND CONFLICTING SIGNS SHALL BE SALVAGED BY THE CONTRACTOR.



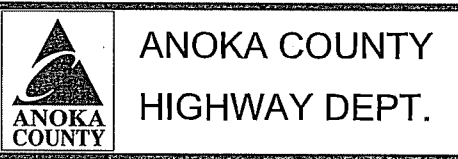
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_RM2.dgn 05/09/2013 12:21:56 PM

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.

PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: *Curt Kobilarcsik*
 DATE: 5-16-13 LICENSE NO. 24756

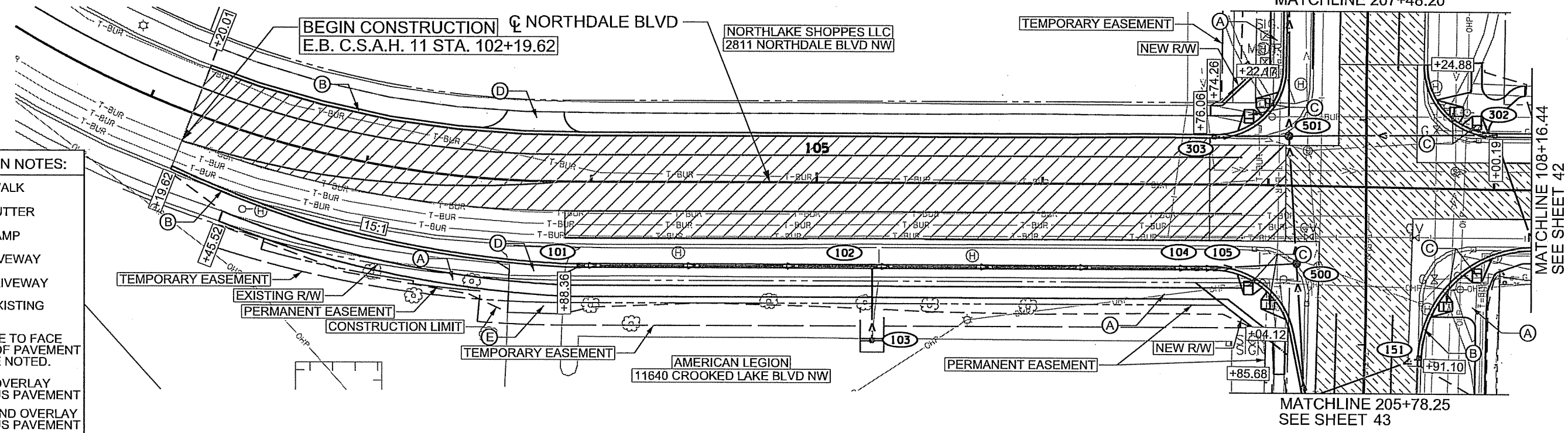
DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



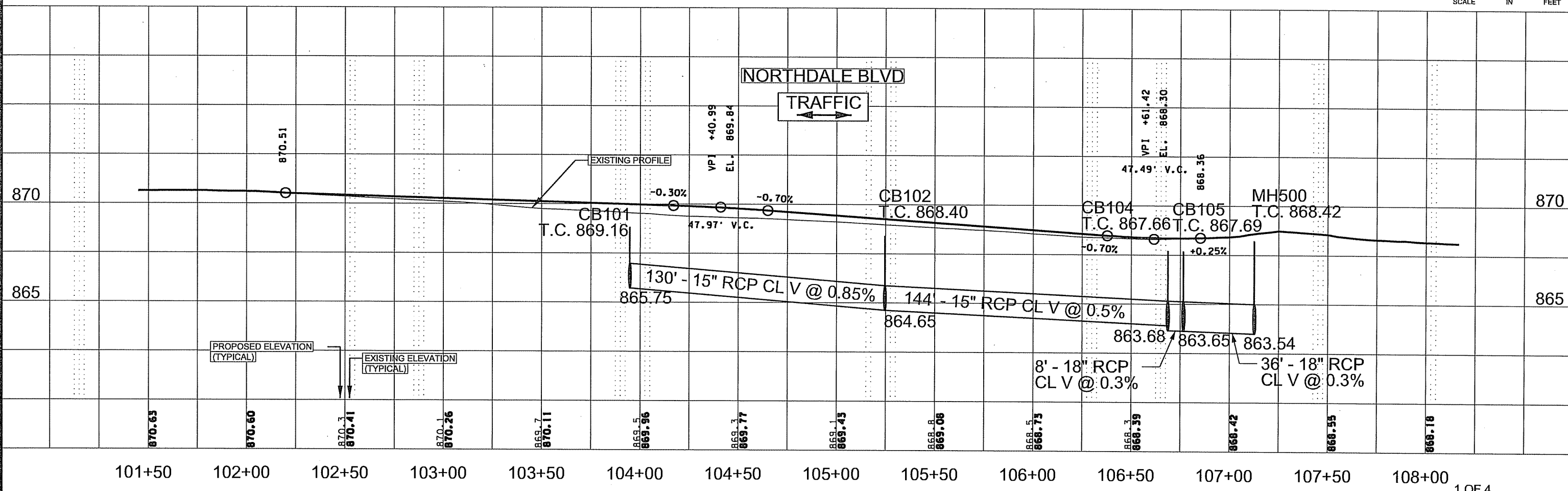
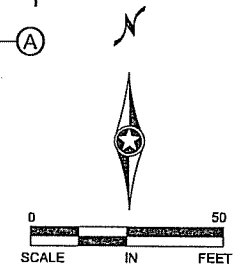
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

REMOVAL PLAN
 STA 200+45.39 TO 212+02.04
 Sheet 40 of 98 Sheets

SEE SHEET 44
MATCHLINE 207+48.20



- CONSTRUCTION NOTES:**
- (A) 4" CONCRETE WALK
 - (B) B618 CURB & GUTTER
 - (C) PEDESTRIAN RAMP
 - (D) CONCRETE DRIVEWAY
 - (E) BITUMINOUS DRIVEWAY
 - (H) CONNECT TO EXISTING STORM SEWER
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- MILL AND OVERLAY BITUMINOUS PAVEMENT
 - RECLAIM AND OVERLAY BITUMINOUS PAVEMENT



NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\102-611-33\Plan\102-611-33_PP1.dgn 05/09/2013 12:21:56 PM

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.

PRINT NAME: CURT KOBLARCSIK
SIGNATURE: *Curt Koblarcsik*
DATE: 5-16-13 LICENSE NO. 24756

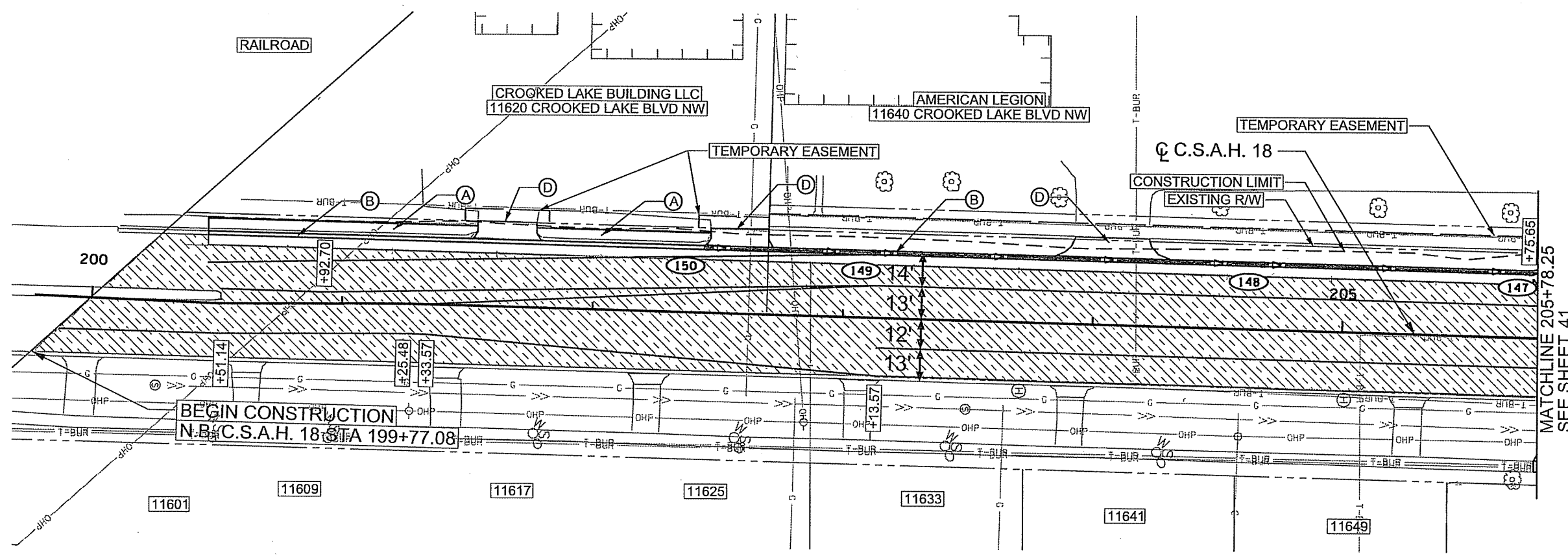
DRAWN BY: DFF DATE: 03-14-13
DESIGN BY: DFF DATE: 03-14-13
CHECKED BY: GMP DATE: 03-18-13



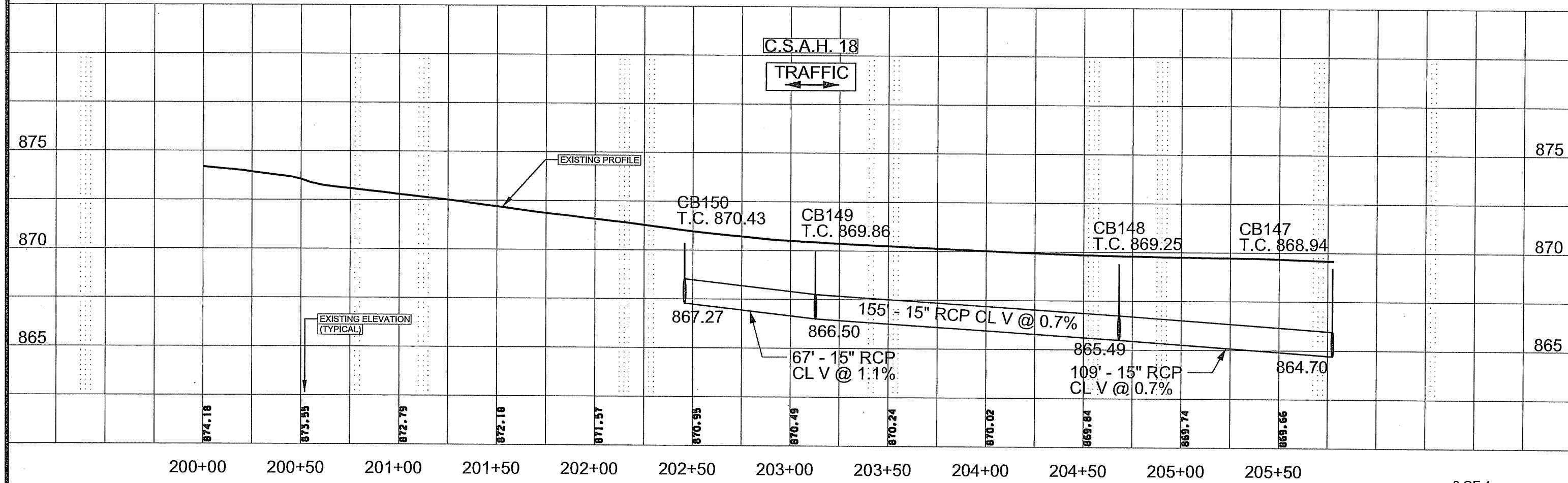
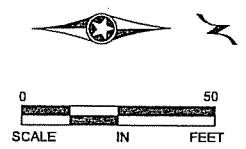
**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

CONSTRUCTION AND DRAINAGE PLAN
STA 102+19.62 TO 108+16.44
Sheet 41 of 98 Sheets



- CONSTRUCTION NOTES:**
- (A) 4" CONCRETE WALK
 - (B) B618 CURB & GUTTER
 - (C) PEDESTRIAN RAMP
 - (D) CONCRETE DRIVEWAY
 - (E) BITUMINOUS DRIVEWAY
 - (H) CONNECT TO EXISTING STORM SEWER
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- MILL AND OVERLAY BITUMINOUS PAVEMENT
 - RECLAIM AND OVERLAY BITUMINOUS PAVEMENT



3 OF 4

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_PP3.dgn 05/09/2013 12:21:58 PM

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.

PRINT NAME: CURT KOBIARCSIK

SIGNATURE: *Curt Kobiarcsik*

DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13

DESIGN BY: DFF DATE: 03-14-13

CHECKED BY: GMP DATE: 03-18-13

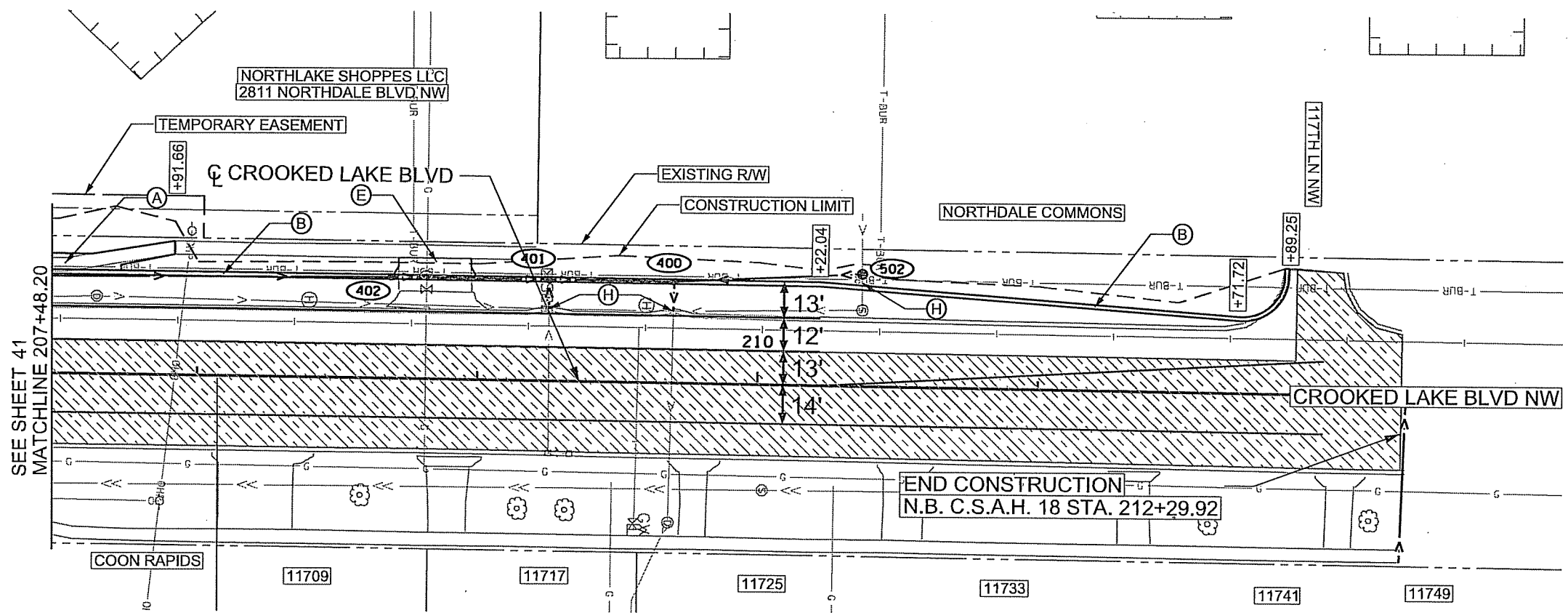


S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

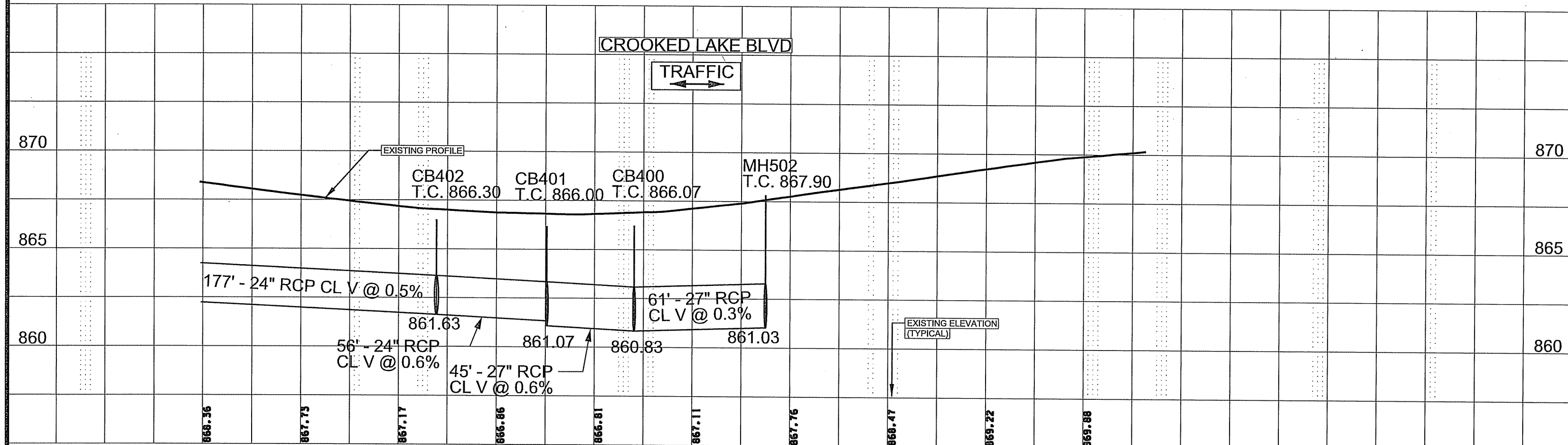
CONSTRUCTION AND DRAINAGE PLAN

STA 200+45.39 TO 205+78.25

Sheet 43 of 98 Sheets



- CONSTRUCTION NOTES:**
- (A) 4" CONCRETE WALK
 - (B) B618 CURB & GUTTER
 - (C) PEDESTRIAN RAMP
 - (D) CONCRETE DRIVEWAY
 - (E) BITUMINOUS DRIVEWAY
 - (H) CONNECT TO EXISTING STORM SEWER
- ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- MILL AND OVERLAY BITUMINOUS PAVEMENT
 - RECLAIM AND OVERLAY BITUMINOUS PAVEMENT



207+50	208+00	208+50	209+00	209+50	210+00	210+50	211+00	211+50	212+00	213+00
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

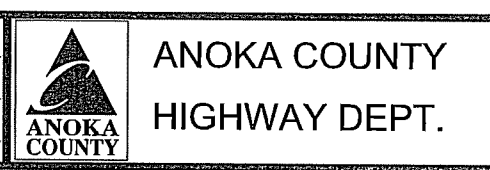
NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_PP4.dgn 05/09/2013 12:21:58 PM

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.

PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: *Curt Kobiarcsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13

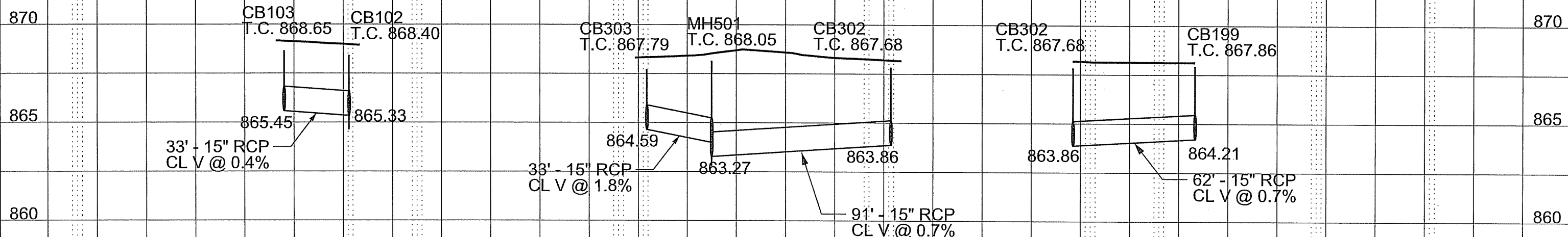
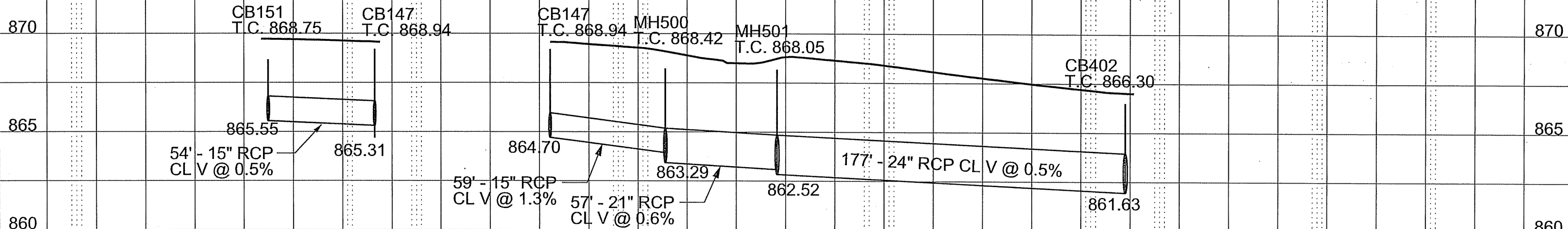


S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CONSTRUCTION AND DRAINAGE PLAN
 STA 207+48.20 TO 212+02.04
 Sheet 44 of 98 Sheets

CSAH 18

CSAH 11



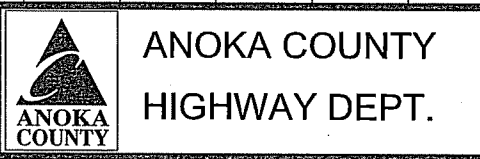
NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_DR_LEADS.dgn 05/09/2013 12:22:07 PM

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.

PRINT NAME: CURT KOBIARCSIK
 SIGNATURE: *Curt Kobiarcsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

DRAINAGE TABULATION

STRUCTURE NO.		ALIGN.	CENTER OF CASTING LOCATION		DRAINAGE STRUCTURES										DOWN-STREAM INLET ELEV.	SLOPE %	RISE	12" RC PIPE SEWER DES 3006	15" RC PIPE SEWER DES 3006	18" RC PIPE SEWER DES 3006	21" RC PIPE SEWER DES 3006	24" RC PIPE SEWER DES 3006	27" RC PIPE SEWER DES 3006	CONNECT TO EX. STORM SEWER EACH	NOTES															
					TYPE	DESIGN	PAY HEIGHT					CASTING ASSEMBLY TYPE	STEPS REQ'D	TOP OF CASTING ELEV.												OUTLET ELEV.														
							H LIN FT	G LIN FT	48-4020 LIN FT	60-4020 LIN FT	72-4020 LIN FT																													
CB101	CB102	EB	103+94.80	37.2	CB	H	3.3						B-9		869.16	865.75	864.65	0.9	15 in																					
CB102	CB104	EB	105+24.66	37.3	CB	48-4020				3.9			B-9		868.40	864.65	863.93	0.5	15 in			130																		
CB103	CB102	EB	105+24.68	70.1	CB	H	3.1						B-9		868.65	865.45	865.33	0.4	15 in			144																		
CB104	CB105	EB	106+68.61	37.3	CB	G		4.1					B-17		867.66	863.68	863.65	0.3	18 in			33																		
CB105	MH500	EB	106+76.61	37.2	CB	G		4.1					B-17		867.69	863.65	863.54	0.3	18 in			8																		
CB200	CB199	EB	108+92.35	26.2	CB	G	2.6						B-9		867.81	865.11	864.21	1.2	15 in			74																		
CB199	CB302	EB	108+17.90	26.2	CB	48-4020				3.8			B-17		867.86	864.21	863.86	0.7	15 in			54																		
CB302	MH501	EB	108+00.19	-24.3	CB	G		3.9					B-17		867.68	863.86	863.27	0.7	15 in			91																		
CB303	MH501	EB	106+76.06	-21.4	CB	H	3.1						B-17		867.79	864.59	863.98	1.9	15 in			33																		
CB150	CB149	NB	202+44.29	-25.4	CB	H	3.1						B-9		870.43	867.27	866.50	1.2	15 in			67																		
CB149	CB148	NB	203+12.05	-26.2	CB	G		3.5					B-9		869.86	866.50	865.49	0.7	15 in			155																		
CB148	CB147	NB	204+67.39	-26.2	CB	G		3.9					B-9		869.25	865.49	864.70	0.7	15 in			109																		
CB151	CB147	NB	205+94.86	25	CB	H	3.1						B-17		868.75	865.55	865.31	0.5	15 in			54																		
CB147	MH500	NB	205+76.76	-26.1	CB	60-4020				4.3			B-17		868.94	864.70	863.93	1.3	15 in			59																		
MH500	MH501	NB	206+35.86	-30.7	MH	48-4020				5.2			M-7	YES	868.42	863.29	862.98	0.6	21 in						57															
MH501	CB402	NB	206+92.56	-34.3	MH	60-4020				5.6			M-7	YES	868.05	862.52	861.63	0.5	24 in								177													
CB402	CB401	NB	208+68.99	-36.2	CB	G		4.8					B-9	YES	866.30	861.63	861.32	0.6	24 in							56														
EXIST	CB401	NB	209+25.30	-25.8																																				
CB401	CB400	NB	209+25.23	-36.3	CB	48-4020				5.0			B-17	YES	866.00	861.07	860.83	0.6	27 in																				1	
MH502	CB400	NB	210+37.00	-40.1	MH	72-4020						7.0	B-17	YES	867.90	861.03	860.83	0.3	27 in																			45		
CB400	EXIST	NB	209+69.84	-36.3	CB	72-4020						5.4	B-17	YES	866.07	860.83		0.4	27 in																			67		
																																								11
																																								1
PROJECT TOTAL							18.3	24.3	17.9	9.9	12.4	20											10	1003	44	57	233	123	3											

- NOTES:
- (1) STATION AND OFFSET FOR EACH POINT NUMBER ARE GIVEN AT CENTER OF GRATE. ADDITIONAL STATION, OFFSET, AND COORDINATES ARE GIVEN AT CENTER OF STRUCTURE FOR 4020 AND DESIGN F STRUCTURES. INVERT ELEVATIONS ARE GIVEN AT CENTER OF STRUCTURE.
 - (2) IF STEPS REQUIRED, STRUCTURE TO INCLUDE MANHOLE STEPS 16" ON CENTER. SEEN MN/DOT STANDARD PLATE 4180.
 - (3) CLASS C BEDDING FOR RC PIPE UNLESS OTHERWISE SPECIFIED.

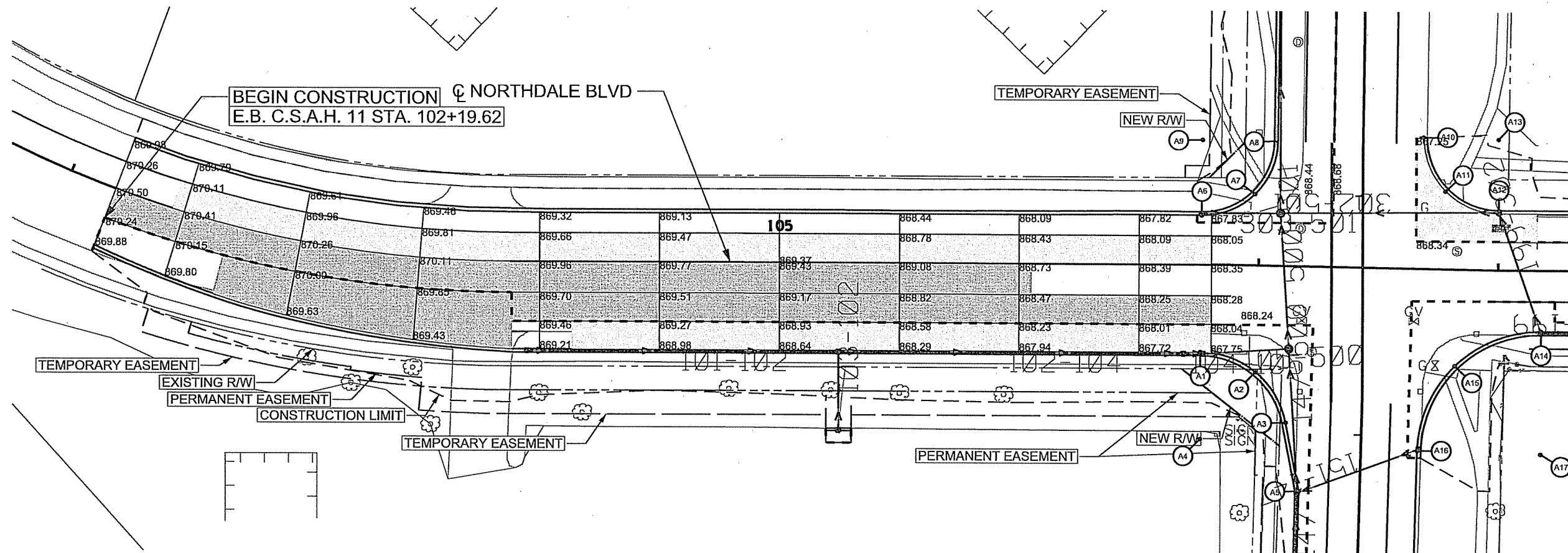
CASTING ASSEMBLIES SUMMARY						
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX BOX	STANDARD PLATE PLATE NO.	QUANTITY	REMARKS
M-7	700-7			4101	2	MANHOLE
		716		4140		
B-9	805	816		4132, 4154	8	CATCH BASIN
B-17	806	816	825	4125, 4134, 4154	10	

CSAH 11/CSAH 18 (NW QUAD)

A6	E.B. C.S.A.H. 11	106+76.06	20.65' LT	867.83	BEGIN RADIUS
A7	E.B. C.S.A.H. 11	106+97.94	29.79' LT	867.89	MIDPOINT
A8	E.B. C.S.A.H. 11	107+07.08	52.05' LT	867.94	END RADIUS
A9	E.B. C.S.A.H. 11	106+76.32	52.15' LT	--	RADIUS POINT

CSAH 11/CSAH 18 (NE QUAD)

A10	E.B. C.S.A.H. 11	107+67.88	54.92' LT	867.94	BEGIN RADIUS
A11	E.B. C.S.A.H. 11	107+77.31	32.55' LT	867.83	MIDPOINT
A12	E.B. C.S.A.H. 11	108+00.19	23.50' LT	867.72	END RADIUS
A13	E.B. C.S.A.H. 11	108+00.19	55.00' LT	--	RADIUS POINT



BEGIN CONSTRUCTION \bar{C} NORTHDALE BLVD
E.B. C.S.A.H. 11 STA. 102+19.62

TEMPORARY EASEMENT

NEW R/W

TEMPORARY EASEMENT

EXISTING R/W

PERMANENT EASEMENT

CONSTRUCTION LIMIT

TEMPORARY EASEMENT

PERMANENT EASEMENT

NEW R/W

SIG

SIG

LEGEND

999.99 PROPOSED SPOT ELEVATION

--- SAWCUT

2.00% CROSS SLOPE

2.50% CROSS SLOPE

ELEVATIONS ARE TOP OF FINISHED PAVEMENT

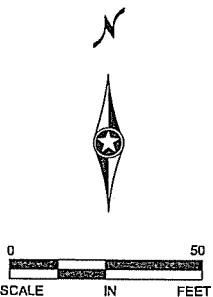
CURB AND GUTTER ELEVATIONS ARE SHOWN AT TOP OF FINISHED BITUMINOUS AT LIP OF GUTTER UNLESS OTHERWISE NOTED

CSAH 11/CSAH 18 (SW QUAD)

POINT	ALIGNMENT	STATION	LOCATION	ELEVATION	DESCRIPTION
A1	E.B. C.S.A.H. 11	106+75.58	36.50' RT	867.74	BEGIN RADIUS
A2	E.B. C.S.A.H. 11	106+99.39	44.64' RT	867.88	MIDPOINT
A3	E.B. C.S.A.H. 11	107+12.33	65.58' RT	868.71	END RADIUS
A4	E.B. C.S.A.H. 11	106+75.58	73.00' RT	--	RADIUS POINT
A5	E.B. C.S.A.H. 11	107+18.40	94.11' RT	868.98	END TAPER

CSAH 11/CSAH 18 (SE QUAD)

A14	E.B. C.S.A.H. 11	108+17.90	25.49' RT	867.73	BEGIN RADIUS
A15	E.B. C.S.A.H. 11	107+82.55	40.35' RT	868.26	MIDPOINT
A16	E.B. C.S.A.H. 11	107+67.54	76.14' RT	868.79	END RADIUS
A17	E.B. C.S.A.H. 11	108+17.90	76.99' RT	--	RADIUS POINT



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_IN1.dgn 05/09/2013 12:22:21 PM

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.

PRINT NAME: CURT KOBILARCSIK
SIGNATURE:
DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY: DFF DATE: 03-14-13
DESIGN BY: DFF DATE: 03-14-13
CHECKED BY: GMP DATE: 03-18-13



**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

INTERSECTION DETAIL
CSAH 11/CSAH 18

PROJECT LOCATION AND GENERAL INFORMATION

THIS ROAD CONSTRUCTION PROJECT ADDS RIGHT TURN LANES TO EACH LEG OF THE INTERSECTION. THIS PROJECT IS LOCATED IN THE CITY OF COON RAPIDS IN ANOKA COUNTY. CONSTRUCTION ACTIVITIES INCLUDE EXCAVATION AND GRADING FOR THE ADDITION OF THE RIGHT TURN LANES, REPLACING CURB & GUTTER, AND STORM SEWER CONSTRUCTION.

THIS PROJECT WILL REQUIRE THE DISTURBANCE OF 3.7 ACRES OF SOILS AND DOES CREATE THE POTENTIAL FOR SEDIMENT DISCHARGE FROM THE SITE.

TRAINING REQUIREMENTS

THE CONTRACTOR WILL ENSURE COMPLIANCE WITH THE TRAINING REQUIRED IN PART 111.A.2 OF THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY.

THE INDIVIDUALS TRAINED AND THE TRAINING RECEIVED WILL BE RECORDED IN THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS PERSONEL FOR THE PROJECT HAVE BEEN DETERMINED.

LONG TERM OPERATION AND MAINTENANCE

THE CITY OF COON RAPIDS STREETS DIVISION WILL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT AND SNOW REMOVAL OPERATIONS ALONG THE PROPOSED WALK.

TIM HIMMER
CITY OF COON RAPIDS PUBLIC WORKS DIRECTOR
1831 111TH AVE
COON RAPIDS, MN 55433
PHONE: (763) 767-6494

RECEIVING SURFACE WATERS, DISCHARGE TO IMPAIRED WATERS & SPECIAL WATERS

THE FOLLOWING TABLE IDENTIFIES ALL SURFACE WATERS WITHIN 1 MILE OF THE PROJECT DISTURBED SOIL BOUNDARIES, WHICH WILL RECEIVE STORMWATER RUNOFF FROM THE CONSTRUCTION SITE, DURING OR AFTER CONSTRUCTION.

STORMWATER FROM A DISCHARGE POINT ON THE PROJECT THAT FLOWS TO A SURFACE WATER IDENTIFIED AS IMPAIRED AND/OR SPECIAL MUST INCLUDE THE FOLLOWING ADDITIONAL BMP REQUIREMENTS:

- 1) ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- 2) TEMPORARY SEDIMENT BASINS MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME. THIS PROJECT AS DESIGNED DOES NOT HAVE FIVE (5) DISTURBED ACRES DRAINING TO A COMMON LOCATION AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

RECEIVING SURFACE WATERS		
NAME OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
ANOKA COUNTY		
COON CREEK	NO	YES

DISTURBED SOIL AREA

TOTAL DISTURBED SOILS AREA FOR THIS PROJECT IS 4.14 ACRES

IMPERVIOUS SOIL AREA

EXISTING AREA OF IMPERVIOUS SURFACE IS 3.44 ACRES.
POST CONSTRUCTION AREA OF IMPERVIOUS SURFACE 3.67 ACRES.

SOIL TYPES

THE PREDOMINANT SOIL TYPE FOUND ON THIS PROJECT IS SAND.

CONSTRUCTION PHASING

SILT FENCE AND/OR OTHER SUITABLE PERIMETER BMP'S AS PROVIDED IN THE PLANS WILL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY. CONSTRUCTION WILL BE REQUIRED TO BE PHASED SO THAT ALL DOWN GRADIENT SEDIMENT CONTROL MEASURES ARE INSTALLED PRIOR TO OR IN CONJUNCTION WITH ANY SOIL DISTURBING ACTIVITIES.

WHEN TOPSOIL IS DISTURBED, THE TOPSOIL WILL BE STRIPPED AND STOCKPILED IN SOIL BERMS AT THE TOE OF THE STRIPPED SLOPES ALONG THE PROJECT LIMITS. TEMPORARY VEGETATION WILL BE ESTABLISHED ON THE STOCKPILED TOPSOIL BERMS WITH SEED MIXTURE 150, TYPE 1 FERTILIZER, AND DISK ANCHORED TYPE 1 MULCH AS PROVIDED IN THE PLAN. STOCKPILED TOPSOIL BERMS WILL NOT BE PLACED IN ANY STORMWATER CONVEYANCES.

AFTER STRIPPING THE TOPSOIL THE EXPOSED SOIL INSLOPES WILL BE STABILIZED WITH DISK ANCHORED TYPE 1 MULCH WITHIN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED.

TEMPORARY SEDIMENT BASINS

THIS ROAD CONSTRUCTION PROJECT AS DESIGNED DOES NOT MEET ANY OF THE TEMPORARY SEDIMENT BASIN DISTURBED AREA THRESHOLD REQUIREMENTS AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

PERMANENT STORMWATER MANAGEMENT SYSTEM

ALL STORMWATER MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING WATERS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING A SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

THIS ROAD CONSTRUCTION PROJECT HAS LESS THEN 1 ACRE INCREASE IN IMPERVIOUS AREA.

EROSION PREVENTION PRACTICES

ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. FOR ALL AREAS WHERE DISTURBED SOILS DRAIN TO AN IMPAIRED OR SPECIAL WATER THE EXPOSED SOIL MUST BE STABILIZED NO LATER THEN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA CEASED. SEE THE IMPAIRED & SPECIAL WATERS SECTION OF THIS SWPPP FOR ADDITIONAL BMP REQUIREMENTS FOR DISTURBED AREAS THAT DRAIN TO A SPECIAL OR IMPAIRED WATER

PROJECT CONTACTS

DNR COE	NOT REQUIRED NOT REQUIRED		
ANOKA COUNTY DESIGN SWPPP PREPARATION	U OF MN DESIGN OF SWPPP EXPIRES 5/13	NICK DOBDA	763-862-4261
ANOKA COUNTY PROJECT REPRESENTATIVE	U OF MN SITE MANAGEMENT EXPIRES 5/15	CHRIS OSTERHUS	763-862-4252
EROSION CONTROL SUPERVISOR (CONTRACTOR)			

SEDIMENT CONTROL PRACTICES

TEMPORARY STOCKPILED TOPSOIL BERMS MUST INCLUDE PERIMETER BMP'S AS PROVIDED IN THE PLAN AT LOCATIONS WHERE CONSTRUCTION STORMWATER DRAINS FROM THE PROJECT

IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES, THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 1:3 OR STEEPER

ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE BMP'S DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL DISCHARGE TO THE INLET HAVE BEEN STABILIZED

VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE MUST BE MINIMIZED. STREET SWEEPING MUST BE USED IF SEDIMENT IS BEING TRACKED OFF THE CONSTRUCTION SITE

POLLUTION PROVENTION MEASURES

THE CONTRACTOR WILL IMPLEMENT THE POLLUTION PREVENTION MANAGEMENT MEASURES AS DIRECTED IN THE NPDES PERMIT PART IV.F AS PERTAINING TO SOLID WASTE, HAZARDOUS MATERIALS EXTERNAL TRUCK WASHING, AND CONCRETE WASHOUT ONSITE.

THESE MANAGEMENT MEASURES FOR POLLUTION PREVENTION WILL BE STRICTLY ENFORCED.

LOCATION OF SWPPP REQUIREMENTS

REQUIREMENT	PLAN		MN/DOT SPECIFICATION	SPECIAL PROVISION
	TITLE	LOCATION		
NPDES PERMIT COMPLIANCE			1701, 1702, & 1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CERTIFIED PERSONNEL IN EROSION AND SEDIMENT CONTROL SITE MANAGEMENT			1506, 1717, & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CHAIN OF RESPONSIBILITY	AGENCY CONTACTS	SHEET 50	1506, 1717, & 2573	
PROJECT SCHEDULE / WEEKLY EROSION & SEDIMENT CONTROL SCHEDULE / COMPLETING INSPECTION / MAINTENANCE LOG	AGENCY CONTACTS	SHEET 50	1717 & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
SWPPP PREPARATION	AGENCY CONTACTS	SHEET 50		
SITE MAP / RECEIVING WATERS / DIRECTION OF FLOW			1717	
PROJECT SPECIFIC CONSTRUCTION STAGING			1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 1806 (DETERMINATION AND EXTENSION OF CONTRACT TIME)
TEMPORARY EROSION AND SEDIMENT CONTROL BMP LOCATIONS, INSTALLATION, TIMING OF INSTALLATION AND TYPE OF BMP	QUANTITY TABULATIONS	SHEET 8	2573 & 2525	2575 (RAPID STABILIZATION SPECIFICATION)
ADDITIONAL TEMPORARY AND OR PERMANENT EROSION AND SEDIMENT CONTROL BMP'S NOT PROVIDED OR SHOWN IN THE PLAN			1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 2575 (RAPID STABILIZATION SPECIFICATION)
MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES, REMOVAL OF TRACKED SEDIMENT, REMOVAL OF DEVICES			1717 & 2573	1514 (MAINTENANCE DURING CONSTRUCTION) 1717 (LAND AIR & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
DEWATERING			2105.3B, & 2451.3C	DEWATERING MAY ALSO REQUIRE DNR PERMIT. NO DEWATERING IS ANTICIPATED FOR THIS PROJECT
FINAL STABILIZATION	QUANTITY TABULATIONS EROSION CONTROL PLAN	SHEET 8 SHEET 52-53	1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS	QUANTITY TABULATIONS EROSION CONTROL PLAN	SHEET 8 SHEET 52-53	2575	2575 (RAPID STABILIZATION SPECIFICATION)
PERMANENT EROSION CONTROL DETAILS	EROSION CONTROL DETAILS	SHEET 54-57	2575	2575 (CONTROLLING EROSION AND ESTABLISHING VEGETATION)

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_SWPPP.dgn 05/09/2013 12:22:24 PM

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.
PRINT NAME: CURT KOBILARCSIK
SIGNATURE: *Curt Kobilarsik*
DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY DFF DATE 03-14-13
DESIGN BY DFF DATE 02-14-13
CHECKED BY GMP DATE 03-18-13



**ANOKA COUNTY
HIGHWAY DEPT.**

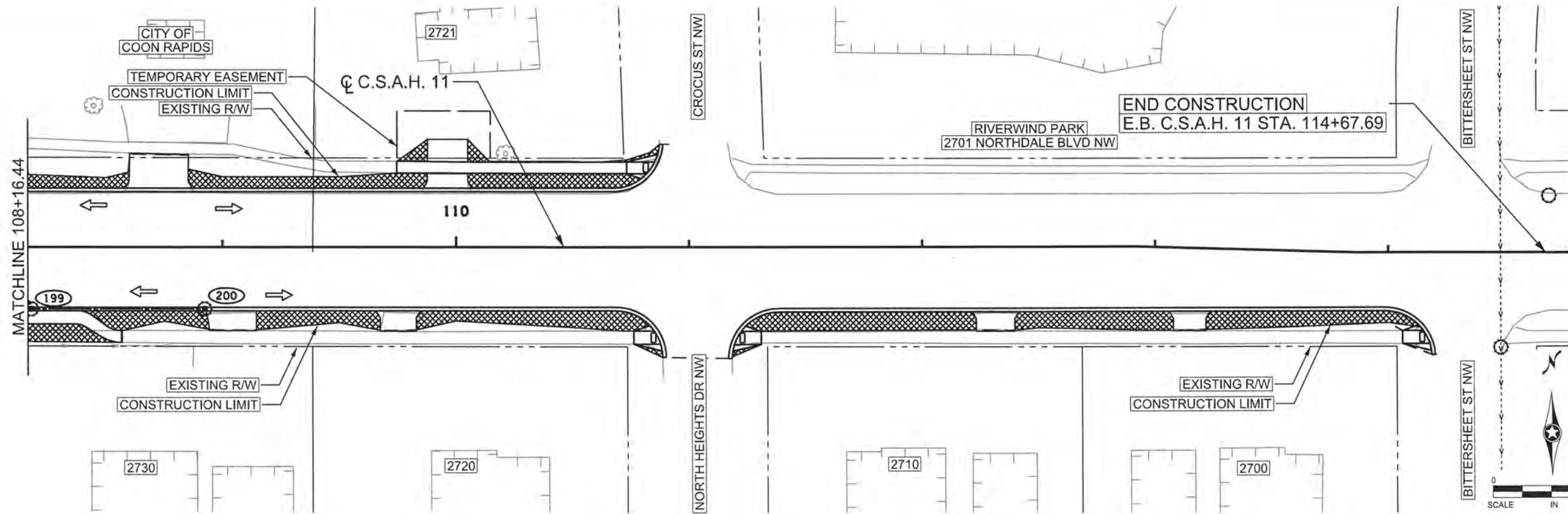
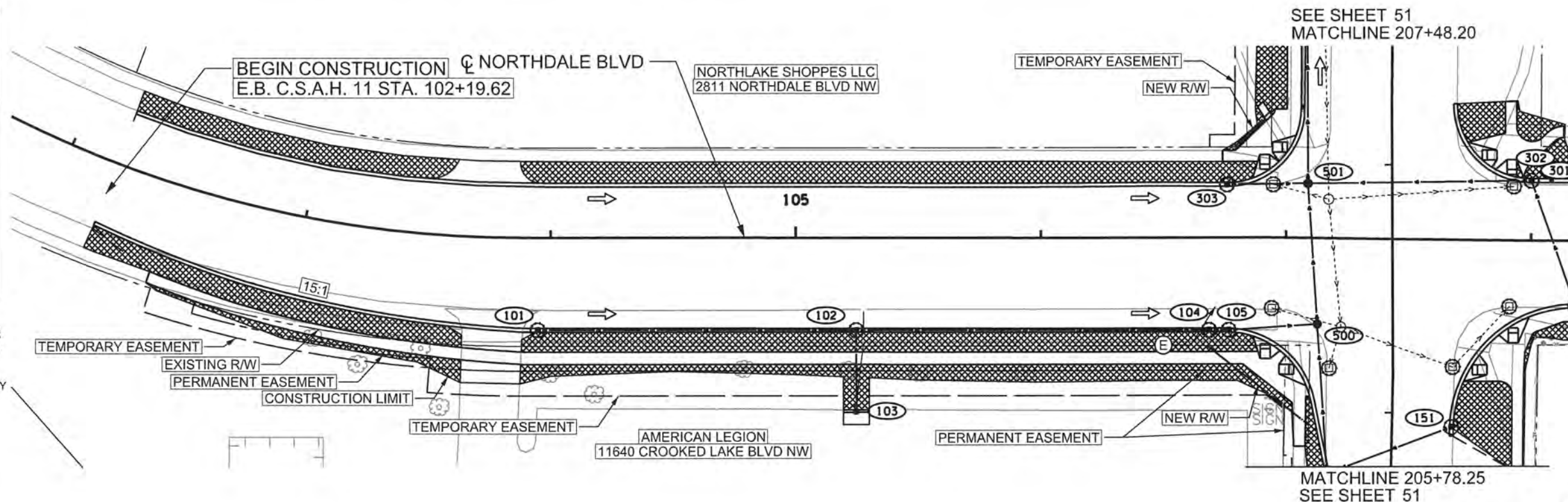
S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

SWPPP NARRATIVE
Sheet 48 of 98 Sheets

LEGEND

- PROPOSED CATCH BASIN
- INPLACE CATCH BASIN
- PROPOSED MANHOLE
- INPLACE MANHOLE
- PROPOSED STORM SEWER
- - - INPLACE STORM SEWER
- INLET PROTECTION
- SURFACE FLOW ARROW
- ▨ MULCH MATERIAL TYPE 3 / SODDING TYPE SALT RESISTANT

- 1.) WHEN SEDIMENT DEPOSITS IN A WATER OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
- 2.) IF SILT DEPOSITS IN THE ANOKA COUNTY RIGHT-OF-WAY, THE CONTRACTOR IS RESPONSIBLE FOR ITS REMOVAL.
- 3.) ALL GRADED AREAS ARE TO BE REVEGETATED WITHIN 7 DAYS OF THE COMPLETION OF GRADING.



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_EC1.dgn 08/10/2013 8:24:18 AM

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.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 12-16-13 LICENSE NO. 24756

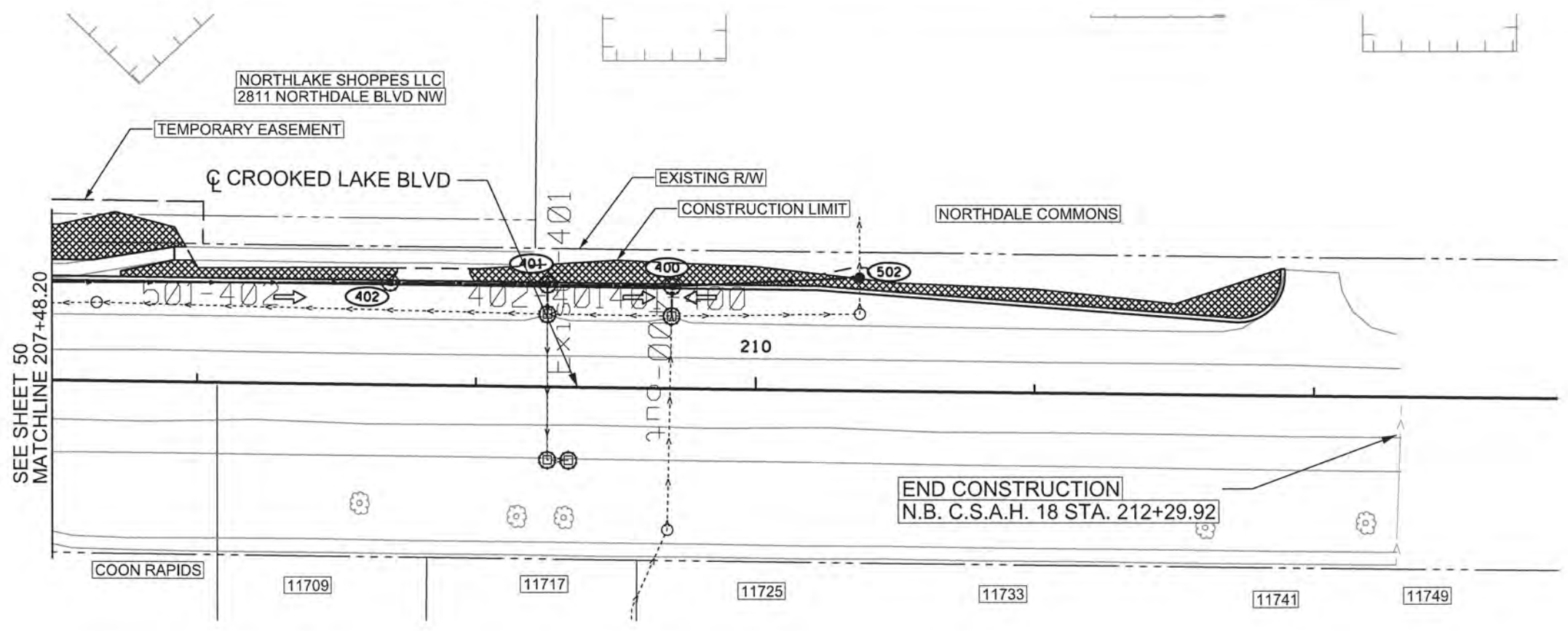
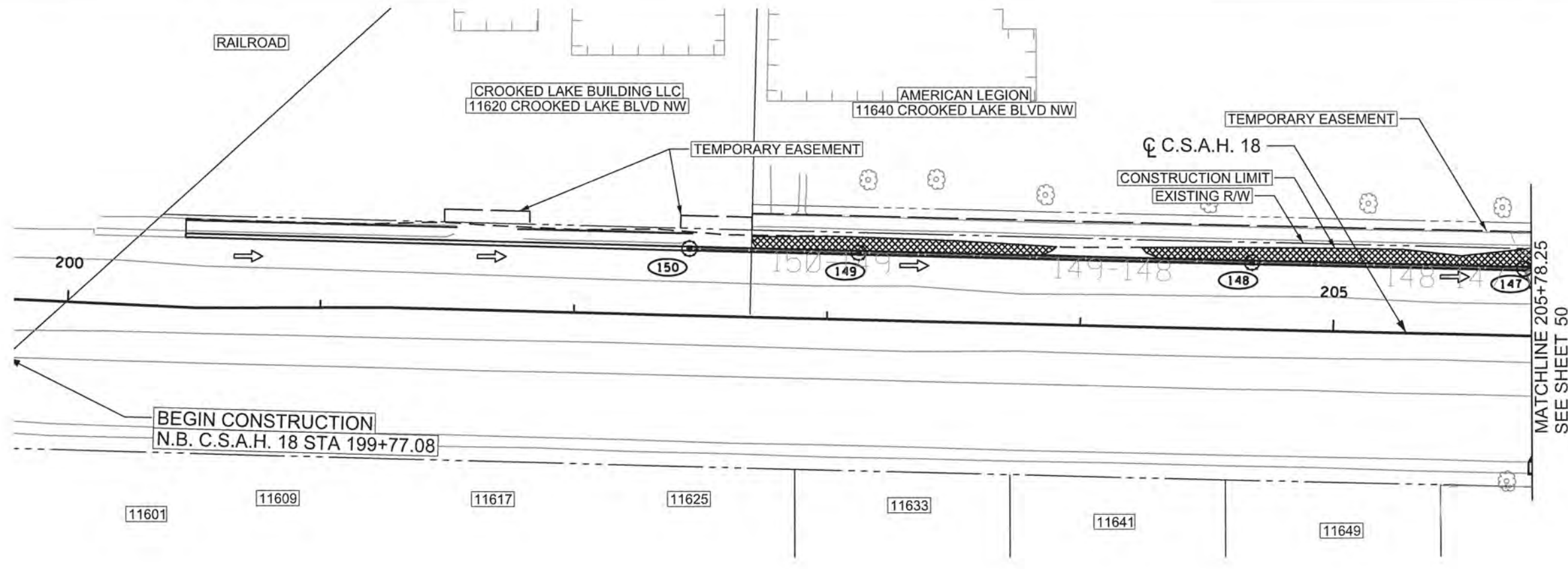
DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



**ANOKA COUNTY
 HIGHWAY DEPT.**

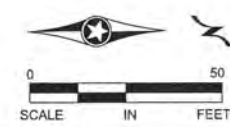
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

**EROSION CONTROL AND
 TURF ESTABLISHMENT PLAN**
 STA 102+19.62 TO 114+67.69
 Sheet 50 of 98 Sheets



LEGEND	
■	PROPOSED CATCH BASIN
□	INPLACE CATCH BASIN
●	PROPOSED MANHOLE
○	INPLACE MANHOLE
—	PROPOSED STORM SEWER
- - -	INPLACE STORM SEWER
○	INLET PROTECTION
→	SURFACE FLOW ARROW
▨	MULCH MATERIAL TYPE 3 / SODDING TYPE SALT RESISTANT

- 1.) WHEN SEDIMENT DEPOSITS IN A WATER OF THE STATE, THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
- 2.) IF SILT DEPOSITS IN THE ANOKA COUNTY RIGHT-OF-WAY, THE CONTRACTOR IS RESPONSIBLE FOR ITS REMOVAL.
- 3.) ALL GRADED AREAS ARE TO BE REVEGETATED WITHIN 7 DAYS OF THE COMPLETION OF GRADING.



2 OF 2

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_EC2.dgn 06/10/2013 8:24:19 AM

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.

PRINT NAME: CURT KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 12-16-13 LICENSE NO. 24756

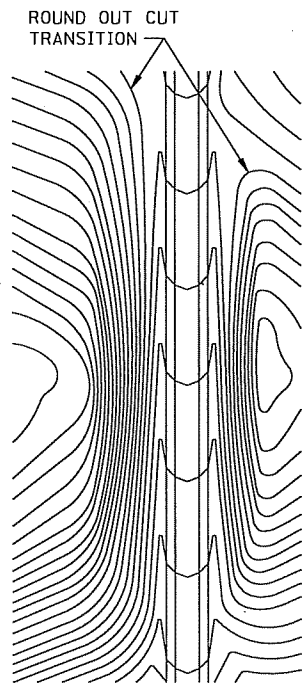
DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13

ANOKA COUNTY
HIGHWAY DEPT.

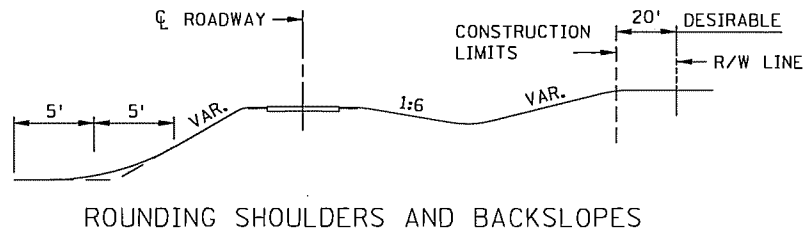
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

EROSION CONTROL AND TURF ESTABLISHMENT PLAN
 STA 200+45.39 TO 212+02.04
 Sheet 51 of 98 Sheets

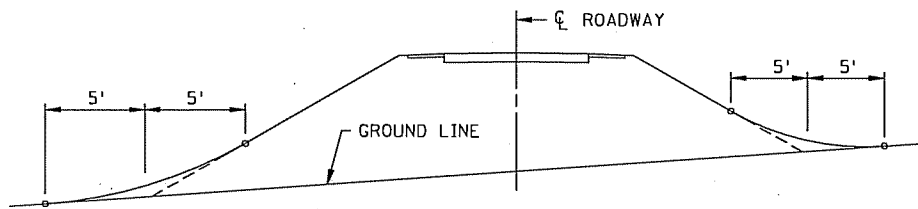
PLOTTED/REVISED:
05/09/2013



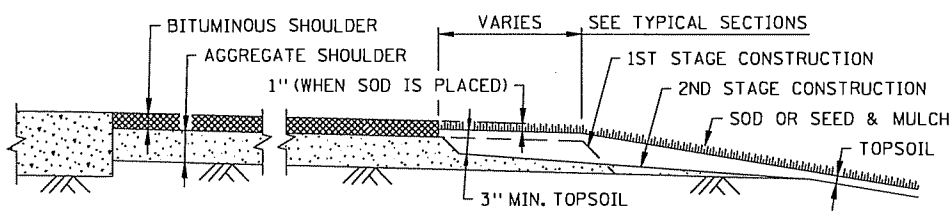
CONTOURING ROAD CUTS



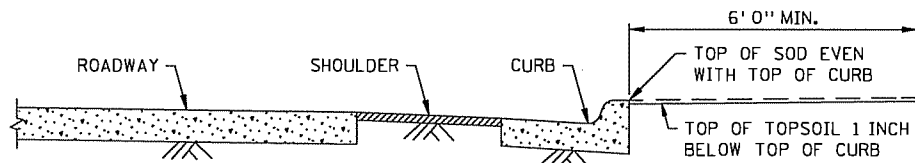
ROUNDING SHOULDERS AND BACKSLOPES



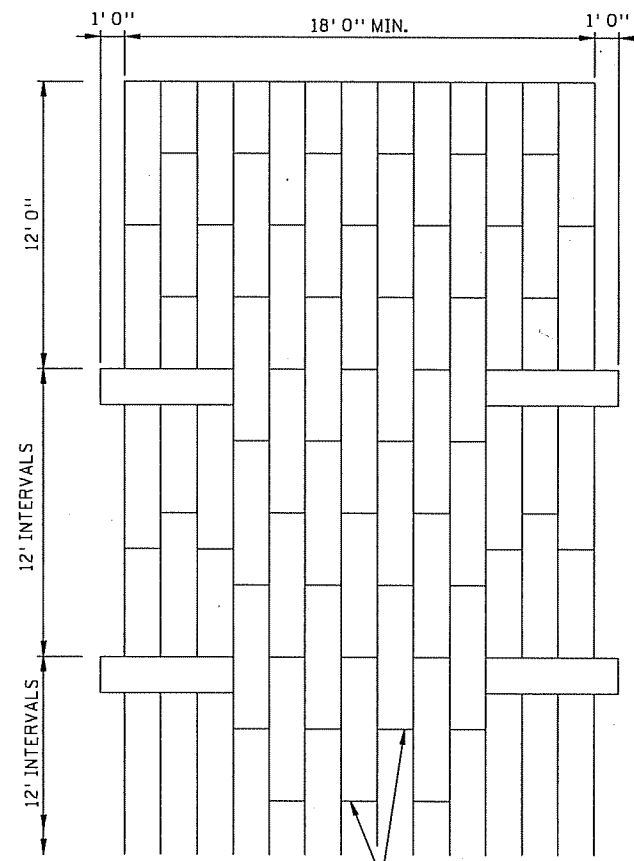
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



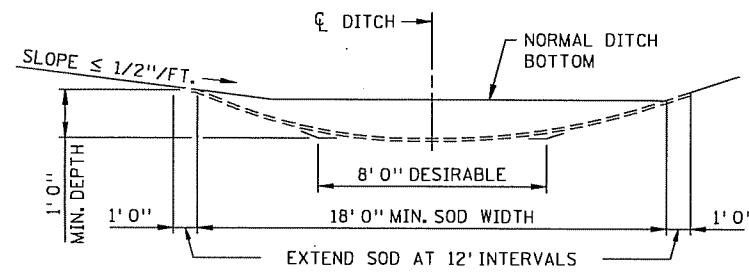
SHAPING AND TOPSOILING INSLOPES



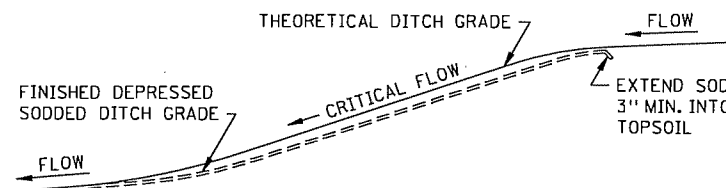
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



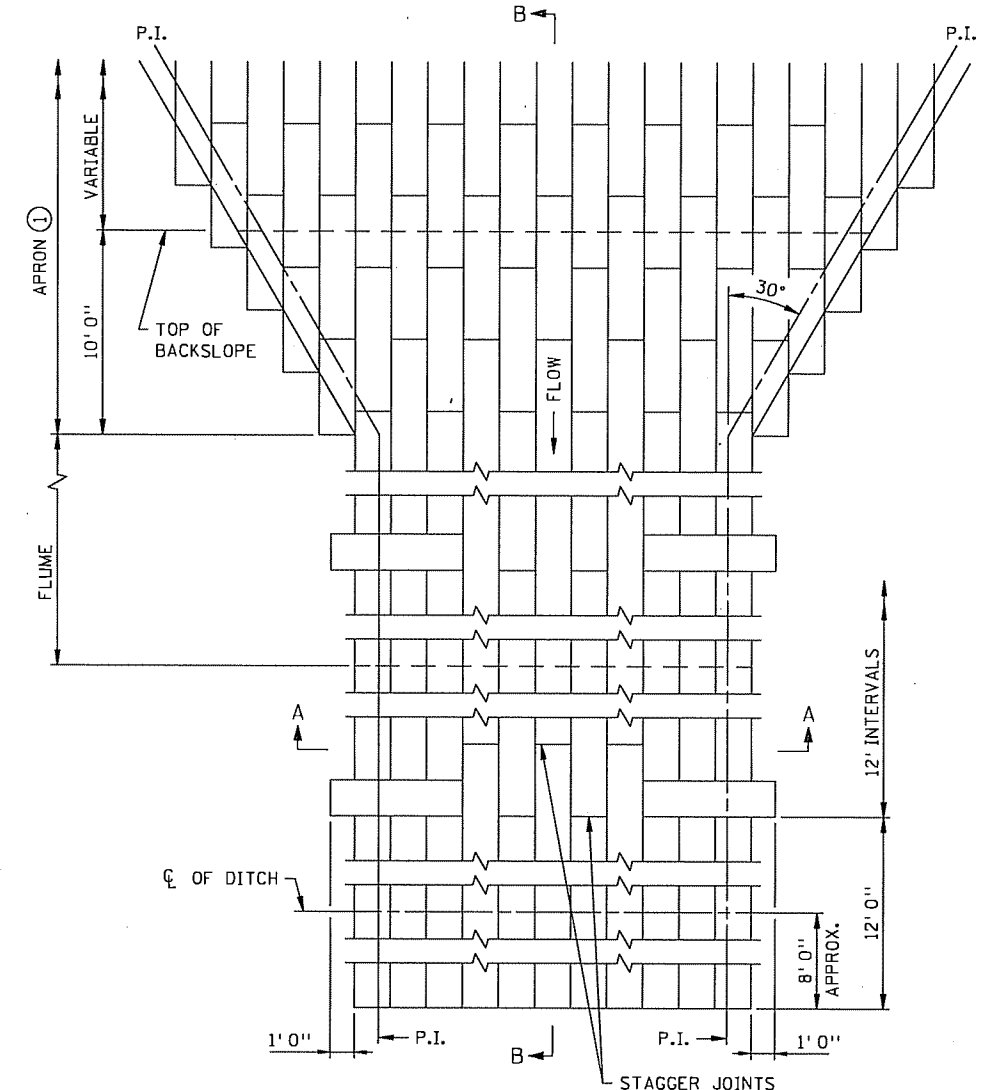
PLAN VIEW



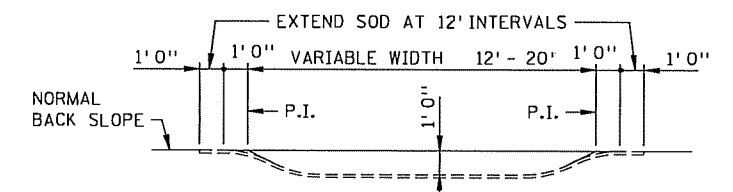
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.),
FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



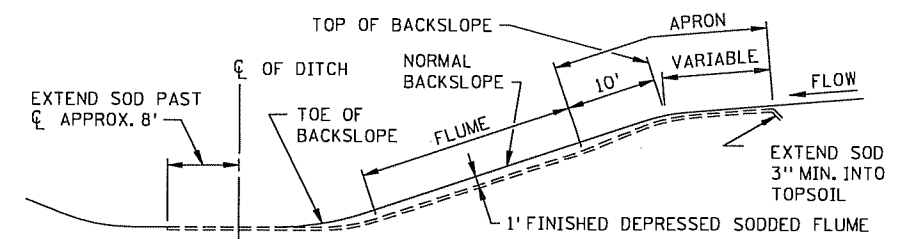
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B
SODDED FLUME DETAILS

NOTES:
SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.
① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO.
5-297.404
STANDARD APPROVED:
NOVEMBER 20, 2002

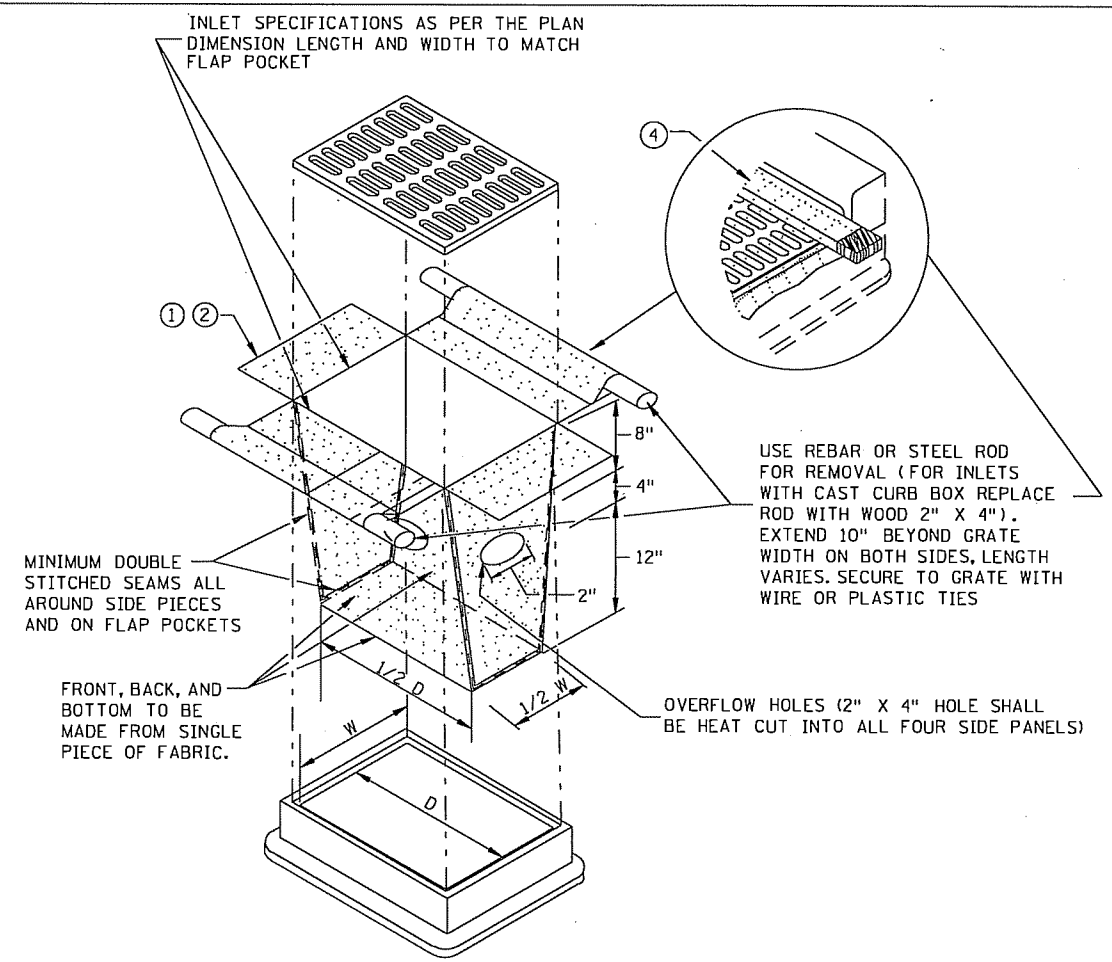
TITLE:
PERMANENT EROSION CONTROL
ALONG ROADWAYS, DITCHES AND FLUMES
S.P. 002-611-033 S.A.P. 114-127-007
S.P. 002-618-031 S.P. 114-020-048

DISTRICT #: USER NAME: dffrey PATH & FILENAME: P:\02-611-33\PlanStandard_Plans\404-L.spndgn FILE NAME: s404-L.spndgn

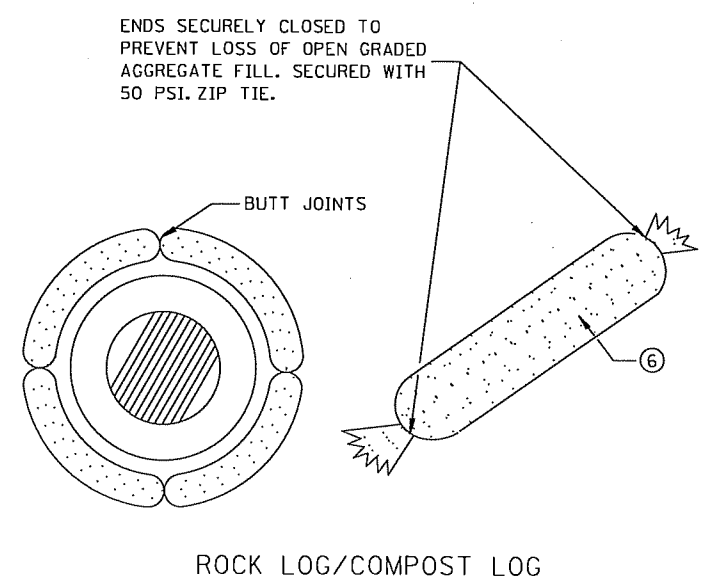
PLOTTED/REVISED:
05/09/2013

DISTRICT #: USER NAME: dffrey
PATH & FILENAME: P:\02-611-33\Plan\Standard_Plans\405_4_spn.dgn

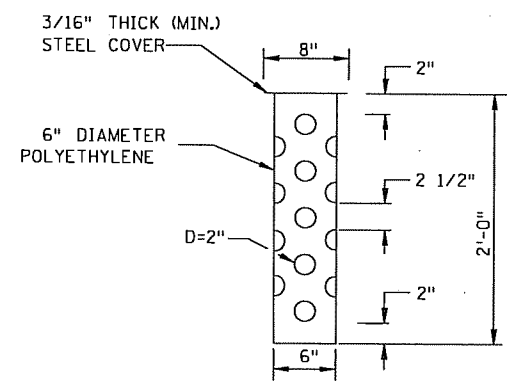
FILE NAME: s405_4_spn.dgn



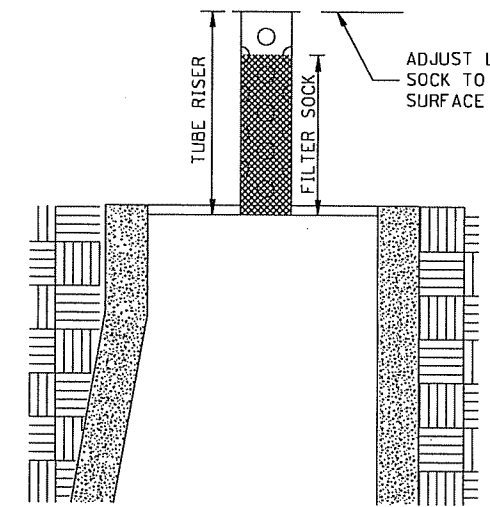
FILTER BAG INSERT ③
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)



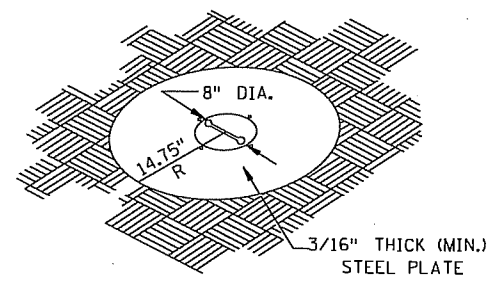
ROCK LOG/COMPOST LOG



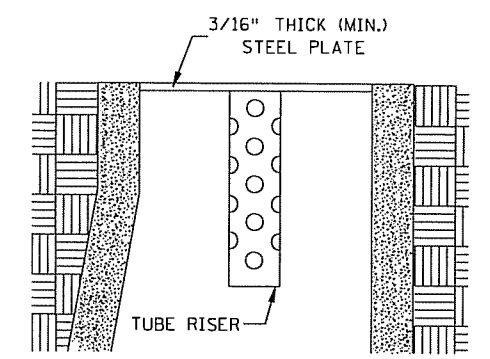
TUBE RISER



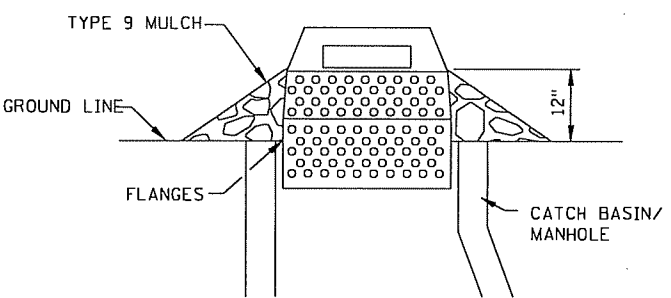
SECTION (UP POSITION)



PERSPECTIVE VIEW

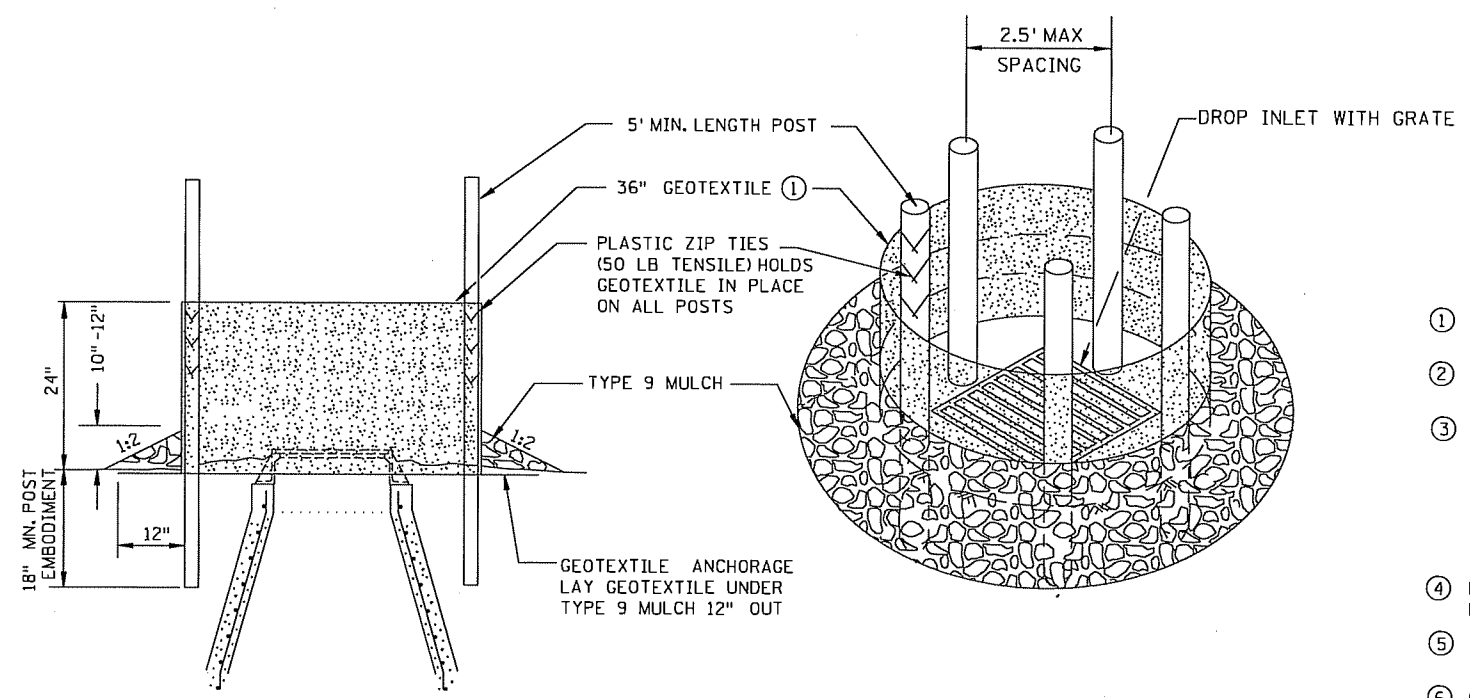


SECTION (DOWN POSITION)



SEDIMENT CONTROL INLET HAT

NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.



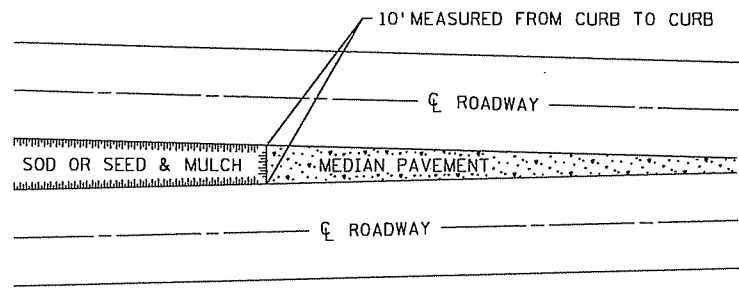
SILT FENCE RING AND ROCK FILTER BERM
USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS.

POP-UP HEAD

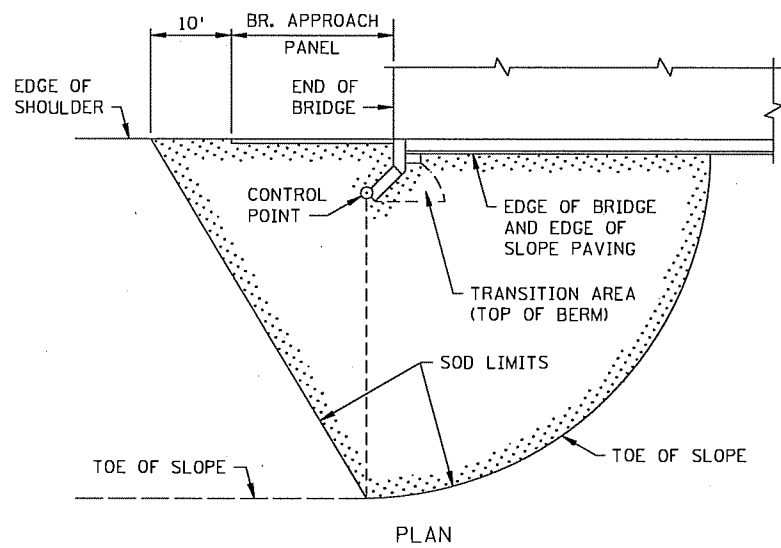
- NOTES:**
SEE SPECS. 2573, 3137, 3886 & 3891.
MANUFACTURED ALTERNATIVES LISTED ON Mn/DOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.
- ① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
 - ② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
 - ③ INSTALLATION NOTES:
DO NOT INSTALL FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
 - ④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
 - ⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
 - ⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

STANDARD SHEET NO. 297.405 (4 OF 4)	TITLE: TEMPORARY SEDIMENT CONTROL STORM DRAIN INLET PROTECTION
STANDARD APPROVED: MARCH 29, 2012	
S.P. 002-611-033	S.A.P. 114-127-007
S.P. 002-618-031	S.P. 114-020-048

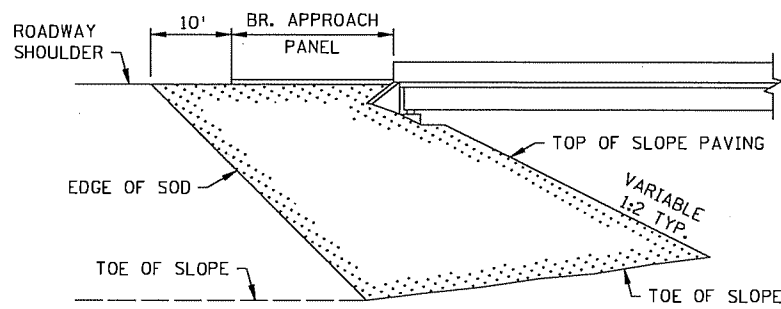
PLOTTED/REVISED:
05/09/2013



SODDING LIMITS AT GORE AREA

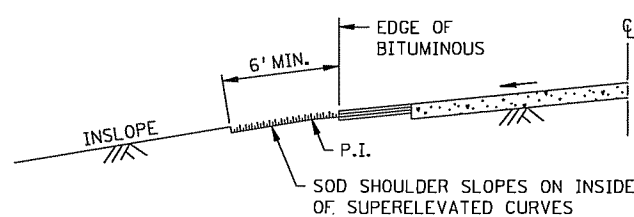


PLAN

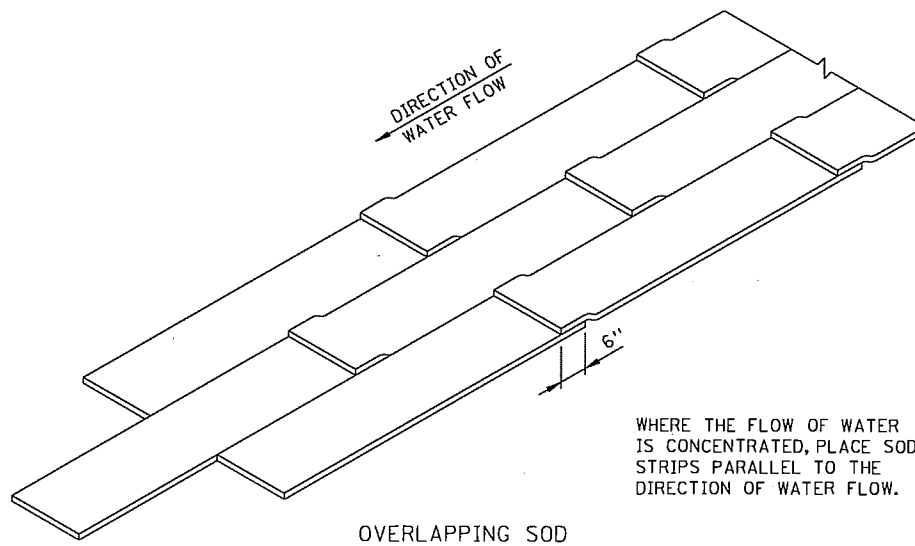


ELEVATION

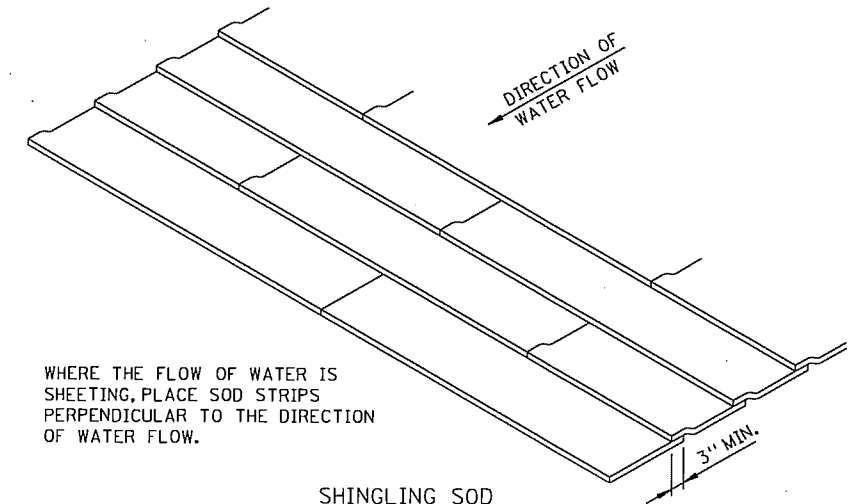
SODDING LIMITS AT BRIDGE APPROACH FILLS



SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

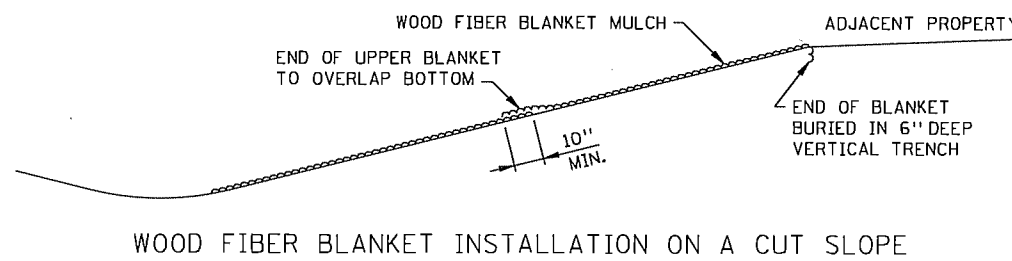


SHINGLING SOD

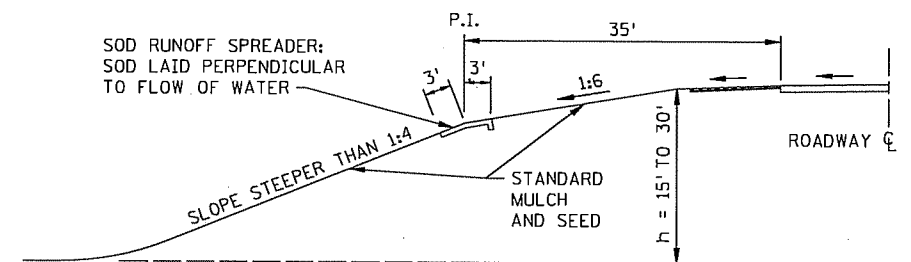
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.

WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

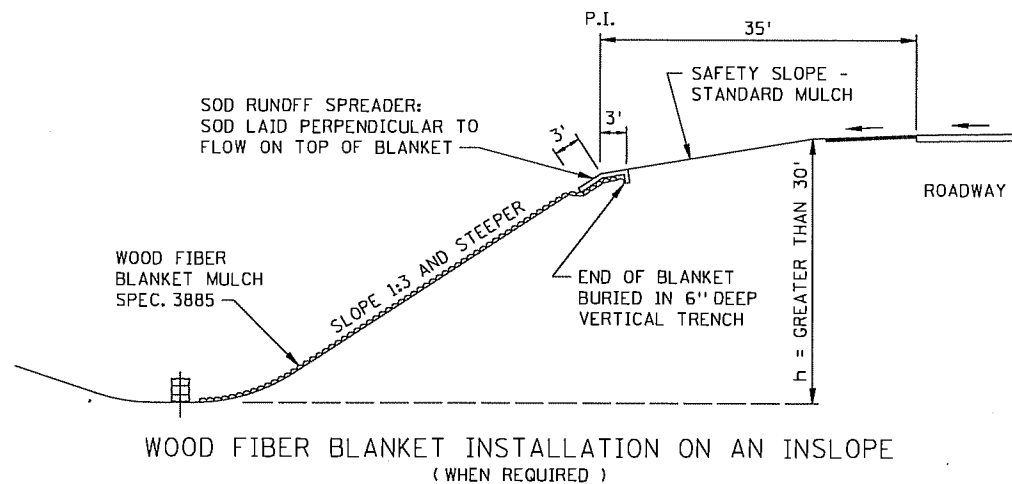
SPECIAL SOD PLACEMENT TECHNIQUES



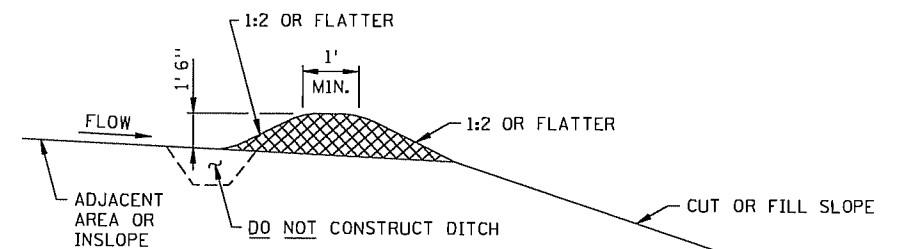
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)

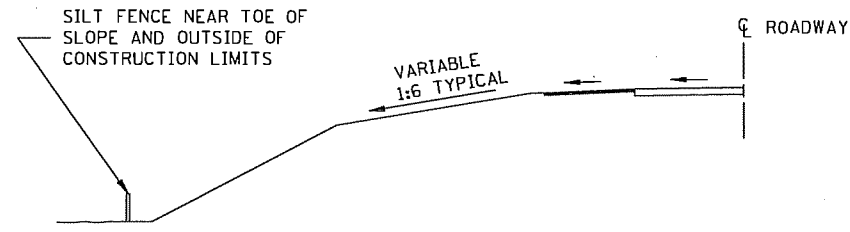


PERMANENT SLOPE PROTECTION DIKE

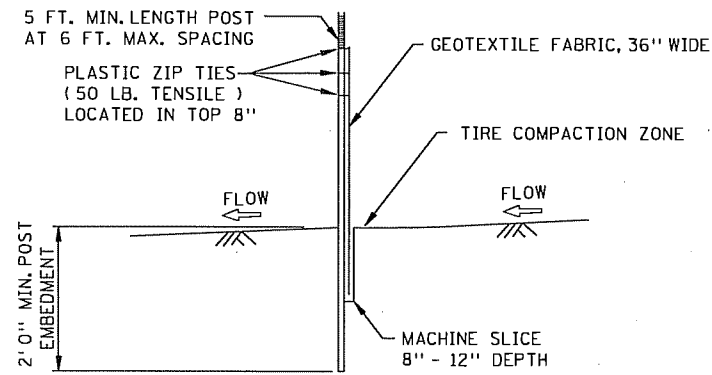
DISTRICT #: USER NAME: dffrey PATH & FILENAME: P:\02-611-33\Plan\Standard_Plans\406.L_spdn.dgn FILE NAME: s406.L_spdn.dgn

STANDARD SHEET NO. 5-297.406	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
STANDARD APPROVED: JANUARY 31, 1985	
REVISION DATE 10-26-2000	S.P. 002-611-033 S.A.P. 114-127-007 S.P. 002-618-031 S.P. 114-020-048
SHEET NO. 54 OF 98 SHEETS	

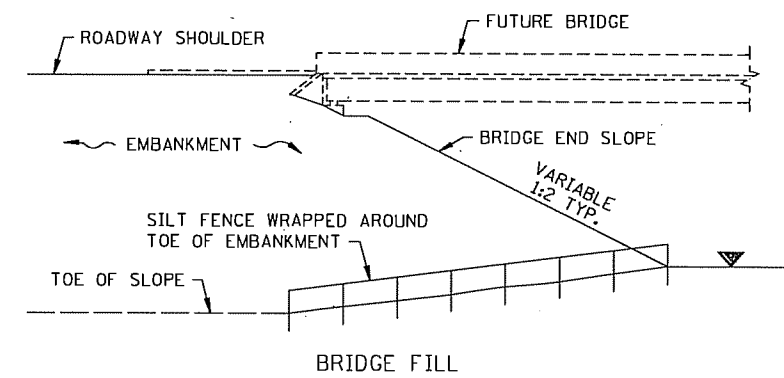
PLOTTED/REVISED:
05/09/2013



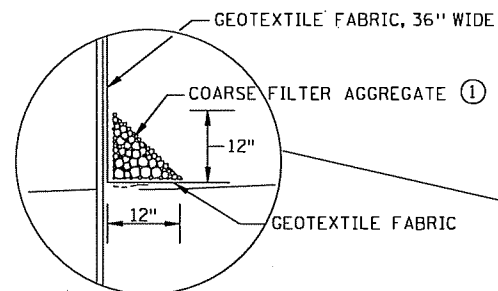
LOCATION OF SILT FENCE
AT TOE OF ROADWAY EMBANKMENT



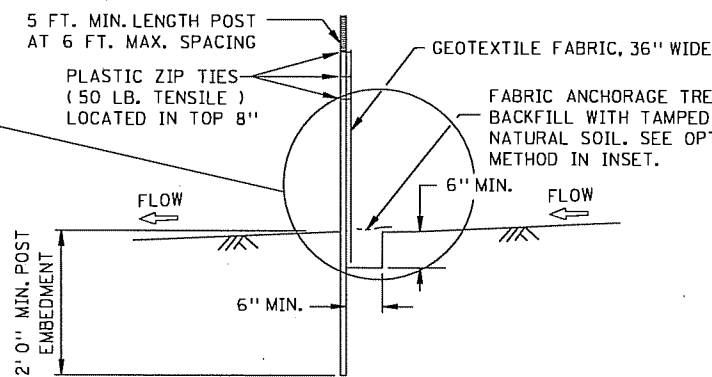
SILT FENCE, MACHINE SLICED
DESIGN GUIDELINES:
TO PROTECT AREAS FROM SHEET FLOW.
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



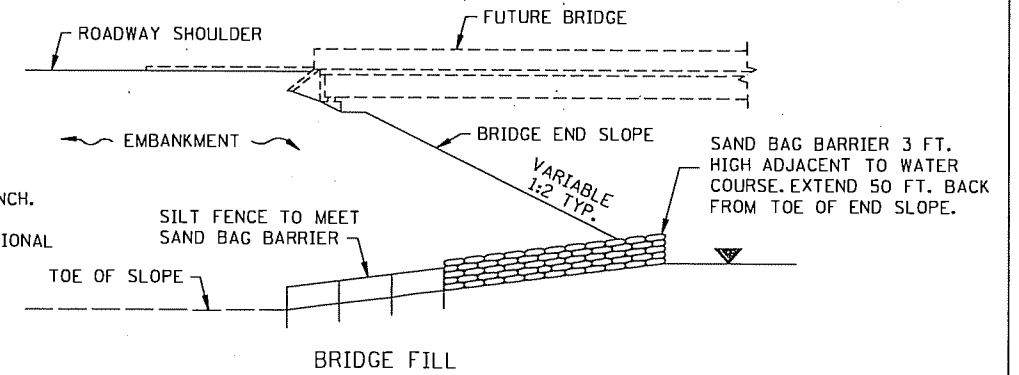
DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: STAGNANT
CONTRIBUTING SLOPE AREA: 1/2 ACRE



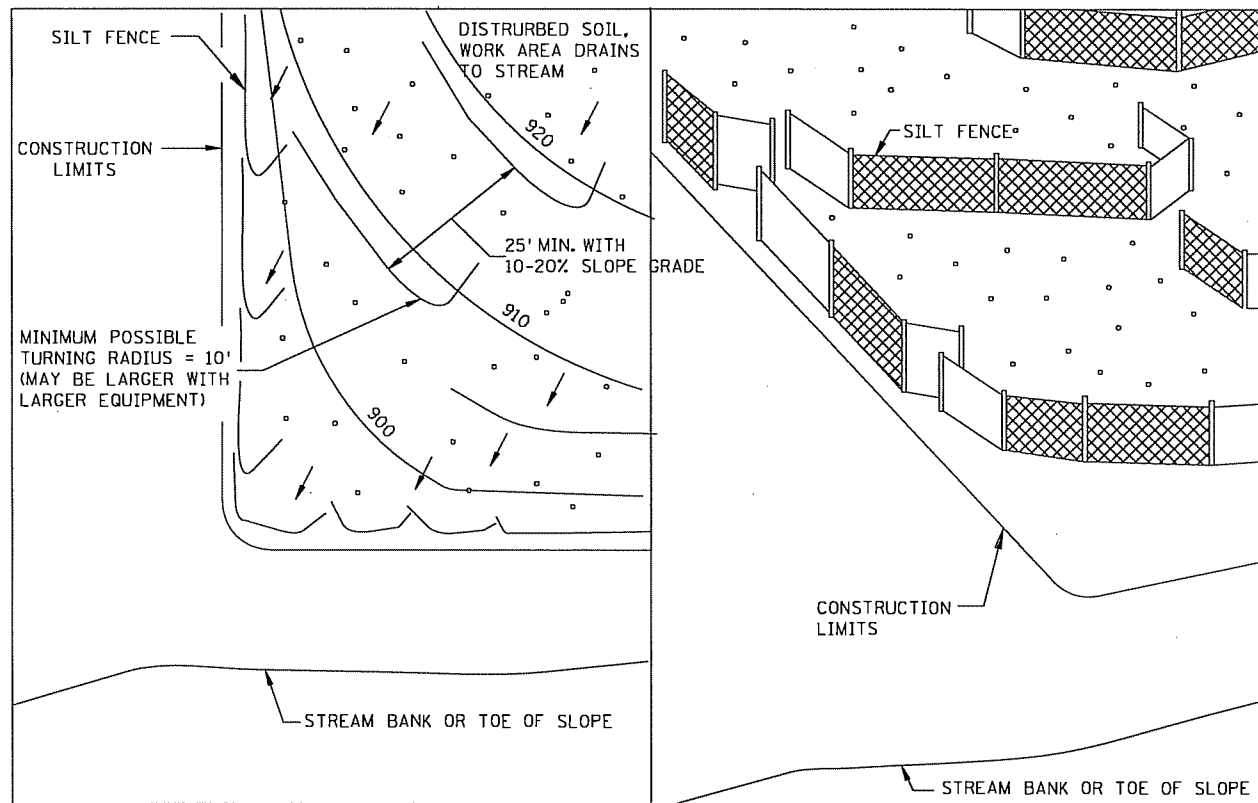
OPTIONAL METHOD
FOR SILT FENCE, HEAVY DUTY



SILT FENCE, HEAVY DUTY
(HAND INSTALLED)
DESIGN GUIDELINES:
TO PROTECT AREAS FROM SHEET FLOW.
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



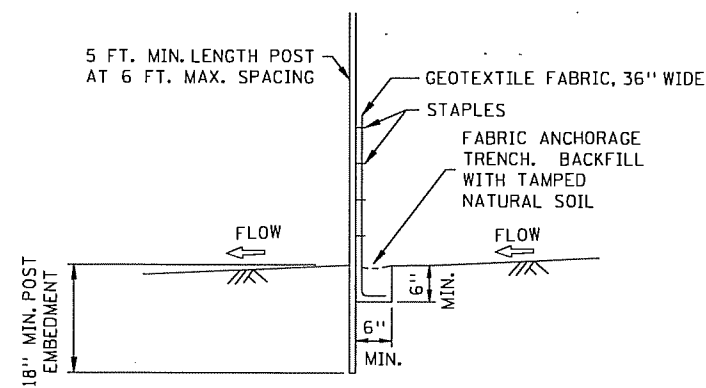
DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1 ACRE



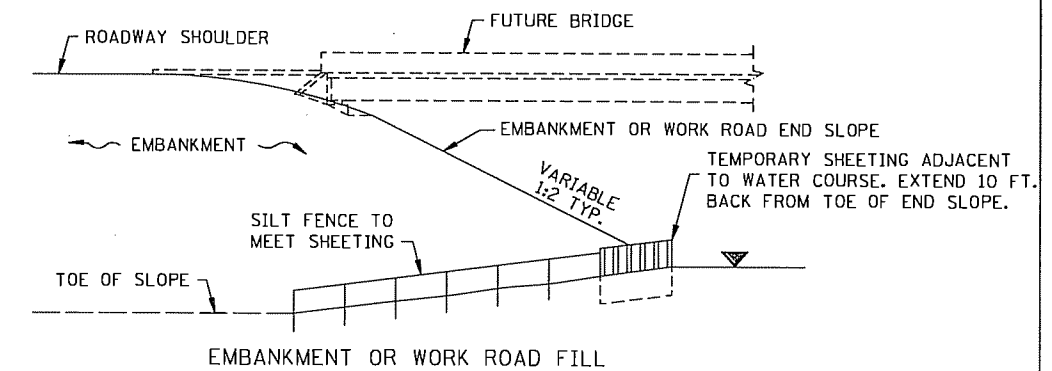
PLAN VIEW

SIDE VIEW

SILT FENCE, J-HOOK INSTALLATION



SILT FENCE, PREASSEMBLED
DESIGN GUIDELINES:
TO PROTECT AREAS FROM SHEET FLOW.
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



DESIGN GUIDELINES:
WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES
SILT FENCE AT BRIDGE EMBANKMENT ADJACENT TO WATER

NOTES:

SEE SPECS. 2573, 3149 & 3886.

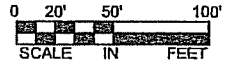
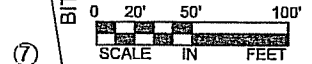
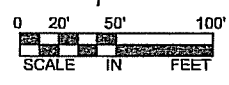
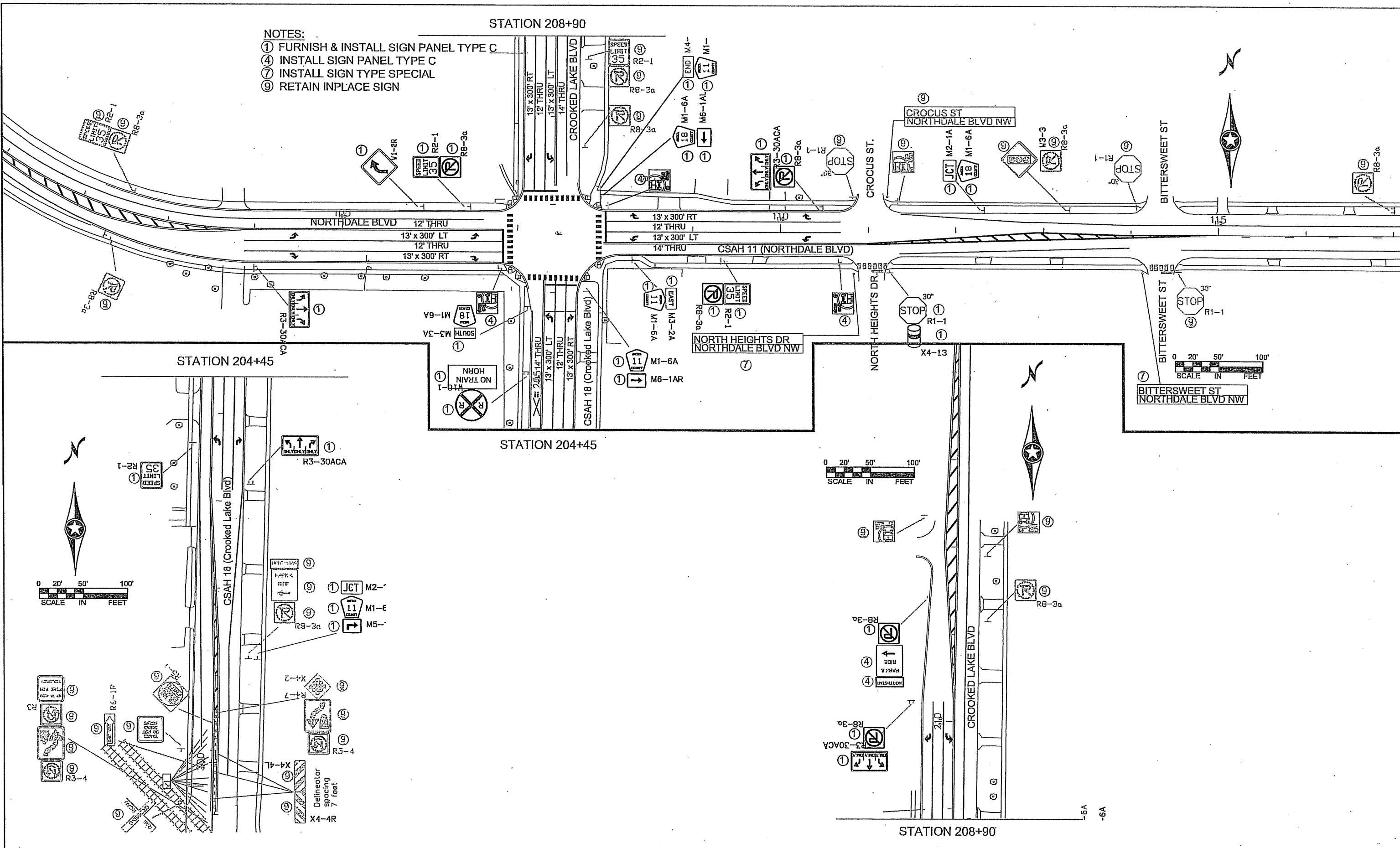
① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

DISTRICT #: USER NAME: dffrey PATH & FILENAME: P:\02-611-33\PlanStandard_Plans\408.J_spn.dgn

STANDARD SHEET NO. 5-297.408 (1 OF 2)	TITLE: TEMPORARY SEDIMENT CONTROL SILT FENCE
STANDARD APPROVED: SEPTEMBER 27, 2006	
S.P. 002-611-033 S.A.P. 114-127-007	
S.P. 002-618-031 S.P. 114-020-048	
SHEET NO. 55 OF 98 SHEETS	

NOTES:

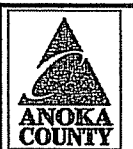
- ① FURNISH & INSTALL SIGN PANEL TYPE C
- ④ INSTALL SIGN PANEL TYPE C
- ⑦ INSTALL SIGN TYPE SPECIAL
- ⑨ RETAIN INPLACE SIGN



NO	DATE	BY	CKD	APPR	REVISION
NAME	P:102-611-33\Basetraffic\0261133_PERMANENT SIGNING & STRIPING.dwg				

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: CURT A. KOBILARCSIK
 SIGNATURE: *Curt Kobilarcsik*
 DATE: 5-16-13 REG. NO. 24756

DRAWN BY: MTH DATE: 09/21/12
 DESIGN BY: MTH DATE: 09/21/12
 CHECKED BY: JR DATE: 02/25/13



ANOKA COUNTY
 HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048

PERMANENT SIGNING &
 STRIPING PLAN
 Sheet 56 of 98 Sheets

L SIGN PANELS TYPE C						
SIGN DESIGNATION	SIGN SIZE	SIZE AREA (FT ²)	Total Installations	Total Area (ft ²)	Posts per Installation	Notes
R1-1	30" x 30"	6.25	2	12.5	1	
X4-15	4" x 15"	1.31	2	0	0	G
R2-1	24" x 30"	5	3	15	1	
R3-30ACA	54" x 30"	11.25	4	45	2	
R8-3a	24" x 24"	4	5	20	1	
W1-2R	36" x 36"	9	1	9	2	
W10-1	36"	2.25	1	2.25	2	
W10-9P	24" x 18"	3	1	3		H
M1-6A	24" x 24"	4	7	28	1	
M2-1A	21" x 15"	2.19	2	4.38		D
M3-2A	24" x 12"	2	1	2		D
M3-3A	24" x 12"	2	1	2		D
M4-6A	24" x 12"	2	1	2		D
M5-1AR	21" x 15"	2.19	1	2.19		E
M6-1AL	21" x 15"	2.19	1	2.19		E
M6-1AR	21" x 15"	2.19	1	2.19		E
Project Totals			34	151.69		

NOTES: This table illustrates quantities for F&I new type "C" signs only.

- A Sign mounted below R1-1 Sign Post Assembly
- B Sign mounted above R1-1 sign post assembly
- C Sign mounted on back of R1-6R Sign Post Assembly
- D Sign mounted above M1-6A sign post assembly
- E Sign mounted below M1-6A sign post assembly
- F Sign mounted below R4-7 Sign Post Assembly
- G Delineator mounted below R1-1 sign post assembly
- H Sign mounted below W10-1

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
R1-1	30" x 30"		2
X4-13	4" x 15"		2
R2-1	24" x 30"		3
R3-30ACA	54" x 30"		4
R8-3a	24" x 24"		5
W1-2R	36" x 36"		1
W10-1	36"		1
W10-9P	24" x 18"		1
M3-2a	24" x 12"		1
M2-1a	21" x 15"		1
M4-6A	24" x 12"		1
M1-6A	24" x 24"		4
M5-1AR	21" x 15"		1
M6-1AR	21" x 15"		1
M2-1a	21" x 15"		1
M3-3a	24" x 12"		1
M1-6A	24" x 24"		3
M6-1AL	21" x 15"		1

PERMANENT & TEMPORARY PAVEMENT MARKING PLAN
NOTES AND GUIDELINES

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. ANOKA COUNTY HIGHWAY DEPARTMENT WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS, LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS, ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

EPOXY:

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENT AND/OR LAITANCE ON LOW SPEED (SPEED LIMIT 35 MPH OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS. SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEANS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEANS SHALL BE APPLIED AT A POUND PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES FAHRENHEIT OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PERFORMED THERMOPLASTIC:

THE PERFORMED THERMOPLASTIC MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS ON CLEAN AND DRY SURFACES. SEE SPECIAL PROVISIONS FOR PERFORMED THERMOPLASTIC MARKING SPECIFICATIONS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50 DEGREES FARHENHEIT OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILD OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

PERMANENT & TEMPORARY PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
PAVEMENT MARKING REMOVAL	LIN FT	9610
24" PAVEMENT MARKING REMOVAL	LIN FT	360
RAISED PAVEMENT MARKER TEMPORARY	EACH	342
REMOVABLE PERFORM PLASTIC MARKING (WHITE)	LIN FT	890
REMOVABLE PERFORM PLASTIC MARKING (YELLOW)	LIN FT	1680
PAVEMENT MESSAGE (LT ARROW) PERFORMED THERMOPLASTIC	EACH	8
PAVEMENT MESSAGE (RT ARROW) PERFORMED THERMOPLASTIC	EACH	8
PAVEMENT MESSAGE (RR X-ING) PERFORMED THERMOPLASTIC	EACH	1
24" SOLID LINE YELLOW - PERFORMED THERMOPLASTIC	LIN FT	441
24" SOLID LINE WHITE - PERFORMED THERMOPLASTIC	LIN FT	152
3' x 6' CROSSWALK MARKING - PERFORMED THERMOPLASTIC	SQ FT	684
4" SOLID LINE WHITE - PAINT	LIN FT	7266
4" SOLID LINE YELLOW - PAINT	LIN FT	9796
4" SOLID LINE WHITE - EPOXY	LIN FT	7100
4" SOLID LINE YELLOW - EPOXY	LIN FT	500
4" BROKEN LINE YELLOW - EPOXY (10' STRIPE, 40' SKIP)	LIN FT	110
4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	3400

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PERFORMED THERMOPLASTIC

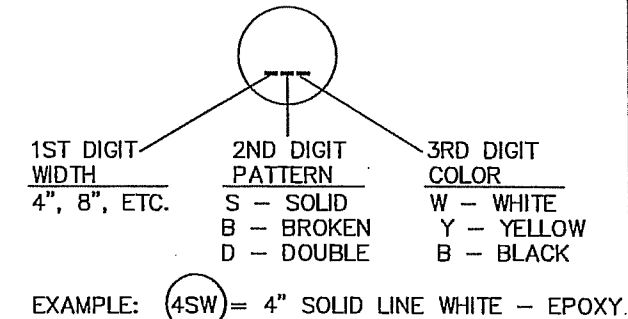
↩ PAVEMENT MESSAGE (LEFT ARROW) PERFORMED THERMOPLASTIC

STRIPING KEY

○ CIRCLE - EPOXY □ SQUARE PERFORMED THERMOPLASTIC

△ TRIANGLE - PAINT □ R x R PERFORMED THERMOPLASTIC

⬠ PENTAGON - REMOVABLE PERFORMED PLASTIC MARKING



NO	DATE	BY	CHK	APPR	REVISION

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.
PRINT NAME: CURT A. KOBILARCSIK
SIGNATURE: *Curt Kobilarcsik*
DATE: 5-16-13 LICENSE NO. 24756

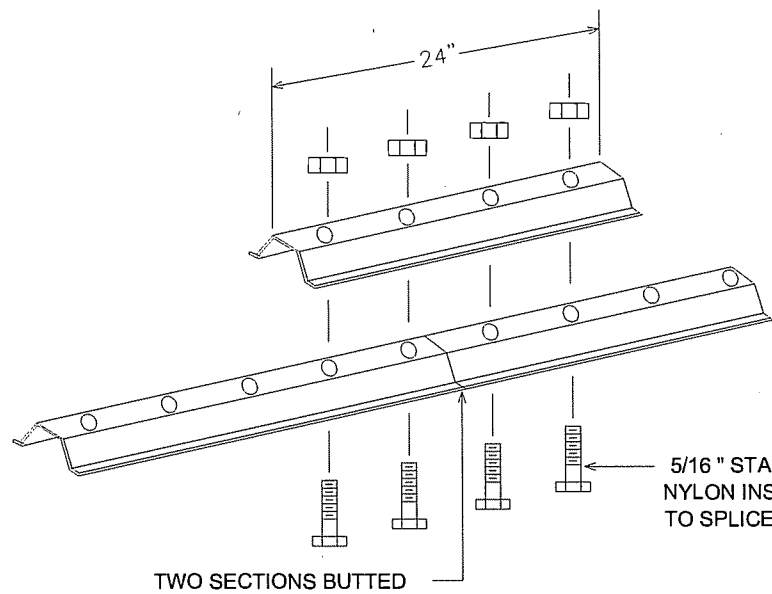
DRAWN BY: MTH DATE 06/26/2012
DESIGN BY: MTH DATE 06/26/2012
CHECKED BY: JR DATE 7/01/2012



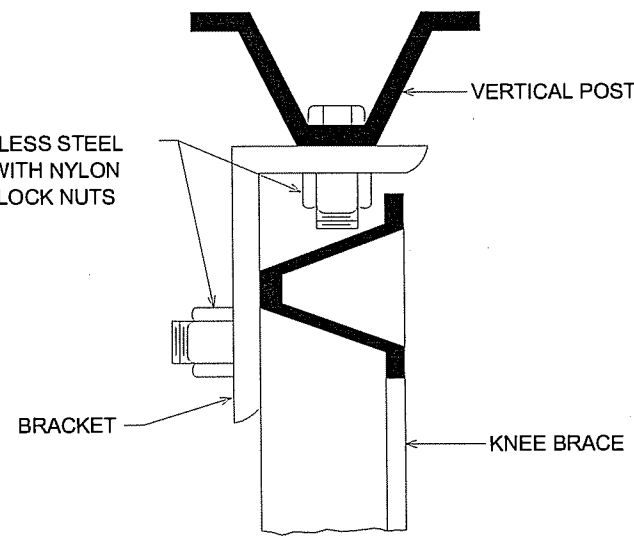
**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.A.P. 114-020-048

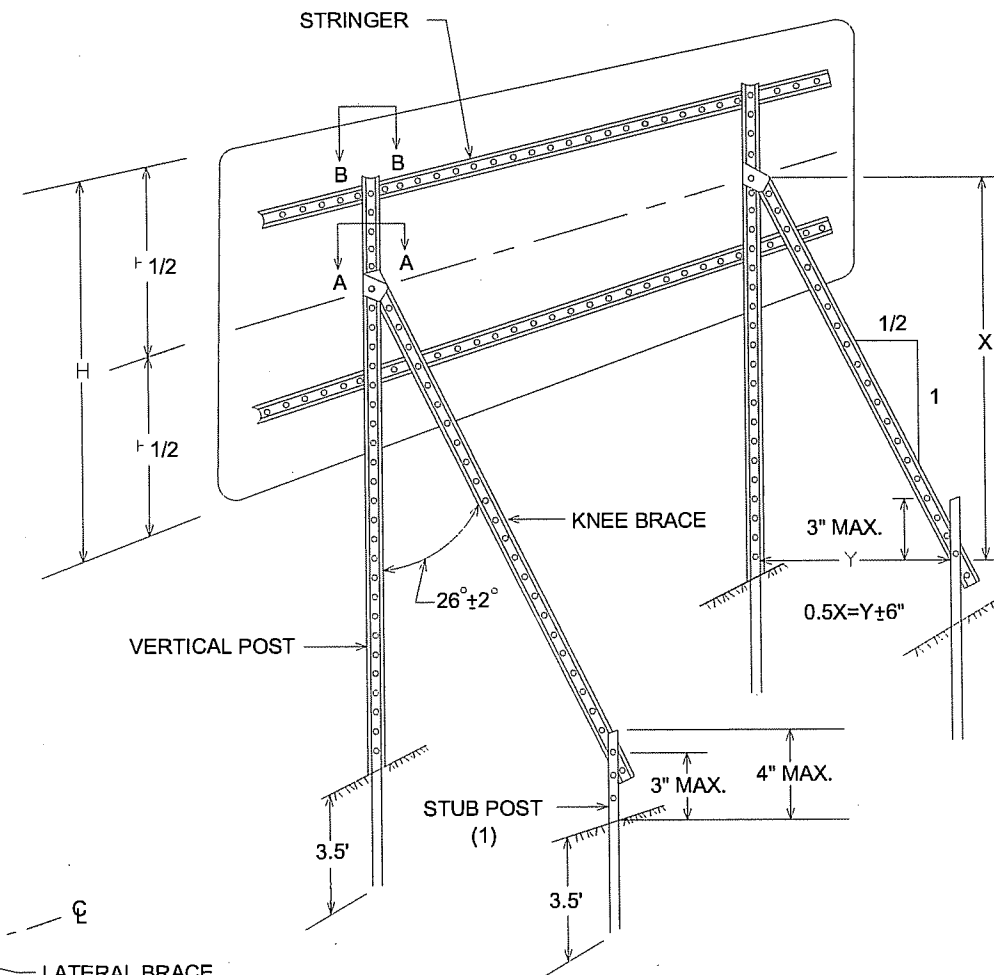
**PERMANENT &
TEMPORARY MARKING
TABULATION**



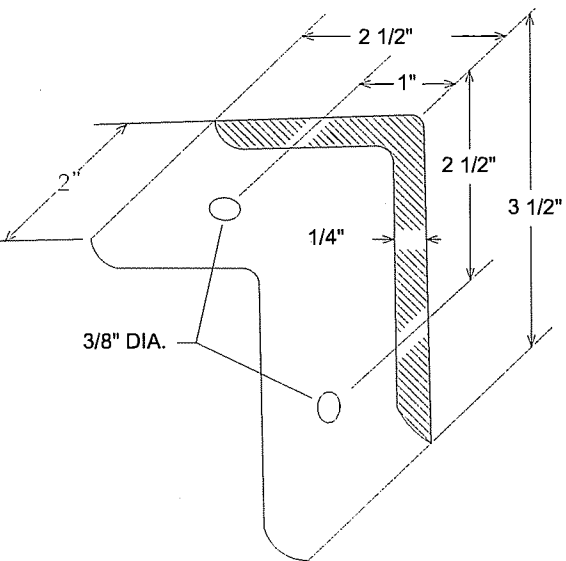
**LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)**



SECTION A-A

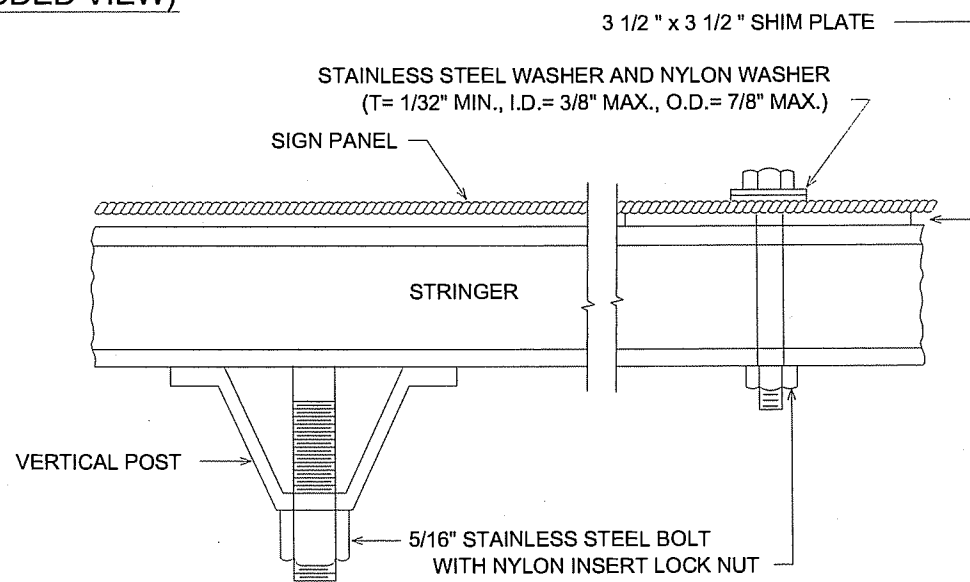


**TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS**

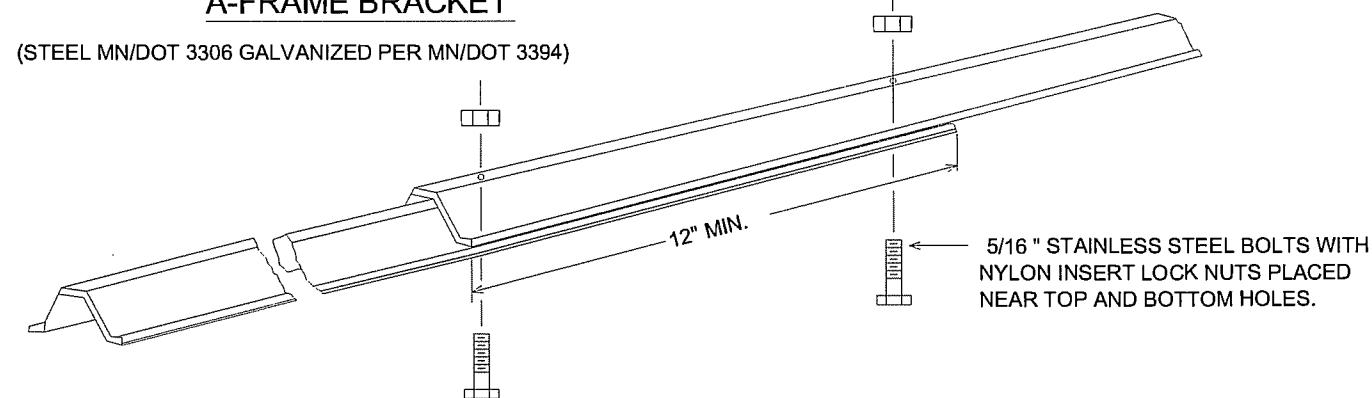


A-FRAME BRACKET

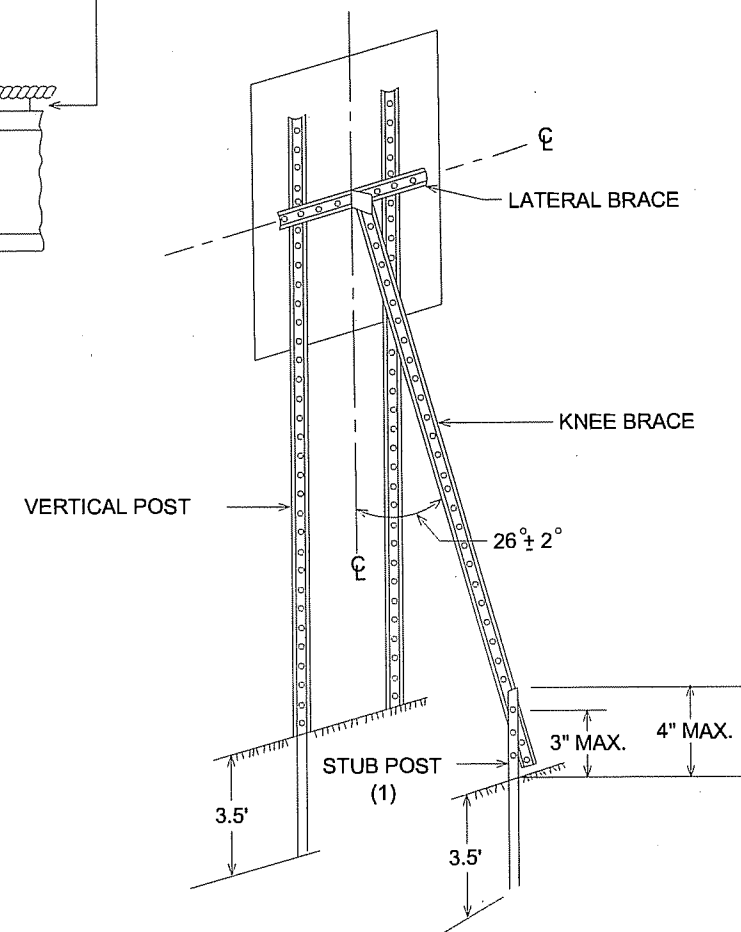
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



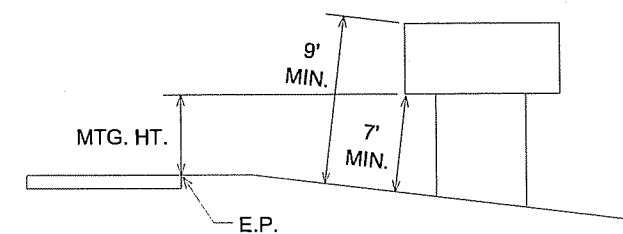
SECTION B-B



KNEE BRACE SPLICE



**TYPICAL "A-FRAME" INSTALLATION
TYPE "C" SIGNS**



TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST.

**TYPE C & D SIGN
STRUCTURAL DETAILS**

NO	DATE	BY	CKD	APPR	REVISION

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.
 PRINT NAME: CURT A KOBILARCSIK
 SIGNATURE: *Curt Kobilarcsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY MTH DATE 01-01-13
 DESIGN BY MTH DATE 01-01-13
 CHECKED BY JR DATE 01-01-13

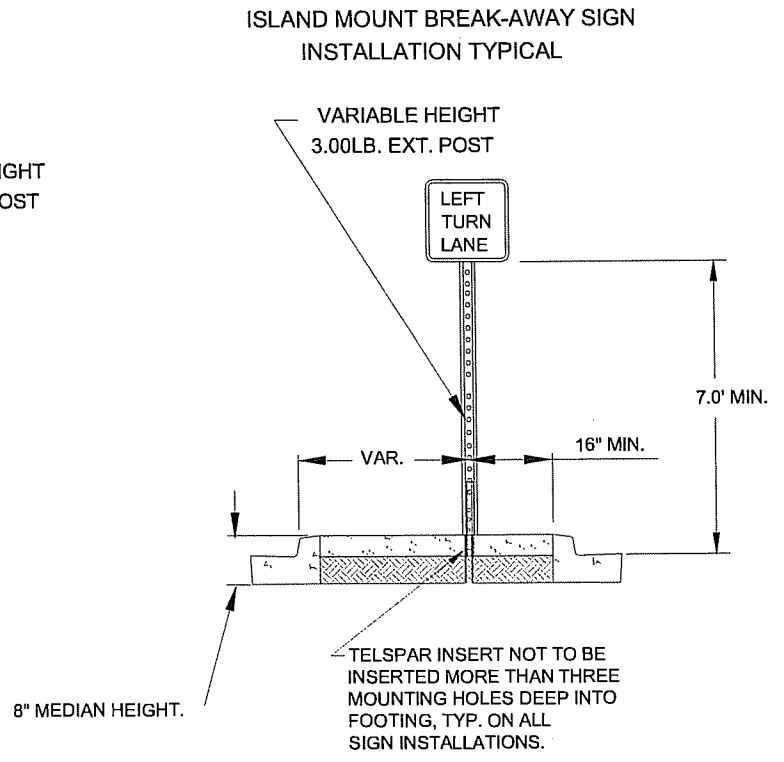
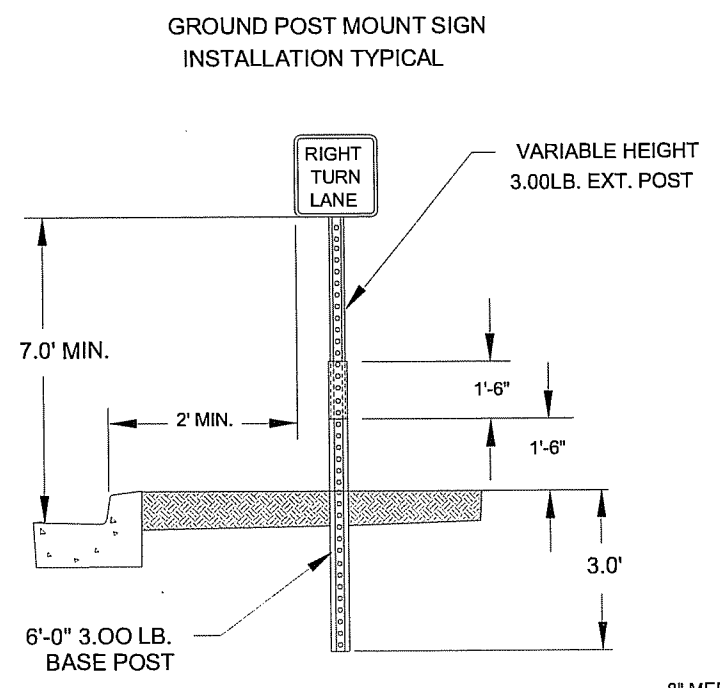
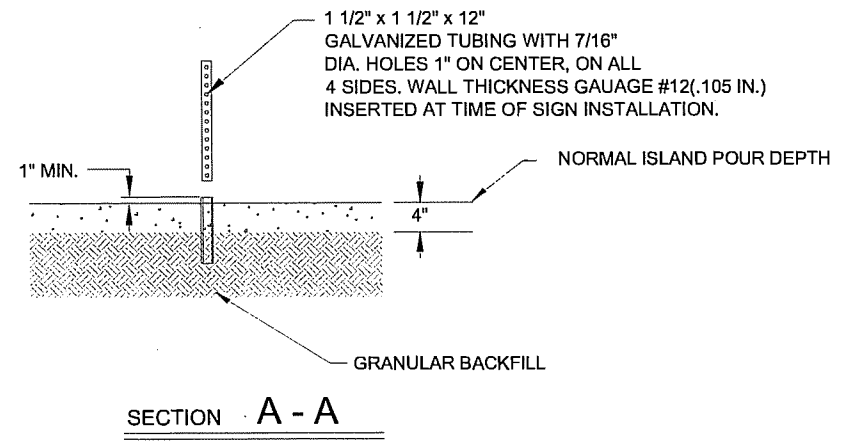
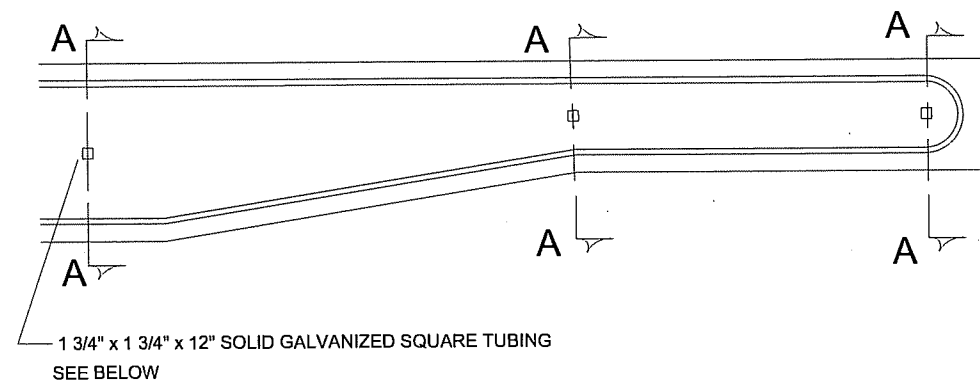


**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048

SIGNING & STRIPING DETAILS

Sheet 59 of 98 Sheets

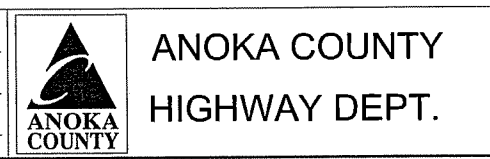


NO	DATE	BY	CKD	APPR	REVISION

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.

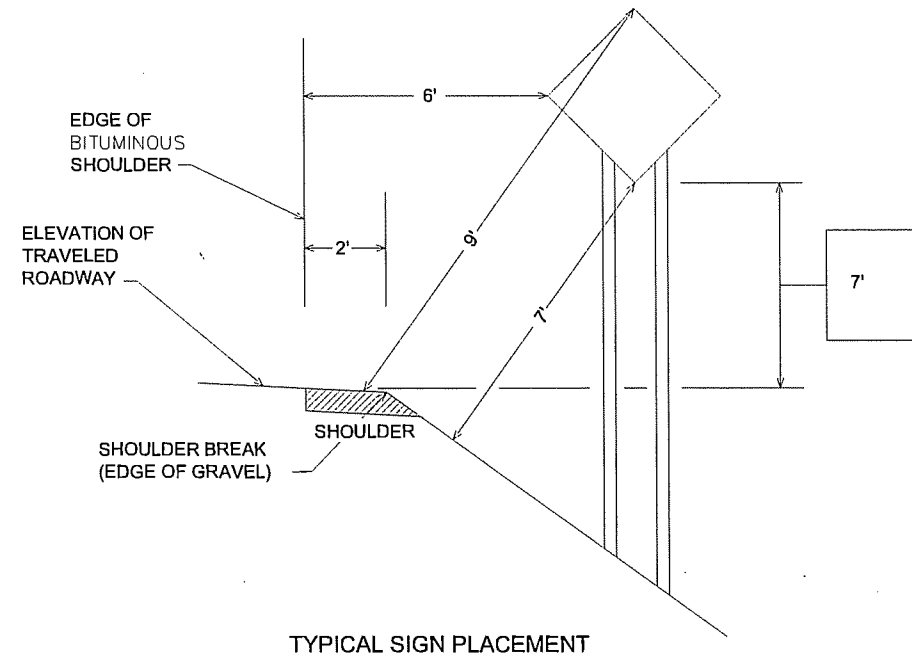
PRINT NAME: CURT A KOBJLARCSIK
 SIGNATURE: *Curt A. Kobylarsik*
 DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY MTH DATE 01-01-13
 DESIGN BY MTH DATE 01-01-13
 CHECKED BY JR DATE 01-01-13



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048

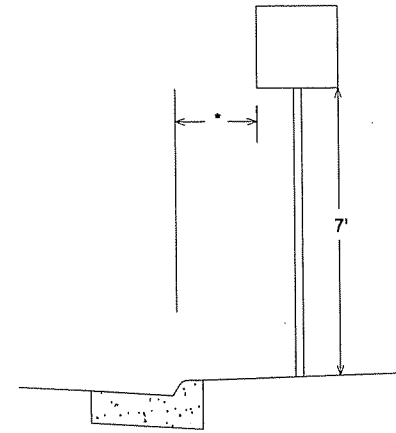
RURAL



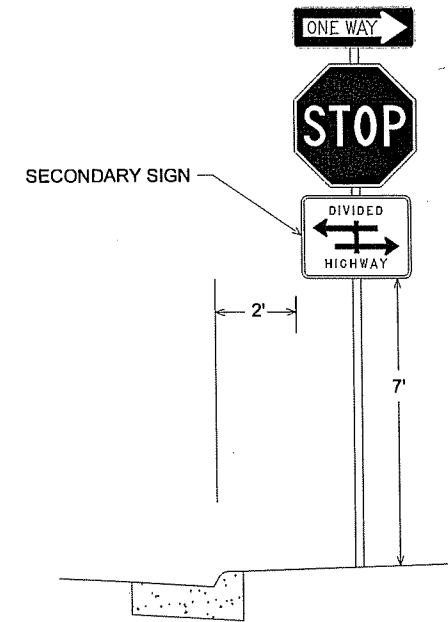
TYPICAL SIGN PLACEMENT

URBAN

- 2' - NARROW BOULEVARD (< 8' WIDE)
- 6' - WIDE BOULEVARD



TYPICAL SIGN PLACEMENT



NOTE:

- ALL DIMENSIONS ARE MINIMUMS
- MAINTAIN 2' CLEAR FROM SIGNS TO BITUMINOUS TRAIL

NO	DATE	BY	CKD	APPR	REVISION

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.

PRINT NAME: CURT A KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*

DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY MTH DATE 01-01-13

DESIGN BY MTH DATE 01-01-13

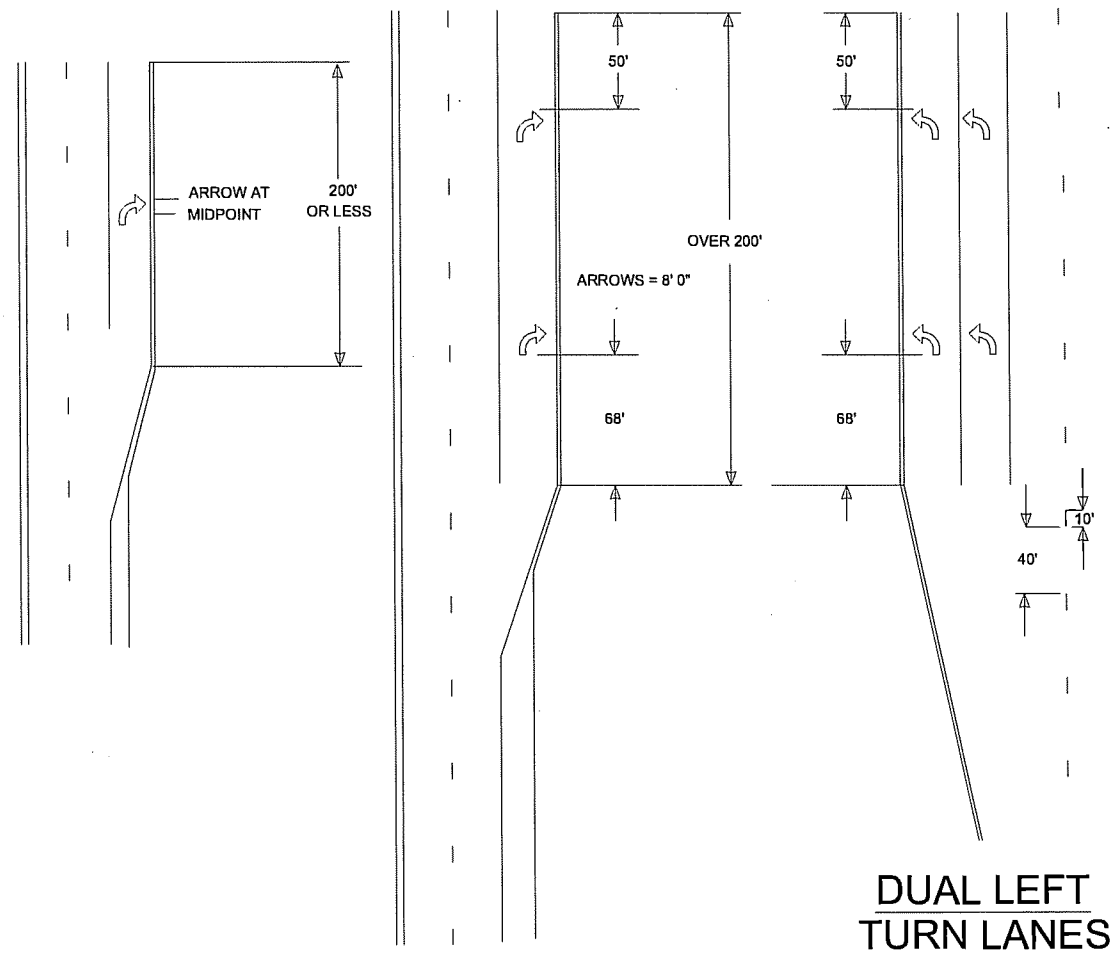
CHECKED BY JR DATE 01-01-13



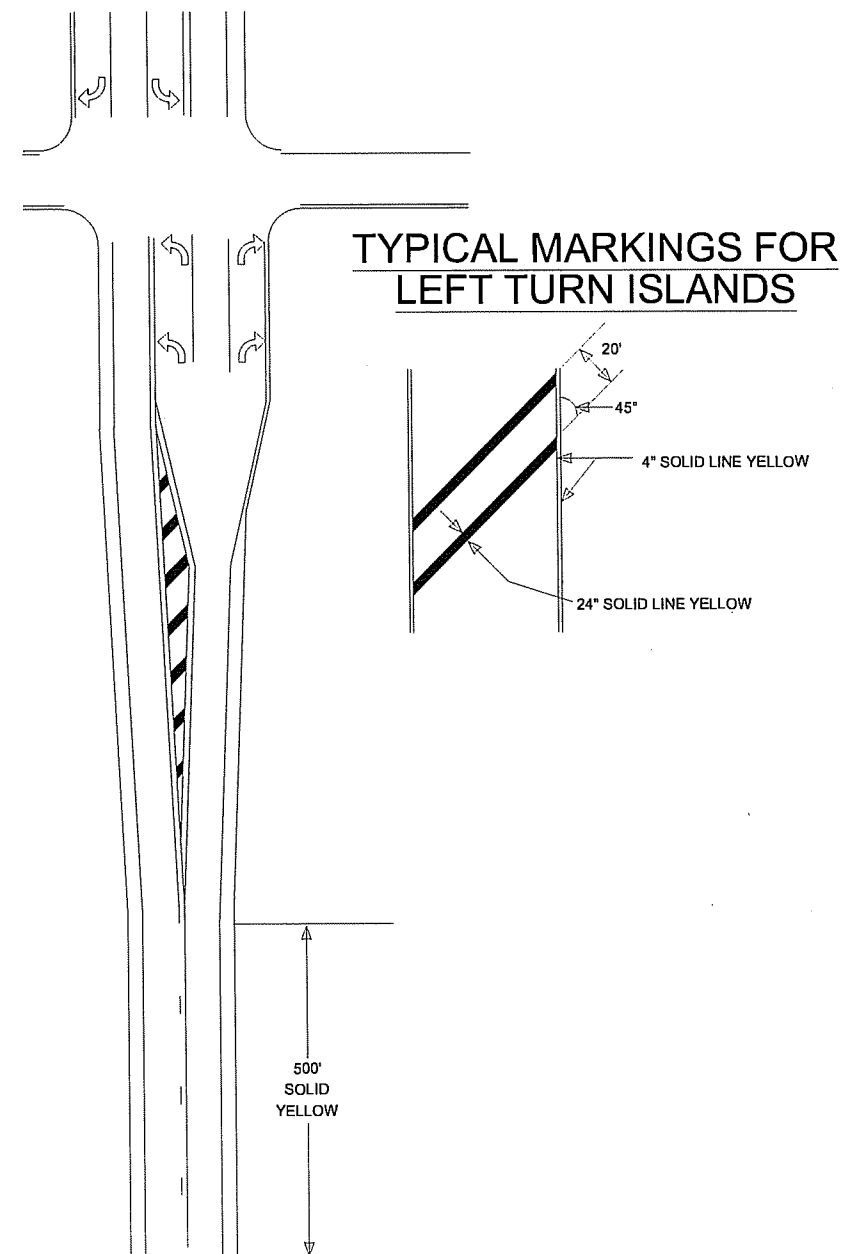
ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.A.P. 114-020-048

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

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.

PRINT NAME: CURT A KOBILARCSIK

SIGNATURE: *Curt Kobilarsik*

DATE: 5-16-13 LICENSE NO. 24756

DRAWN BY MTH DATE 01-01-13

DESIGN BY MTH DATE 01-01-13

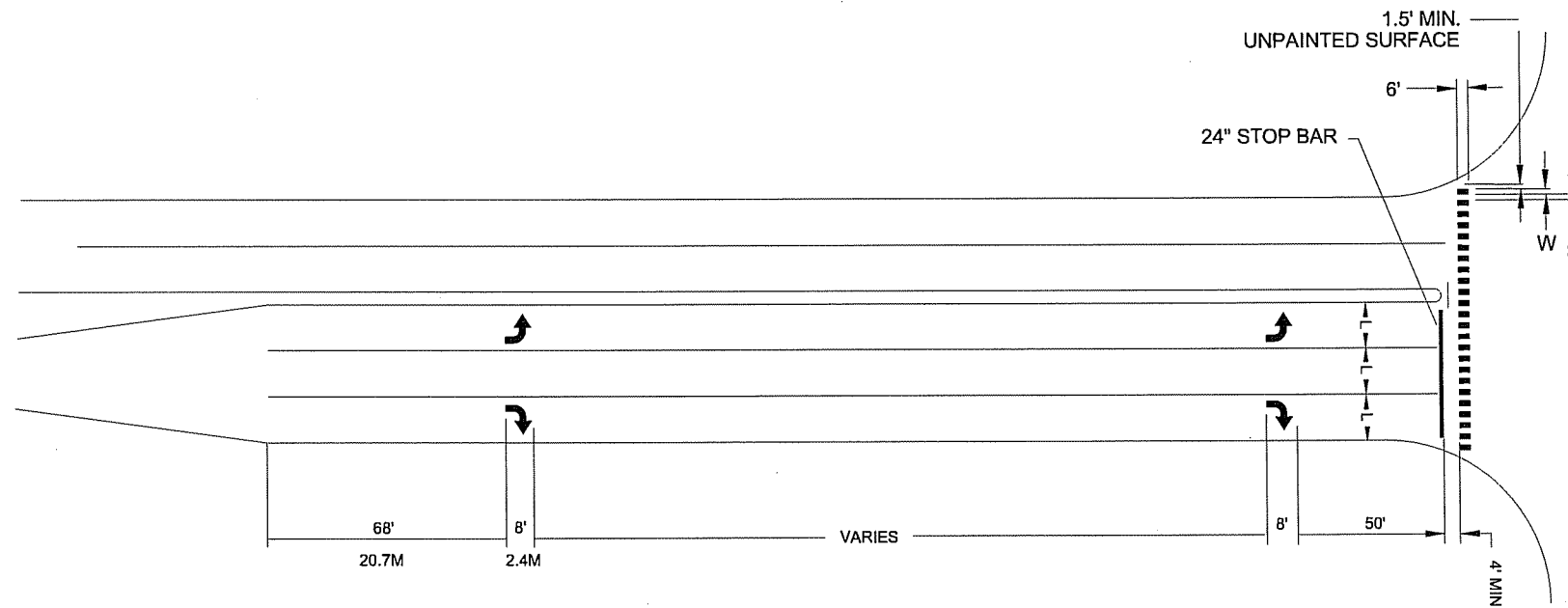
CHECKED BY JR DATE 01-01-13



**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.A.P. 114-020-048

MARKINGS FOR PEDESTRIAN CROSSWALKS



(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

NOTES: CROSSWALKS:

- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) INSIDE LANE.

NOTES & GUIDELINES

GENERAL INFORMATION:

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.

EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.

A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

EPOXY:

THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENTS AND/OR LAITANCE. ON LOW SPEED (SPEED LIMIT 35 OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS, SANDBLAST CLEANING SHALL BE USED FOR ALL EPOXY PAVEMENT MARKINGS.

THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES F° OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50°F OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OF DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

NO	DATE	BY	CKD	APPR	REVISION

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.

PRINT NAME: CURT A KOBILARCSIK
 SIGNATURE: *Curt Kobilarsik*
 DATE: 5-16-13 LICENSE NO. 24756

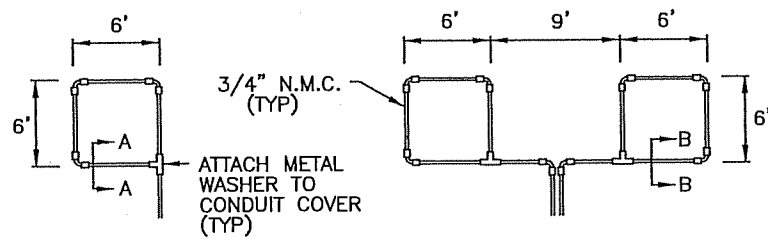
DRAWN BY MTH DATE 01-01-13
 DESIGN BY MTH DATE 01-01-13
 CHECKED BY JR DATE 01-01-13

ANOKA COUNTY
HIGHWAY DEPT.

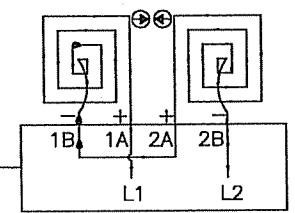
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.A.P. 114-020-048

SIGNING & STRIPING DETAILS

Sheet 63 of 98 Sheets



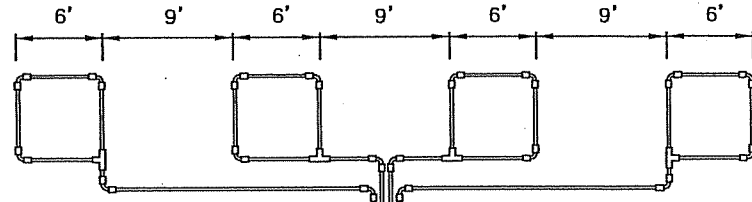
**LOOP DETECTOR
DETAIL 'A'**
(LOOP PHASING FOR
SINGLE CONNECTION)



LOOP CONNECTIONS SHALL BE
LABELED AND SPLICED IN THE
HANDHOLE AS FOLLOWS:

L1 TO 1A
1B TO 2A
2B TO L2

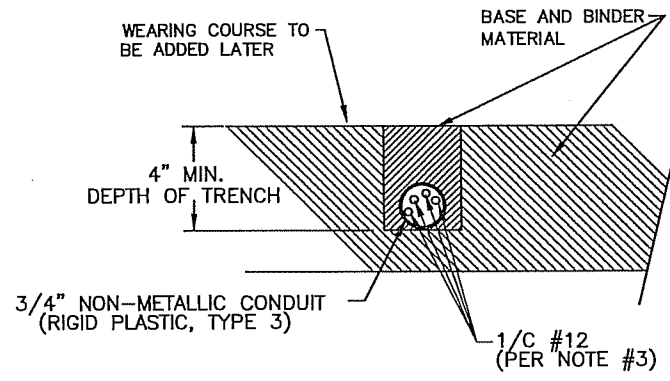
**LOOP DETECTOR
DETAIL 'B'**
(LOOP PHASING FOR
SERIES CONNECTION)



LOOP CONNECTIONS SHALL BE LABELED AND SPLICED
IN THE HANDHOLE AS FOLLOWS:

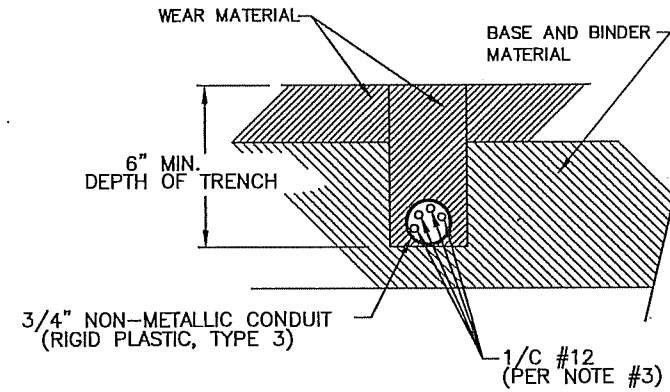
L1 TO 1A 3B TO 4A
1B TO 2A 4B TO L2
2B TO 3A

**LOOP DETECTOR
DETAIL 'C'**
(LOOP PHASING FOR
SERIES CONNECTION)



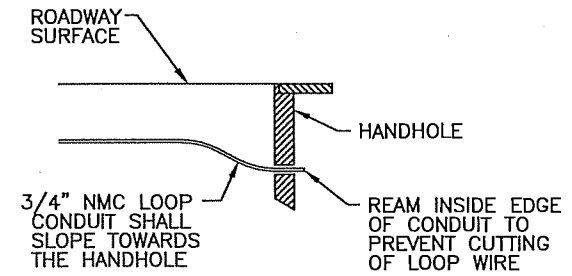
SECTION A-A

DETAIL FOR LOOP INSTALLATION
IN NEW ROADWAY



SECTION B-B

DETAIL FOR LOOP INSTALLATION
IN EXISTING ROADWAY



DRAINAGE DETAIL

LOOP DETECTOR WIRING

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6' x 15' AND LARGER SHALL HAVE (2) TURNS.

LEGEND OF SYMBOLS

CONTROLLER AND SERVICE EQUIP. NO's	(A)
SIGNAL BASE NO.	(1)
SIGNAL FACE NO.	(2)
LUMINAIRE NO.	(3)
CONTROLLER AND CABINET	(4)
CONTROLLER AND CABINET - IN PLACE	(5)
HANDHOLE	(6)
HANDHOLE - IN PLACE	(7)
RIGID STEEL CONDUIT (RSC)	(8)
RIGID STEEL CONDUIT (RSC) - IN PLACE	(9)
SIGNAL FACE WITH BACKGROUND SHIELD	(10)
SIGNAL FACE W/O BACKGROUND SHIELD	(11)
SIGNAL FACE - IN PLACE	(12)
PEDESTRIAN INDICATORS	(13)
PEDESTRIAN INDICATORS - IN PLACE	(14)
PEDESTRIAN PUSH BUTTONS ON PEDESTAL OR POLE	(15)
PEDESTRIAN PUSH BUTTON STATION	(16)
TRAFFIC SIGNAL PEDESTAL	(17)
TRAFFIC SIGNAL PEDESTAL - INPLACE	(18)
TRAFFIC SIGNAL POLE AND MAST ARM	(19)
TRAFFIC SIGNAL POLE AND MAST ARM - IN PLACE	(20)
STREET LIGHT POLE AND LUMINAIRE	(21)
STREET LIGHT POLE AND LUMINAIRE - IN PLACE	(22)
MAST ARM AND LUMINAIRE	(23)
MAST ARM AND LUMINAIRE - INPLACE	(24)
WOOD POLE	(25)
WOOD POLE - IN PLACE	(26)
SOURCE OF POWER	(27)
RAILROAD SIGNAL - IN PLACE	(28)
RIGHT OF WAY LINE	(29)
CENTERLINE	(30)
EDGE OF ROADWAY	(31)
SHOULDERLINE	(32)
CURB LINE	(33)
STOP BAR	(34)
EMERGENCY VEHICLE PREEMPTION DETECTOR	(35)

ABBREVIATIONS

3-1(EG)	SIGNAL HEAD PHASE "3" - NO "1"	P2-1(EG)	PED INDICATION PHASE "2" - NO. "1"
BR. GR.	BARE GROUND	PB	PUSH BUTTON
CH. SW.	CHECK SWITCH	PB2-1(EG)	PUSH BUTTON PHASE "2" - NO. "1"
CLR	CLEAR	PEC	PHOTOELECTRIC CELL
D2-1(EG)	DETECTOR PHASE "2" - NO. "1"	PED	PEDESTRIAN
DWK	DON'T WALK	R	RED
EQG	EQUIPMENT GROUND	R&S	REMOVE AND SALVAGE
EVP	EMERGENCY VEHICLE PRE-EMPTION	RLTA	RED LEFT TURN ARROW
F&I	FURNISH AND INSTALL	RRTA	RED RIGHT TURN ARROW
FL	FLASH/FLASHING	RSC	RIGID STEEL CONDUIT
G	GREEN	SOP	SOURCE OF POWER
GLTA	GREEN LEFT TURN ARROW	SPR	SPARE
GRN	GREEN	ST. LHT	STREET LIGHT
GR. R	GROUND ROD	STA	STATION
GRTA	GREEN RIGHT TURN ARROW	SW	SWITCH
GTHA	GREEN THRU ARROW	SWD	SWITCHED
HH	HANDHOLE	S&R	SALVAGE AND REINSTALL
HPS	HIGH PRESSURE SODIUM	TDW	TELEPHONE DROP WIRE
JB	JUNCTION BOX	WLK	WALK
LUM	LUMINAIRE	YEL	YELLOW
NEU	NEUTRAL	YLTA	YELLOW LEFT TURN ARROW
NMC	NONMETALLIC CONDUIT	YRTA	YELLOW RIGHT TURN ARROW
		YTHA	YELLOW THRU ARROW

CONDUCTOR COLOR CODE

R	RED
O	ORANGE
BL	BLUE
WH	WHITE
R/BLK	RED WITH BLACK TRACER
O/BLK	ORANGE WITH BLACK TRACER
BL/BLK	BLUE WITH BLACK TRACER
WH/BLK	WHITE WITH BLACK TRACER
BLK	BLACK
BLK/WH	BLACK WITH WHITE TRACER
G/BLK	GREEN WITH BLACK TRACER
G	GREEN

TRAFFIC SIGNAL TABULATION

ITEM NO	ITEM	UNIT	TOTAL ESTIMATED QUANTITY
2565	TRAFFIC CONTROL SIGNAL SYSTEM	SIG. SYS.	1
2565	EMERGENCY VEHICLE PREEMPTION SYSTEM	LUMP SUM	1
2565	SIGNAL SERVICE CABINET	EACH	1
2565	PVC HANDHOLE	EACH	3
2565	2" RIGID STEEL CONDUIT	LIN FT	450

TRAFFIC SIGNAL STANDARD PLATES

THESE TRAFFIC SIGNAL STANDARD PLATES AS APPROVED BY FHWA SHALL APPLY:

PLATE NO.	DESCRIPTION
* 8000 I	STANDARD BARRICADES
* 8111 E	TRAFFIC SIGNAL BRACKETING (PEDESTAL MOUNTED) (3 SHEETS)
* 8112 G	PEDESTAL FOUNDATION (TRAFFIC CONTROL SIGNALS)
* 8114 A	PVC HANDHOLE/PULLBOX (NO VEHICLE LOAD) (2 SHEETS)
* 8118 D	SERVICE EQUIPMENT & POLE-TRAFFIC CONTROL SIGNALS
* 8119 C	GROUND MOUNTED CABINET FOUNDATION
* 8120 P	POLE FOUNDATION (PA 85)
* 8121 H	TRANSFORMER BASE & POLE BASE PLATE (2 SHEETS)
* 8122 F	PEDESTAL & PEDESTAL BASE (FOR TRAFFIC CONTROL SIGNALS SUPPORT)
* 8123 G	POLE & MAST ARM-LUMINAIRES & TRAFFIC LIGHTS ASSEMBLY (2 SHEETS)
* 8126 K	POLE FOUNDATION (PA90 & PA100)

* - APPLIES TO THIS PROJECT

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

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.
JMG
Name: John M. Gray, PE
Lc. No. 22457
Date: May 13, 2013

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

**ANOKA COUNTY,
MINNESOTA**
CITY OF COON RAPIDS

**TRAFFIC SIGNAL SYSTEM
DETAILS AND STANDARD PLATES**
CSAH 11-NORTHDALE BOULEVARD AT
CSAH 18-CROOKED LAKE BOULEVARD

FILE NO.
ANOKC 123594
SIGNAL SHEET
1 OF 11
64
98

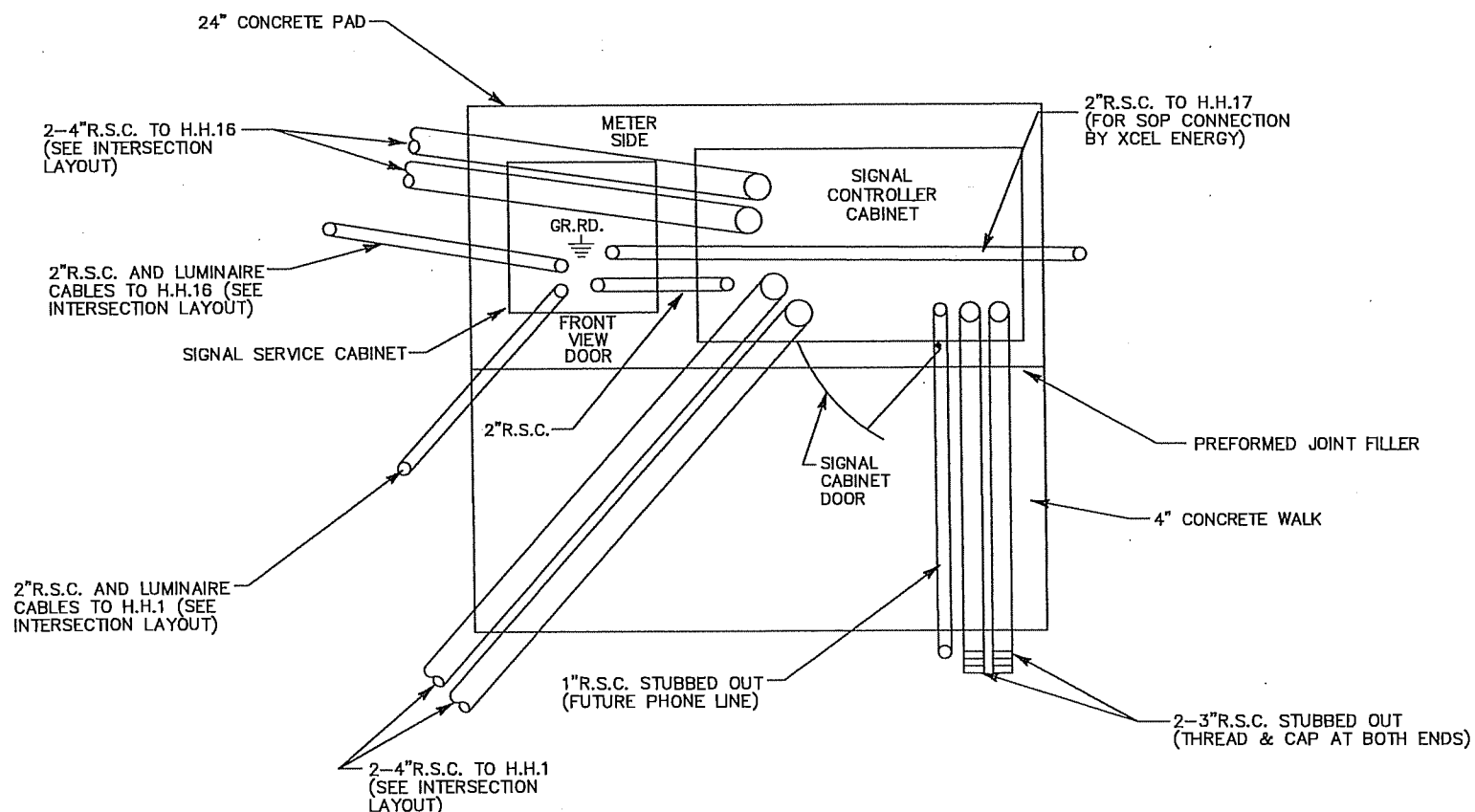
S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-020-048
S.A.P. 114-127-007

TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

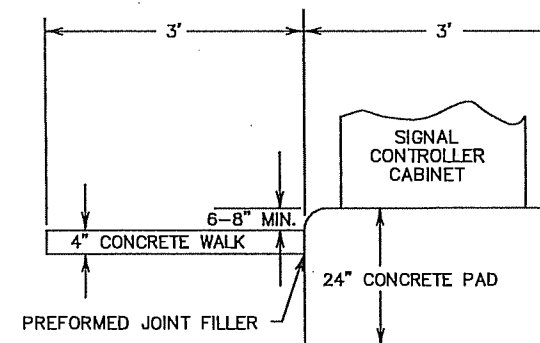
SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)

PLAN VIEW

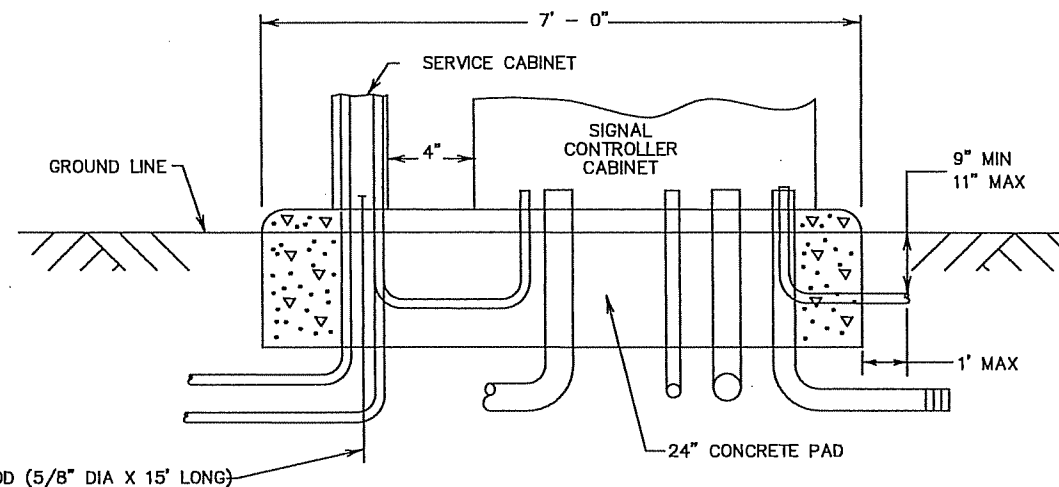
CSAH 11-NORTHDALE BOULEVARD NW
AT CSAH 18-CROOKED LAKE BOULEVARD NW



SIDE VIEW



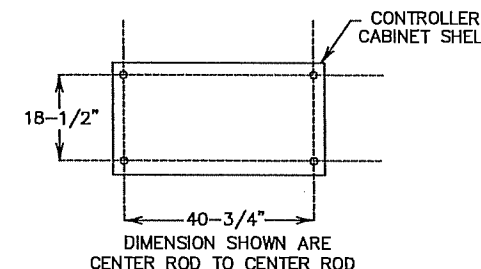
FRONT VIEW



NOTES:

1. THE ANCHOR RODS, NUTS AND WASHERS FOR THE COUNTY FURNISHED CONTROLLER AND CABINET SHALL BE FURNISHED BY THE COUNTY AND INSTALLED BY THE CONTRACTOR.
2. THE UPPER PART OF THE NEW EQUIPMENT PAD SHALL BE BEVELLED OR CHAMFERED IN A NEAT MANNER AS DIRECTED BY THE ENGINEER.
3. THE TOP OF THE CONDUITS SHALL BE THREADED AND CAPPED AFTER INSTALLATION (UNTIL CABLES ARE INSTALLED).
4. CONDUIT SHALL PROJECT A MINIMUM OF 2" ABOVE THE CONCRETE AND SHALL BE LOCATED INSIDE THE CABINET WHERE DIRECTED BY THE ENGINEER, BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
5. CONCRETE MIX 3A32 OR EQUAL SHALL BE USED FOR THE EQUIPMENT PAD AND SIDEWALK.
6. CONDUITS WITH BOTH ENDS TERMINATING WITHIN THE PAD SHALL NOT BE INSTALLED BELOW THE CONCRETE.
7. THE EXACT LOCATION OF CONDUITS WITHIN THE PAD SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
8. ANCHOR RODS SHALL PROJECT A MINIMUM OF 3" ABOVE THE CONCRETE BUT SHALL NOT INTERFERE WITH THE CABINET FUNCTIONS (SUPPORTING MEMBERS, ETC.).
9. CONTRACTOR SHALL PROVIDE MINIMUM 4-INCH CLEARANCE BETWEEN CONTROLLER AND SERVICE CABINETS ON THE EQUIPMENT PAD FOUNDATION AS SHOWN.

CONTROLLER CABINET TYPE "P" & "R" BOLT PATTERN



S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-020-048
S.A.P. 114-127-007

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
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.
John M. Gray
Name: John M. Gray, PE
Lic. No. 22457
Date: May 13, 2013

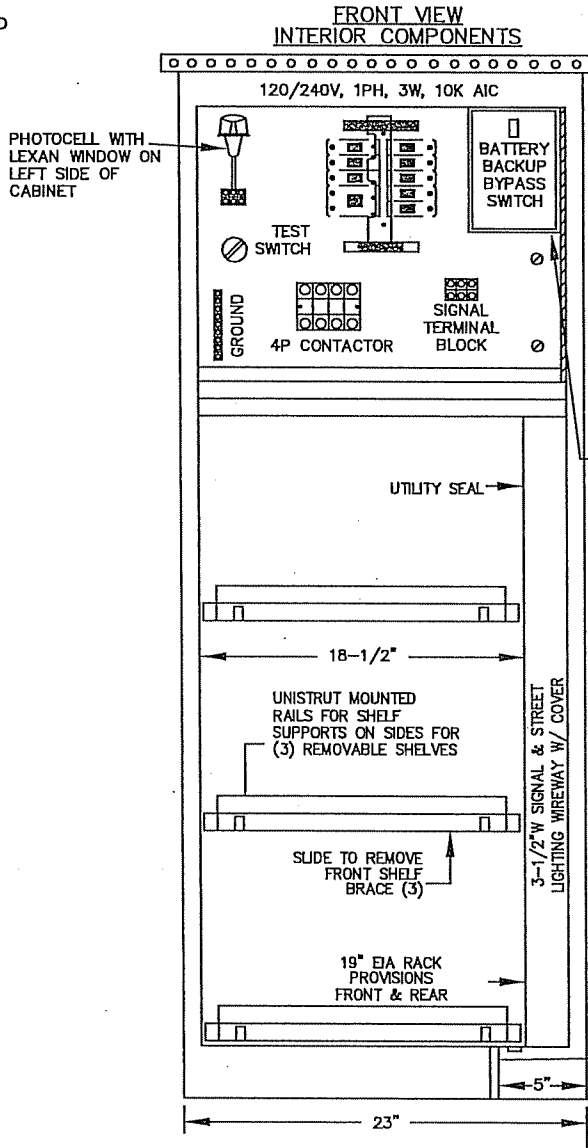
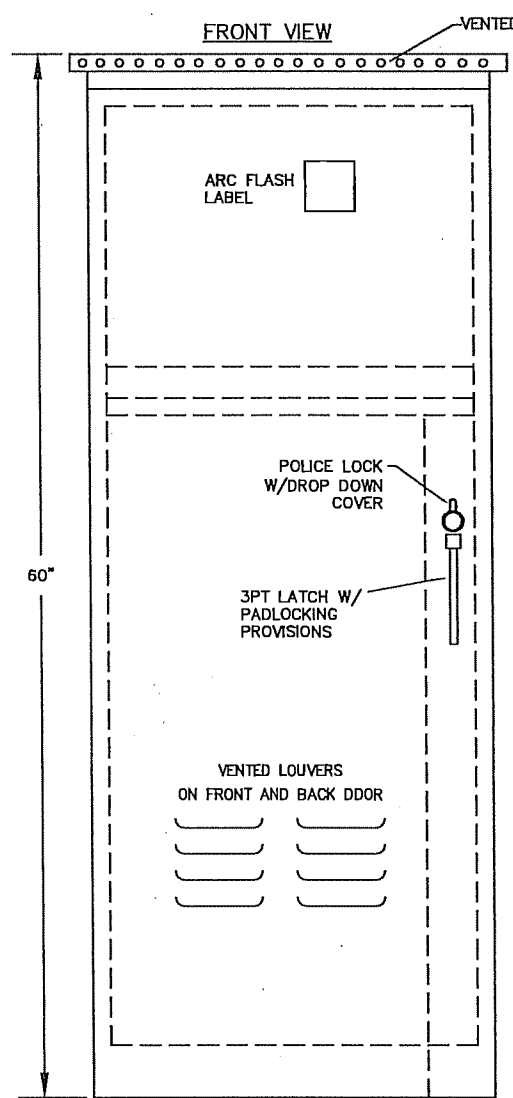
SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

**ANOKA COUNTY,
MINNESOTA**
CITY OF COON RAPIDS

**TRAFFIC SIGNAL SYSTEM
EQUIPMENT PAD FOUNDATION**
CSAH 11-NORTHDALE BOULEVARD AT
CSAH 18-CROOKED LAKE BOULEVARD

FILE NO.
ANOKC 123594
SIGNAL SHEET
2 OF 11

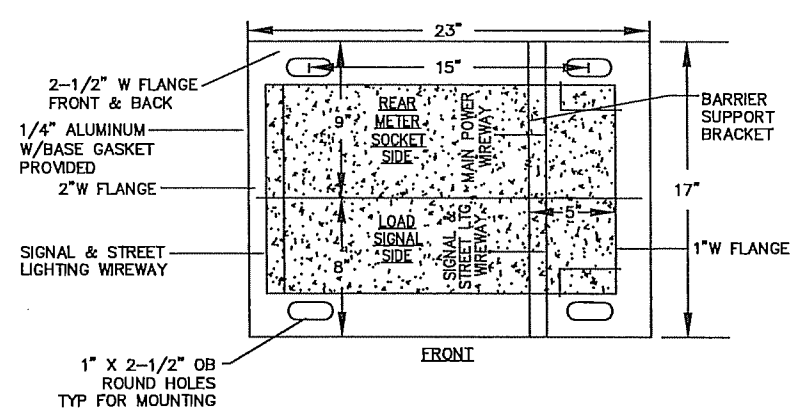
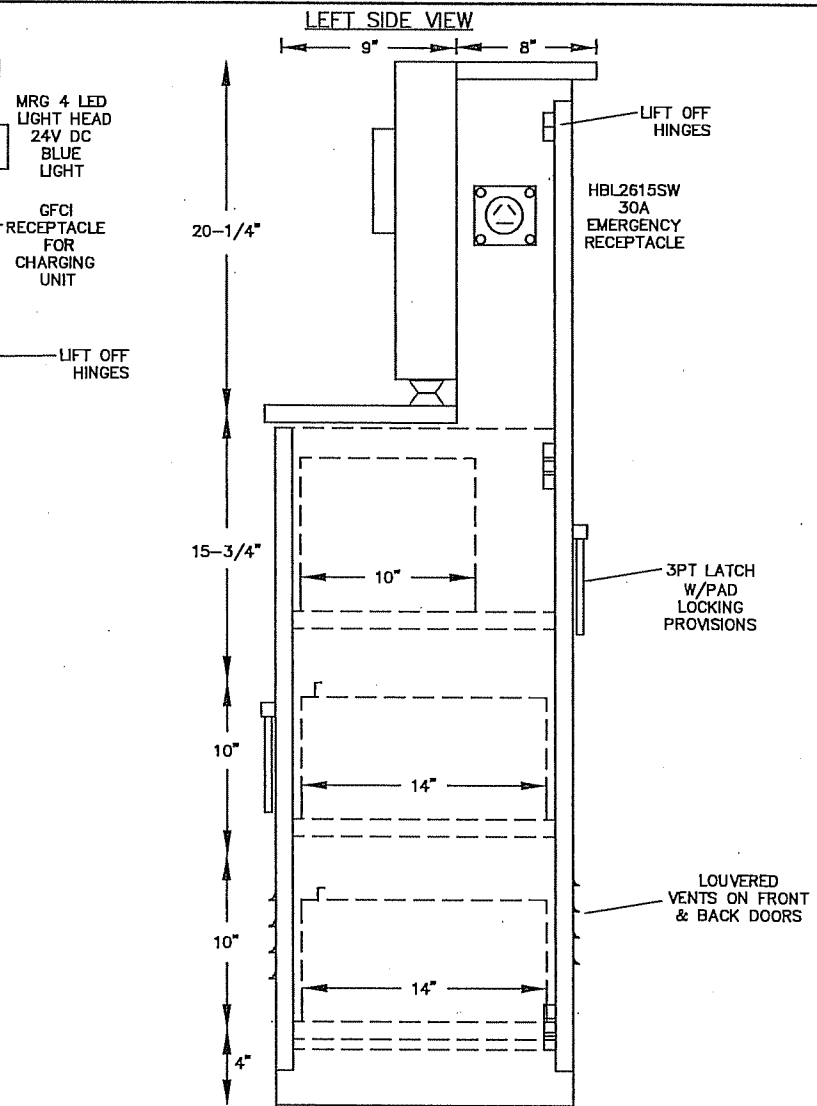
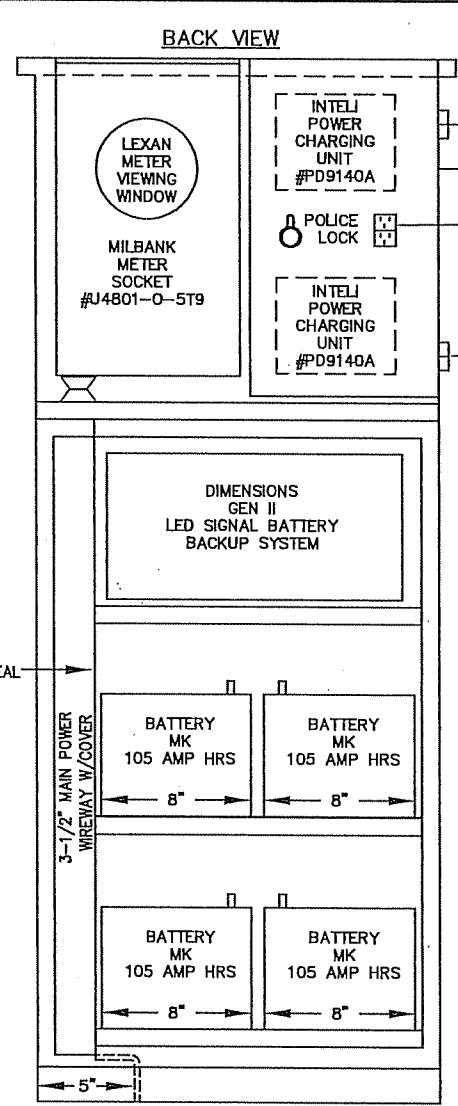
65
98



- LOAD CENTER
CIRCUIT
BREAKERS
ITE "Q" TYPE
1-100A/2P
SERVICE
DISCONNECT
1-20A/1P GFCI
RECEPTACLE
1-15/1P
PHOTOCELL
4-15A/1P
LUMINAIRES
1-30A/1P
SIGNAL SVC
1 SPARE

CUTOUT PROVISIONS IN
DEAD FRONT FOR BATTERY
BACKUP BYPASS SWITCH

INTERIOR
COMPONENTS
BEHIND HINGED
DEAD FRONT
W/ (2)-1/4
TURN LATCHES

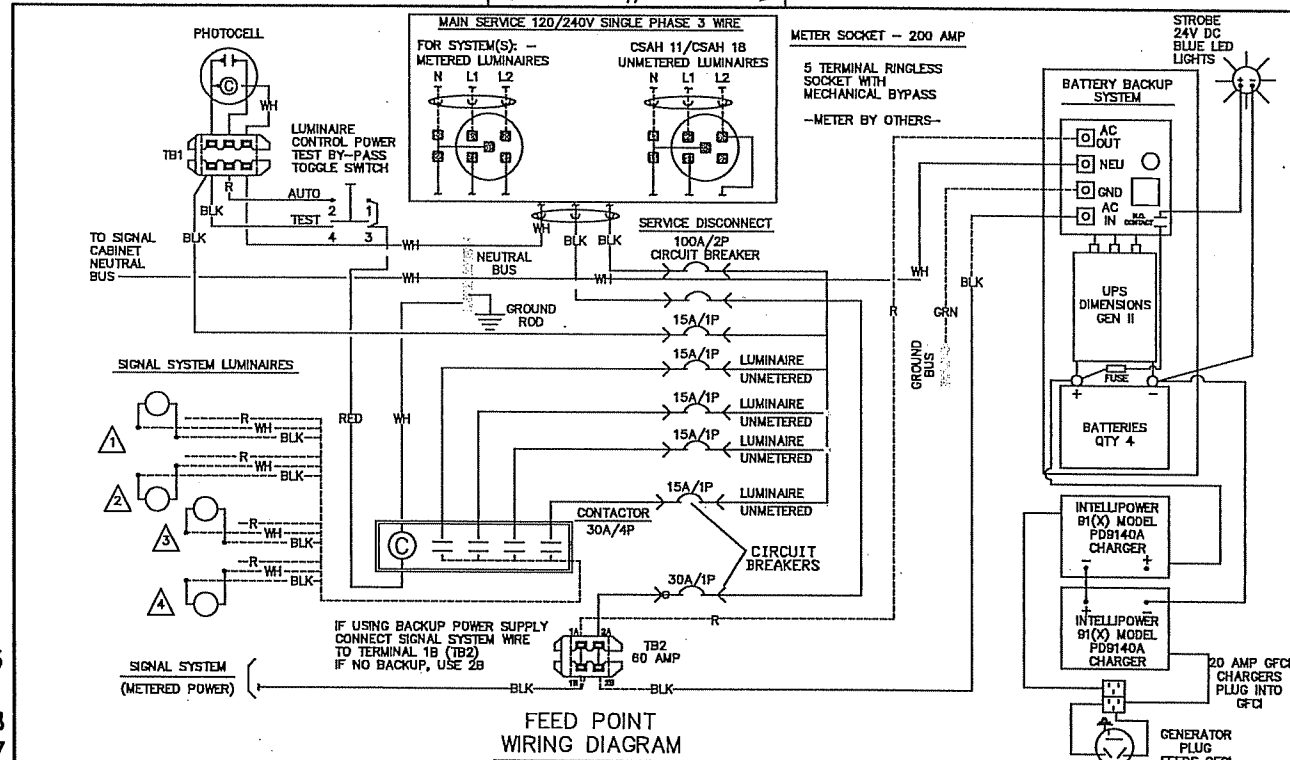


CABINET CONSTRUCTION

- NEMA 3R
- 1/8" ALUMINUM 5052-H32
- ANODIZED 30 MINUTE CLEAR
- NEOPRENE GASKETED DOORS
- NON-CORRODING HARDWARE
- ETL LISTED IN ACCORDANCE W/UL508A

SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES REGARDING SEPARATE PAY ITEM FOR FURNISHING & INSTALLING NEW BATTERY BACK-UP SIGNAL SERVICE CABINET.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-020-048
S.A.P. 114-127-007



DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

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.

John M. Gray
Name: John M. Gray, PE
Lic. No. 22457
Date: May 13, 2013

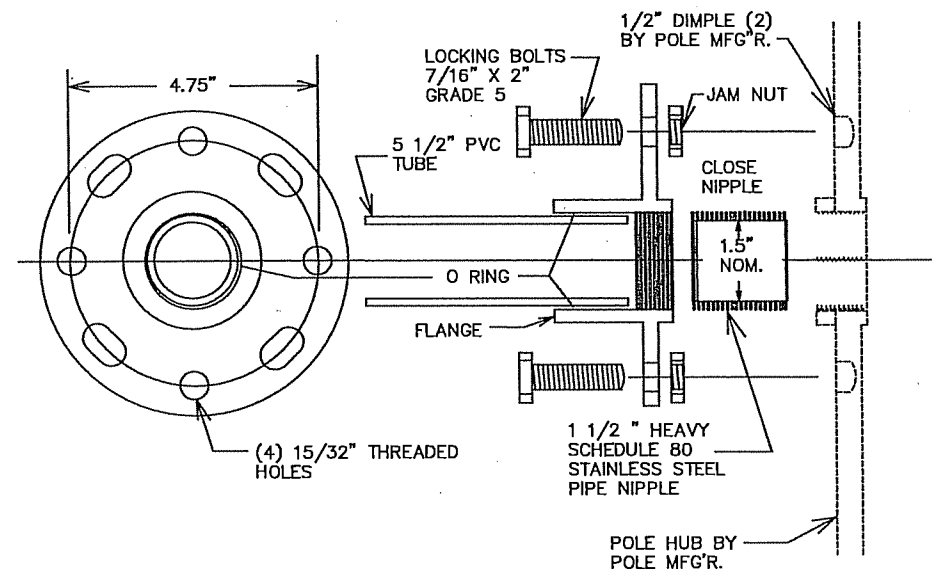
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

**ANOKA COUNTY,
MINNESOTA**
CITY OF COON RAPIDS

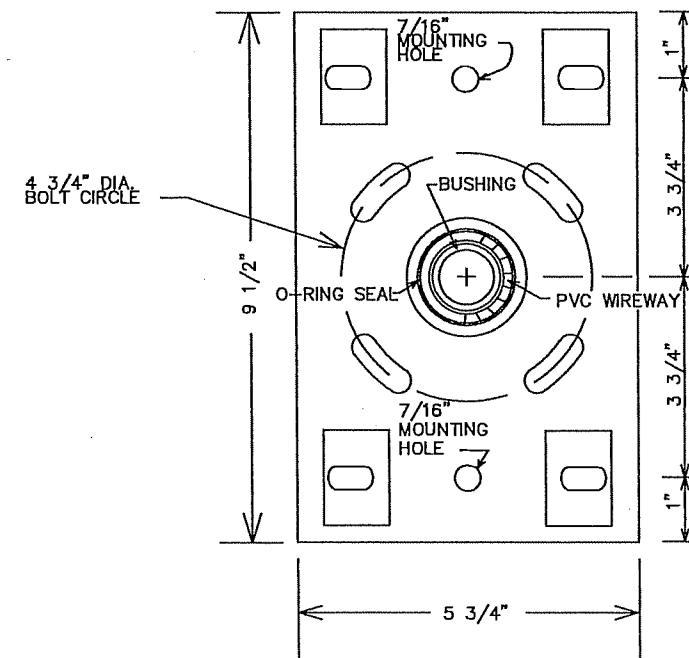
**TRAFFIC SIGNAL SYSTEM
SERVICE CABINET DETAILS**
CSAH 11-NORTHDALE BOULEVARD AT
CSAH 18-CROOKED LAKE BOULEVARD

FILE NO.
ANOKC 123594
SIGNAL SHEET
3 OF 11

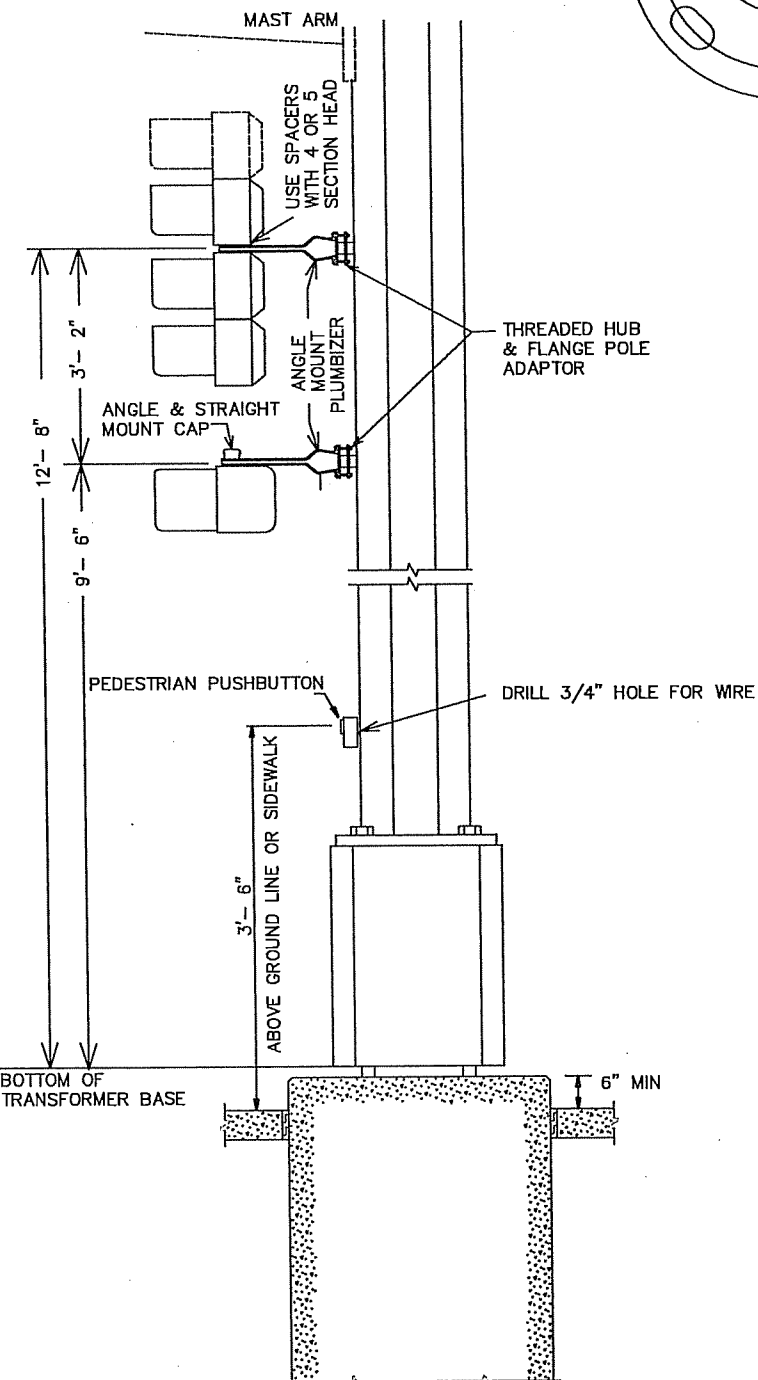
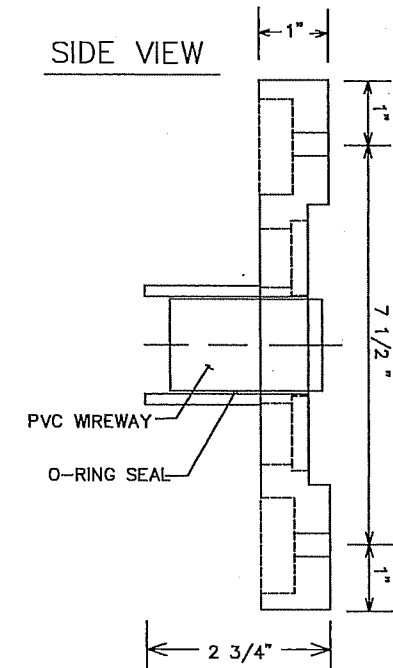
66
98



THREADED HUB AND FLANGE POLE ADAPTOR

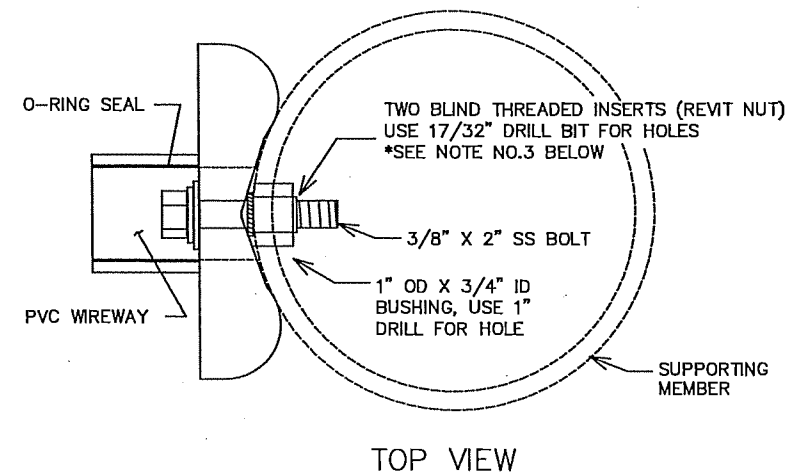


BOLT ON HUB & FLANGE

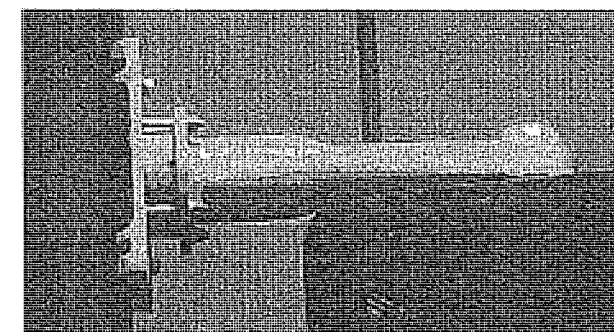


TYPICAL SIGNAL POLE MOUNTING
NOT TO SCALE

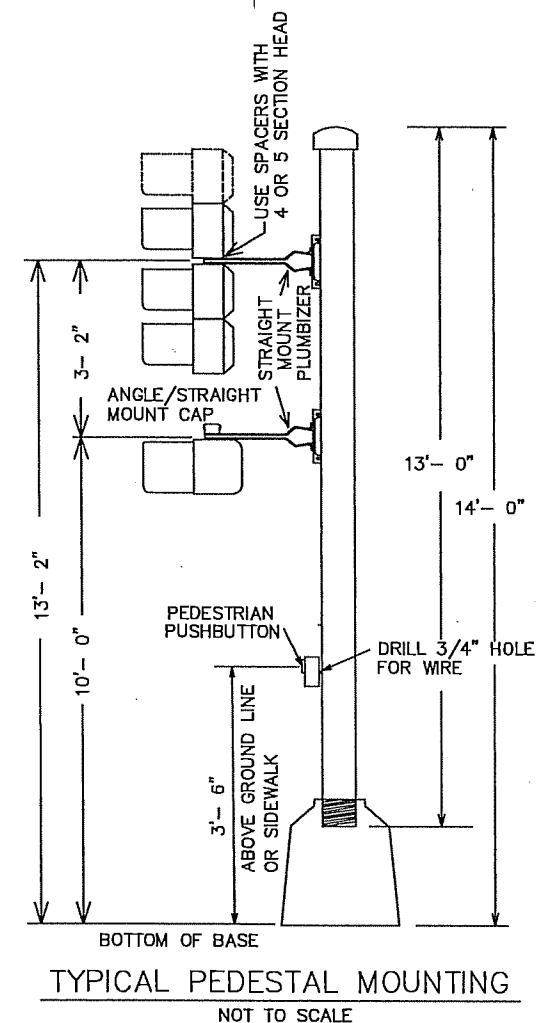
- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
 2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 & 5 SECTION POLY HEADS.
 3. SEE STANDARD PLATE NUMBER 8123 FOR ADDITIONAL SIGNAL POLE DETAILS.



TOP VIEW



- NOTE:
1. ALL THREADED SURFACES TO BE COATED WITH ANTI-SEIZE COMPOUND.
 2. USE SIGNAL HEAD MOUNTED SPACERS FOR 4 & 5 SECTION POLY HEADS.
 3. BLIND THREADED INSERTS (RIVET NUT) MUST BE INSTALLED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.
 4. SEE STANDARD PLATE NUMBER 8122 FOR ADDITIONAL PEDESTAL POLE DETAILS.



TYPICAL PEDESTAL MOUNTING
NOT TO SCALE

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-020-048
S.A.P. 114-127-007

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
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.

JMG
Name: John M. Gray, PE
Date: May 13, 2013
Lic. No. 22457

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

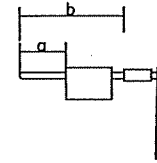
ANOKA COUNTY,
MINNESOTA
CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM
ONE-WAY POLE MOUNT DETAILS
CSAH 11-NORTHDALE BOULEVARD AT
CSAH 18-CROOKED LAKE BOULEVARD

FILE NO.
ANOKC 123594
SIGNAL SHEET
4 OF 11

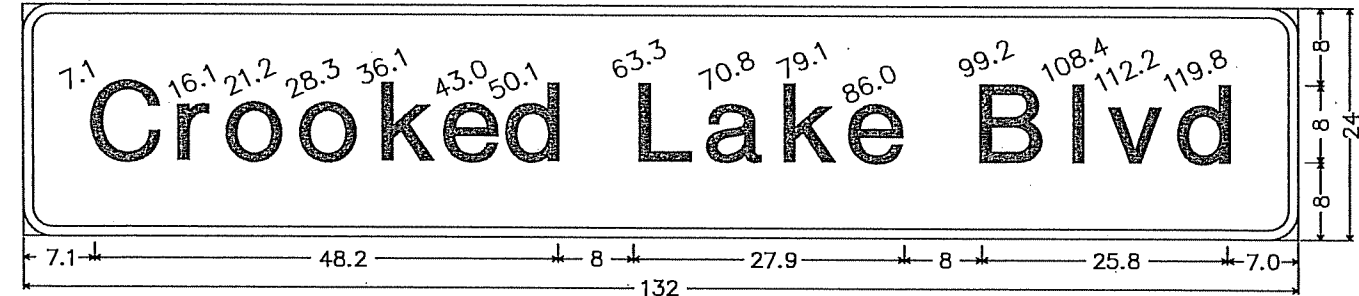
67
98

MAST ARM MOUNTED SIGNS							
SIGN PANELS - TYPE D (FURNISH AND INSTALL)							
SIGN PANEL	SIZE (Inches)	NO. REQ.	BRACKETS PER SIGN	BRACKET SPACING (**)	AREA (sq. ft.) PER SIGN	POLE NO.	a
D-1	132x24	1	5	-	22.00	1	25'
D-2	108x24	1	4	-	18.00	2	20'
D-3	132x24	1	5	-	22.00	4	13'
D-4	108x24	1	4	-	18.00	6	20'
TOTALS		4			80.00		



(**)= SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE SPECIAL PROVISIONS AND STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/07) FOR BRACKET SPACING REQUIREMENTS.

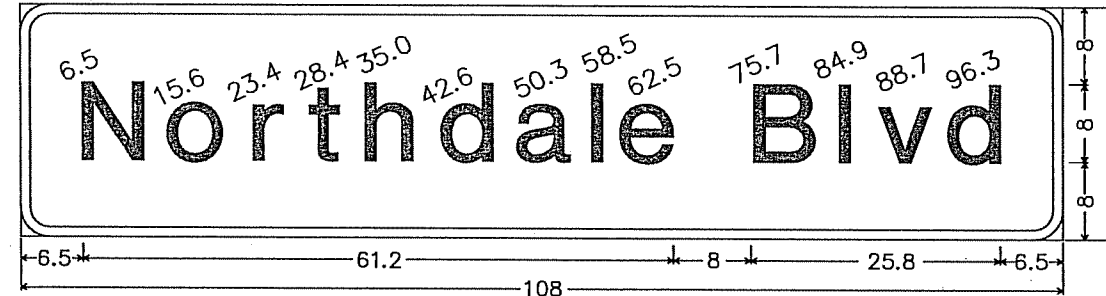
D-1, D-3



3.0" Radius, 1.0" Border, White on Green;
 [Crooked Lake Blvd] E Mod;

SIGNAL SYSTEM MOUNTED SIGNS							
SIGN PANELS - TYPE C (FURNISH AND INSTALL)							
SIGN PANEL	SIZE (in.)	NO. REQ.	NO. POSTS PER SIGN	POST SPACING (in.)	SQ. FT. PER SIGN	POLE NO.	a
R10-X12	36x42	4	2	-	10.50	1,2,4,6	1'
TOTALS		4			42.00		

D-2, D-4

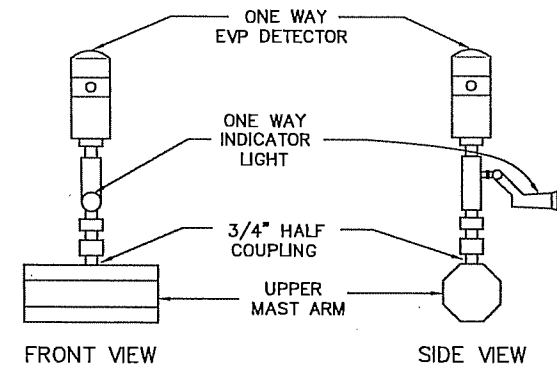


3.0" Radius, 1.0" Border, White on Green;
 [Northdale Blvd] E Mod;

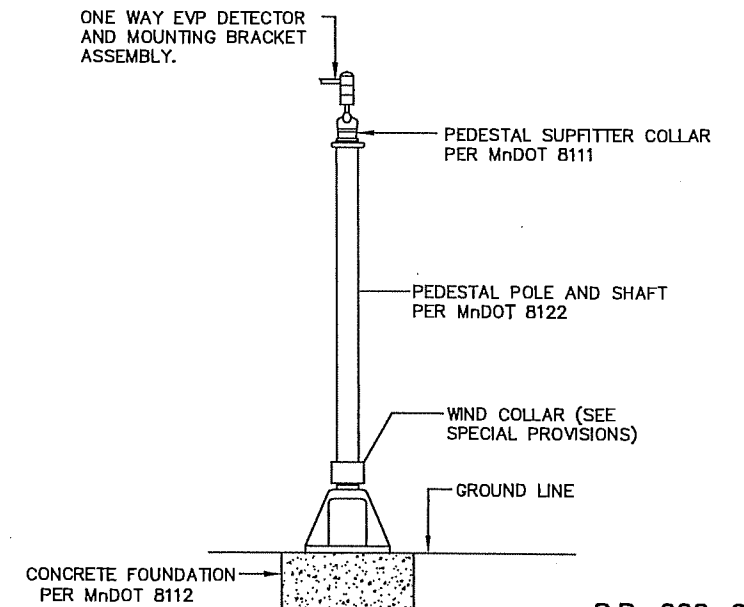
GENERAL SIGNING NOTES:

- COLOR FOR ALL TYPE D SIGNS SHOWN SHALL BE WHITE LEGEND AND BORDER ON GREEN BACKGROUND, FULLY REFLECTORIZED.
- CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
- FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS, SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE: 7/06/07), AND SPECIAL PROVISIONS.
- SEE STANDARD SIGNS MANUAL FOR DETAILED DRAWINGS OF TYPE C SIGN PANELS.
- FURNISHING AND INSTALLING TYPE C AND D SIGNS AS SHOWN SHALL BE INCLUDED UNDER ITEM NO. 2565 (TRAFFIC CONTROL SIGNAL SYSTEM). SEE SPECIAL PROVISIONS.
- ALL NEW TYPE C AND D SIGN PANELS SHOWN SHALL BE FABRICATED USING DG3 SHEETING. SEE SPECIAL PROVISIONS.

EVP DETECTOR AND LIGHT MOUNTING DETAIL ON MAST ARM



PEDESTAL POLE MOUNTED EVP DETECTOR DETAIL



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-020-048
 S.A.P. 114-127-007

DRAWN BY: JMG			
DESIGNER: JMG			
CHECKED BY: JMG			
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: May 13, 2013 Name: John M. Gray, PE Lic. No. 22457

SEH PHONE: (651) 490-2000 3535 VADNAIS CENTER DR. ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM SIGNING AND MISCELLANEOUS DETAILS CSAH 11-NORTHDALE BOULEVARD AT CSAH 18-CROOKED LAKE BOULEVARD

FILE NO. ANOKC 123594 SIGNAL SHEET 5 OF 11

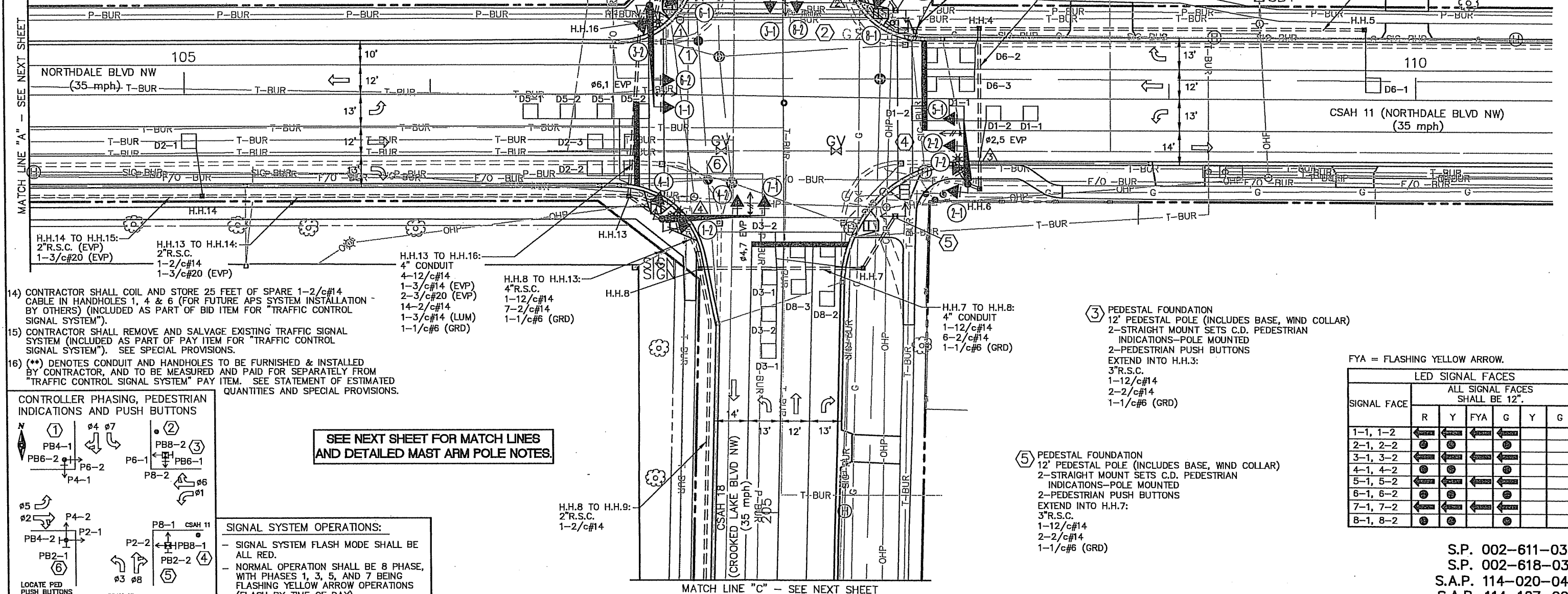
68 98

- NOTES:**
- 1) LOCATION OF FOUNDATIONS, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
 - 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
 - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
 - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
 - 6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION "FILLED" COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
 - 7) ALL VEHICLE SIGNAL INDICATIONS AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
 - 8) SEE DETAILS, SPECIAL PROVISIONS & STATEMENT OF ESTIMATED QUANTITIES REGARDING BATTERY BACK-UP SIGNAL SERVICE CABINET TO BE FURNISHED AND INSTALLED BY CONTRACTOR (SEPARATE FROM ITEM NO. 2565 FOR THIS SIGNAL SYSTEM).
 - 9) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 6 FEET FROM THE END OF EACH MAST ARM (FOR EVP).
 - 10) ALL VEHICLE AND PEDESTRIAN SIGNAL HOUSINGS, BACKGROUND SHIELDS, AND VISORS SHALL BE FABRICATED USING BLACK POLYCARBONATE MATERIALS. SEE SPECIAL PROVISIONS.
 - 11) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
 - 12) (EVP) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM). SEE ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - 13) SEE DETAILS AND SPECIAL PROVISIONS REGARDING TYPE C AND TYPE D SIGNS TO BE F & I BY CONTRACTOR (INCLUDED AS PART OF BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").

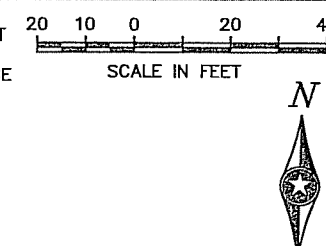
PVC LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	2-6x6	10' & 40'	1
D1-2	2-6x6	0' & 25'	7
D2-1	6x6	180'	1
D2-2	2-6x6	0' & 15'	7
D2-3	2-6x6	0' & 15'	1
D3-1	2-6x6	10' & 40'	1
D3-2	2-6x6	0' & 25'	7
D4-1	6x6	150'	3,8
D4-2	2-6x6	0' & 15'	7
D4-3	2-6x6	0' & 15'	1
D5-1	2-6x6	10' & 40'	1
D5-2	2-6x6	0' & 25'	1
D6-1	6x6	180'	1
D6-2	2-6x6	0' & 15'	7
D6-3	2-6x6	0' & 15'	1
D7-1	2-6x6	10' & 40'	1
D7-2	2-6x6	0' & 25'	1
D8-1	6x6	180'	3,8
D8-2	2-6x6	0' & 15'	7
D8-3	2-6x6	0' & 15'	1

- LOOP DETECTORS FUNCTIONS:**
- 1) CALL AND EXTEND
 - 3) EXTEND ONLY
 - 7) DELAYED CALL, IMMEDIATE EXTEND
 - 8) CARRY OVER (STRETCH)

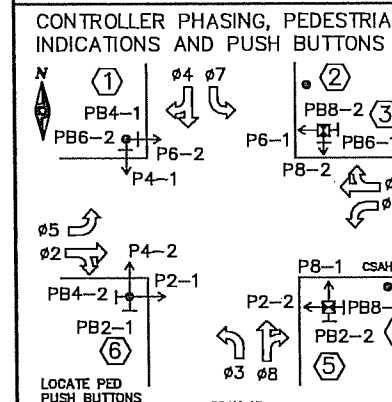
NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.



- (A) EQUIPMENT PAD FOUNDATION**
 INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)
 BATTERY BACK-UP SIGNAL SERVICE CABINET
 BETWEEN CONTROLLER CABINET AND SERVICE CABINET:
 METERED SIGNAL SERVICE
 2"R.S.C.
 3-1/c#6
 CONTROLLER CABINET TO H.H.1:
 2-4"R.S.C.
 5-12/c#14
 1-4/c#14
 2-3/c#14 (EVP)
 2-3/c#20 (EVP)
 9-2/c#14
 2-3/c#14 (LUM)
 1-1/c#6 (GRD)
- SERVICE CABINET TO H.H.1:**
 2"R.S.C.
 UNMETERED STREET LIGHT SERVICE
 2-3/c#14 (LUM)
- CONTROLLER CABINET TO H.H.16:**
 2-4"R.S.C.
 7-12/c#14
 2-3/c#14 (EVP)
 16-2/c#14
 3-3/c#20 (EVP)
 1-1/c#6 (GRD)
- SERVICE CABINET TO H.H.16:**
 2"R.S.C.
 UNMETERED STREET LIGHT SERVICE
 2-3/c#14 (LUM)
- SERVICE CABINET TO H.H.17:**
 2"R.S.C. (FOR SERVICE CABLE INSTALLATION BY OTHERS)
- STUB OUT 2-3"R.S.C. FROM CONTROLLER CABINET TO EAST (THREAD & CAP BOTH ENDS-FOR FUTURE USE)**
- STUB OUT 1"N.M.C. FROM CONTROLLER CABINET (FOR FUTURE PHONE LINE BY OTHERS)**



- 14) CONTRACTOR SHALL COIL AND STORE 25 FEET OF SPARE 1-2/c#14 CABLE IN HANDHOLES 1, 4 & 6 (FOR FUTURE APS SYSTEM INSTALLATION - BY OTHERS) (INCLUDED AS PART OF BID ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM").
- 15) CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL SYSTEM (INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM"). SEE SPECIAL PROVISIONS.
- 16) (**) DENOTES CONDUIT AND HANDHOLES TO BE FURNISHED & INSTALLED BY CONTRACTOR, AND TO BE MEASURED AND PAID FOR SEPARATELY FROM "TRAFFIC CONTROL SIGNAL SYSTEM" PAY ITEM. SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.



SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING FLASHING YELLOW ARROW OPERATIONS (FLASH BY TIME OF DAY).

SEE NEXT SHEET FOR MATCH LINES AND DETAILED MAST ARM POLE NOTES.

- (3) PEDESTAL FOUNDATION**
 12" PEDESTAL POLE (INCLUDES BASE, WIND COLLAR)
 2-STRAIGHT MOUNT SETS C.D. PEDESTRIAN INDICATIONS-POLE MOUNTED
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND INTO H.H.3:
 3"R.S.C.
 1-12/c#14
 2-2/c#14
 1-1/c#6 (GRD)

FYA = FLASHING YELLOW ARROW.

SIGNAL FACE	LED SIGNAL FACES					
	ALL SIGNAL FACES SHALL BE 12".					
	R	Y	FYA	G	Y	G
1-1, 1-2	←	←	←	←		
2-1, 2-2	←	←	←	←		
3-1, 3-2	←	←	←	←		
4-1, 4-2	←	←	←	←		
5-1, 5-2	←	←	←	←		
6-1, 6-2	←	←	←	←		
7-1, 7-2	←	←	←	←		
8-1, 8-2	←	←	←	←		

- (5) PEDESTAL FOUNDATION**
 12" PEDESTAL POLE (INCLUDES BASE, WIND COLLAR)
 2-STRAIGHT MOUNT SETS C.D. PEDESTRIAN INDICATIONS-POLE MOUNTED
 2-PEDESTRIAN PUSH BUTTONS
 EXTEND INTO H.H.7:
 3"R.S.C.
 1-12/c#14
 2-2/c#14
 1-1/c#6 (GRD)

DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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

JMG Name: John M. Gray, PE
 Date: May 13, 2013 Lic. No. 22457

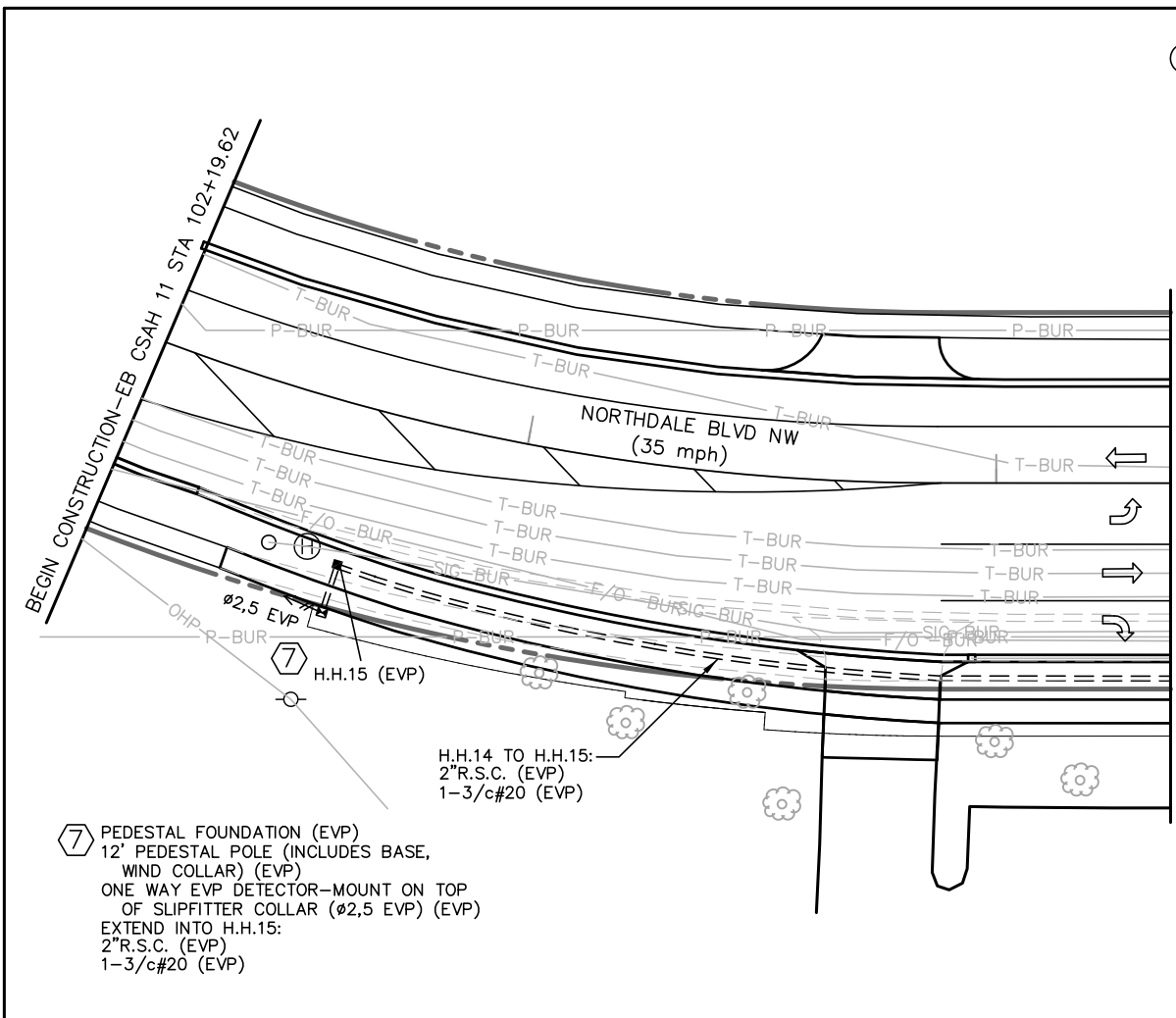
SEH
 PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
 CITY OF COON RAPIDS

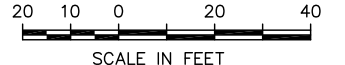
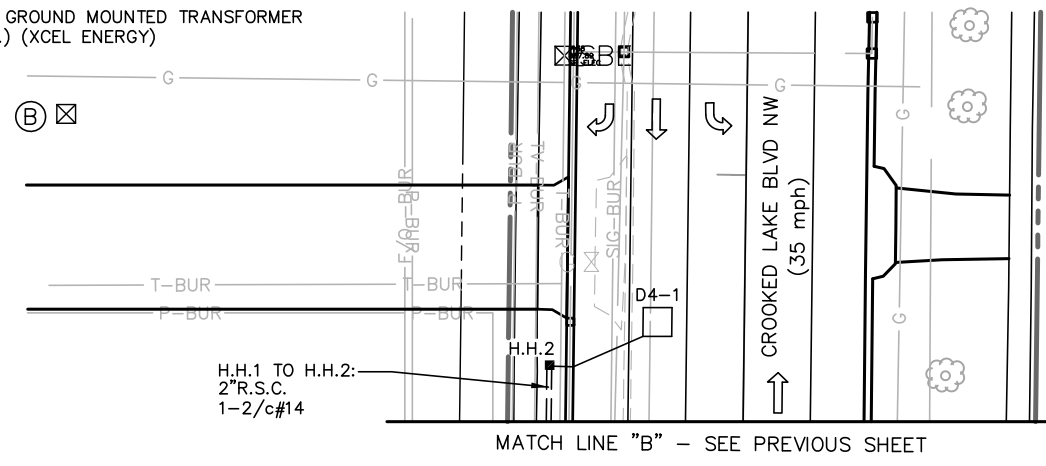
TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
 CSAH 11-NORTHDALE BOULEVARD AT CSAH 18-CROOKED LAKE BOULEVARD

FILE NO. ANOKC 123594
 SIGNAL SHEET 6 OF 11
69
98

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-020-048
 S.A.P. 114-127-007



⑧ INPLACE GROUND MOUNTED TRANSFORMER (S.O.P.) (XCEL ENERGY)

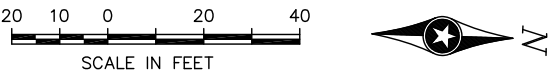
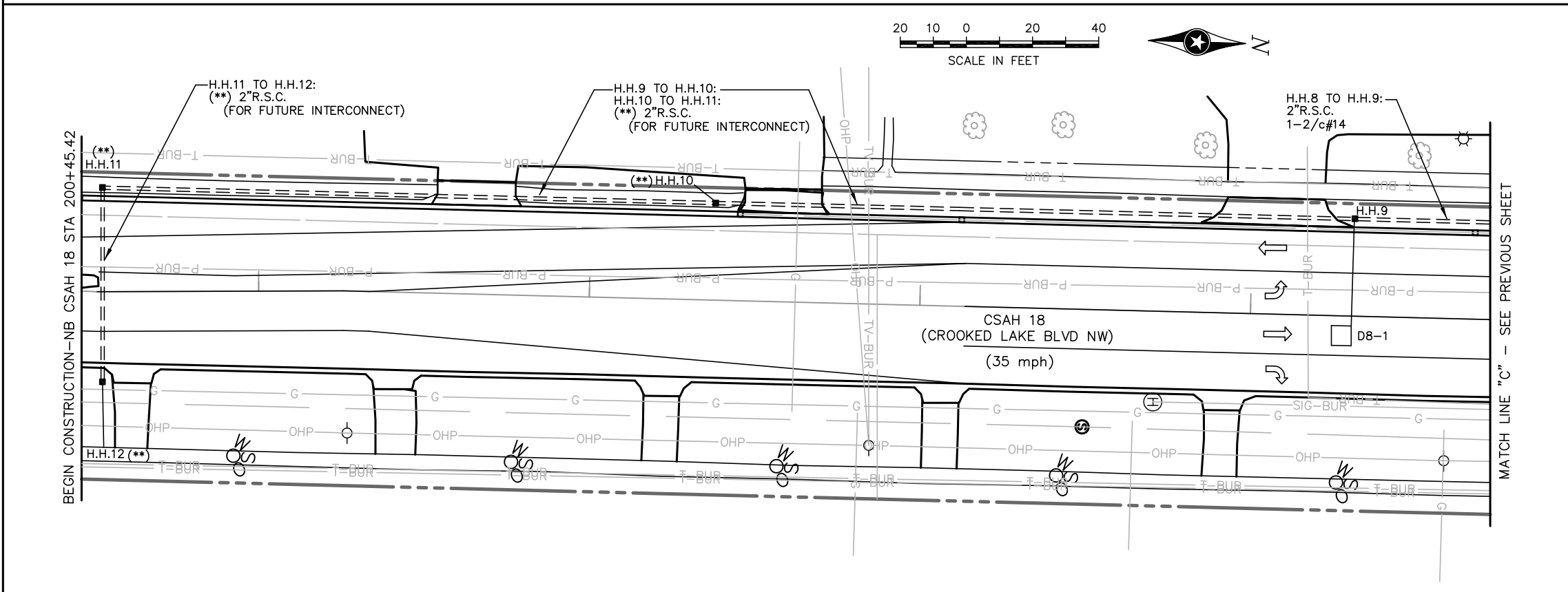


- ① PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9 (DAVIT AT 350")
LUMINAIRE-COBRAHEAD LED (SEE SPECIAL PROVISIONS)
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 10'
FROM END OF MAST ARM
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°
2-ANGLE MOUNT SETS C.D. PEDESTRIAN INDICATIONS-POLE MOUNTED 90° & 180°
2-PEDESTRIAN PUSH BUTTONS
R10-X12 SIGN PANEL-ADJACENT TO 1-1
TYPE D SIGN PANEL (D-1)
ONE WAY EVP DETECTOR & LIGHT (Ø6,1) (EVP)
EXTEND INTO H.H.16:
3"R.S.C.
3-12/c#14
1-3/c#14 (EVP)
2-2/c#14
1-3/c#20 (EVP)
1-3/c#14 (LUM)
1-1/c#6 (GRD)

- ② PA100 POLE FOUNDATION
TYPE PA100-A-40-D30-9 (DAVIT AT 350")
LUMINAIRE-COBRAHEAD LED (SEE SPECIAL PROVISIONS)
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 10'
FROM END OF MAST ARM
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°
R10-X12 SIGN PANEL-ADJACENT TO 3-1
TYPE D SIGN PANEL (D-2)
ONE WAY EVP DETECTOR & LIGHT (Ø8,3) (EVP)
EXTEND INTO H.H.3:
3"R.S.C.
2-12/c#14
1-3/c#14 (EVP)
1-3/c#20 (EVP)
1-3/c#14 (LUM)
1-1/c#6 (GRD)

- ④ PA85 POLE FOUNDATION
TYPE PA85-A-25-D30-9 (DAVIT AT 350")
LUMINAIRE-COBRAHEAD LED (SEE SPECIAL PROVISIONS)
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 10'
FROM END OF MAST ARM
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 0° & 180°
R10-X12 SIGN PANEL-ADJACENT TO 5-1
TYPE D SIGN PANEL (D-3)
ONE WAY EVP DETECTOR & LIGHT (Ø2,5) (EVP)
EXTEND INTO H.H.6:
3"R.S.C.
2-12/c#14
1-4/c#14
1-3/c#14 (EVP)
1-3/c#20 (EVP)
1-3/c#14 (LUM)
1-1/c#6 (GRD)

- ⑥ PA100 POLE FOUNDATION
TYPE PA100-A-40-D40-9 (DAVIT AT 350")
LUMINAIRE-COBRAHEAD LED (SEE SPECIAL PROVISIONS)
1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
1-STRAIGHT MOUNT SIGNAL-OVERHEAD AT 10'
FROM END OF MAST ARM
2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180°
2-ANGLE MOUNT SETS C.D. PEDESTRIAN INDICATIONS-POLE MOUNTED 90° & 180°
2-PEDESTRIAN PUSH BUTTONS
R10-X12 SIGN PANEL-ADJACENT TO 7-1
TYPE D SIGN PANEL (D-4)
ONE WAY EVP DETECTOR & LIGHT (Ø4,7) (EVP)
EXTEND INTO H.H.13:
3"R.S.C.
3-12/c#14
1-3/c#14 (EVP)
2-2/c#14
1-3/c#20 (EVP)
1-3/c#14 (LUM)
1-1/c#6 (GRD)

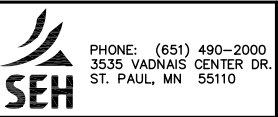


S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-020-048
S.A.P. 114-127-007

DRAWN BY: JMG	1	JMG	12/2013	REVISED TO SHOW MAST ARMS/POLES AS CONTRACTOR FURNISHED
DESIGNER: JMG				
CHECKED BY: JMG				
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.

John M. Gray
Name: John M. Gray, PE
Date: May 13, 2013 Lic. No. 22457

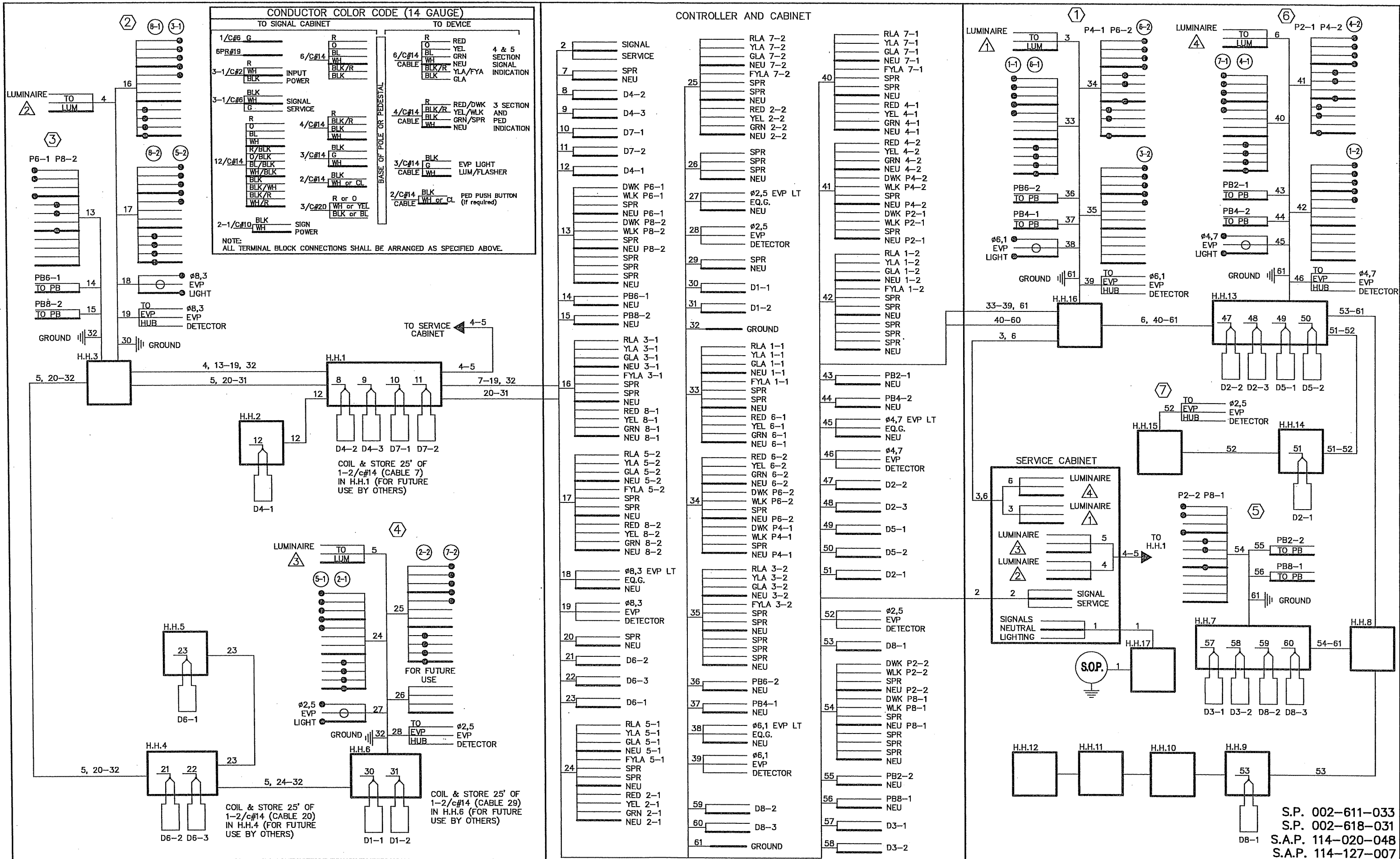


ANOKA COUNTY,
MINNESOTA
CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM
INTERSECTION LAYOUT
CSAH 11-NORTHDALE BOULEVARD AT
CSAH 18-CROOKED LAKE BOULEVARD

FILE NO.
ANOKC 123594
SIGNAL SHEET
7 OF 11

70
98



DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG
 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 FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

JMG
 Name: John M. Gray, PE
 Lic. No. 22457
 Date: May 13, 2013

SEH
 PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY,
 MINNESOTA
 CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM
 FIELD WIRING DIAGRAM
 CSAH 11-NORTHDALE BOULEVARD AT
 CSAH 18-CROOKED LAKE BOULEVARD

FILE NO.
 ANOKC 123594
 SIGNAL SHEET
 8 OF 11

71
 98

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-020-048
 S.A.P. 114-127-007

② P80 POLE FOUNDATION
 TYPE P80-A-25-D40-9 (DAVIT AT 355')
 LUMINAIRE-200 W HPS WITH PEC AND CH.SW.
 ONE WAY SIGNAL-OVERHEAD
 2-TYPE 10B-POLE MOUNTED 90° AND 180°
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 TYPE D SIGN PANEL-OVERHEAD
 R10-12 SIGN PANEL-ADJACENT TO 6-1
 ONE WAY EVP DETECTOR AND LIGHT (ø6)
 EXTENDED INTO H.H.12:
 3"R.S.C.
 2-12/c#12
 2-3/c#12
 1-3/c#20
 2-1/c#10 (LUM)

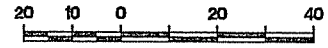
INPLACE NMC LOOP DETECTORS			
NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	6x10	40'	1
D2-1	6x6	250'	1
D2-2	2-6x6	0'	7
D2-3	2-6x6	0'	5
D3-1	6x10	40'	1
D4-1	2-6x6	250'	1,8
D4-2	2-6x6	0'	7
D4-3	2-6x6	0'	7
D5-1	6x10	40'	1
D6-1	2-6x6	250'	1
D6-2	2-6x6	0'	7
D6-3	2-6x6	0'	5
D7-1	6x10	40'	1
D8-1	2-6x6	250'	1,8
D8-2	2-6x6	0'	7
D8-3	2-6x6	0'	7

LOCATION = DISTANCE FROM STOP BAR
 TO FRONT OF LOOP DETECTOR.

FUNCTIONS:

- 1 = CALL AND EXTEND
- 5 = DELAYED CALL ONLY
- 7 = DELAYED CALL, IMMEDIATE EXTEND
- 8 = CARRY OVER (STRETCH)

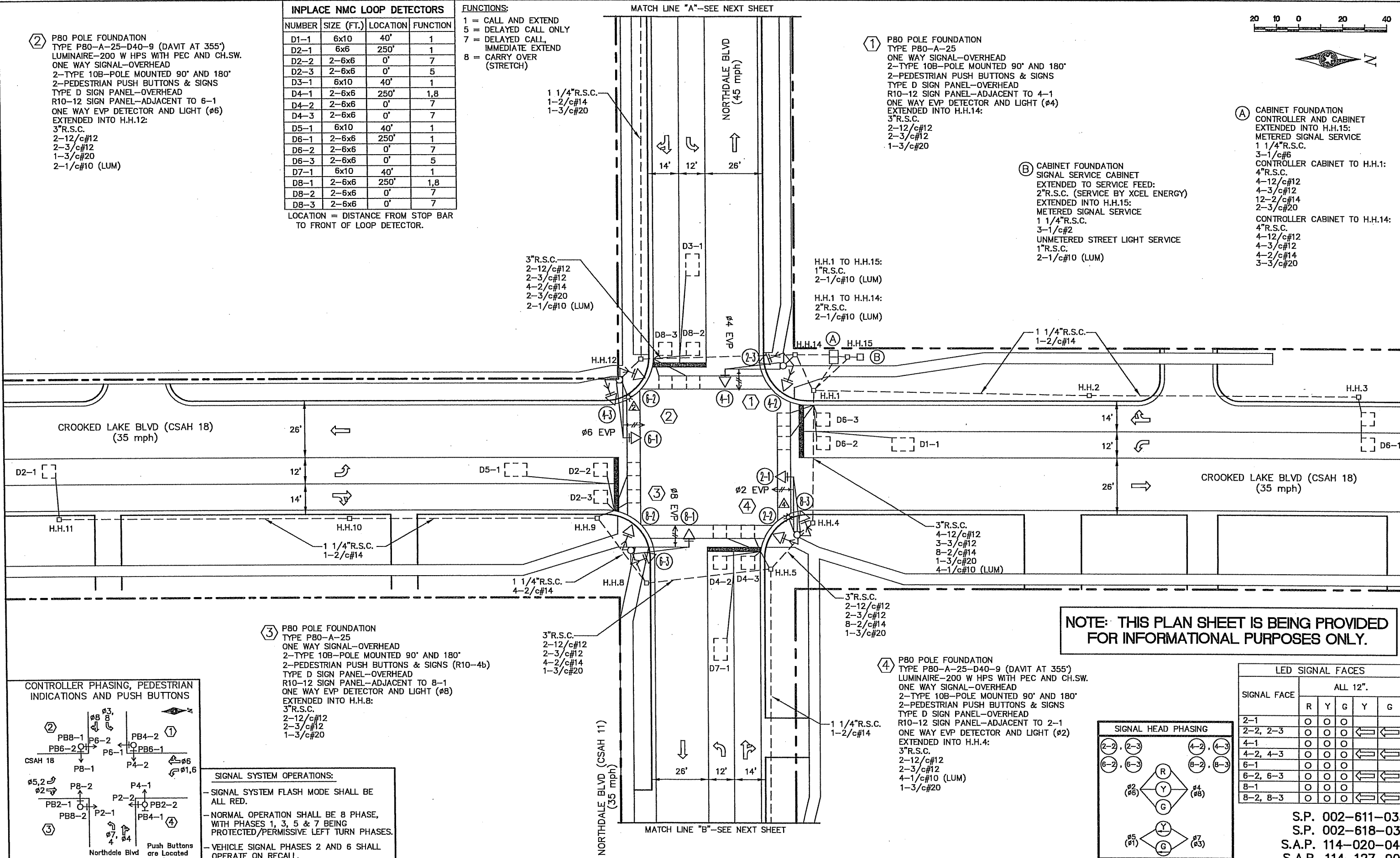
MATCH LINE "A"-SEE NEXT SHEET



① P80 POLE FOUNDATION
 TYPE P80-A-25
 ONE WAY SIGNAL-OVERHEAD
 2-TYPE 10B-POLE MOUNTED 90° AND 180°
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 TYPE D SIGN PANEL-OVERHEAD
 R10-12 SIGN PANEL-ADJACENT TO 4-1
 ONE WAY EVP DETECTOR AND LIGHT (ø4)
 EXTENDED INTO H.H.14:
 3"R.S.C.
 2-12/c#12
 2-3/c#12
 1-3/c#20

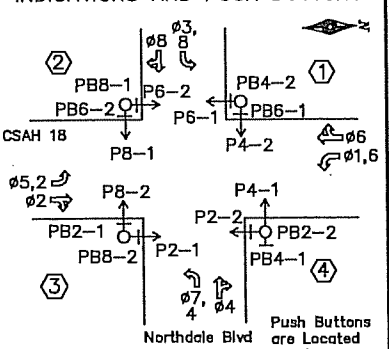
④ CABINET FOUNDATION
 CONTROLLER AND CABINET
 EXTENDED INTO H.H.15:
 METERED SIGNAL SERVICE
 1 1/4"R.S.C.
 3-1/c#6
 CONTROLLER CABINET TO H.H.1:
 4"R.S.C.
 4-12/c#12
 4-3/c#12
 12-2/c#14
 2-3/c#20
 CONTROLLER CABINET TO H.H.14:
 4"R.S.C.
 4-12/c#12
 4-3/c#12
 4-2/c#14
 3-3/c#20

③ CABINET FOUNDATION
 SIGNAL SERVICE CABINET
 EXTENDED TO SERVICE FEED:
 2"R.S.C. (SERVICE BY XCEL ENERGY)
 EXTENDED INTO H.H.15:
 METERED SIGNAL SERVICE
 1 1/4"R.S.C.
 3-1/c#2
 UNMETERED STREET LIGHT SERVICE
 1"R.S.C.
 2-1/c#10 (LUM)



NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



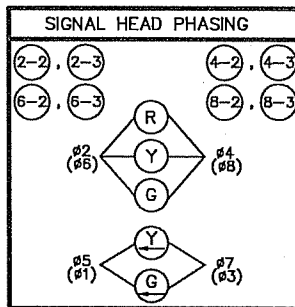
SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5 & 7 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

③ P80 POLE FOUNDATION
 TYPE P80-A-25
 ONE WAY SIGNAL-OVERHEAD
 2-TYPE 10B-POLE MOUNTED 90° AND 180°
 2-PEDESTRIAN PUSH BUTTONS & SIGNS (R10-4b)
 TYPE D SIGN PANEL-OVERHEAD
 R10-12 SIGN PANEL-ADJACENT TO 8-1
 ONE WAY EVP DETECTOR AND LIGHT (ø8)
 EXTENDED INTO H.H.8:
 3"R.S.C.
 2-12/c#12
 2-3/c#12
 4-2/c#14
 1-3/c#20

④ P80 POLE FOUNDATION
 TYPE P80-A-25-D40-9 (DAVIT AT 355')
 LUMINAIRE-200 W HPS WITH PEC AND CH.SW.
 ONE WAY SIGNAL-OVERHEAD
 2-TYPE 10B-POLE MOUNTED 90° AND 180°
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 TYPE D SIGN PANEL-OVERHEAD
 R10-12 SIGN PANEL-ADJACENT TO 2-1
 ONE WAY EVP DETECTOR AND LIGHT (ø2)
 EXTENDED INTO H.H.4:
 3"R.S.C.
 2-12/c#12
 2-3/c#12
 8-2/c#14
 4-1/c#10 (LUM)

LED SIGNAL FACES					
SIGNAL FACE	ALL 12"				
	R	Y	G	Y	G
2-1	O	O	O		
2-2, 2-3	O	O	O	←	←
4-1	O	O	O		
4-2, 4-3	O	O	O	←	←
6-1	O	O	O		
6-2, 6-3	O	O	O	←	←
8-1	O	O	O		
8-2, 8-3	O	O	O	←	←



DRAWN BY:	JMG
DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	

NO.	BY	DATE	REVISIONS

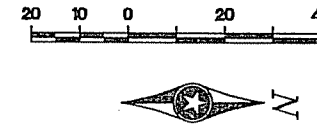
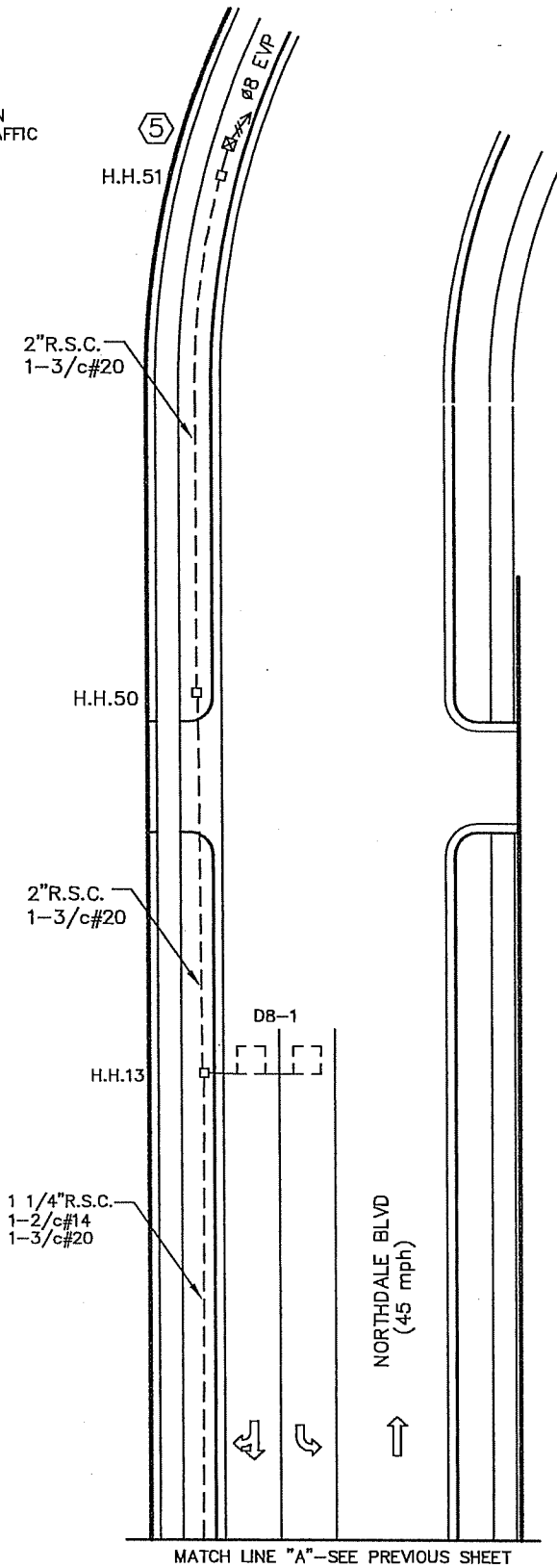
SEH
 PHONE: (651) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
 CITY OF COON RAPIDS

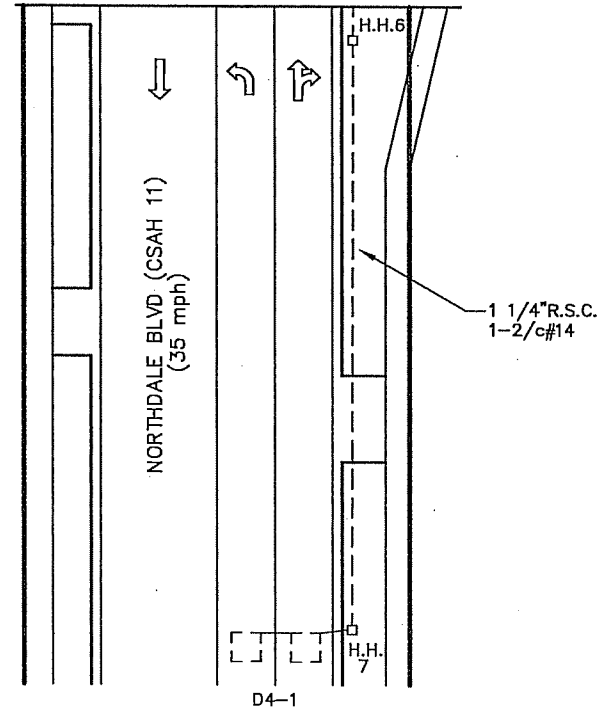
INPLACE SIGNAL SYSTEM "FOR INFORMATION ONLY"
 CSAH 11-NORTHDALE BOULEVARD AT
 CSAH 18-CROOKED LAKE BOULEVARD

FILE NO. ANOKC 123594
 SIGNAL SHEET 9 OF 11
72
98

⑤ PEDESTAL FOUNDATION
 10' PEDESTAL POLE (INCLUDES BASE)
 ONE WAY EVP DETECTOR (Ø8)—MOUNT ON
 TOP OF POLE, FACING EASTBOUND TRAFFIC
 EXTENDED INTO H.H.51:
 2"R.S.C.
 1-3/c#20



MATCH LINE "B"—SEE PREVIOUS SHEET



NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-020-048
 S.A.P. 114-127-007

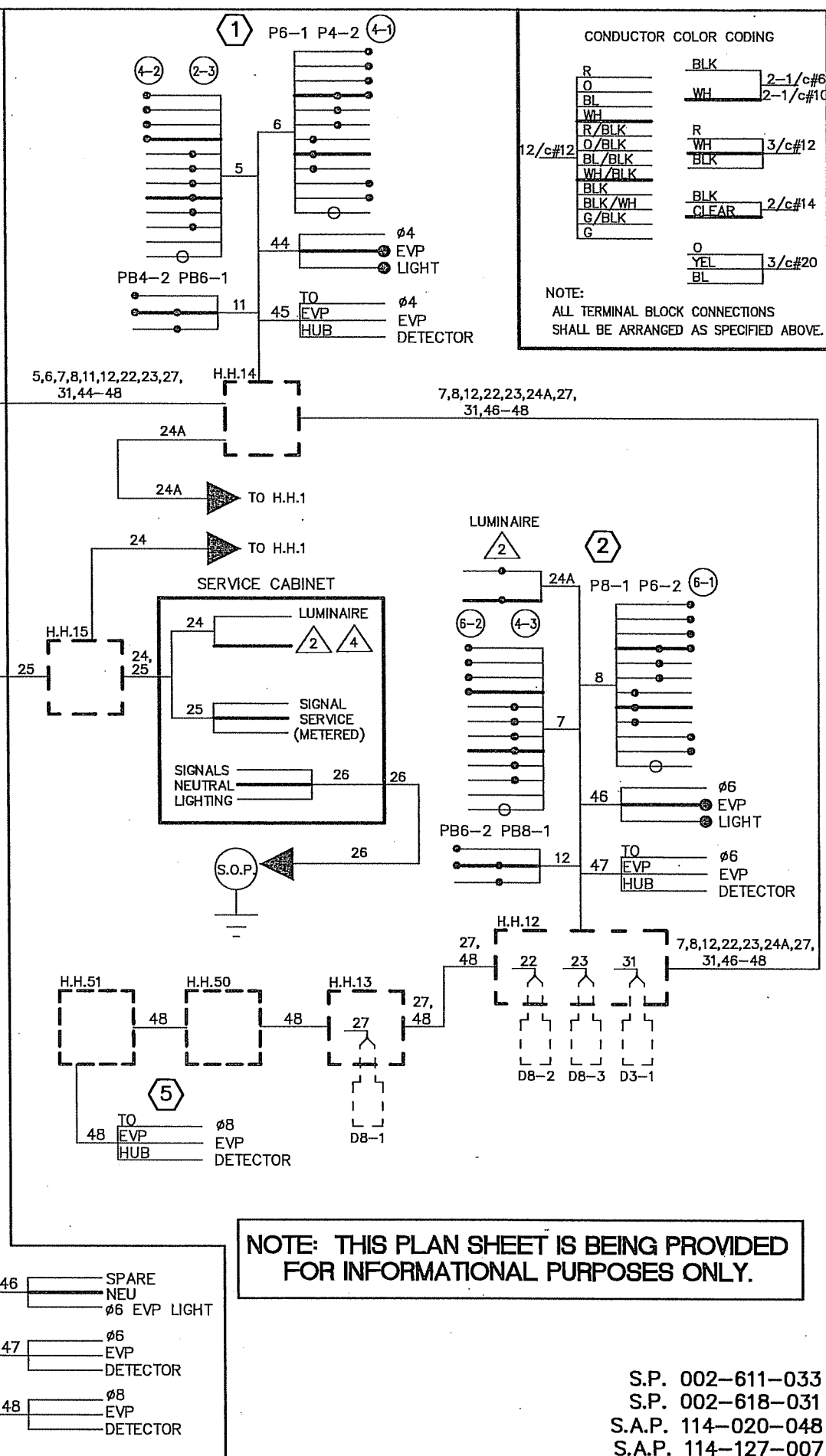
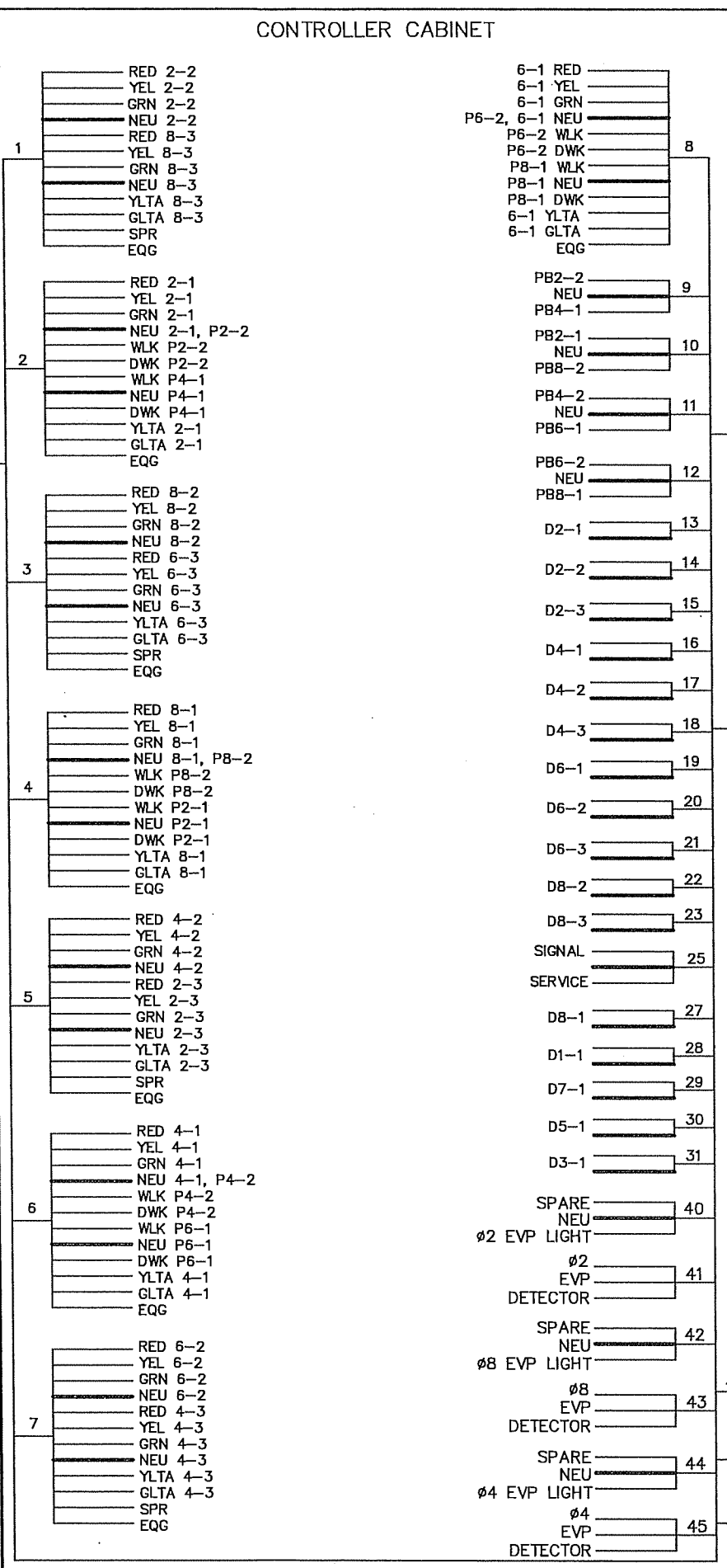
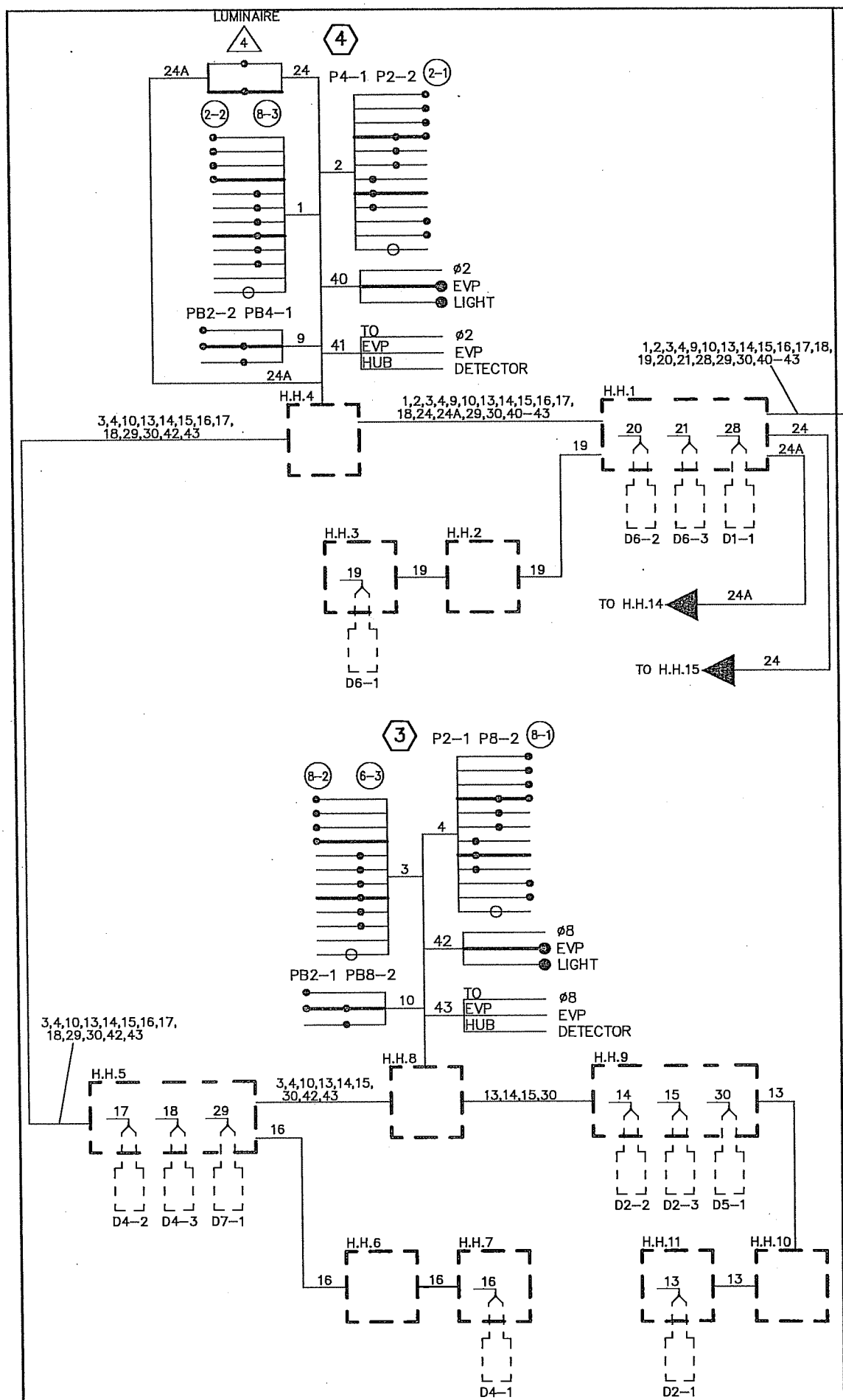
DRAWN BY: JMG				
DESIGNER: JMG				
CHECKED BY: JMG				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

SEH
 PHONE: (851) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
 CITY OF COON RAPIDS

INPLACE SIGNAL SYSTEM "FOR INFORMATION ONLY"
 CSAH 11-NORTHDALE BOULEVARD AT
 CSAH 18-CROOKED LAKE BOULEVARD

FILE NO. ANOKC 123594
 SIGNAL SHEET 10 OF 11
73
98



CONDUCTOR COLOR CODING

R	BLK
O	WH 2-1/c#6
BL	WH 2-1/c#10
WL	
R/BLK	R
O/BLK	WH 3/c#12
BL/BLK	BLK
WL/BLK	
BLK	BLK 2/c#14
BLK/WH	CLEAR
G/BLK	
G	
O	YEL 3/c#20
YEL	BL

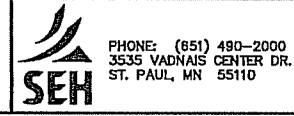
NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

NOTE: THIS PLAN SHEET IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-020-048
S.A.P. 114-127-007

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

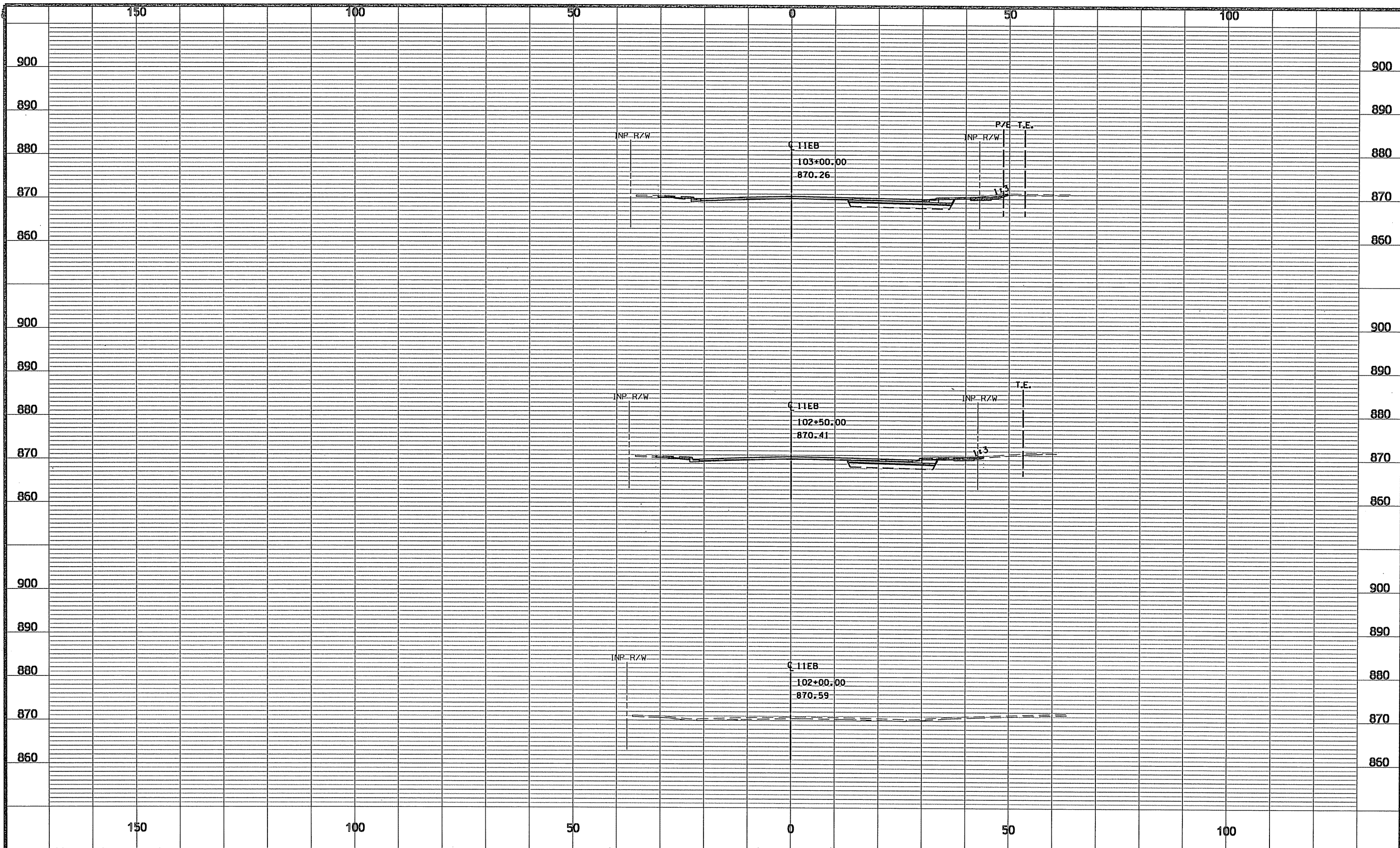
NO.	BY	DATE	REVISIONS



ANOKA COUNTY, MINNESOTA
CITY OF COON RAPIDS

INPLACE SIGNAL SYSTEM 'FOR INFORMATION ONLY'
CSAH 11-NORTHDALE BOULEVARD AT
CSAH 18-CROOKED LAKE BOULEVARD

FILE NO. ANOKC 123594
SIGNAL SHEET 11 OF 11
74
98



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn					
05/09/2013 12:22:50 PM					

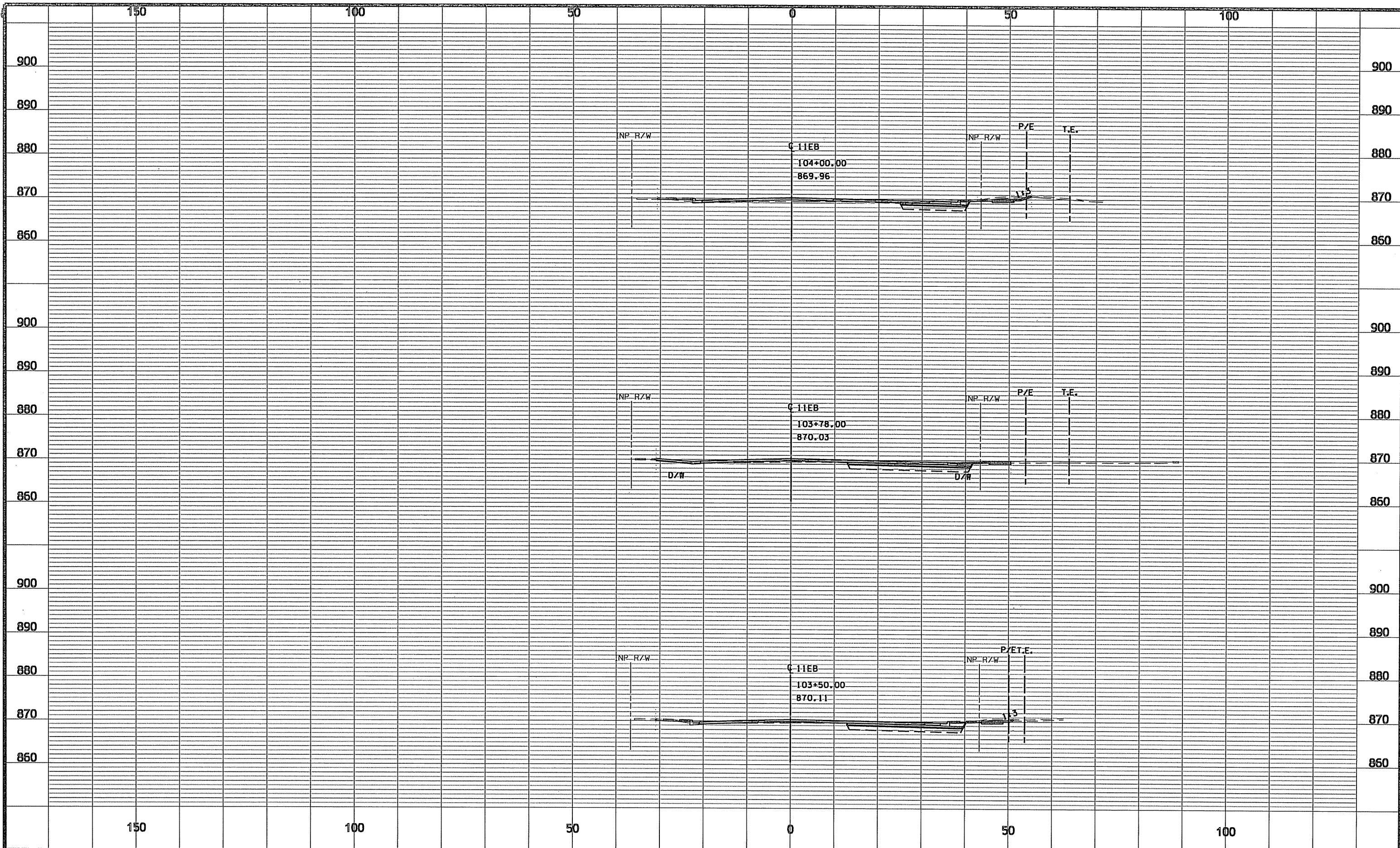
DRAWN BY DF DATE 03-14-13
 DESIGN BY DF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 102+00.00 TO 103+00.00
 Sheet 75 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn					
05/09/2013 12:22:50 PM					

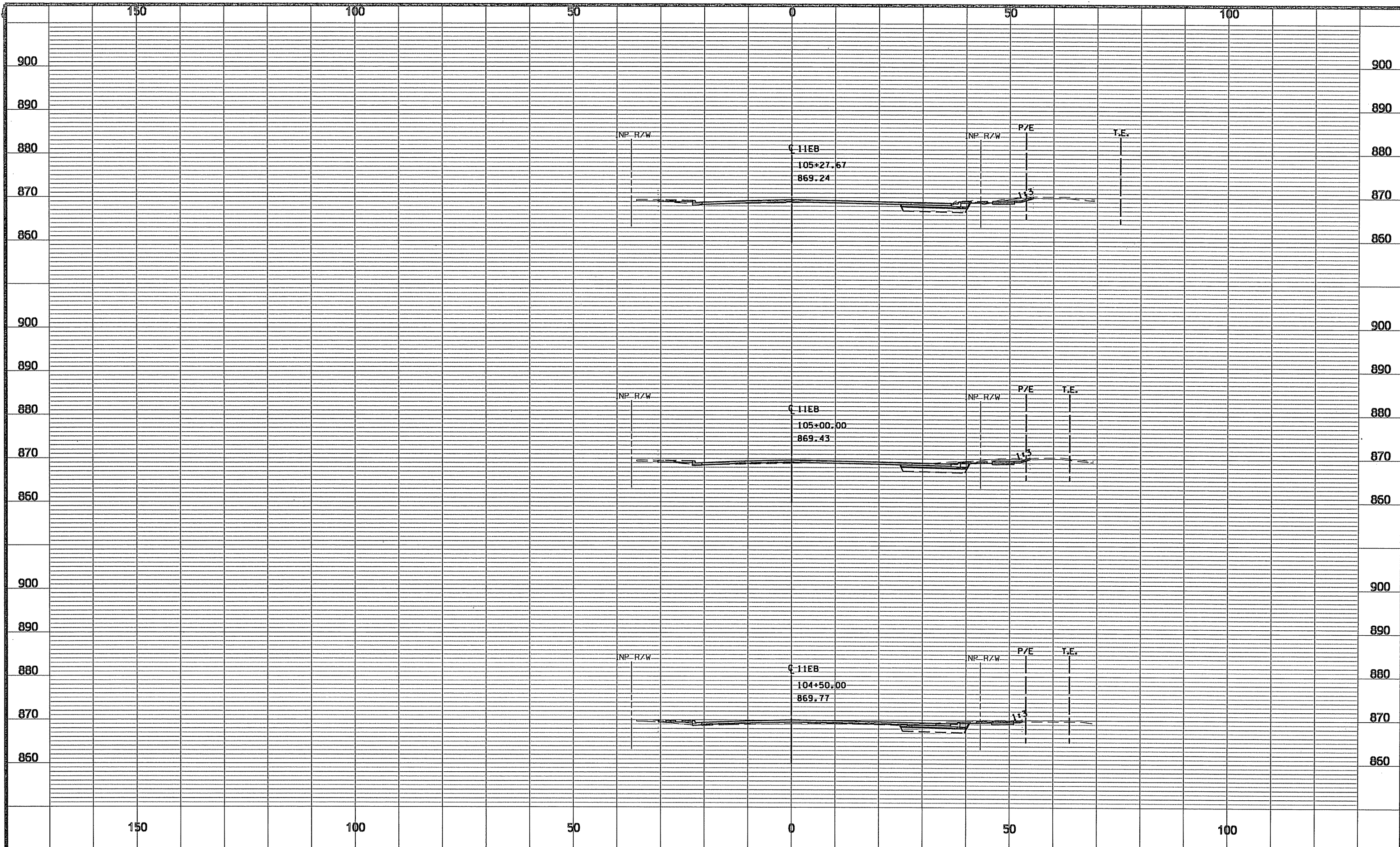
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 103+50.00 TO 104+00.00
 Sheet 76 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn					05/09/2013 12:22:50 PM

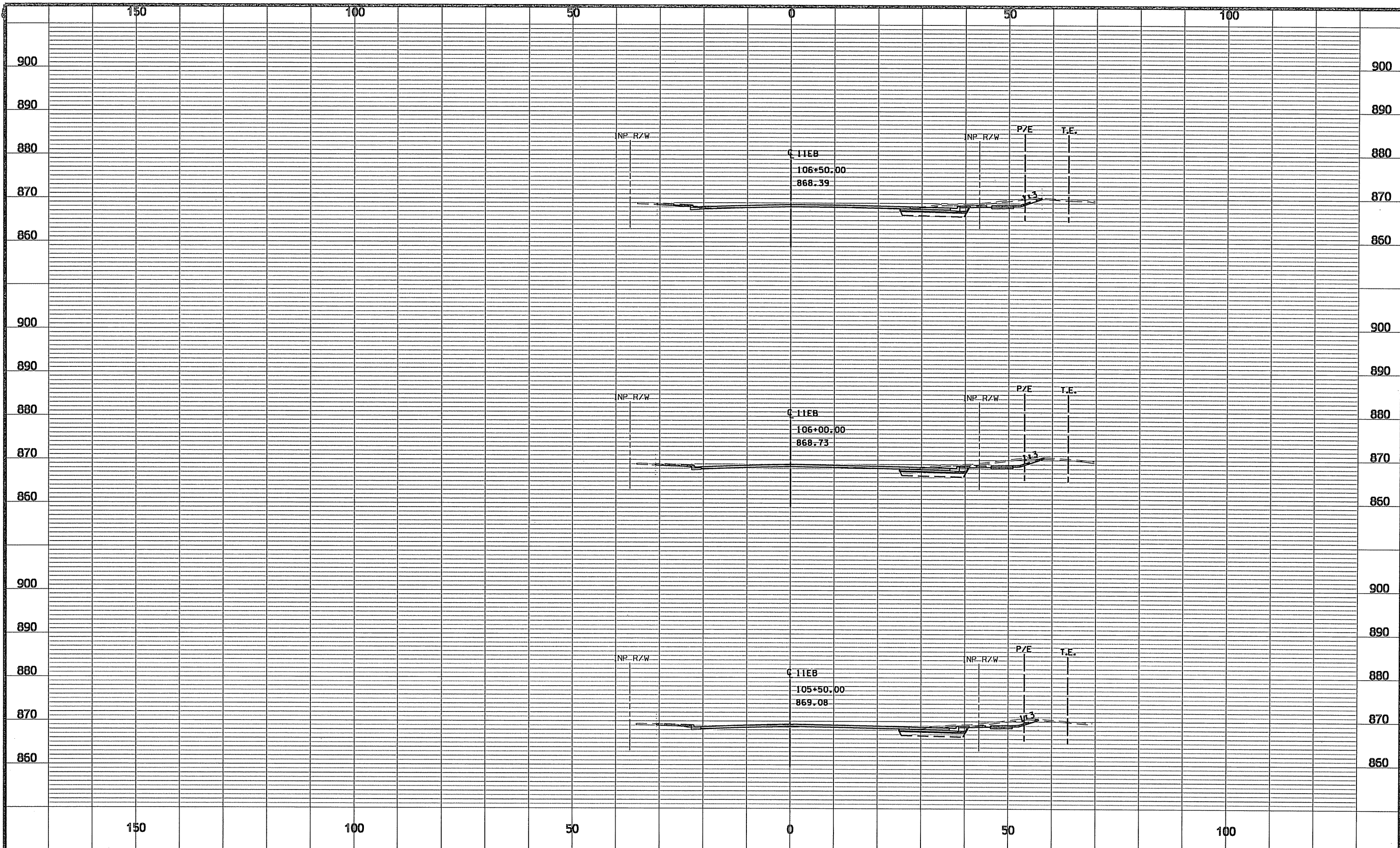
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 104+50.00 TO 105+27.67
 Sheet 77 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn 05/09/2013 12:22:50 PM					

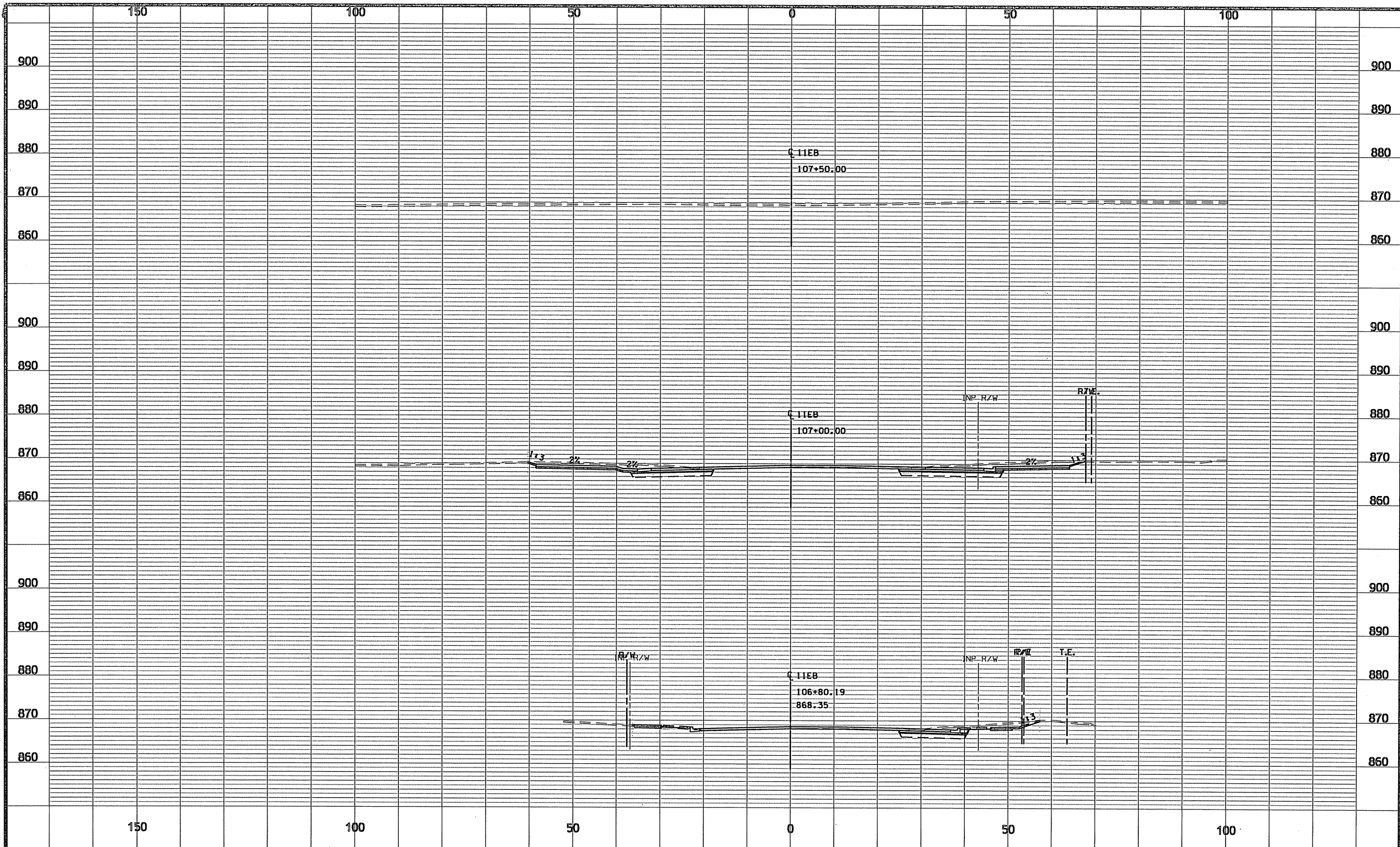
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 105+50.00 TO 106+50.00
 Sheet 78 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn					05/09/2013 12:22:50 PM

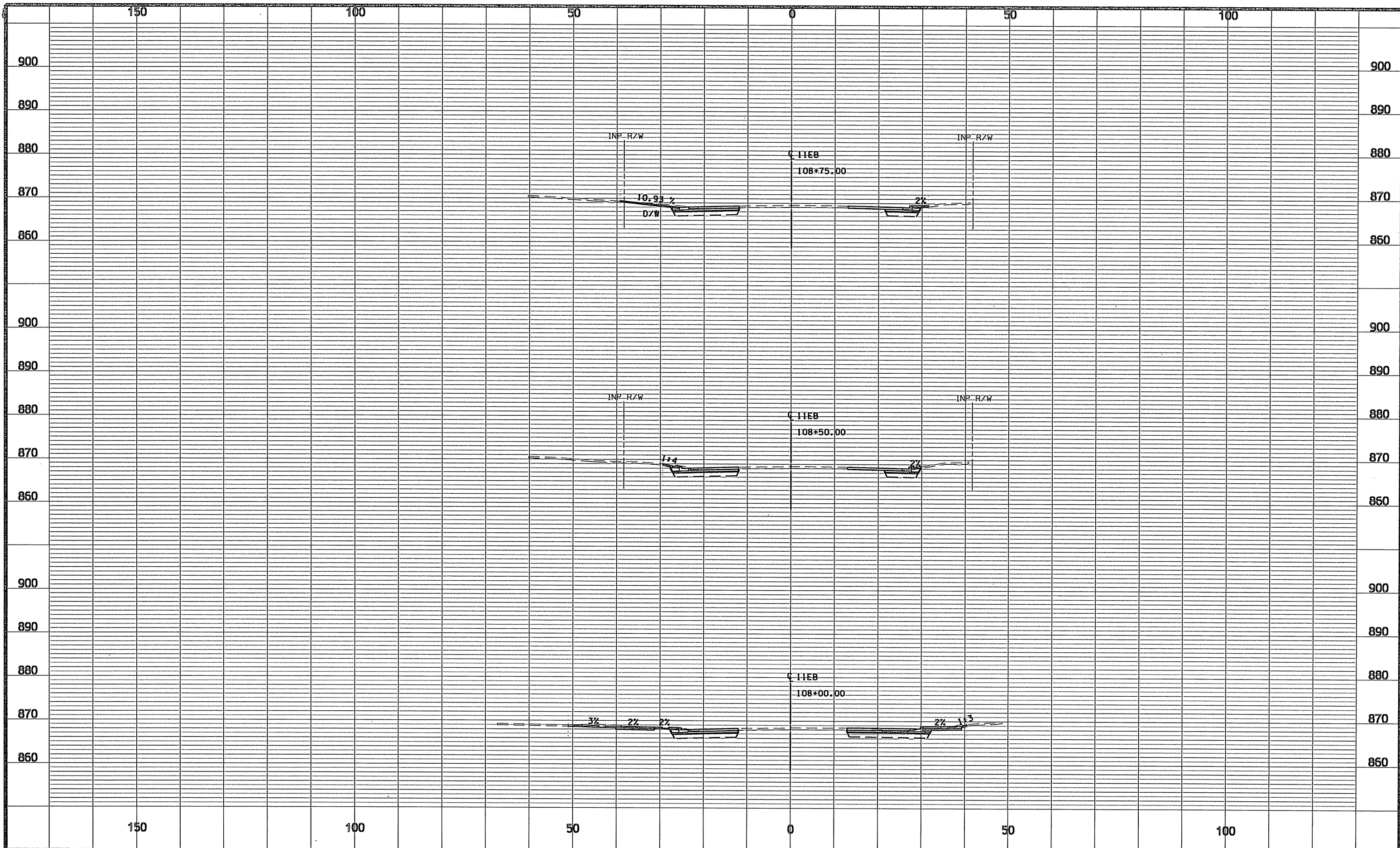
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 106+80.19 TO 107+50.00
 Sheet 79 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn 05/09/2013 12:22:51 PM

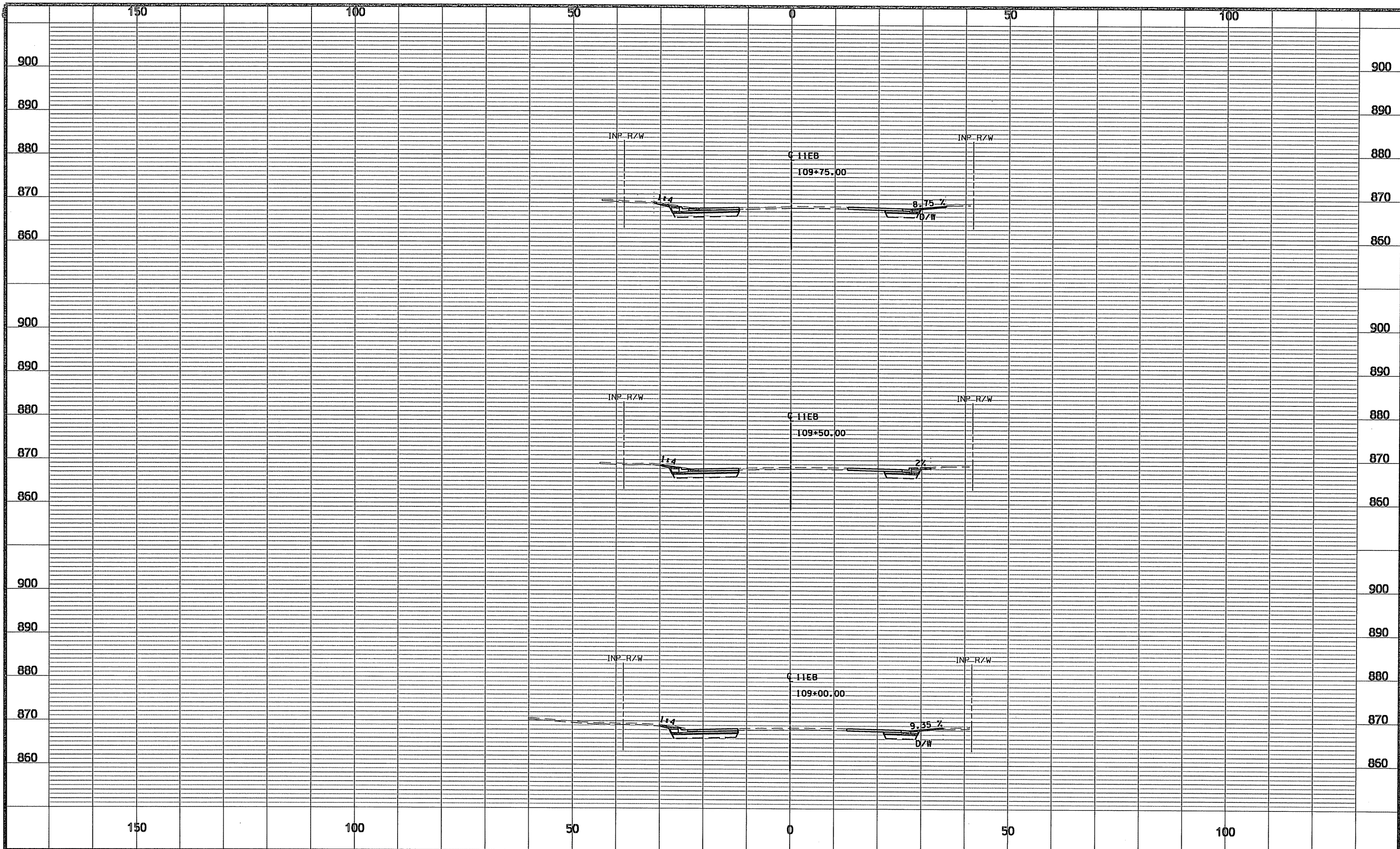
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 108+00.00 TO 108+75.00
 Sheet 80 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn 05/09/2013 12:22:51 PM					

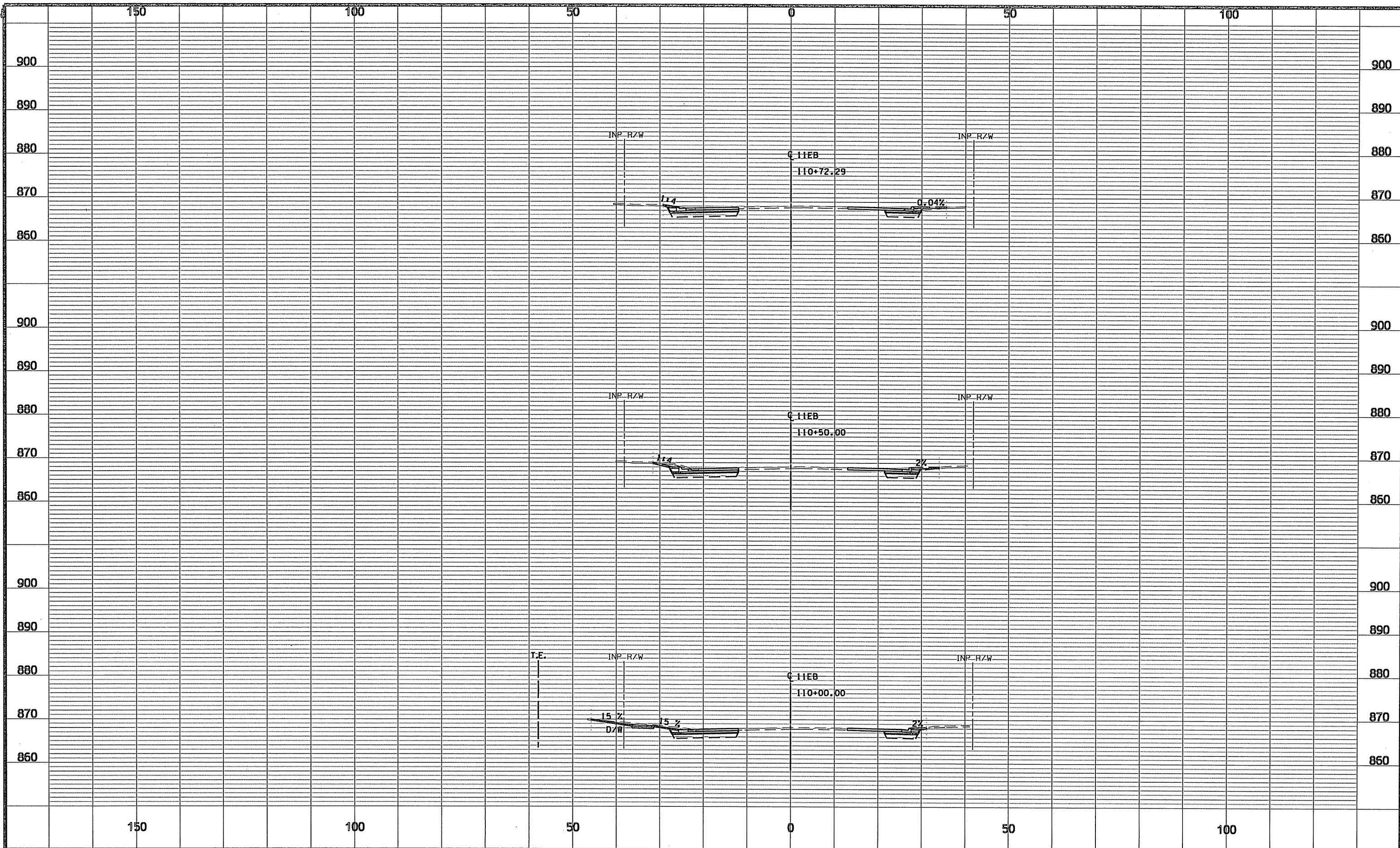
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 109+00.00 TO 109+75.00
 Sheet 81 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn					
					05/09/2013 12:22:51 PM

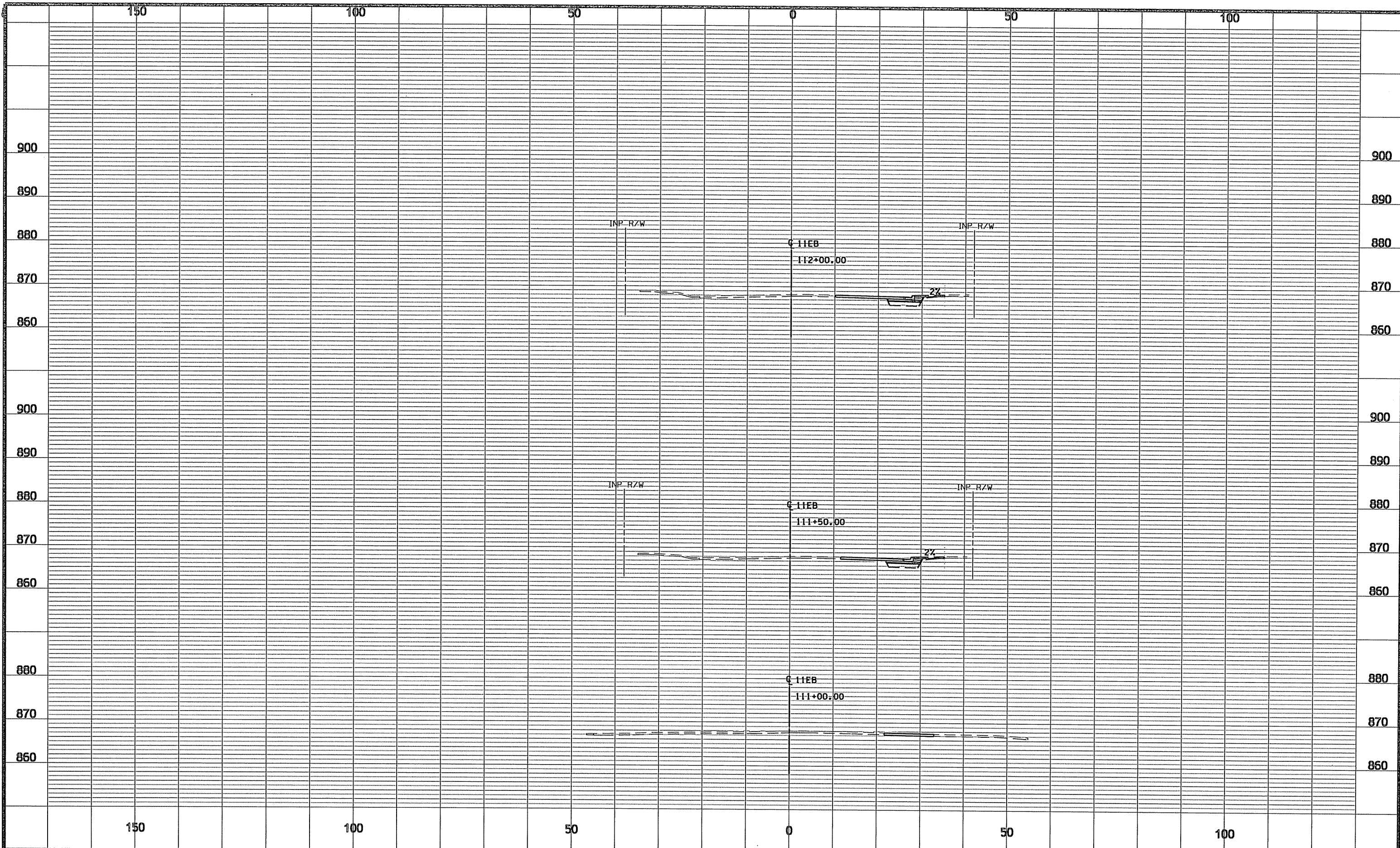
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 110+00.00 TO 110+72.29
 Sheet 82 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn					
05/09/2013 12:22:51 PM					

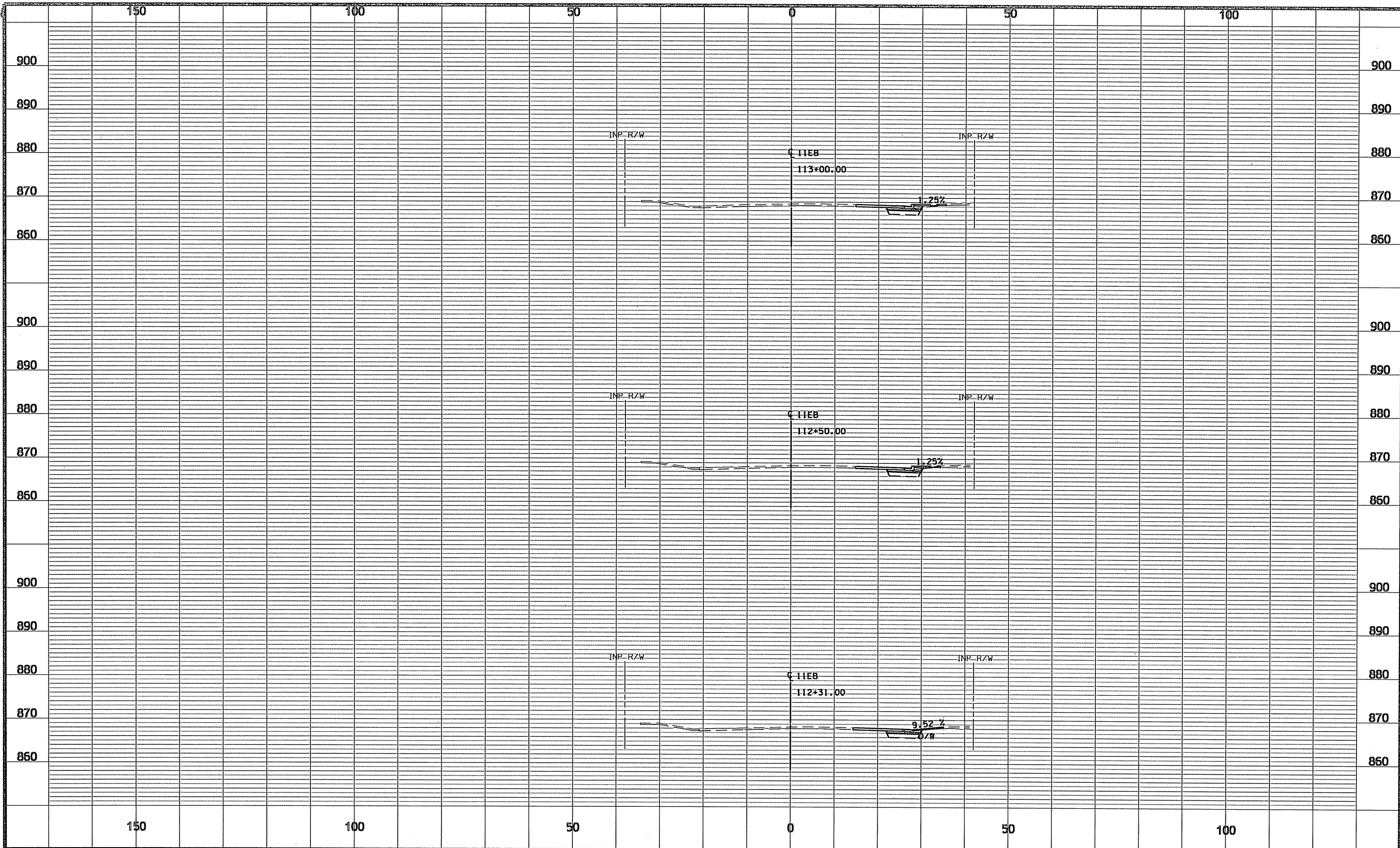
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 111+00.00 TO 112+00.00
 Sheet 83 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn 05/09/2013 12:22:51 PM

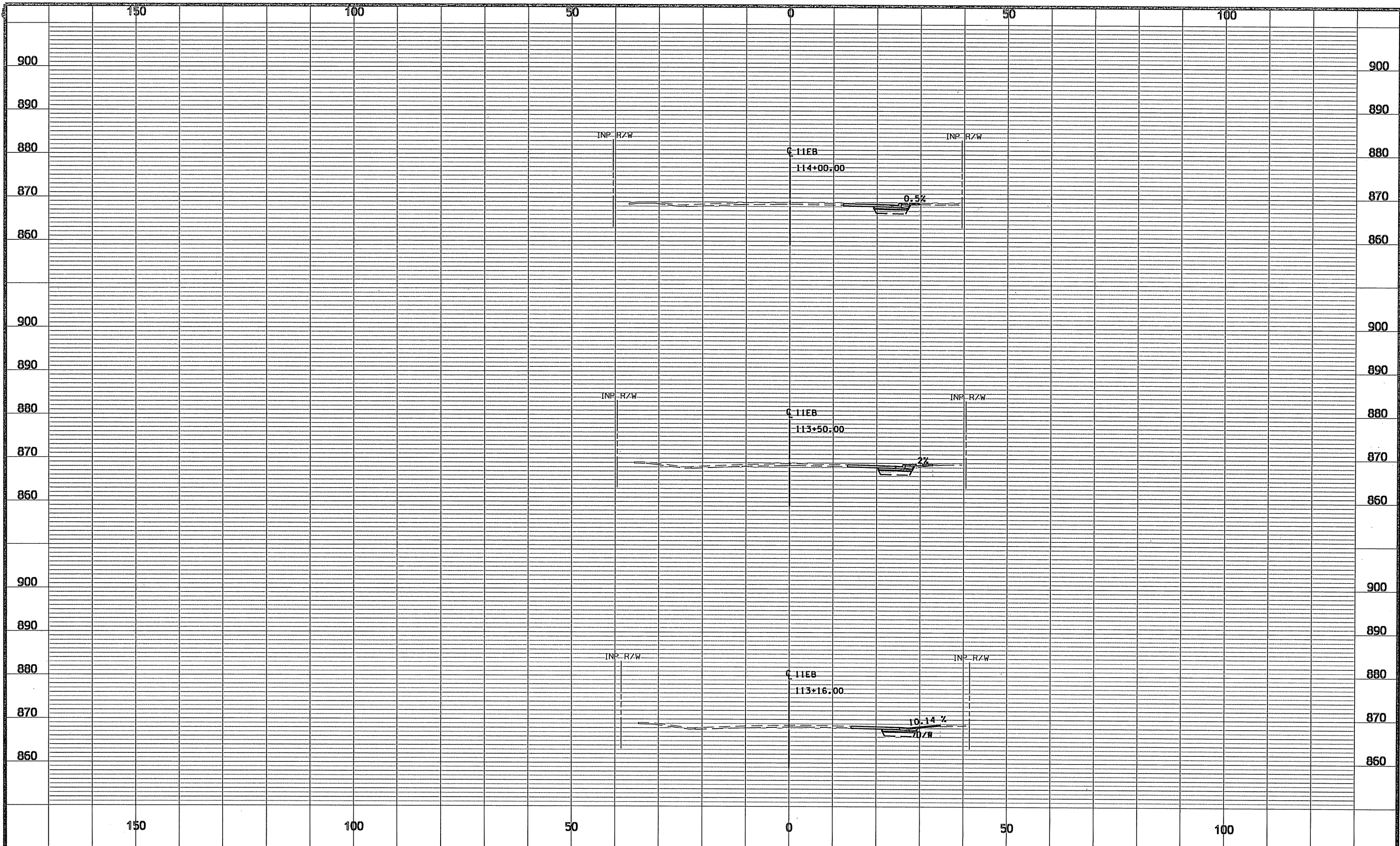
DRAWN BY DFF DATE 03-14-13
DESIGN BY DFF DATE 03-14-13
CHECKED BY GMP DATE 03-18-13



**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

CROSS SECTIONS
CSAH 11
STA 112+31.00 TO 113+00.00
Sheet 84 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_11_P1.dgn 05/09/2013 12:22:52 PM					

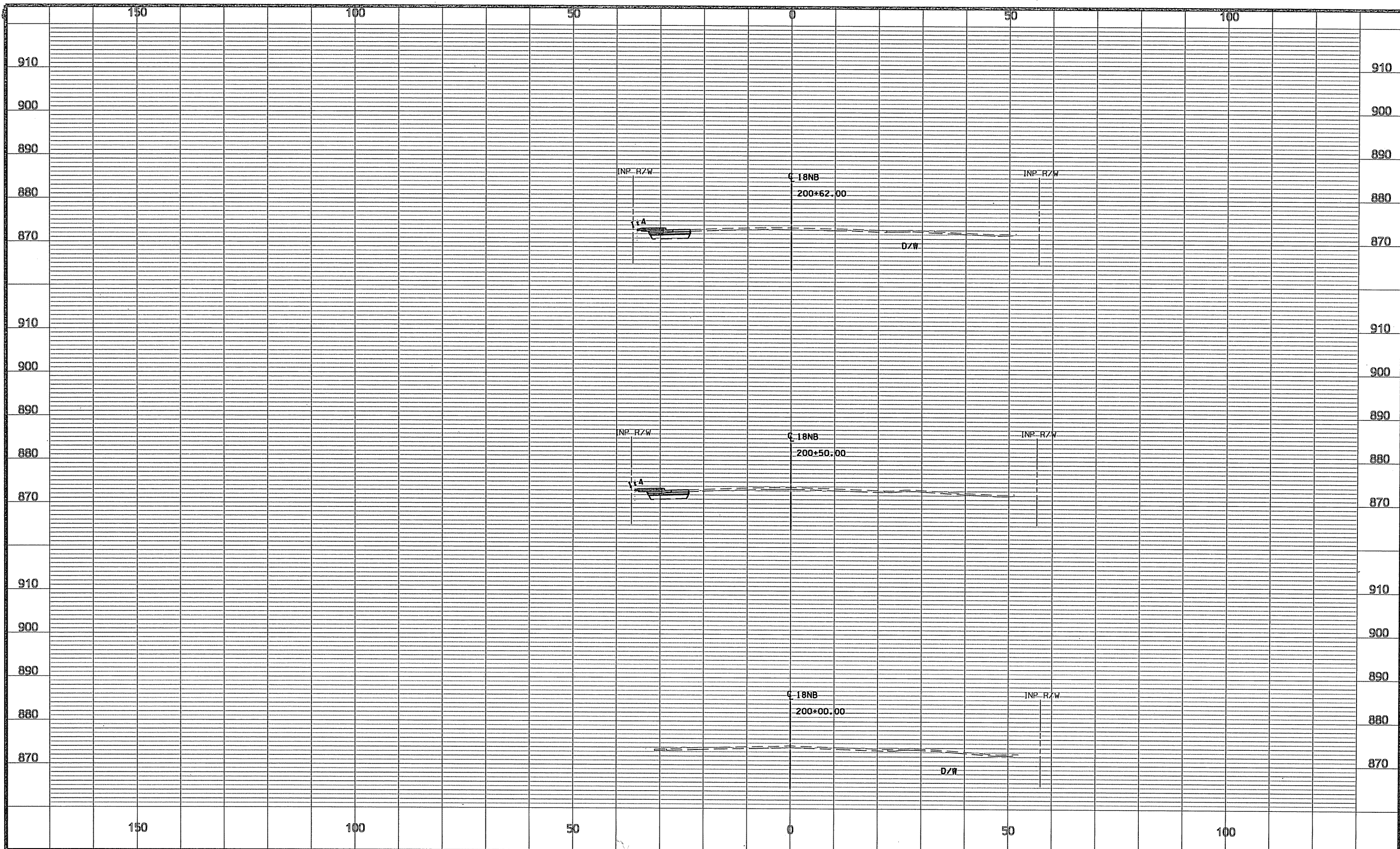
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 11
 STA 113+16.00 TO 114+00.00
 Sheet 85 of 98 Sheets

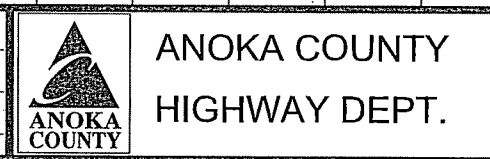


NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn 05/09/2013 12:22:53 PM

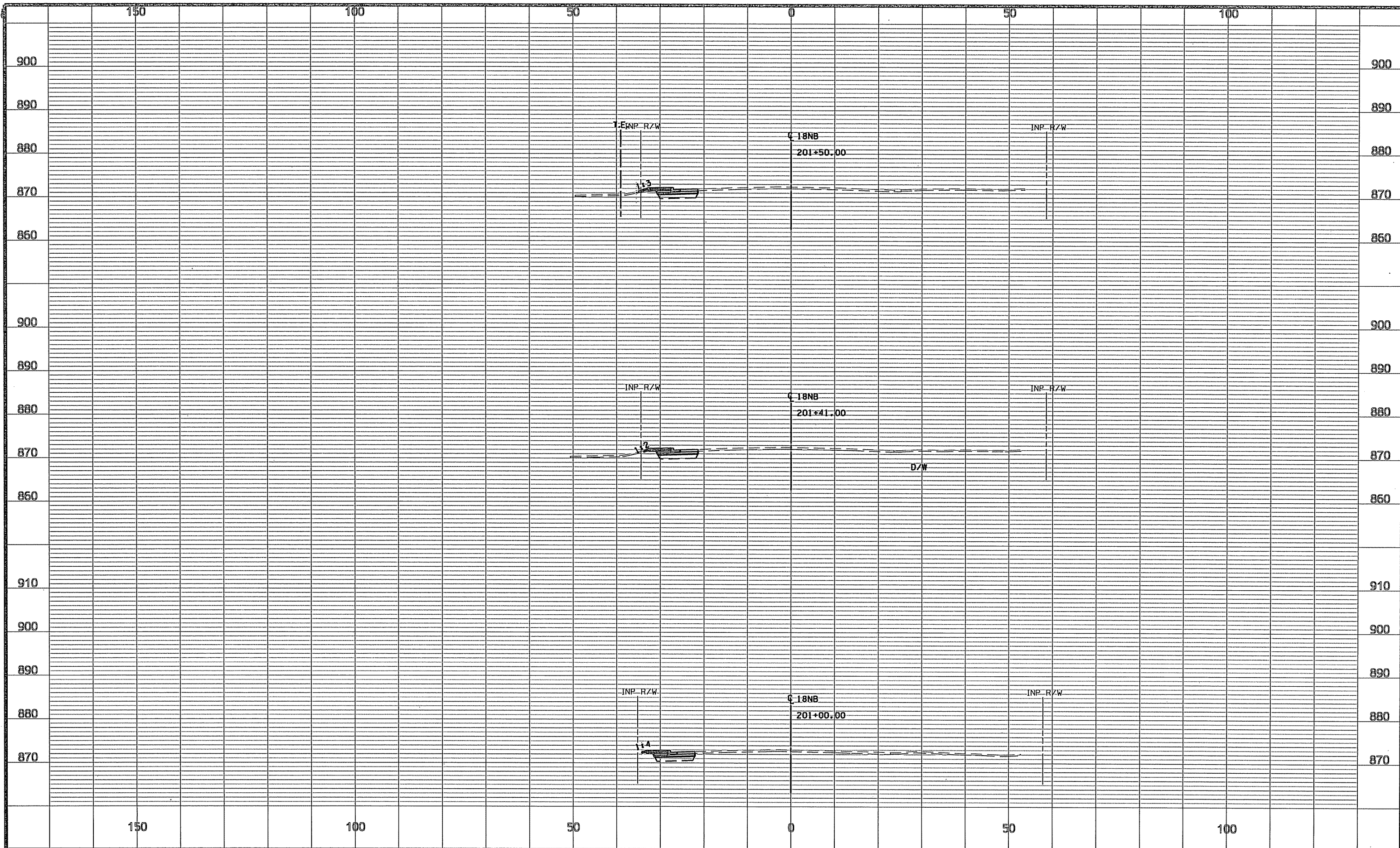
--	--	--	--

DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



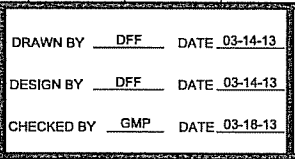
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 200+00.00 TO 200+62.00
 Sheet 86 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					05/09/2013 12:22:53 PM

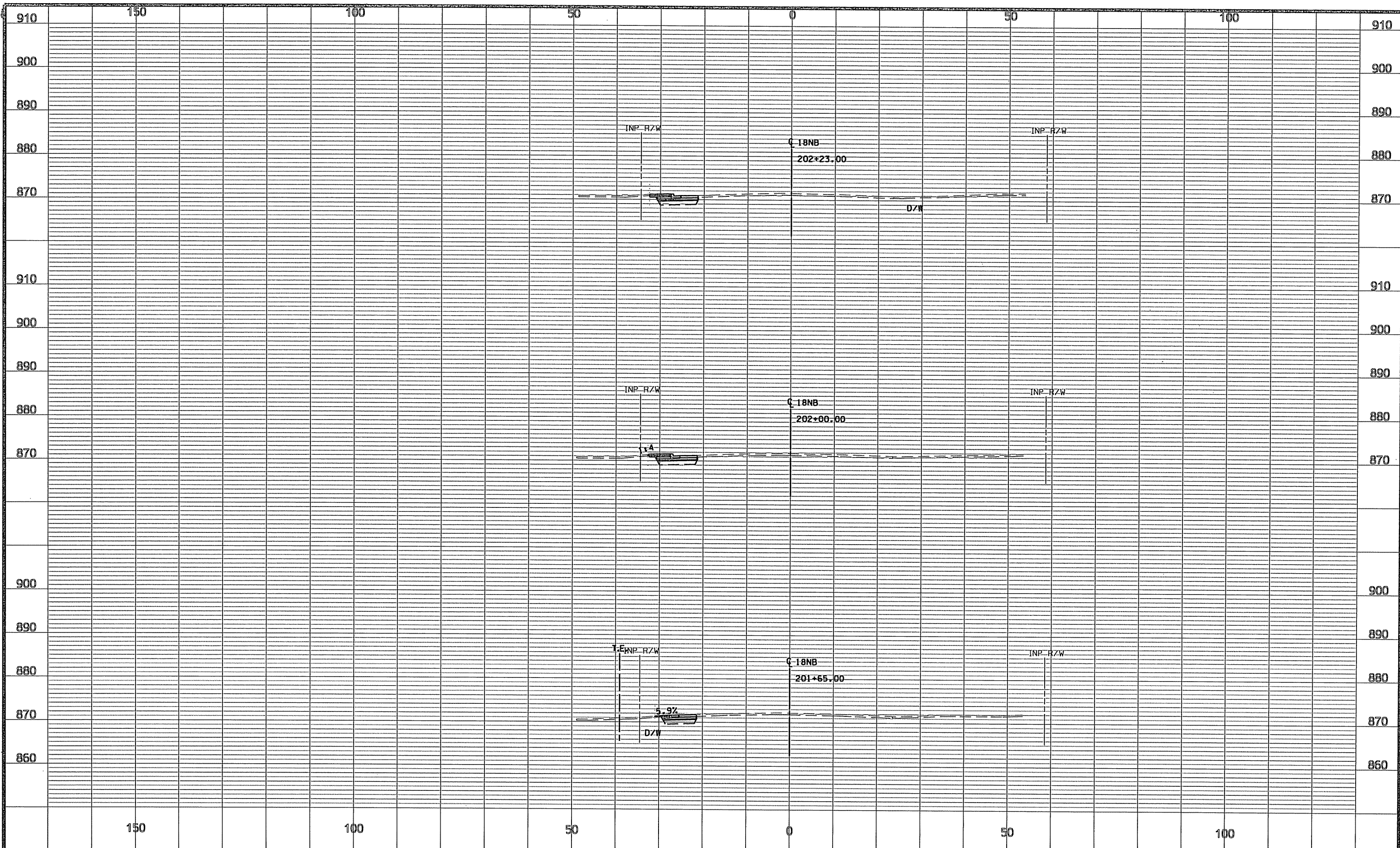
DRAWN BY	DFP	DATE	03-14-13
DESIGN BY	DFP	DATE	03-14-13
CHECKED BY	GMP	DATE	03-18-13



**ANOKA COUNTY
HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 201+00.00 TO 201+50.00
 Sheet 87 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					
05/09/2013 12:22:53 PM					

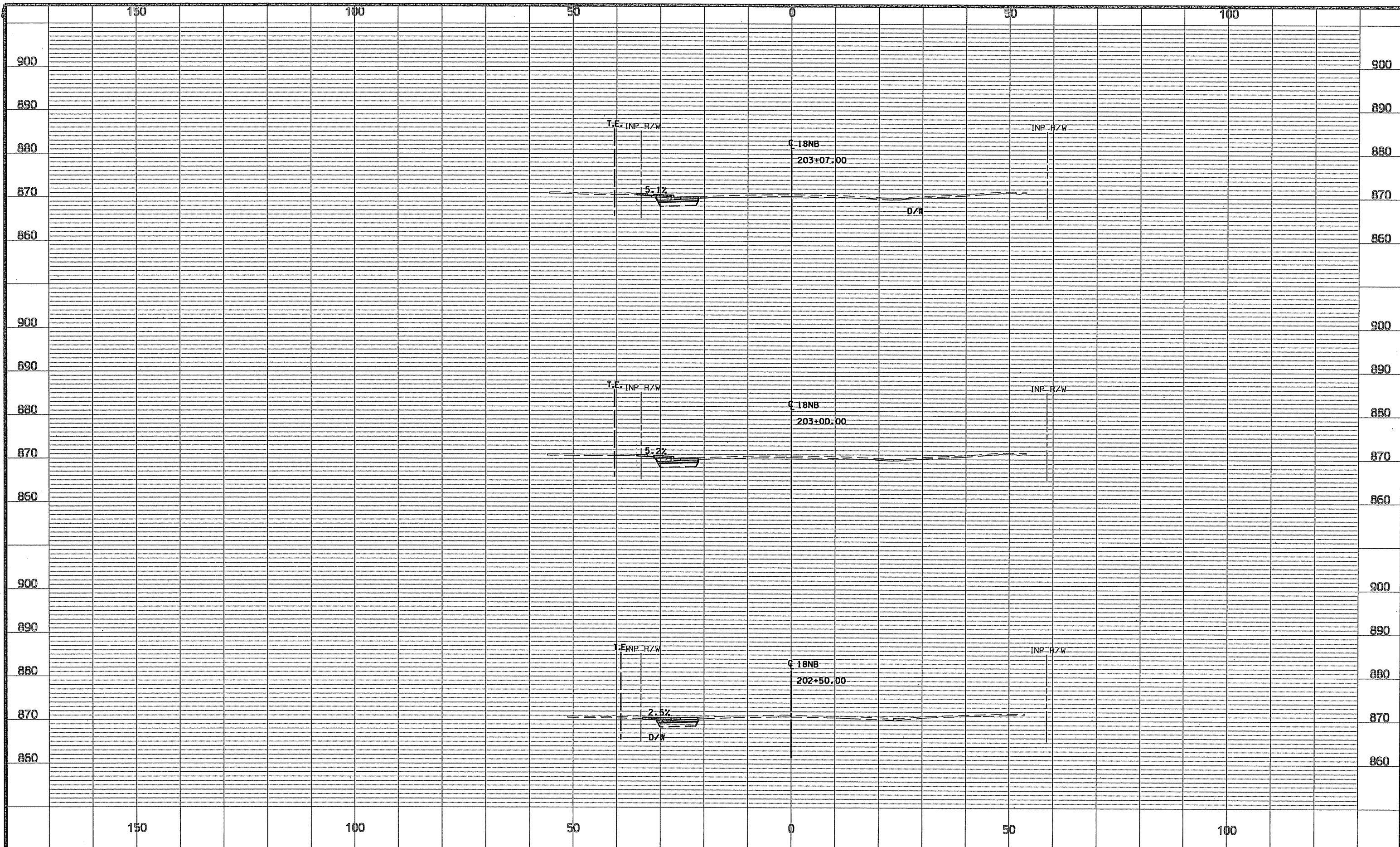
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



**ANOKA COUNTY
 HIGHWAY DEPT.**

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 201+65.00 TO 202+23.00
 Sheet 88 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					05/09/2013 12:22:54 PM

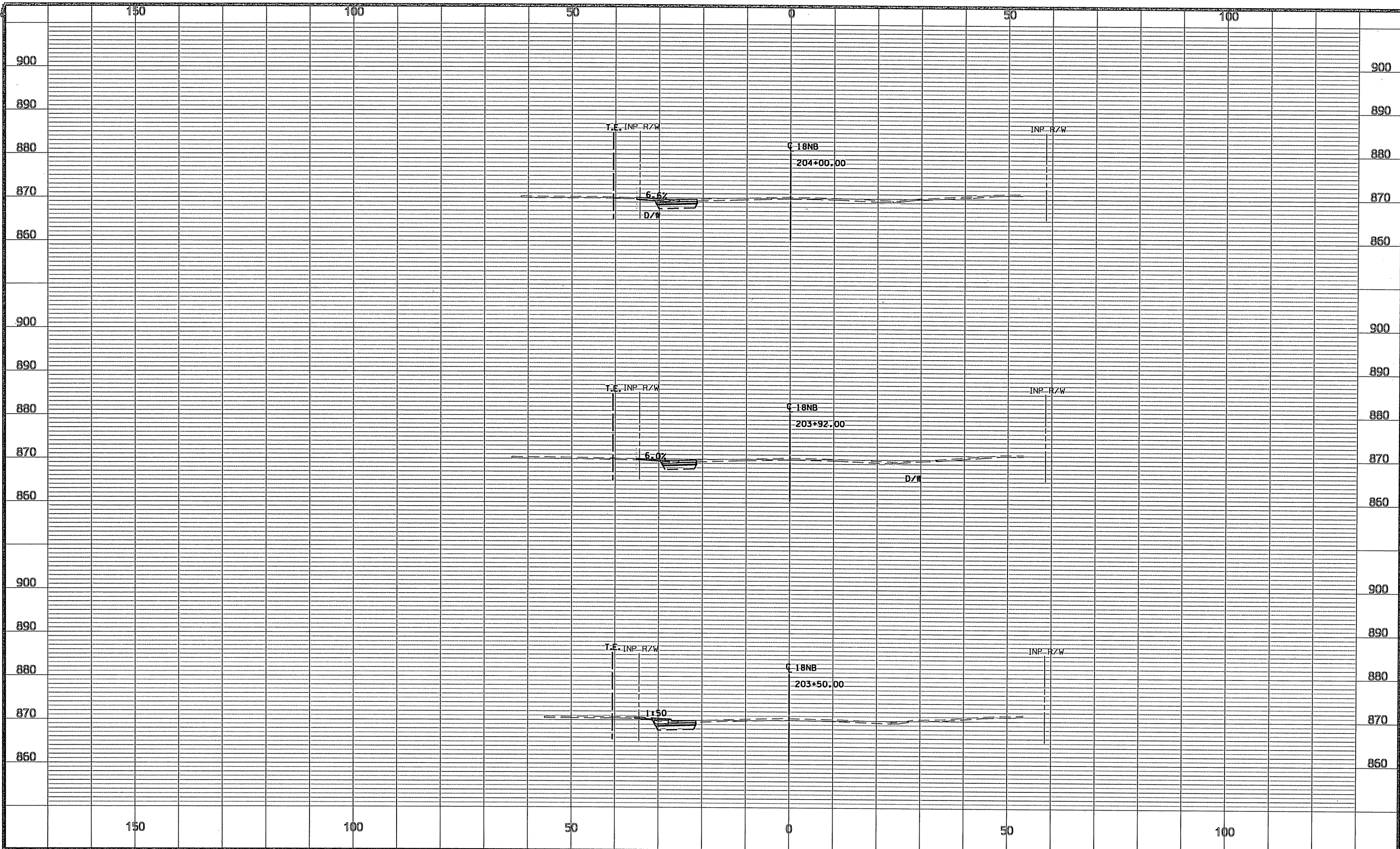
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

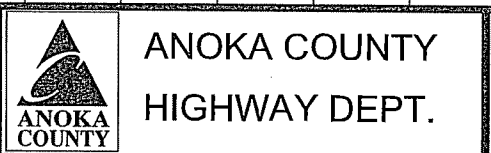
CROSS SECTIONS
 CSAH 18
 STA 202+50.00 TO 203+07.00
 Sheet 89 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION

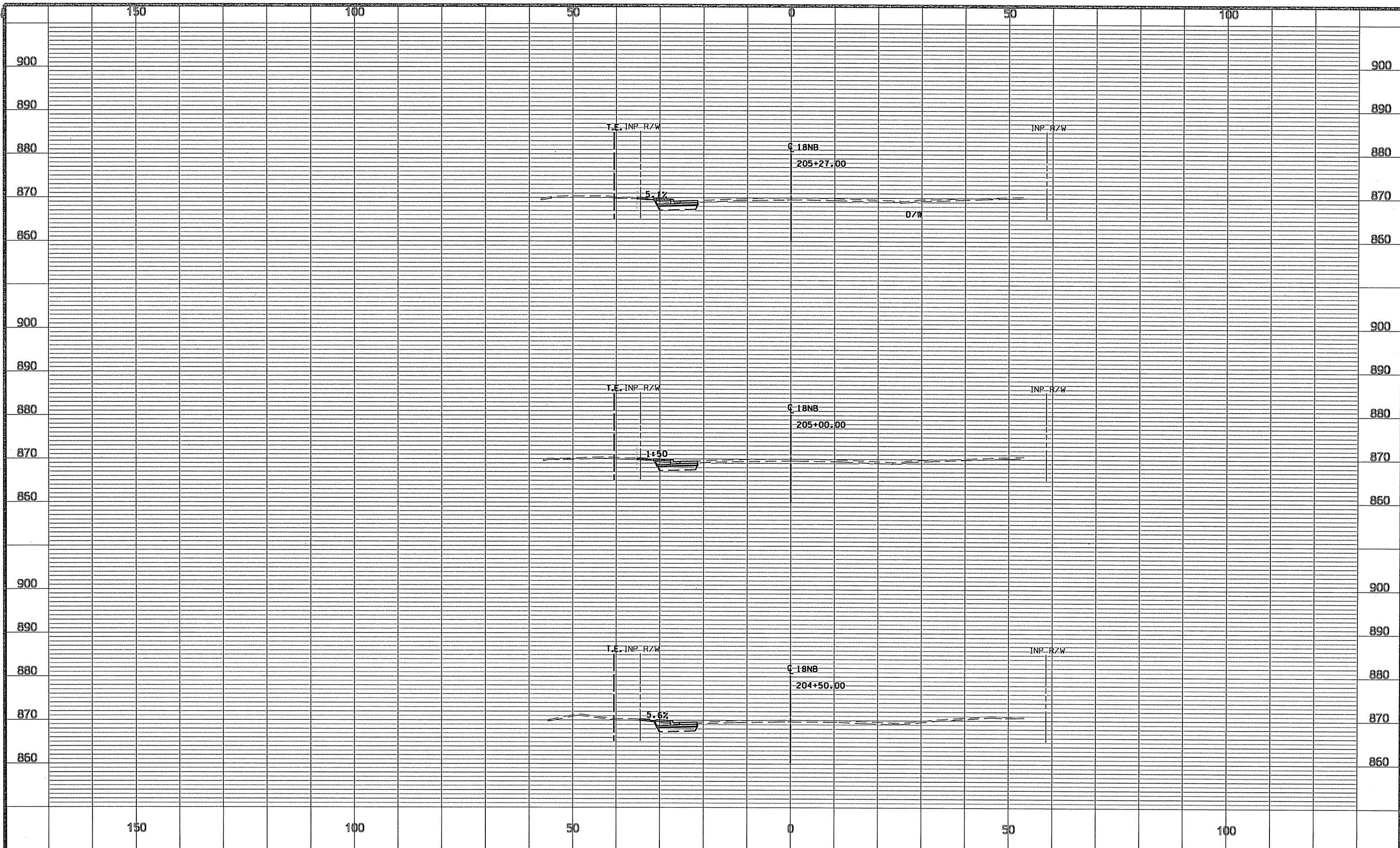
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn 05/09/2013 12:22:54 PM

DRAWN BY: DFF DATE: 03-14-13
 DESIGN BY: DFF DATE: 03-14-13
 CHECKED BY: GMP DATE: 03-18-13



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 203+50.00 TO 204+00.00
 Sheet 90 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					05/09/2013 12:22:54 PM

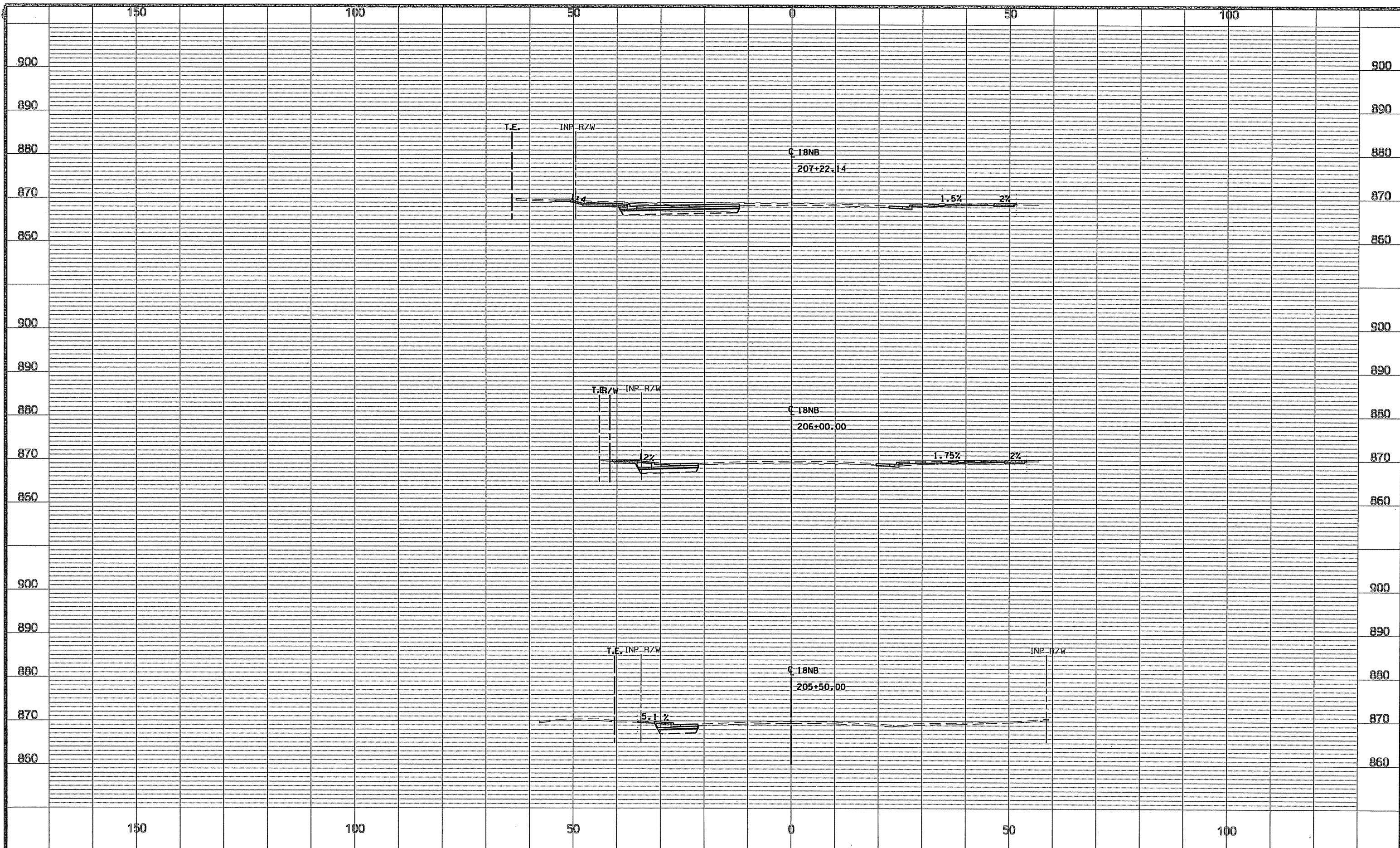
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 204+50.00 TO 205+27.00
 Sheet 91 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					
05/09/2013 12:22:54 PM					

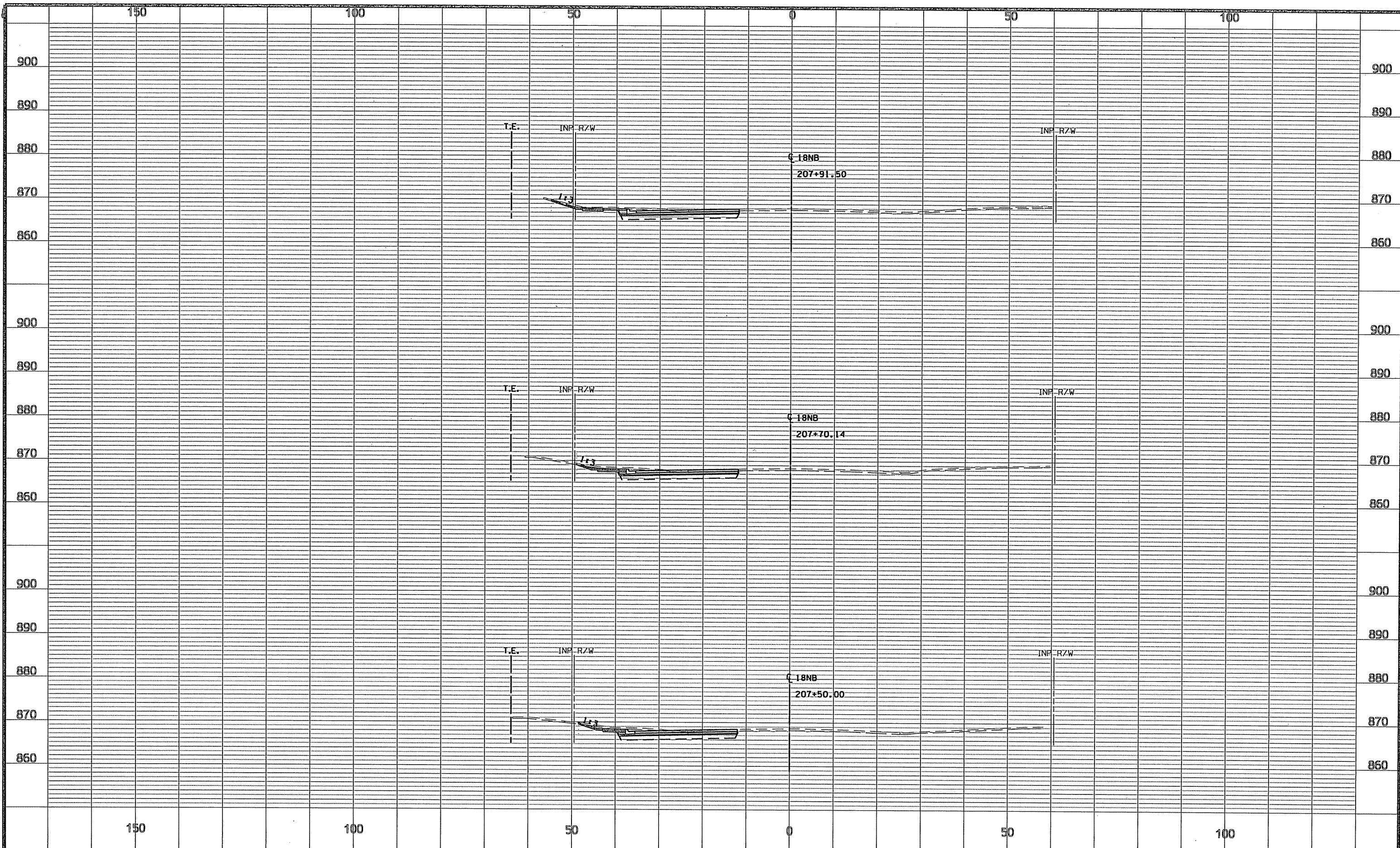
DRAWN BY DFP DATE 03-14-13
 DESIGN BY DFP DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 205+50.00 TO 207+22.14
 Sheet 92 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn 05/09/2013 12:22:55 PM

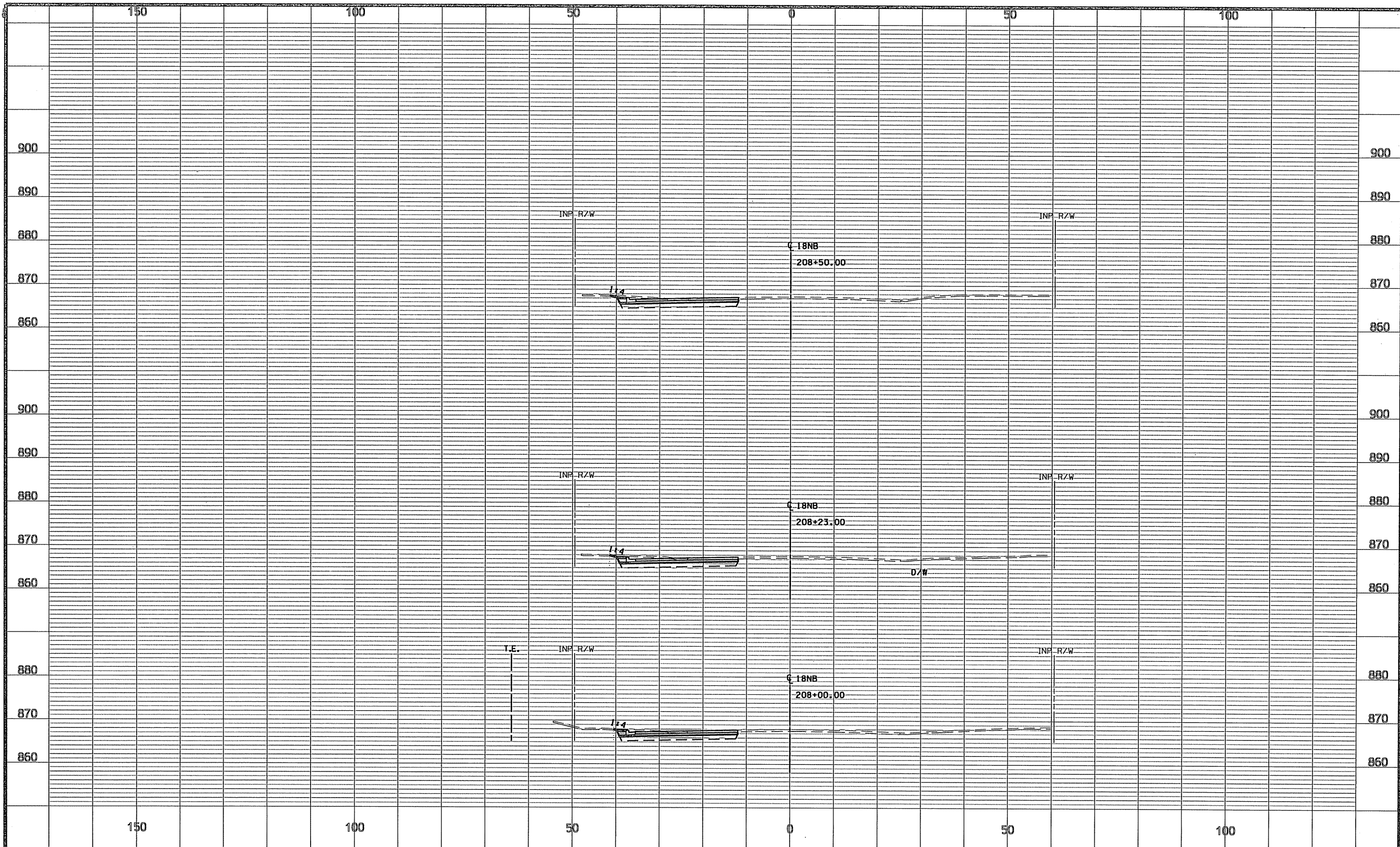
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 207+50.00 TO 207+91.50
 Sheet 93 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn 05/09/2013 12:22:55 PM					

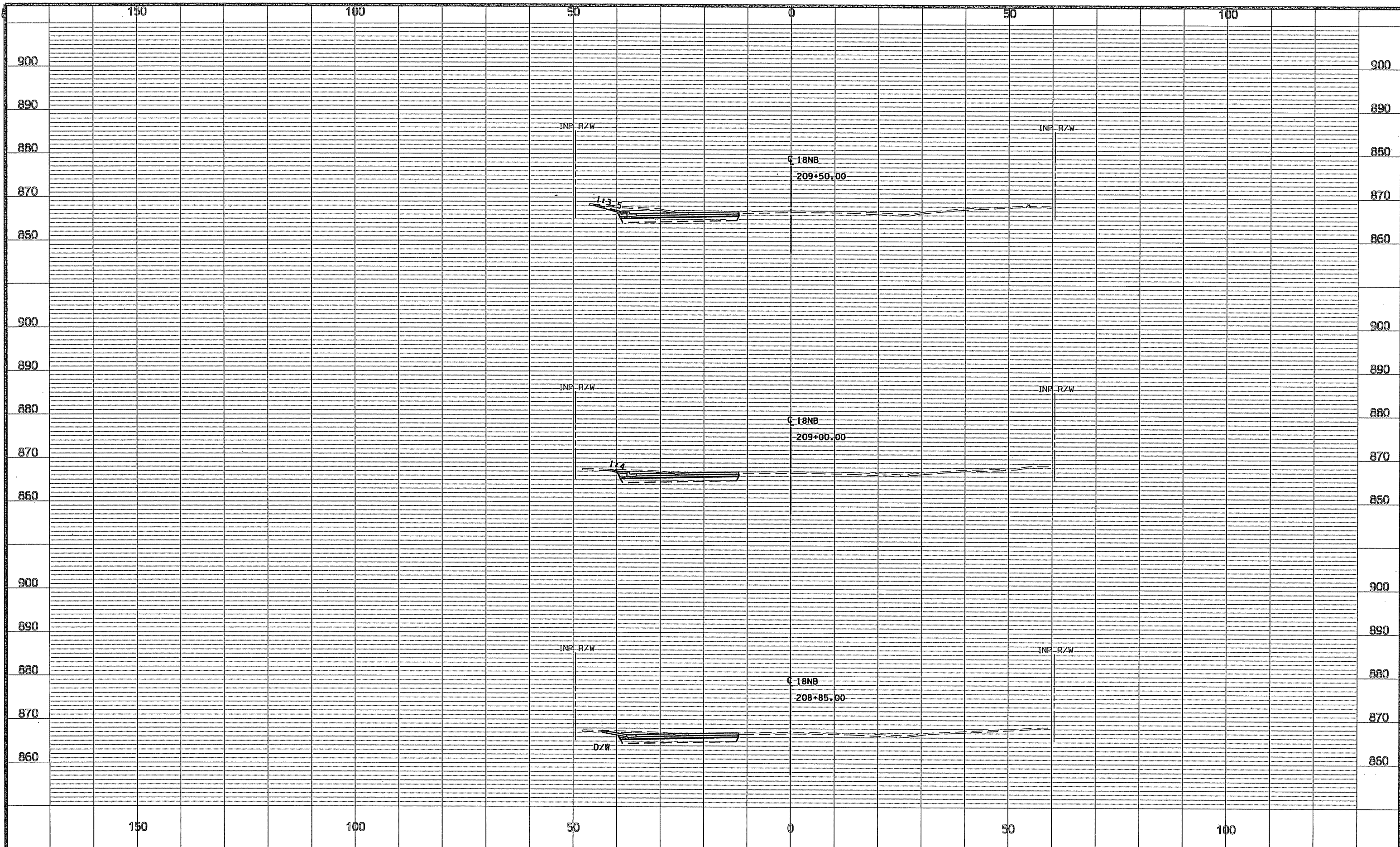
DRAWN BY DFP DATE 03-14-13
 DESIGN BY DFP DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 208+00.00 TO 208+50.00
 Sheet 94 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					
05/09/2013 12:22:55 PM					

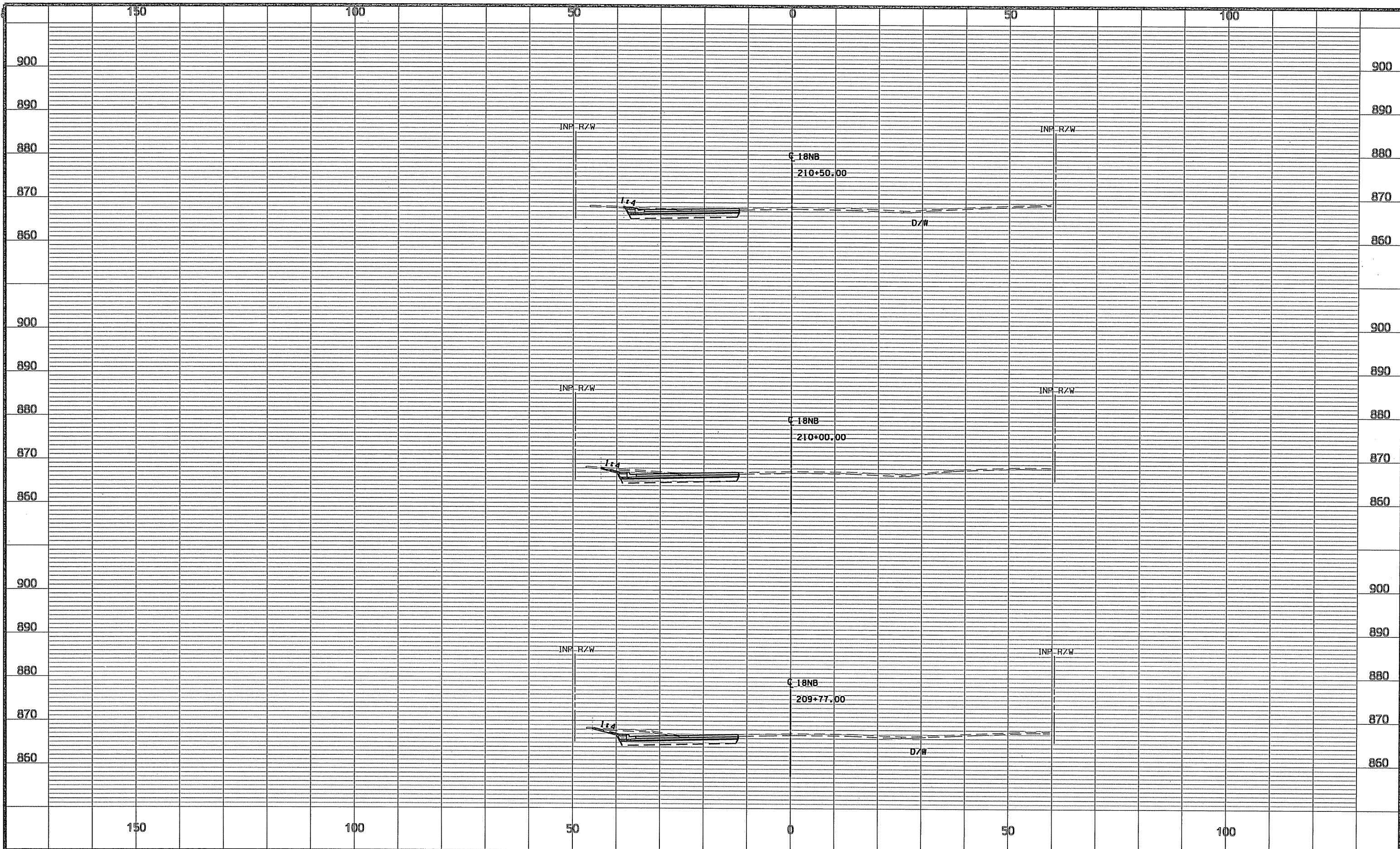
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 208+85.00 TO 209+50.00
 Sheet 95 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn					
05/09/2013 12:22:55 PM					

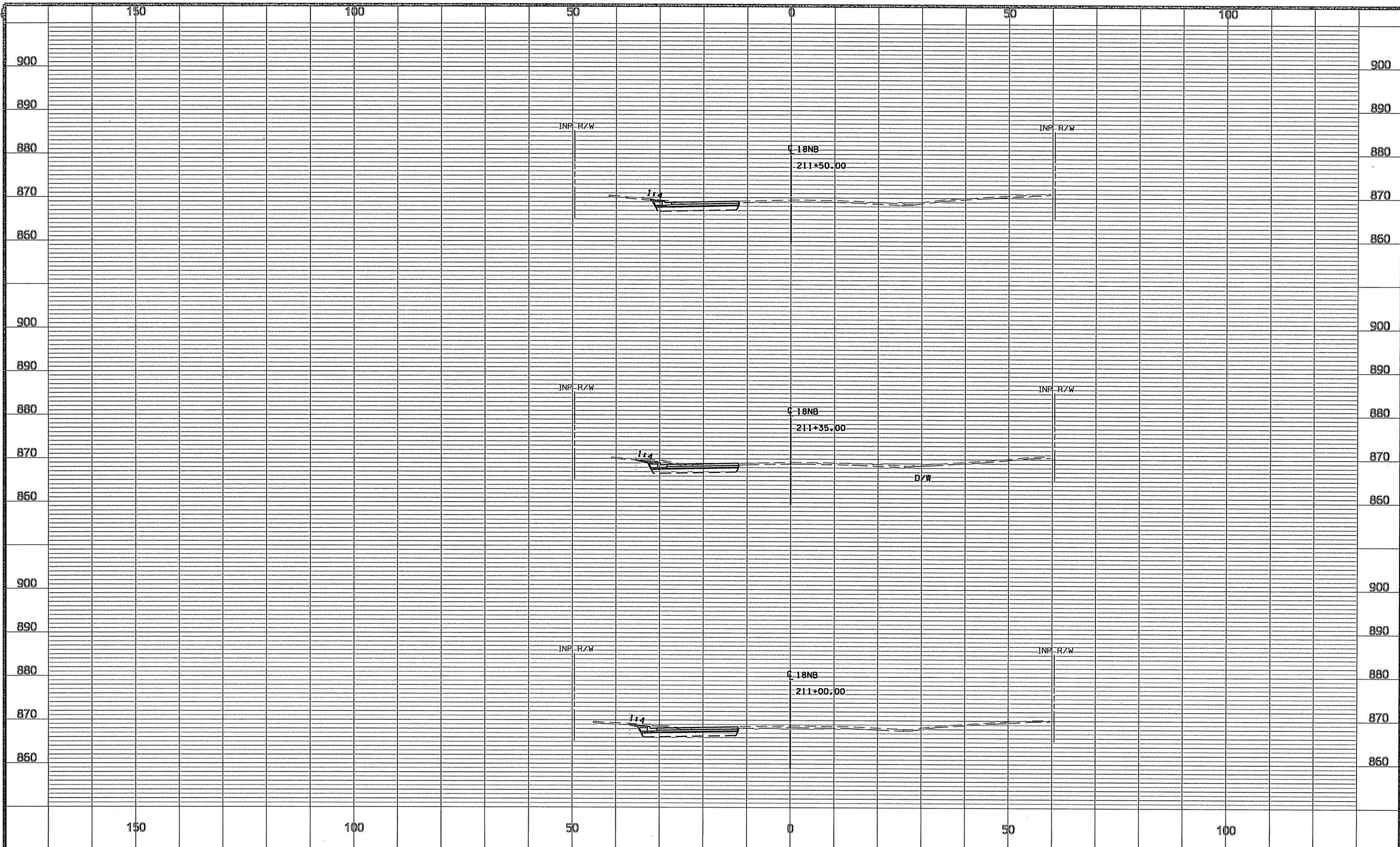
DRAWN BY DFF DATE 03-14-13
DESIGN BY DFF DATE 03-14-13
CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

S.P. 002-611-033
S.P. 002-618-031
S.A.P. 114-127-007
S.P. 114-020-048

CROSS SECTIONS
CSAH 18
STA 209+77.00 TO 210+50.00
Sheet 96 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn 05/09/2013 12:22:55 PM					

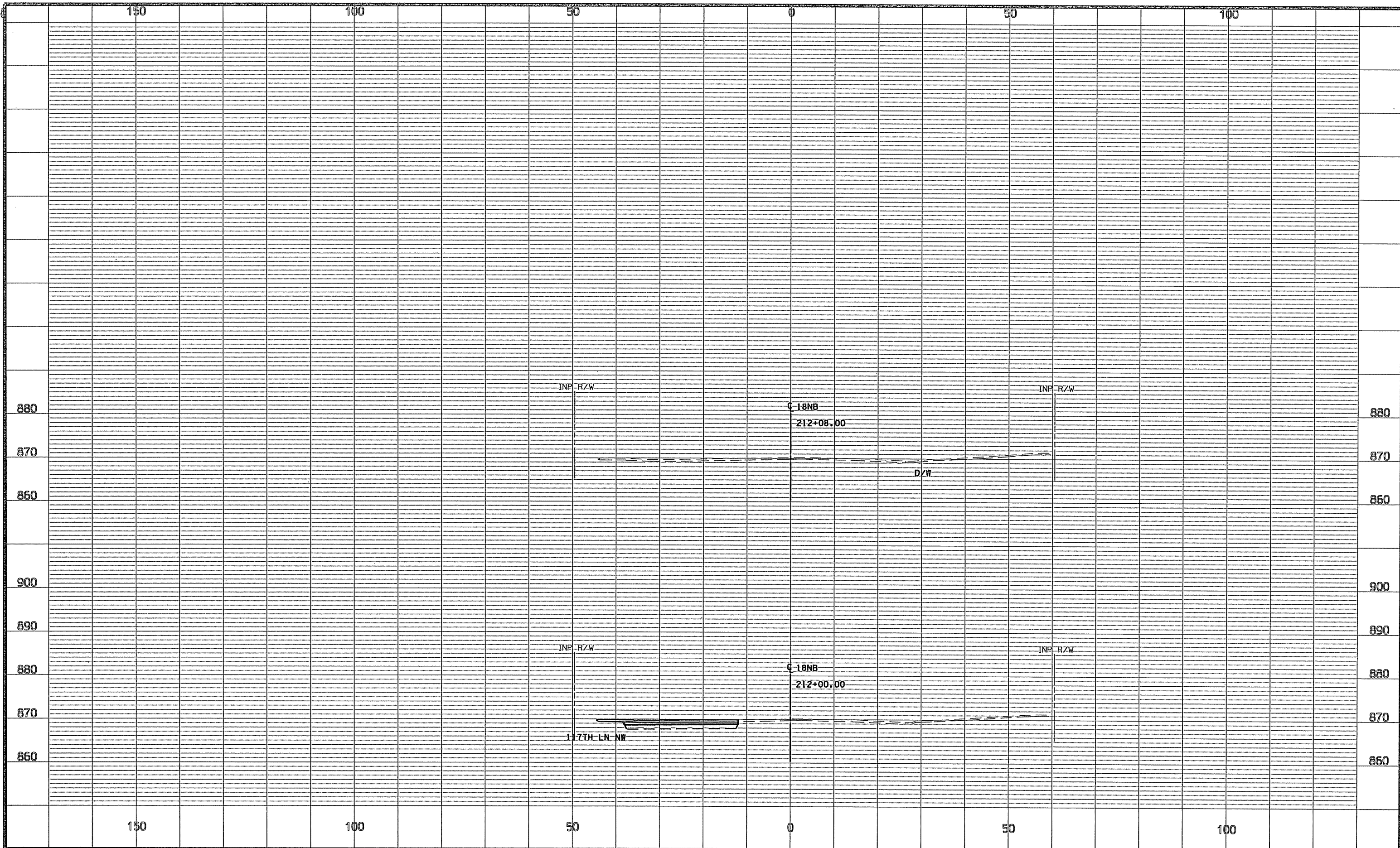
DRAWN BY DFF DATE 03-14-13
 DESIGN BY DFF DATE 03-14-13
 CHECKED BY GMP DATE 03-18-13



ANOKA COUNTY
HIGHWAY DEPT.

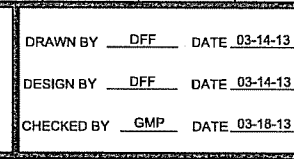
S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 211+00.00 TO 211+50.00
 Sheet 97 of 98 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-611-33\Plan\02-611-33_XS2_18_P1.dgn 05/09/2013 12:22:55 PM					

DRAWN BY <u> DFF </u> DATE <u> 03-14-13 </u> DESIGN BY <u> DFF </u> DATE <u> 03-14-13 </u> CHECKED BY <u> GMP </u> DATE <u> 03-18-13 </u>



S.P. 002-611-033
 S.P. 002-618-031
 S.A.P. 114-127-007
 S.P. 114-020-048

CROSS SECTIONS
 CSAH 18
 STA 212+00.00 TO 212+08.00
 Sheet 98 of 98 Sheets