

DATE: 6/17/2008 TIME: 5:55:38 PM
 FILENAME: K:\g-f\AnokaCity\3721000\hwy-brdg\hwy\p1r-slf\casat57_1.sld.dgn

PLAN SYMBOLS

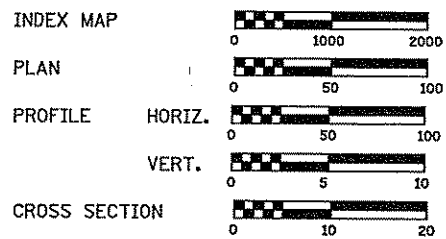
- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT-OF-WAY LINE
- TEMPORARY EASEMENT
- PRESENT RIGHT-OF-WAY
- PERMANENT DRAINAGE EASEMENT
- CONTROL OF ACCESS LINE
- PROPERTY LINES (EXCEPT LAND LINES)
- VACATED PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT-OF-WAY
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- DRAIN TILE
- CULVERT
- DROP INLET
- GUARD RAIL
- BARBED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SNOW FENCE
- STONE WALL OR FENCE
- HEDGE
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- MEANDER CORNER
- SPRINGS
- MARSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERY

- CATTLE GUARD
- OVERPASS (HIGHWAY OVER)
- UNDERPASS (HIGHWAY UNDER)
- BRIDGE
- BUILDING (ONE STORY FRAMED)
- F - FRAME C - CONCRETE
- S - STONE T - TILE
- B - BRICK ST - STUCCO
- IRON ROD OR PIPE
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN HUB
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY

UTILITY SYMBOLS

- POWER POLE LINE
- TELEPHONE POLE LINE
- ANCHOR
- STREET LIGHT
- STREET LIGHT CONDUIT
- PEDESTAL (TELEPHONE CABLE TERMINAL)
- GAS MAIN
- WATER MAIN
- HYDRANT
- VALVE
- CATCH BASIN
- TELEPHONE CABLE IN CONDUIT
- ELECTRIC CABLE IN CONDUIT
- TELEVISION CABLE IN CONDUIT
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- BURIED TELEPHONE CABLE
- BURIED ELECTRIC CABLE
- BURIED TELEVISION CABLE
- TRAFFIC SIGNAL INTERCONNECT CABLE
- SEWER (STORM) MANHOLE
- SEWER (SANITARY) MANHOLE
- SEWER (STORM)
- SEWER (SANITARY)

SCALES



MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR: **GRADING, AGGREGATE BASE, BITUMINOUS PAVING, STORM SEWER, CONCRETE CURB & GUTTER, BITUMINOUS PATH, SIGNING AND STRIPING, TRAFFIC CONTROL SIGNAL, AND APPURTENANT WORK.**

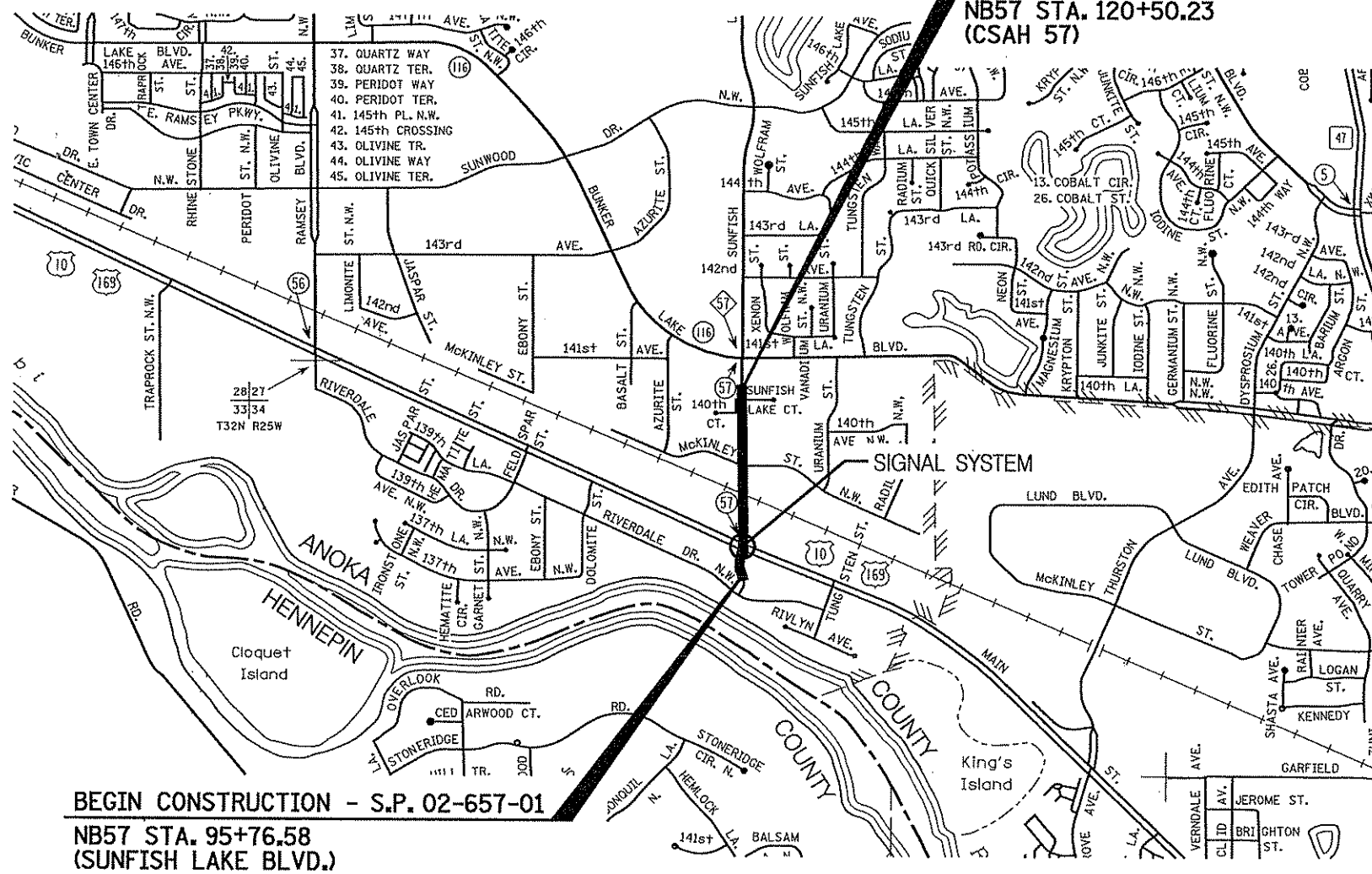
LOCATED ON COUNTY ROAD 57 FROM A POINT 350 FEET SOUTH OF TH 10 TO A POINT 450 FEET SOUTH OF COUNTY ROAD 116

AGREEMENT NO. **92833**
 Anoka County
 S.P. 0202-85 (TH 10=003)
 State Funds
 METRO DISTRICT

CSAH 57 DESIGN
 GROSS LENGTH.....**2473.65** FEET.....**0.468** MILES.
 BRIDGES-LENGTH.....**0** FEET.....**0** MILES
 EXCEPTIONS-LENGTH.....**0** FEET.....**0** MILES
 NET LENGTH.....**2473.65** FEET.....**0.468** MILES
 REF. PT. 222+00.542

NOTE: LENGTHS AND DESCRIPTIONS BASED ON THE CSAH 57 NB ALIGNMENT

END CONSTRUCTION - S.P. 02-657-01



BEGIN CONSTRUCTION - S.P. 02-657-01

NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

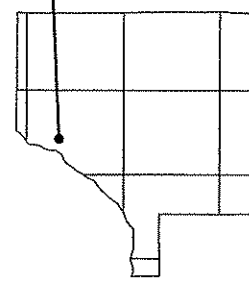
S.A.P. 02-657-01
 SUNFISH LAKE BLVD. AND CSAH 57

DESIGN DESIGNATION
 ADT (2008) 9,343
 ADT (2028) 17,600
 FUNCTIONAL CLASS MINOR ARTERIAL
 NO OF TRAFFIC LANES 4
 NO OF PARKING LANES 0
 SHOULDER WIDTH 8'
 R-VALUE 56
 TON DESIGN 10
 ESALS 1,720,000
 DESIGN SPEED (MPH):
 SUNFISH LAKE BLVD. 30
 NB57 STA. 95+76.58 TO NB57 STA. 99+00 30
 CSAH 57 45
 NB57 STA. 100+00 TO NB57 STA. 120+53.23 45
 BASED ON STOPPING SIGHT DISTANCE.
 3.5 FT HEIGHT OF EYE 2.0 FT HEIGHT OF OBJECT

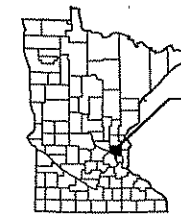
DESIGN DESIGNATION - BIKE PATH
 DESIGN SPEED (MPH) 20
 BASED ON:
 4.5 FT HEIGHT OF EYE 0.0 FT HEIGHT OF OBJECT

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

PROJECT LOCATION



ANOKA COUNTY



PROJECT LOCATION
 COUNTY: ANOKA
 DISTRICT: METRO

S.A.P. 02-657-01,
 S.P. 0202-85 (TH 10=003), C.P. 08-20 SHEET NO. 1 OF 82 SHEETS

MINN PROJECT NO. STATE FUNDS

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" (MUTCD), AND PART VI "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	ESTIMATED QUANTITIES
4	INDEX OF TABULATIONS AND STANDARD PLATES
5-6	QUANTITY TABULATIONS
7	EARTHWORK TABULATIONS, SUMMARY AND SOIL/CONST. NOTES
8-11	TYPICAL SECTIONS
12-14	MISCELLANEOUS DETAILS
15	DETOUR LAYOUT
16,16A,17,18,18A,19	STAGING AND TRAFFIC CONTROL
20	ALIGNMENT PLAN
21-22	INPLACE TOPOGRAPHY AND REMOVAL PLANS
23-24	UTILITY PLANS
25-26	CONSTRUCTION PLANS
27-28	PROFILES
29-31	INTERSECTION DETAILS
32	SUPERELEVATION PLAN
33-34	DRAINAGE PLANS
35-36	DRAINAGE PROFILES
37-38	DRAINAGE TABULATIONS
39-43	CITY DRAINAGE SYSTEM PLANS
44-45	EROSION CONTROL AND TURF ESTABLISHMENT PLANS
46-52	EROSION CONTROL DETAILS
53	SIGNING AND STRIPING TABULATIONS
54-55	SIGNING AND STRIPING PLANS
56-61	SIGNING AND STRIPING DETAILS
62-78,80-82	SIGNAL PLANS
X1-X15	CROSS SECTIONS

DELETED SHEETS: 52, 79

THIS PLAN CONTAINS 97 SHEETS

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

TKDA

ENGINEERS · ARCHITECTS · PLANNERS

SIGNATURE: *Joseph M. Weaver* TYPED OR PRINTED NAME: JOSEPH M. WEAVER
 DESIGN ENGINEER: 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: *June 17, 2008* LICENSE NUMBER 22405

APPROVED	<i>B. Eder</i>	DATE: 6/19/08
	CITY OF RAMSEY ENGINEER	
APPROVED	<i>Robert J. ...</i>	DATE: 6/23/08
	ANOKA COUNTY ENGINEER	
RECOMMENDED FOR APPROVAL	<i>Ann ...</i>	DATE: 7/10/08
	DISTRICT TRANSPORTATION ENGINEER	
RECOMMENDED FOR APPROVAL	<i>Benjamin J. ...</i>	DATE: 7/8/08
	DISTRICT MATERIALS ENGINEER	
RECOMMENDED FOR APPROVAL	<i>John ...</i>	DATE: 7-9-08
	DISTRICT WATER RESOURCES ENGINEER	
RECOMMENDED FOR APPROVAL	<i>David ...</i>	DATE: 7/10/08
	DISTRICT TRAFFIC ENGINEER	
RECOMMENDED FOR APPROVAL	<i>Tom ...</i>	DATE: 7/25/08
	STATE PRE-LETTING ENGINEER	
OFFICE OF LAND MANAGEMENT APPROVAL	<i>M. ...</i>	DATE: 8/5/08
	DIRECTOR, LAND MANAGEMENT	
APPROVED	<i>M. ...</i>	DATE: Aug 06/08
	STATE DESIGN ENGINEER	
	<i>Michael P. Kowalski</i>	DATE: 7/9/08
	DISTRICT STATE AID ENGINEER REVIEW FOR COMPLIANCE WITH STATE AID RULES/POLICY	
	<i>Michael P. Kowalski</i>	DATE: 7/9/08
	APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER	

ESTIMATED QUANTITIES

TAB. LETTER	SHEET NO.	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	CITY OF RAMSEY CSAH 57	ANOKA COUNTY CSAH 57 S.A.P. 02-657-01	
								STORM SEWER	ROADWAY
		2021.501	MOBILIZATION		LUMP SUM	1	0.18		0.82
		2021.610	RAILROAD PROTECTIVE SERVICES		HOOR	40			40
		2031.501	FIELD OFFICE TYPE D		EACH	1			1
Z	43	2101.501	CLEARING	(1)	ACRE	0.4	0.4		
A	5	2101.502	CLEARING	(1)	TREE	44			44
Z	43	2101.506	GRUBBING	(1)	ACRE	0.4	0.4		
A	5	2101.507	GRUBBING	(1)	TREE	56			56
		2102.501	PAVEMENT MARKING REMOVAL	(2)	SQ FT	154			154
		2102.502	PAVEMENT MARKING REMOVAL	(2)	LIN FT	200			200
D	5	2104.501	REMOVE PIPE CULVERTS	(3) (4)	LIN FT	387			387
B	5	2104.501	REMOVE CURB AND GUTTER	(4)	LIN FT	1773			1773
B	5	2104.501	REMOVE GUARD RAIL-PLATE BEAM	(4)	LIN FT	51			51
B	5	2104.505	REMOVE CONCRETE WALK	(4)	SQ YD	254			254
B	5	2104.505	REMOVE BITUMINOUS PAVEMENT	(4)(5)	SQ YD	1378			1378
C	5	2104.509	REMOVE GATE VALVE & BOX	(4)	EACH	6			6
D	5	2104.509	REMOVE DRAINAGE STRUCTURE	(4)	EACH	1			1
B,Z	5,43	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)		LIN FT	2305	562		1743
C	5	2104.523	SALVAGE GATE VALVE & BOX		EACH	2			2
C	5	2104.523	SALVAGE HYDRANT		EACH	3			3
Q	53	2104.523	SALVAGE SIGN SPECIAL		EACH	3			3
P,S	53	2104.523	SALVAGE SIGN PANEL TYPE C		EACH	27			27
Z	43	2104.523	SALVAGE VEHICULAR GATE		EACH	1	1		
H	7	2105.501	COMMON EXCAVATION	(P) (6)	CU YD	19927	9828		10099
H	7	2105.507	SUBGRADE EXCAVATION		CU YD	5972			5972
H	7	2105.522	SELECT GRANULAR BORROW (CV)		CU YD	6951			6951
		2130.501	WATER	(7)	M GAL	120			120
		2131.502	CALCIUM CHLORIDE SOLUTION	(7)	GALLON	2200			2200
F,Z	6,43	2211.503	AGGREGATE BASE (CV) CLASS 5	(P)	CU YD	4419	632		3787
F	6	2232.501	MILL BITUMINOUS SURFACE (2.0")	(8)	SQ YD	272			272

NOTES:

- (1) LIMITS OF CLEARING AND GRUBBING SHALL BE STAKED IN THE FIELD.
- (2) REMOVE PAVEMENT MARKINGS AT THE INTERSECTION OF TH 10 AND CSAH 57. ACTUAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
- (3) REMOVAL INCLUDES ALL TYPES OF PIPES AND APRONS. LENGTH INCLUDES APRONS.
- (4) ALL REMOVAL ITEMS, INCLUDING CONCRETE AND BITUMINOUS MATERIAL, SHALL BE DISPOSED OF OFF-SITE. NO DISPOSAL SHALL BE ALLOWED WITHIN ROADWAY RIGHT-OF-WAY OR EASEMENTS.
- (5) BITUMINOUS PAVEMENT REMOVAL AT THE TH10 INTERSECTION IS ASSUMED TO BE GREATER THAN 6".
- (6) INCLUDES INPLACE TOPSOIL AND BITUMINOUS PAVEMENT UNDER 6".
- (7) TO BE USED FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
- (8) MILLED BITUMINOUS SURFACE MAY BE RECYCLED. EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE RIGHT-OF-WAY.
- (9) DELETED
- (10) DELETED
- (11) DELETED
- (P) DENOTES PLAN QUANTITY.

ESTIMATED QUANTITIES

TAB. LETTER	SHEET NO.	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	CITY OF RAMSEY CSAH 57	ANOKA COUNTY CSAH 57 S.A.P. 02-657-01	
								STORM SEWER	ROADWAY
F	6	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	(12)	GALLON	2006			2006
F,Z	6,43	2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,E)	(13)	TON	4972	170		4802
F	6	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (4,B)	(13)	TON	2516			2516
K	37	2501.515	15" RC PIPE APRON		EACH	2			2
K	37	2501.515	27" RC PIPE APRON		EACH	1			1
K	37	2503.541	15" RC PIPE SEWER DES 3006		LIN FT	917	70		847
K	37	2503.541	18" RC PIPE SEWER DES 3006		LIN FT	76			76
Z	43	2503.541	18" RC PIPE SEWER DES 3006 CL V		LIN FT	16	16		
K	37	2503.541	21" RC PIPE SEWER DES 3006		LIN FT	595			595
Z	43	2503.541	24" RC PIPE SEWER DES 3006 CL III		LIN FT	16	16		
K	37	2503.541	27" RC PIPE SEWER DES 3006		LIN FT	1052			1052
Z	43	2503.541	30" RC PIPE SEWER DES 3006 CL III		LIN FT	8	8		
Z	43	2503.541	36" RC PIPE SEWER DES 3006 CL III		LIN FT	2022	2022		
K	37	2503.602	CONNECT TO EXISTING STORM SEWER		EACH	2	1		1
K,Z	37,43	2503.602	CONNECT INTO EXISTING DRAINAGE STRUCTURE	(14)	EACH	3	1		2
Z	43	2503.602	18" PIPE PLUG		EACH	2	2		
Z	43	2503.602	24" PIPE PLUG		EACH	2	2		
Z	43	2503.602	30" PIPE PLUG		EACH	1	1		
C	5	2504.602	INSTALL HYDRANT		EACH	3			3
C	5	2504.602	INSTALL GATE VALVE & BOX		EACH	2			2
C	5	2504.602	ADJUST VALVE BOX		EACH	7			7
C	5	2504.602	8"X6" REDUCER		EACH	1			1
C	5	2504.602	12" SLEEVE		EACH	5			5
C	5	2504.602	6" PIPE BEND 45 DEGREE		EACH	1			1
C	5	2504.602	6" GATE VALVE AND BOX		EACH	1			1
C	5	2504.602	12" GATE VALVE AND BOX		EACH	5			5
C	5	2504.603	6" WATERMAIN DUCTILE IRON CL 53		LIN FT	80			80
K	37	2506.501	CONST DRAINAGE STRUCTURE DESIGN F		LIN FT	22.9			22.9
K	37	2506.501	CONST DRAINAGE STRUCTURE DESIGN G		LIN FT	43.5	3.4		40.1
K	37	2506.501	CONST DRAINAGE STRUCTURE DESIGN H		LIN FT	25.9	3.2		22.7
Z	43	2506.501	CONST DRAINAGE STRUCTURE DESIGN SPECIAL	(15)	LIN FT	13.8	13.8		
K	37	2506.501	CONST DRAINAGE STRUCTURE DES 48-4020		LIN FT	8.7			8.7
K	37	2506.501	CONST DRAINAGE STRUCTURE DES 54-4020		LIN FT	21.6			21.6
K	37	2506.501	CONST DRAINAGE STRUCTURE DES 60-4020		LIN FT	15.5			15.5
Z	43	2506.501	CONST DRAINAGE STRUCTURE DES 66-4020		LIN FT	37.2	37.2		
Z	43	2506.501	CONST DRAINAGE STRUCTURE DES 72-4020		LIN FT	9.4	9.4		
Z	43	2506.501	CONST DRAINAGE STRUCTURE DES 78-4020		LIN FT	8.2	8.2		
K	37	2506.501	CONST DRAINAGE STRUCTURE DES 108-4020		LIN FT	5.5			5.5
K	37	2506.502	CONST DRAINAGE STRUCTURE DESIGN SPECIAL 1	(16)	EACH	2	1		1

NOTES:

- (12) BITUMINOUS MATERIAL FOR TACK COAT COMPUTED AT 0.05 GALLONS / SQ YD / LIFT.
- (13) SPEC. 2360 BITUMINOUS MIXTURES COMPUTED AT 113 POUNDS / SQ YD / INCH.
- (14) CONNECT INTO EXISTING INCLUDES ALL SIZES AND TYPES.
- (15) SEE SHEET 42 FOR DETAIL.
- (16) DESIGN SPECIAL 1 STRUCTURE SHALL BE ECOSTORM MODEL 1 STORM WATER TREATMENT UNIT OR APPROVED EQUAL.

DATE: 7/31/2008 TIME: 3:00:26 PM FILENAME: K:\r-f\Anoka\City\3721000\hwy-brdg\hwy-pln-sfr\Casht57_1ba.dgn

DRAWN BY: TJV

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.

SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/31/2008 LIC. NO. 22405

TKDA
 ENGINEERS • ARCHITECTS • PLANNERS

ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

ESTIMATED QUANTITIES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

Sheet No. 2 of 82 Sheets

ESTIMATED QUANTITIES

TAB. LETTER	SHEET NO.	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	CITY OF RAMSEY CSAH 57	ANOKA COUNTY CSAH 57 S.A.P. 02-657-01	
								STORM SEWER	ROADWAY
K,Z	37,43	2506.516	CASTING ASSEMBLY	(17)	EACH	47	13	34	
D,E	5,6	2506.522	ADJUST FRAME & RING CASTING		EACH	11	1	10	
D,E	5,6	2506.602	RECONSTRUCT DRAINAGE STRUCTURE		EACH	6	1	1	4
K	37	2511.501	RANDOM RIPRAP CLASS II	(18)	CU YD	11.3		11.3	
Z	43	2511.501	RANDOM RIPRAP CLASS III		CU YD	13.8	13.8		
K,Z	37,43	2511.515	GEOTEXTILE FILTER TYPE IV		SQ YD	64	29	35	
F	6	2521.501	4" CONCRETE WALK	(19)(21)	SQ FT	9552			9552
F	6	2521.501	6" CONCRETE WALK	(20)(21)	SQ FT	1227			1227
F	6	2531.501	CONCRETE CURB & GUTTER DESIGN B418		LIN FT	2417			2417
F	6	2531.501	CONCRETE CURB & GUTTER DESIGN B424		LIN FT	3760			3760
F	6	2531.501	CONCRETE CURB & GUTTER DESIGN B618		LIN FT	1232			1232
F	6	2531.618	TRUNCATED DOMES		SQ FT	120			120
I	13	2540.602	MAIL BOX SUPPORT	(22)	EACH	1			1
K	37	2554.509	GUIDE POST TYPE B		EACH	3			3
		2554.603	WATER FILLED BARRIER		LIN FT	720			720
		2554.603	RELOCATE WATER FILLED BARRIER		LIN FT	720			720
		2557.602	INSTALL VEHICULAR GATE		EACH	1	1		
		2563.601	TRAFFIC CONTROL	(23)	LUMP SUM	1	0.18		0.82
N,O	53	2564.531	SIGN PANELS TYPE C	(24)	SQ FT	383.3	3.5		379.8
P	53	2564.536	INSTALL SIGN PANEL TYPE C	(24)	EACH	5			5
Q	53	2564.537	INSTALL SIGN TYPE SPECIAL	(24)	EACH	3			3
R	53	2564.552	DELINEATOR TYPE X4-13		EACH	8			8
R	53	2564.552	HAZARD MARKER X4-2		EACH	11			11
R	53	2564.554	SNOW PLOW MARKER X4-5		EACH	2			2
		2565.511	TRAFFIC CONTROL SIGNAL SYSTEM	(25)(26)	SIG SYS	1			1
		2565.601	EMERGENCY VEHICLE PREEMPTION SYSTEM	(26)	SIG SYS	1			1
		2565.616	TEMPORARY SIGNAL SYSTEM	(27)	SYSTEM	1			1

NOTES:

- (17) SEE SHEETS 38 AND 42 FOR CASTING TYPES.
- (18) PLACE GEOTEXTILE FILTER TYPE IV.
- (19) USED FOR CONCRETE MEDIANS.
- (20) USED FOR CONCRETE MEDIAN NOSE, AND DRIVEWAY APRONS
- (21) CONCRETE EXPANSION JOINT SPACING IN MEDIAN SHALL BE A MAXIMUM OF 20'.
- (22) THE CONTRACTOR SHALL PLACE SALVAGED MAIL BOXES ON MAIL BOX SUPPORT.
- (23) ALL TRAFFIC CONTROL AND SIGNING SHALL CONFORM TO THE MMUTCD INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- (24) F&I SIGN POST SHALL BE INCIDENTAL.
- (25) SIGNAL SYSTEM AT TH 10 / CSAH 57 (SUNFISH LAKE BLVD.). SIGNAL CONTROLLER AND CABINET INSTALLED FOR USE WITH TEMPORARY AND PERMANENT SIGNAL SYSTEM.
- (26) S.P. 0202-85 (STATE FUNDS PER AGREEMENT)
- (27) SIGNAL SYSTEM AT TH 10 / CSAH 57 (SUNFISH LAKE BLVD.).

ESTIMATED QUANTITIES

TAB. LETTER	SHEET NO.	ITEM NUMBER	ITEM	NOTE NO.	UNIT	TOTAL ESTIMATED QUANTITY	CITY OF RAMSEY CSAH 57	ANOKA COUNTY CSAH 57 S.A.P. 02-657-01	
								STORM SEWER	ROADWAY
G,Z	6,43	2573.502	SILT FENCE, TYPE MACHINE SLICED	(28)	LIN FT	3222	1270		1952
G	6	2573.530	STORM DRAIN INLET PROTECTION	(29)	EACH	35			35
G,Z	6,43	2575.501	SEEDING		ACRE	3.3	2.2		1.1
G	6	2575.502	SEED MIXTURE 260		POUND	110			110
Z	43	2575.502	SEED MIXTURE 328		POUND	194	194		
G	6	2575.505	SODDING TYPE SALT RESISTANT		SQ YD	1238			1238
G,Z	6,43	2575.511	MULCH MATERIAL TYPE 1		TON	6.6	4.4		2.2
G,Z	6,43	2575.519	DISK ANCHORING		ACRE	3.3	2.2		1.1
Z	43	2575.532	FERTILIZER TYPE 1	(30)	POUND	1110	1110		
G	6	2575.532	FERTILIZER TYPE 2	(31)	POUND	479			479
M	53	2582.501	PAVT MSSG (RR XING) PAINT		EACH	2	2		
L	53	2582.501	PAVT MSSG (LT ARROW) POLY PREF		EACH	7			7
L	53	2582.501	PAVT MSSG (RT ARROW) POLY PREF		EACH	2			2
L	53	2582.501	PAVT MSSG (RR XING) POLY PREF		EACH	4			4
L	53	2582.501	PAVT MSSG (ONLY) POLY PREF		EACH	7			7
L	53	2582.502	4" SOLID LINE WHITE-POLY PREFORM		LIN FT	137			137
L	53	2582.502	24" SOLID LINE WHITE-POLY PREFORM		LIN FT	116			116
J	19	2582.502	4" SOLID LINE WHITE-PAINT		LIN FT	3383			3383
M	53	2582.502	12" SOLID LINE WHITE-PAINT		LIN FT	16	16		
J	19	2582.502	24" SOLID LINE WHITE-PAINT		LIN FT	48			48
J	19	2582.502	4" DOUBLE SOLID LINE YELLOW-PAINT		LIN FT	3024			3024
L	53	2582.502	4" SOLID LINE WHITE-EPOXY		LIN FT	8258			8258
L	53	2582.502	24" SOLID LINE WHITE-EPOXY		LIN FT	116			116
L	53	2582.502	4" BROKEN LINE WHITE-EPOXY		LIN FT	1812			1812
L	53	2582.502	8" DOTTED LINE WHITE-EPOXY		LIN FT	893			893
L	53	2582.502	4" SOLID LINE YELLOW-EPOXY		LIN FT	2954			2954
L	53	2582.502	24" SOLID LINE YELLOW-EPOXY		LIN FT	243			243
L	53	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY		LIN FT	1195			1195
L	53	2582.503	CROSSWALK MARKING-POLY PREFORM		SQ FT	360			360

NOTES:

- (28) INCLUDES REMOVING SEDIMENT BUILD-UP AND REPAIRING, REPLACING, OR SUPPLEMENTING WHEN NON-FUNCTIONAL.
- (29) SEE SHEET 49 FOR DETAILS.
- (30) ANALYSIS (20-0-10)
- (31) ANALYSIS (22-5-10)

DATE: 7/24/2008 TIME: 8:45:11 AM FILENAME: K:\CP\Anoka\372000\wp\brdg\wp\m-sh\est57_fbd.dgn

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SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/24/2008 LIC. NO. 22405

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 CSAH 57 RECONSTRUCTION

ESTIMATED QUANTITIES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 3 of 82 Sheets

DATE: 7/18/2008 TIME: 12:32:04 PM
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THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

INDEX OF TABULATIONS		
TAB. LETTER	SHEET NO.	DESCRIPTION
A	5	CLEARING AND GRUBBING
B	5	MISCELLANEOUS REMOVALS AND SAWCUTS
C	5	INPLACE WATERMAIN ITEMS
D	5	INPLACE STORM SEWER AND CULVERTS
E	6	INPLACE SANITARY SEWER
F	6	BITUMINOUS, CONCRETE AND AGGREGATE ITEMS
G	6	EROSION CONTROL AND TURF ESTABLISHMENT
H	7	EARTHWORK SUMMARY
I	13	MAILBOXES
J	19	TEMPORARY STRIPING
K	37	STORM SEWER
L	53	PAVEMENT MARKINGS - ROADWAY
M	53	PAVEMENT MARKINGS - CITY PATH
N	53	SIGN PANELS TYPE C - ROADWAY
O	53	SIGN PANELS TYPE C - CITY PATH
P	53	SALVAGE AND INSTALL SIGN TYPE C
Q	53	SALVAGE AND INSTALL SIGN TYPE SPECIAL
R	53	DELINEATORS AND MARKERS
Z	43	CITY OF RAMSEY - LOCAL FUNDING IMPROVEMENTS

STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3007D	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133C	RIPRAP AT RCP OUTLETS
3145F	CONCRETE PIPE TIES
4005L	MANHOLE OR CATCH BASIN TYPE A & B CONE SECTIONS PRECAST - DESIGN F
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
4110F	COVER CASTING FOR MANHOLE
4125D	CATCH BASIN FRAME CASTING - CASTING NO. 806
4134A	CURB BOX CASTING FOR CATCH BASIN - CASTING NO. 825
4154B	CATCH BASIN GRATE CASTING (GRATE CASTING NO. 816)
4180J	MANHOLE OR CATCH BASIN STEP
7036F	PEDESTRIAN CURB RAMP FOR THE HANDICAPPED
7100H	CONCRETE CURB AND GUTTER
7102I	CONCRETE CURB AND GUTTER
7109C	MEDIAN NOSE AND ISLAND
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
7113A	CONCRETE APPROACH NOSE DETAIL
8000I	STANDARD BARRICADES
8110D	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8114A	P.V.C. HAND HOLE/PULL BOX
8115D	PEDESTRIAN PUSH BUTTON INSTALLATION
8121E	TRANSFORMER BASE AND POLE BASE PLATE
8123E	POLE AND MAST ARM - LUMINARIES AND TRAFFIC LIGHTS ASSEMBLY
8124E	MAST ARM SIGNAL HEAD MOUNTS
8126H	POLE FOUNDATION (PA90 AND PA100)
8150C	INSTALLATION OF CULVERT MARKERS
8337B	TEMPORARY PORTABLE PRECAST CONCRETE BARRIER (TYPE F)
9102D	TURF ESTABLISHMENT AREA (AT PIPE CULVERT ENDS)

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 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/18/2008 LIC. NO. 22405

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 CSAH 57 RECONSTRUCTION

INDEX OF TABULATIONS
 AND STANDARD PLATES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 4 of 82 Sheets

CHECKED BY: JMW

CLEARING AND GRUBBING - TAB A (1)		
STATION TO STATION	CLEARING	GRUBBING
	TREE	TREE
NB57 ALIGNMENT		
STA. 95+76 TO STA. 109+00	39	51
STA. 109+00 TO STA. 118+60	5	5
TOTALS	44	56

MISCELLANEOUS REMOVALS AND SAWCUTS - TAB B (1)					
STATION TO STATION	REMOVE CURB AND GUTTER	REMOVE GUARD RAIL	REMOVE CONCRETE WALK	REMOVE BITUMINOUS PAVEMENT	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)
	LIN FT	LIN FT	SQ YD	SQ YD	LIN FT
NB57 ALIGNMENT					
STA. 95+76 TO STA. 109+00	1376	51	254	1378	1344
STA. 109+00 TO STA. 118+60	397				399
TOTALS	1773	51	254	1378	1743

INPLACE WATERMAIN ITEMS - TAB C												
STATION / OFFSET	REMOVE GATE VALVE & BOX	SALVAGE GATE VALVE & BOX	SALVAGE HYDRANT	INSTALL HYDRANT	INSTALL GATE VALVE & BOX	ADJUST VALVE BOX	8"X6" REDUCER	12" SLEEVE	6" PIPE BEND 45 DEGREE	6" GATE VALVE AND BOX	12" GATE VALVE AND BOX	6" WATERMAIN DUCTILE IRON CL 53
	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN FT
NB57 ALIGNMENT												
STA. 97+13, 2' RT						1						48
STA. 98+32, 37' LT	1		1	1						1		
STA. 98+63, 36' LT	1							1			1	
STA. 101+04, 56' LT						1						
STA. 101+09, 73' LT	1							1			1	
STA. 101+13, 69' LT		1	1	1	1				1			26
STA. 103+92, 89' LT						1						
STA. 105+40, 68' LT	1							1			1	
STA. 106+64, 69' LT	1							1			1	
STA. 109+43, 35' RT		1	1	1	1		1					6
STA. 109+69, 76' LT	1							1			1	
STA. 109+70, 2' RT						3						
STA. 117+98, 26' RT						1						
TOTALS	6	2	3	3	2	7	1	5	1	1	5	80

INPLACE STORM SEWER AND CULVERTS - TAB D											
STATION TO STATION	OFFSETS	INPLACE ITEM	EXIST. ELEV.	PROP. ELEV.	CHANGE	REMOVE PIPE CULVERT	ADJUST FRAME AND RING CASTING (2)		RECONSTRUCT DRAINAGE STRUCTURE (2)(3)		REMOVE DRAINAGE STRUCTURE
						LIN FT	CITY EACH	COUNTY EACH	CITY EACH	COUNTY EACH	EACH
NB57 ALIGNMENT											
STA. 96+02	23' LT	MANHOLE	856.24	856.09	-0.15		1				
STA. 98+73	52' LT	MANHOLE	858.95	859.97	1.02				1		
STA. 100+88	81' LT	MANHOLE	858.53	860.20	1.67					1	
STA. 100+83	51' LT	MANHOLE	859.53	860.44	0.91			1			
STA. 101+49 TO STA. 102+00	22' RT	18" CMP				51					
STA. 105+05	58' LT	MANHOLE	864.75	865.37	0.62			1			
STA. 107+80	53' LT	MANHOLE	865.37	865.26	-0.11			1			
STA. 107+92	97' LT	MANHOLE	863.57	863.60	0.03			1			
STA. 108+77	96' LT	MANHOLE									1
STA. 110+26	96' LT	MANHOLE	865.30	865.34	0.04			1			
STA. 109+48 TO STA. 110+07	17' RT	18" CMP				60					
STA. 109+65 TO STA. 110+38	70' LT	18" CMP				73					
STA. 117+23 TO STA. 118+35	70' LT	18" CMP				112					
STA. 117+40 TO STA. 118+31	10' RT	24" CMP				91					
TOTALS						387	1	5	1	1	1

NOTE
(2) USE A MINIMUM OF 2 AND A MAXIMUM OF 6 ADJUSTING RINGS.
(3) SEE TAB E FOR ADDITIONAL DRAINAGE STRUCTURES FOR RECONSTRUCTION.

NOTE
(1) SEE TAB Z FOR QUANTITIES ASSOCIATED WITH CITY DRAINAGE IMPROVEMENTS.

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SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 7/31/2008 LIC. NO. 22405

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CSA# 57 RECONSTRUCTION

QUANTITY TABULATIONS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
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INPLACE SANITARY SEWER - TAB E						
STATION / OFFSET	EXIST. ELEV.	PROP. ELEV.	CHANGE	ADJUST	RECONSTRUCT	
				FRAME AND RING CASTING EACH	DRAINAGE STRUCTURE (2) (3) EACH	
NB57 ALIGNMENT						
STA. 96+02	12' LT	856.35	856.30	-0.05	1	
STA. 98+58	44' LT	858.94	859.94	1.00	1	
STA. 100+98	61' LT	859.04	860.09	1.05		1
STA. 104+99	78' LT	864.20	865.53	1.33		1
STA. 106+81	80' LT	863.31	865.75	2.44		1
STA. 109+79	78' LT	865.51	865.80	0.29	1	
STA. 109+79	11' RT	866.45	865.97	-0.48	1	
STA. 113+78	12' RT	867.22	869.20	1.98		1
STA. 117+88	13' RT	876.32	875.76	-0.56	1	
TOTALS					5	4

NOTES:

- (2) USE A MINIMUM OF 2 AND A MAXIMUM OF 6 ADJUSTING RINGS.
- (3) SEE TAB D FOR ADDITIONAL DRAINAGE STRUCTURES FOR RECONSTRUCTION.

BITUMINOUS, CONCRETE AND AGGREGATE ITEMS - TAB F (1)											
STATION TO STATION	BITUMINOUS ITEMS				CONCRETE ITEMS						AGGREGATE ITEM
	MILL BIT. SURFACE (2.0")	TYPE SP WEAR (SPWEB440E)	TYPE SP NON WEAR (SPNWC430B)	TACK COAT	4" CONC. WALK	6" CONC. WALK	B418 CURB AND GUTTER	B424 CURB AND GUTTER	B618 CURB AND GUTTER	TRUNCATED DOMES	AGGREGATE BASE CLASS 5
	SQ YD	TON (4)	TON (4)	GALLON (5)	SQ FT	SQ FT	LIN FT	LIN FT	LIN FT	SQ FT	CU YD
NB57 ALIGNMENT											
STA. 95+76 TO STA. 109+00	272	2657	1365	1100	7670	1178	1145	1986	1193	48	2124
STA. 109+00 TO STA. 118+60		2145	1151	906	1882	49	1272	1774	39	72	1663
TOTALS	272	4802	2516	2006	9552	1227	2417	3760	1232	120	3787

BASIS OF QUANTITIES:

- (4) SPEC. 2360 BITUMINOUS MIXTURES COMPUTED AT 113 POUNDS / SQ YD / INCH.
- (5) BITUMINOUS MATERIAL FOR TACK COAT COMPUTED AT 0.05 GALLONS / SQ YD./LIFT.

EROSION CONTROL AND TURF ESTABLISHMENT - TAB G (1)								
STATION TO STATION	SILT FENCE TYPE MACHINE SLICED	STORM DRAIN INLET PROTECTION	SEEDING	SEED MIX 260 (6)	SODDING TYPE SALT RESISTANT	MULCH MATERIAL TYPE 1 (7)	DISK ANCHORING	FERTILIZER TYPE 2 (22-5-10) (8)
	LIN FT	EACH	ACRE	POUND	SQ YD	TON	ACRE	POUND
NB57 ALIGNMENT								
STA. 95+76 TO STA. 109+00	1231	21	0.7	70	699	1.4	0.7	300
STA. 109+00 TO STA. 118+60	721	14	0.4	40	539	0.8	0.4	179
TOTALS	1952	35	1.1	110	1238	2.2	1.1	479

BASIS OF QUANTITIES:

- (6) APPLIED AT A RATE OF 100 POUND/ACRE.
- (7) APPLIED AT A RATE OF 2 TON/ACRE.
- (8) APPLIED AT A RATE OF 350 POUND/ACRE FOR SEED MIX 260. APPLIED AT A RATE OF 350 POUND/ACRE FOR SODDING.

NOTE

- (1) SEE TAB Z FOR QUANTITIES ASSOCIATED WITH CITY DRAINAGE IMPROVEMENTS.

DATE: 7/21/2008 TIME: 6:58:02 AM FILENAME: K:\p\Arakchy\13721000\my-brdg\my-plr-sif\csat57_tbad.gn

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 DATE: 7/21/2008 LIC. NO. 22405

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QUANTITY TABULATIONS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

Sheet No. 6 of 82 Sheets

DATE: 7/18/2008 TIME: 12:27:04 PM
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EARTHWORK VOLUMES BY STATIONS					
STATION	EXCAVATION (E.V.)		EMBANKMENT (C.V.)		
	COMMON (1)	SUBGRADE	SUITABLE GRADING	SELECT GRANULAR	TOPSOIL
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)
CSAH 57					
100+50.00					
101+00.00	280	206	18	229	18
101+50.00	332	183	24	206	20
101+75.86	190	91	5	91	6
102+00.00	176	81	7	84	7
102+50.00	335	163	16	173	12
103+00.00	348	159	10	171	8
103+50.00	304	143	18	166	9
104+00.00	229	130	75	162	22
104+50.00	206	120	100	162	22
104+66.91	62	39	31	55	2
104+76.77	35	23	19	32	0
105+00.00	70	53	49	75	6
105+50.00	122	104	119	146	24
106+00.00	46	46	30	54	6
106+50.00	139	117	90	142	20
107+00.00	193	116	152	163	27
107+50.00	234	124	130	167	25
108+00.00	261	131	99	172	17
108+50.00	260	133	104	174	18
109+00.00	243	132	148	173	31
109+50.00	269	158	139	190	37
109+79.09	203	112	32	118	17
110+00.00	169	97	1	97	4
110+50.00	317	208	8	224	6
111+00.00	236	153	14	179	14
111+50.00	250	150	10	174	16
112+00.00	254	147	11	174	15
112+50.00	256	147	13	174	13
113+00.00	256	148	20	174	14
113+50.00	251	147	29	173	14
114+00.00	245	140	43	170	21
114+50.00	250	133	55	165	29
115+00.00	244	133	55	164	27
115+50.00	236	135	52	168	23
116+00.00	233	139	47	172	21
116+50.00	226	143	41	174	18
117+00.00	224	144	47	174	17
117+50.00	237	160	48	176	20
118+00.00	269	174	21	175	11
118+50.00	199	132	5	132	10
TOTALS	8,889	5,194	1,935	6,144	647

EARTHWORK VOLUMES BY STATIONS					
STATION	EXCAVATION (E.V.)		EMBANKMENT (C.V.)		
	COMMON (1)	SUBGRADE	SUITABLE GRADING	SELECT GRANULAR	TOPSOIL
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)
SUNFISH LAKE BLVD.					
195+71.59					
196+00.00	62	50	4	50	6
196+28.14	73	50	3	50	5
196+50.00	70	40	2	40	5
196+66.09	59	31	1	31	4
197+00.00	142	72	5	72	9
197+50.00	237	125	11	125	18
198+00.00	248	155	20	155	17
198+50.00	191	142	41	153	15
199+00.00	128	113	84	131	18
TOTALS	1,210	778	171	807	97

EARTHWORK SUMMARY - TAB H					
LOCATION	EXCAVATION (E.V.)		EMBANKMENT (C.V.)		
	COMMON	SUBGRADE	SUITABLE GRADING	SELECT GRANULAR	TOPSOIL
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)
SUNFISH LK BLVD.	1,210	778	171	807	97
CSAH 57	8,889	5,194	1,935	6,144	647
CITY DRAINAGE SYSTEM	9,828	0	0	0	641
TOTALS	19,927	5,972	2,106	6,951	1,385

- NOTES:**
- (1) COMMON EXCAVATION INCLUDES 194 C.Y. (EV) OF PAVEMENT REMOVAL AND 249 C.Y. (EV) OF TOPSOIL EXCAVATION. REMAINING 767 C.Y. (EV) IS AVAILABLE FOR USE AS SUITABLE GRADING MATERIAL.
 - (2) COMMON EXCAVATION INCLUDES 1,616 C.Y. (EV) OF PAVEMENT REMOVAL AND 2,341 C.Y. (EV) OF TOPSOIL EXCAVATION. REMAINING 4,932 C.Y. (EV) IS AVAILABLE FOR USE AS SUITABLE GRADING MATERIAL.
 - (3) AN AVERAGE TOPSOIL DEPTH OF 6.75" WAS USED FOR QUANTITY PURPOSES. AN AVERAGE BITUMINOUS DEPTH OF 5" WAS USED FOR QUANTITY PURPOSES.
 - (4) COMMON EXCAVATION INCLUDES 78 C.Y. (EV) OF PAVEMENT REMOVAL AND 350 C.Y. (EV) OF TOPSOIL EXCAVATION. REMAINING 9,400 C.Y. (EV) IS AVAILABLE FOR USE AS SUITABLE GRADING. SEE TAB Z FOR CITY DRAINAGE SYSTEM IMPROVEMENT QUANTITIES.

SOIL AND CONSTRUCTION NOTES:

1. THE GRADING GRADE IS DEFINED AS THE BOTTOM OF THE CLASS 5 OR 6 AGGREGATE BASE.
2. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL, AND OTHER UNSTABLE MATERIAL.
3. GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B.
4. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B.
5. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND MAY BE RECYCLED OR DISPOSED OF OFF THE RIGHT OF WAY.
6. OBTAIN COMPACTION OF THE GRADING PORTIONS OF CONSTRUCTION IN ACCORDANCE WITH THE "SPECIFIED DENSITY METHOD" REQUIREMENTS. OBTAIN COMPACTION OF THE AGGREGATE BASE PORTIONS OF CONSTRUCTION IN ACCORDANCE WITH THE "MODIFIED PENETRATION INDEX METHOD" REQUIREMENTS.
7. UNLESS OTHERWISE REQUIRED, ADD 1:20 TAPERS TO THE FULL DEPTH STATION LIMITS OF ALL SUBGRADE EXCAVATIONS. PROVIDE 1:20 TRANSITION TAPERS BETWEEN CHANGES IN SUBGRADE EXCAVATION DEPTHS.
8. 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 A 1:1 SLOPE TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
9. 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.
10. 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 1:20 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
11. PROVIDE A SAWCUT TO ENSURE A UNIFORM JOINT WHERE PLACING NEW PAVEMENT NEXT TO INPLACE PAVEMENT.
12. 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 RATE SPECIFIED IN SPEC. 2357. THE ASPHALT EMULSION MAY BE DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
13. STRIP AND REUSE AS SLOPE DRESSING ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION. AVERAGE DEPTHS ENCOUNTERED WERE 6.75 INCHES ON THE ROADWAY PORTION AND 3 INCHES ON THE CITY DRAINAGE SYSTEM PORTION.
14. AS A PRECAUTIONARY MEASURE FROM A SOILS STANDPOINT, TRAFFIC LANES TO BE USED DURING CONSTRUCTION MUST BE DELINEATED TO KEEP VEHICLES A SAFE DISTANCE AWAY FROM THE ADJACENT EXCAVATION. THE DELINEATION SHOULD COINCIDE WITH POINTS ESTABLISHED BY PROJECTING 1:2 OR GREATER (FLATTER) SLOPE BETWEEN THE EDGE OF THE TRAFFIC SURFACE AND THE BOTTOM OF THE EXCAVATION. A 1:3 OR FLATTER SLOPE WILL BE REQUIRED IN SWAMP EXCAVATION AREAS.
15. 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.
16. PIPE SEWERS CONNECTING MANHOLES AND CATCH BASINS SHALL BE IN ACCORDANCE WITH SPEC. 2503. BEDDING AND BACKFILL SHALL CONSIST OF UNIFORM SUITABLE GRADING MATERIAL MATCHING ADJACENT SOILS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
17. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPEC. 2105.3D.

EARTHWORK BALANCE

EXCAVATION (CU YD)		EMBANKMENT (CU YD)	
COMMON EXCAVATION (1)	19,927 (EV)	TOPSOIL NOT NEEDED ON PROJECT (5)	1,139 (EV)
		TOPSOIL MATERIAL NEEDED	1,801 (EV) / 1.3 = 1,385 (CV)
		GRADING MATERIAL NEEDED	2,738 (EV) / 1.3 = 2,106 (CV)
		GRADING MATERIAL NOT NEEDED ON PROJECT (5)	18,333 (EV)
SUBGRADE EXCAVATION	5,972 (EV)	SELECT GRANULAR BORROW	6,951 (CV)
			6,951 (CV) SELECT GRANULAR EMBANKMENT

- NOTES:**
- (5) MATERIAL NOT USED ON PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE RIGHT-OF-WAY.

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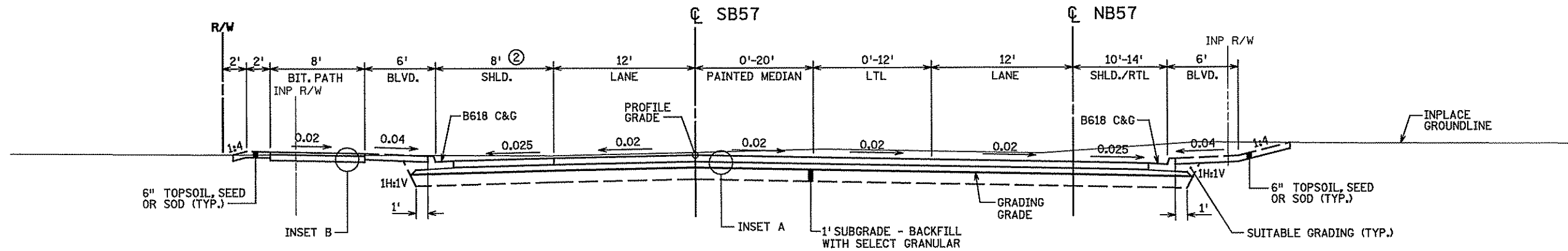
SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/18/2008 LIC. NO. 22405

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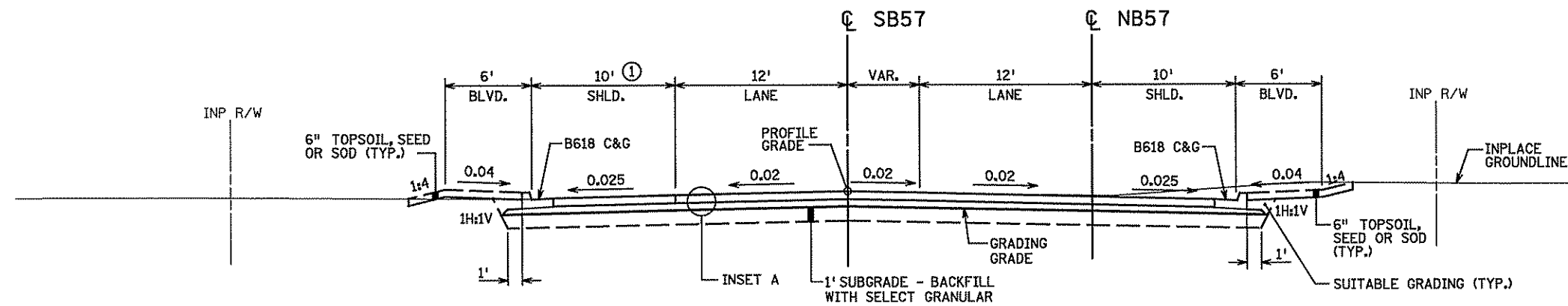
ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

EARTHWORK TABULATIONS,
 SUMMARY AND SOIL/CONST. NOTES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 7 of 82 Sheets



SUNFISH LAKE BLVD.
(NB57 STA. 96+70 TO STA. 98+00)



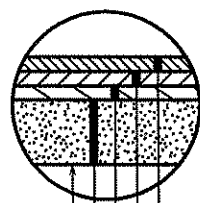
SUNFISH LAKE BLVD.
(NB57 STA. 95+76 TO STA. 96+70)

GENERAL NOTES:

- ALL STATIONS REFER TO NB CSAH 57 ALIGNMENT UNLESS OTHERWISE INDICATED.
- SEE CONSTRUCTION PLANS FOR TURN LANE LOCATIONS.
- ALL CROSS SLOPES ARE EXPRESSED IN FT/FT.
- NORMAL CROSS SLOPES ARE SHOWN. FOR SUPERELEVATION TRANSITIONS, SEE SUPERELEVATION PLANS.
- MAXIMUM SHOULDER SUPERELEVATION ROLLOVER SHALL BE 0.07 FT/FT.
- UNLESS OTHERWISE SPECIFIED, THE GRADING GRADE CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.
- SUBGRADE EXCAVATION DIMENSION SHOWN ARE FROM BACK OF CURB.
- UNLESS OTHERWISE SPECIFIED, CLASS 5 AGGREGATE WILL EXTEND 1' BEYOND BACK OF CURB.

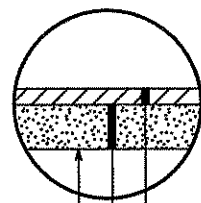
NOTES:

- ① BEGIN SHOULDER TRANSITION AT SB STA. 196+35.76.
- ② END SHOULDER TRANSITION AT SB STA. 196+95.08.



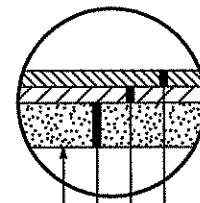
INSET A
ROADWAY

- SPEC 2360 2" TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB440E)
- SPEC 2360 2" TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB440E)
- SPEC 2360 2" TYPE SP 12.5 NON-WEARING COURSE MIXTURE (SPNWB430B)
- SPEC 2211 6" AGGREGATE BASE (CV), CLASS 5
- GRADING GRADE



INSET B
BIT. PATH

- SPEC 2360 2.5" TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB440E)
- SPEC 2211 6" AGGREGATE BASE (CV), CLASS 5
- GRADING GRADE



INSET C
COMMERCIAL ENTRANCE

- SPEC 2360 2" TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB440E)
- SPEC 2360 2" TYPE SP 12.5 WEARING COURSE MIXTURE (SPWEB440E)
- SPEC 2211 6" AGGREGATE BASE (CV), CLASS 5
- GRADING GRADE

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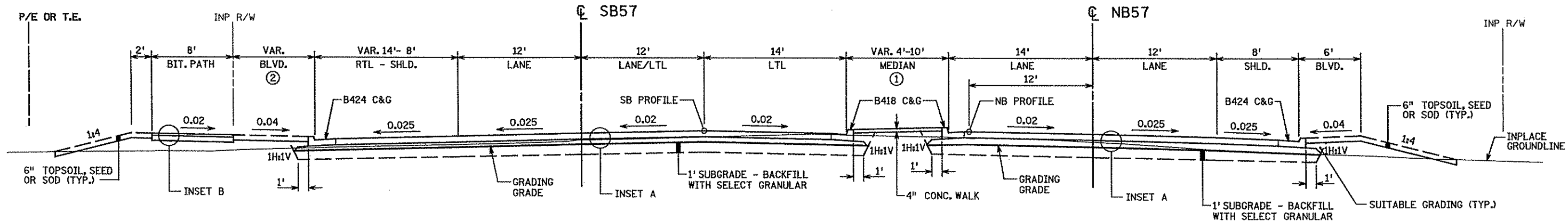
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PRINTED NAME: JOSEPH M. WEAVER
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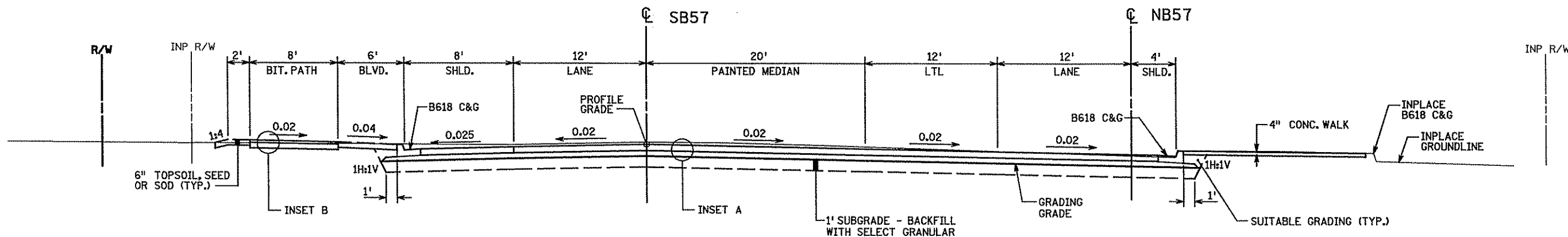
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

TYPICAL SECTIONS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 8 of 82 Sheets



NB57 STA. 100+25 TO STA. 104+68
NB57 STA. 109+90 TO STA. 113+45



SUNFISH LAKE BLVD.
(NB57 STA. 98+00 TO STA. 99+00)

NOTES:

- ① MEDIAN WIDTHS:
 - 4' FROM NB STA. 100+61.35 TO 100+95.69
 - TRANS. 4' TO 10' FROM NB STA. 100+95.69 TO 104+46.59
 - 4' FROM NB STA. 110+34.87 TO 113+45
- ② BLVD. WIDTHS:
 - VARIES TO MATCH INPLACE, NB STA. 100+25 TO 104+68
 - 5.615' (5' FROM BACK OF CURB) NB STA. 110+50 TO 113+45

GENERAL NOTES:

- ALL STATIONS REFER TO NB CSAH 57 ALIGNMENT UNLESS OTHERWISE INDICATED.
- SEE CONSTRUCTION PLANS FOR TURN LANE LOCATIONS.
- ALL CROSS SLOPES ARE EXPRESSED IN FT/FT.
- NORMAL CROSS SLOPES ARE SHOWN. FOR SUPERELEVATION TRANSITIONS, SEE SUPERELEVATION PLANS.
- MAXIMUM SHOULDER SUPERELEVATION ROLLOVER SHALL BE 0.07 FT/FT.
- UNLESS OTHERWISE SPECIFIED, THE GRADING GRADE CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.
- SUBGRADE EXCAVATION DIMENSION SHOWN ARE FROM BACK OF CURB.
- UNLESS OTHERWISE SPECIFIED, CLASS 5 AGGREGATE WILL EXTEND 1' BEYOND BACK OF CURB.

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PRINTED NAME: **JOSEPH M. WEAVER**
DATE: **6/17/2008** LIC. NO. **22405**

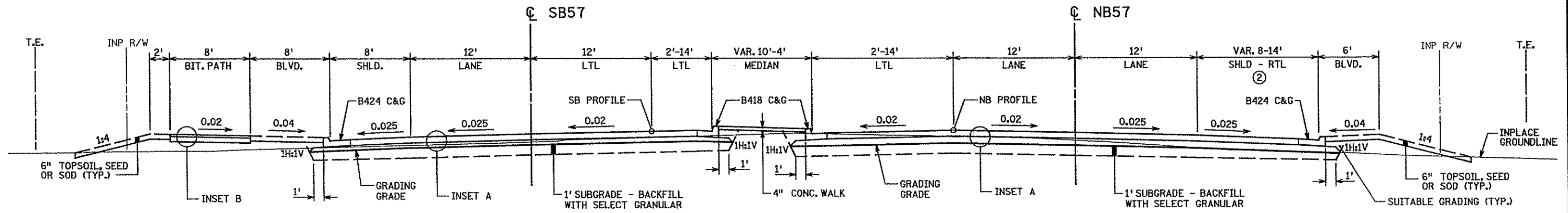
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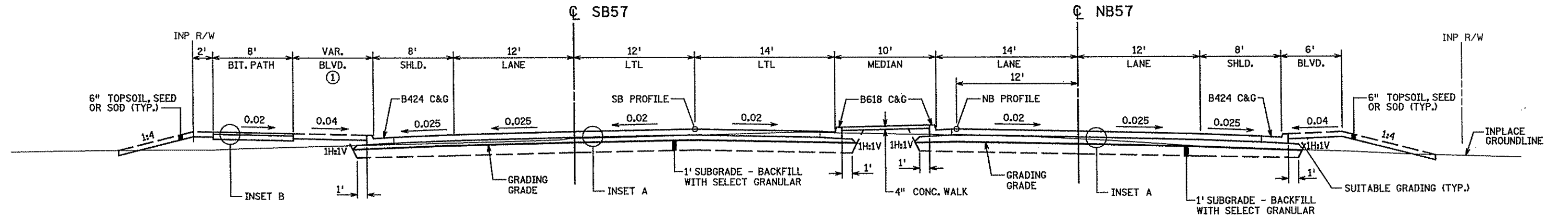
TYPICAL SECTIONS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 9 of 82 Sheets

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NB57 STA. 107+09 TO STA. 109+90



NB57 STA. 104+68 TO STA. 107+09

NOTES:

- ① BLVD. WIDTH VARIES 8' - 12', SEE BITUMINOUS PATH DETAIL.
- ② BEGIN 14' RTL AT STA. 107+79.93

GENERAL NOTES:

- ALL STATIONS REFER TO NB CSAH 57 ALIGNMENT UNLESS OTHERWISE INDICATED.
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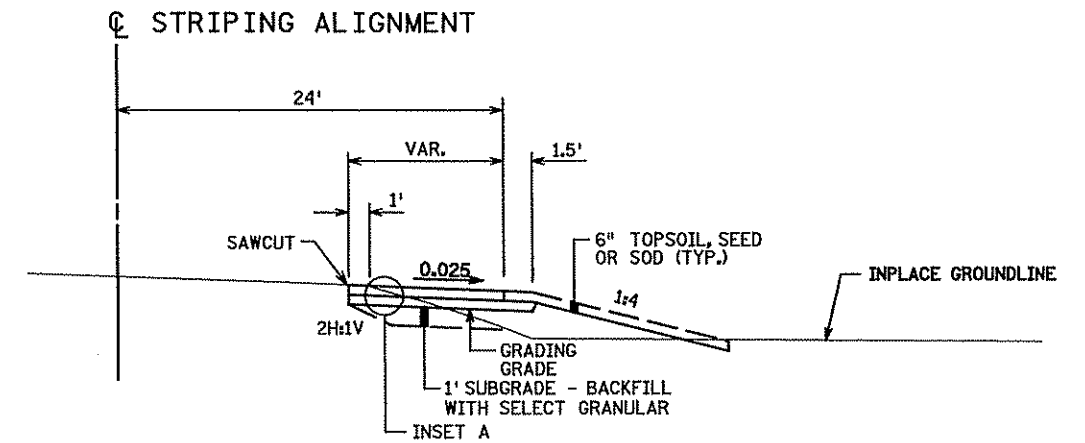
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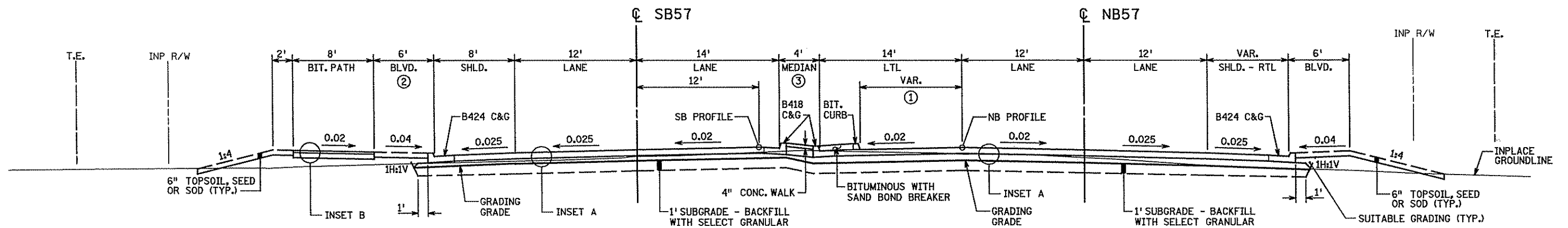
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

TYPICAL SECTIONS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 10 of 82 Sheets



TYPICAL WIDENING
NB57 STA. 118+60 TO STA. 120+53.23



NB57 STA. 113+45 TO STA. 118+60

NOTES:

- ① SEE ALIGNMENT PLAN - BIT. CURB IS 14' LEFT OF STRIPING ALIGNMENT.
- ② BLVD. WIDTHS:
- TRANS. 5.615' TO 6' FROM NB STA. 113+45 TO 114+35
- 6' FROM NB STA. 114+35 TO 116+28
- ③ END MEDIAN STA. 116+28.46

GENERAL NOTES:

- ALL STATIONS REFER TO NB CSAH 57 ALIGNMENT UNLESS OTHERWISE INDICATED.
- SEE CONSTRUCTION PLANS FOR TURN LANE LOCATIONS.
- ALL CROSS SLOPES ARE EXPRESSED IN FT/FT.
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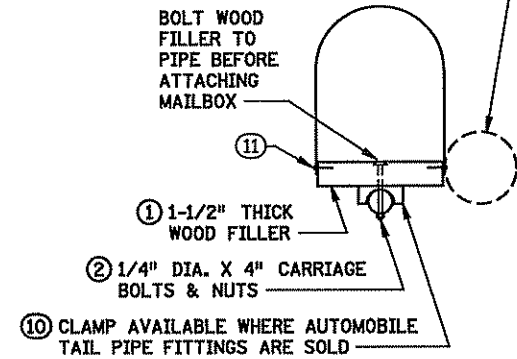
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

TYPICAL SECTIONS

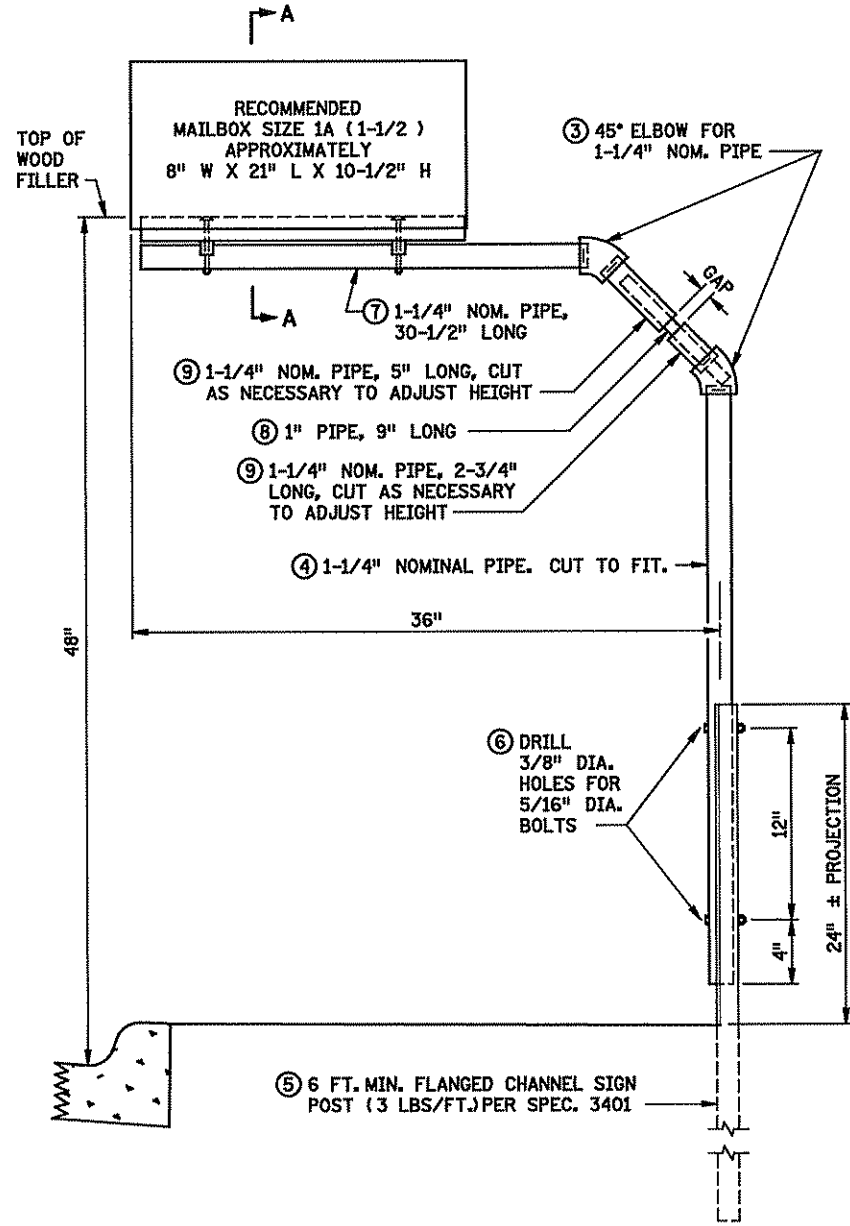
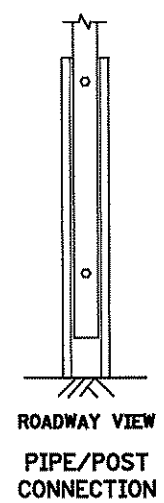
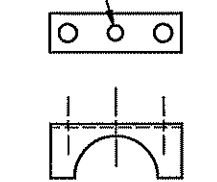
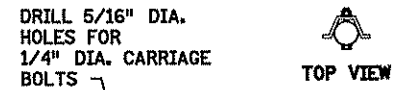
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IF NECESSARY, LOCATE NEWSPAPER HOLDER ABOVE HORIZONTAL PIPE TO PREVENT SNOW PLOW DAMAGE.



SECTION A-A



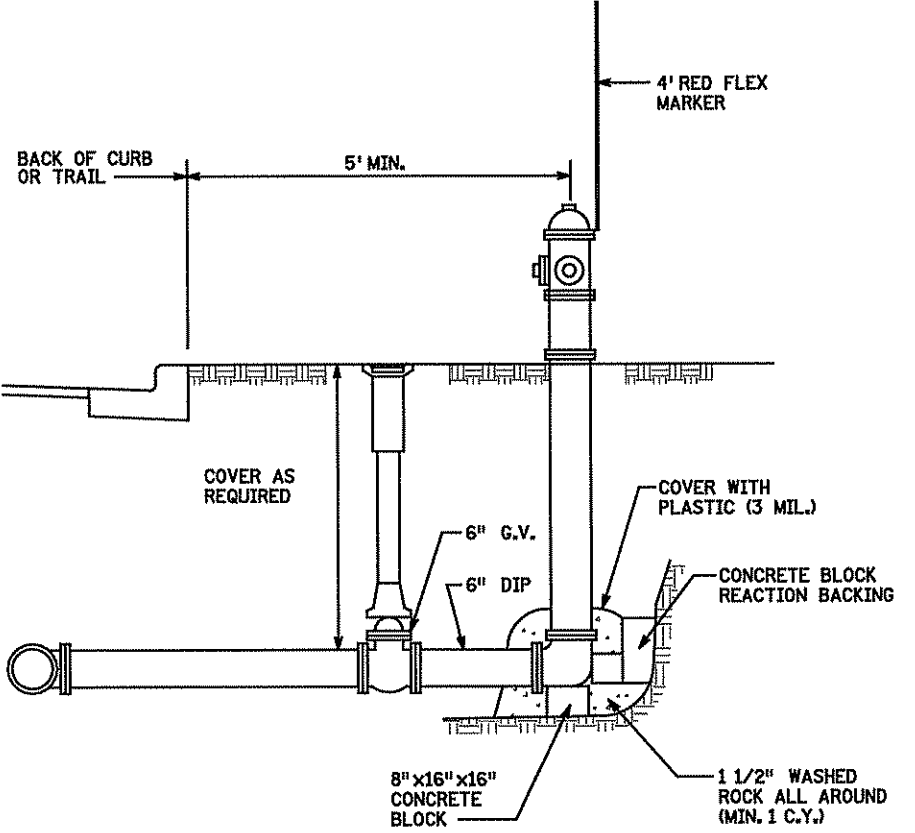
URBAN MAILBOX SUPPORT

STEEL PIPE WITH FITTINGS AND STEEL FENCE POST

LIST OF MATERIALS FOR CONTRACTORS

ITEM NO.	NUMBER REQUIRED	DESCRIPTION
1	1	1-1/2" THICK WOOD FILLER CUT TO FIT SNUG UNDER MAIL BOX
2	2	1/4" DIA. X 4" LONG CARRIAGE BOLTS & NUTS
3	2	45° ELBOW FOR 1-1/4" NOMINAL PIPE
4	1	1-1/4" NOMINAL PIPE, CUT TO FIT
5	1	6 FT. MIN. SIGN POST (3 LBS./FT.)
6	2	5/16" DIA. BOLT, NUT & LOCKWASHER
7	1	1-1/4" NOMINAL PIPE, 30-1/2" LONG
8	1	1" PIPE, 9" LONG
9	1	1-1/4" NOMINAL PIPE, 5" LONG
10	2	1-1/2" TAIL PIPE CLAMP
11	9	NO. 10 X 1" SHEET METAL SCREWS

MAILBOXES - TAB I		
STATION	SIDE	MAILBOX SUPPORT
NB57 101+98	RT	1
TOTAL		1



- NOTES:**
1. IN AREAS OF EXTRA DEPTH ON THE WATERMAIN, HYDRANT EXTENSIONS MAY BE REQUIRED.
 2. HYDRANT, VALVE AND FITTINGS SHALL BE RESTRAINED. RETAINING GLANDS SHALL BE USED.
 3. TOP NUT OF HYDRANT 2.5' ABOVE TOP BACK OF CURB.
 4. HYDRANTS BURIED BELOW WATER TABLE, DRAIN HOLES NEED TO BE PLUGGED AND HYDRANT MARKED BY PAINTING 5" CAP YELLOW.
 5. ALL VALVE BOXES SHALL HAVE A VALVE NUT EXTENSION TO WITHIN 1' OF FINISHED GRADE.
 6. BRUSH PAINT ALL HYDRANTS AFTER INSTALLATION IS COMPLETE.

HYDRANT RELOCATION DETAIL

NOT TO SCALE

GENERAL NOTES

- ALL PIPE AND PIPE FITTINGS SHALL CONFORM TO SPEC 3362.
- ALL FASTENERS SHALL CONFORM TO SPEC 3391.
- ALL MATERIALS SHALL BE GALVANIZED PER SPEC 3392.
- MAILBOX LOCATIONS SHOULD BE STAKED BEFORE INSTALLATION FOR PROPER HEIGHT AND DISTANCE FROM THE ROADWAY. ONCE STAKED, THE INSTALLER MUST NOTIFY THE ENGINEER AND THE POST OFFICE. THE ENGINEER AND POSTMASTER/MAILCARRIER WILL BE ALLOWED 48 HOURS TO REVIEW AND MODIFY THE STAKED LOCATIONS PRIOR TO FINAL INSTALLATION.
- OTHER MN/DOT APPROVED MAILBOX SUPPORTS MAY BE USED. THESE INCLUDE THE DESIGNS DEVELOPED BY ANOKA COUNTY, THE METRO MN/DOT DISTRICT, FRIEND INNOVATIONS AND MINNCOR INDUSTRIES.
- DESIGN MODIFICATIONS TO PREVIOUSLY APPROVED SUPPORTS SHALL BE DOCUMENTED AND SENT TO THE DESIGN STANDARDS ENGINEER, OFFICE OF TECHNICAL SUPPORT.
- THE MAILBOX TO BE 8 INCHES TO 12 INCHES OUTSIDE THE EDGE OF SHOULDER OR 6 INCHES TO 12 INCHES FROM FACE OF CURB.
- NO MORE THAN THREE MAILBOXES SPACED 30 INCHES CENTER TO CENTER ARE TO BE USED IN ONE LOCATION.
- BOX MUST BE LOCATED SO CARRIER CAN SERVE WITHOUT LEAVING VEHICLE.

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 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/18/2008

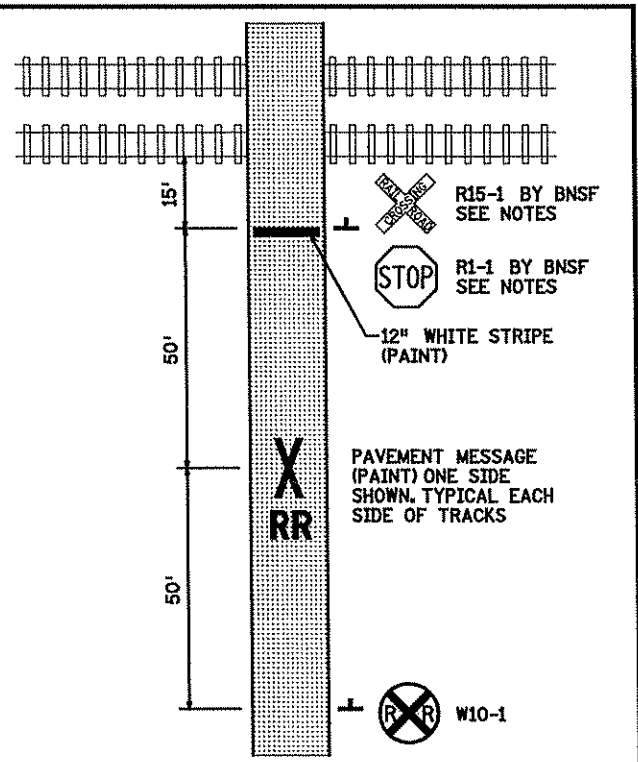
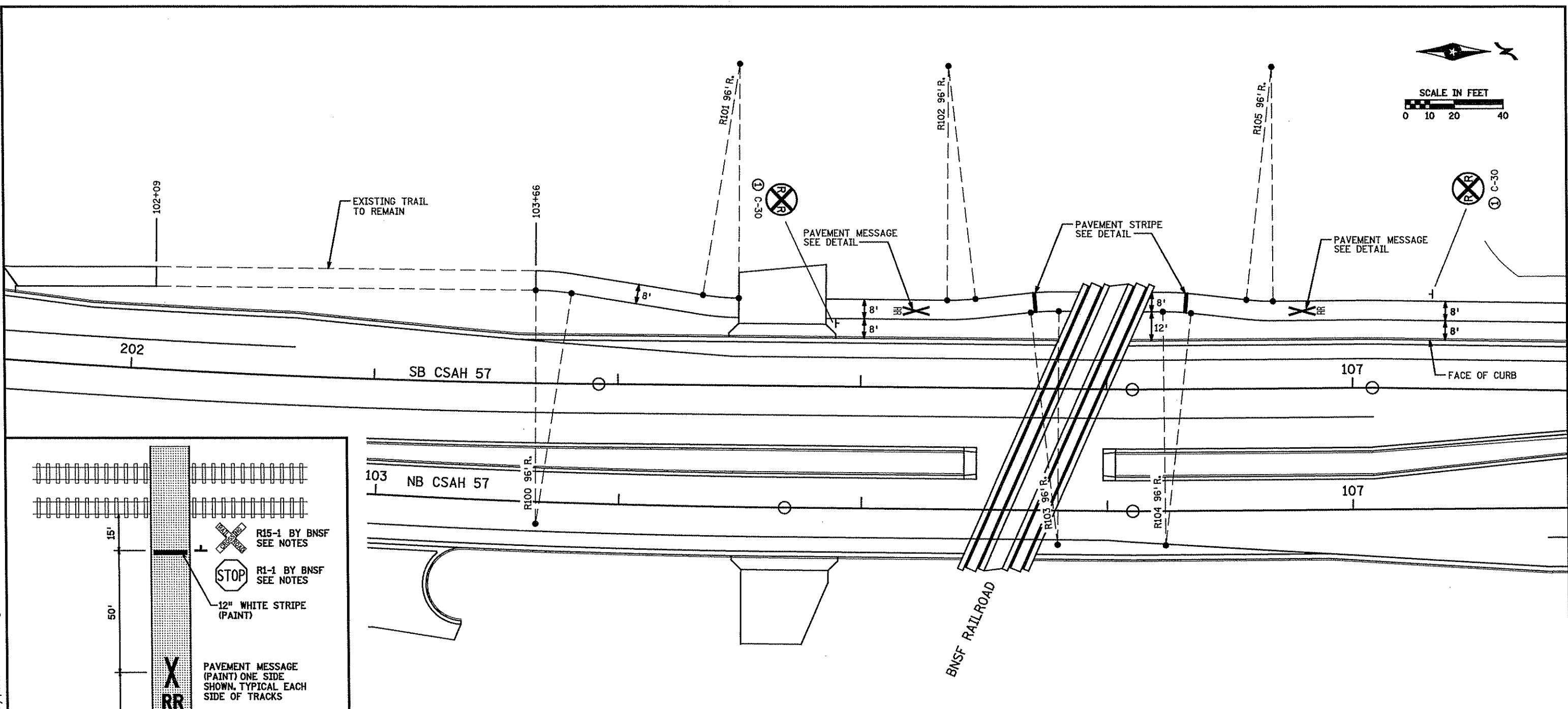
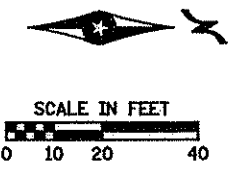
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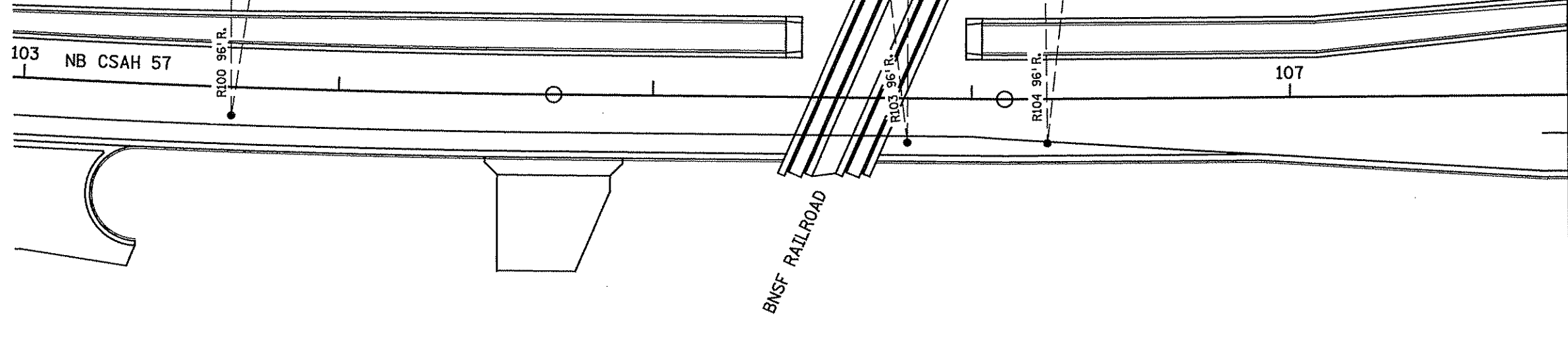
MISCELLANEOUS DETAILS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 13 of 82 Sheets



TRAIL PAVEMENT MARKING DETAIL
NO SCALE

- NOTES:**
- 1) LOCATE AND INSTALL SIGNS AND STRIPING PER CHAPTER 9 OF MN MUTCD, 2005 EDITION.
 - 2) (2) RR CROSSBUCK SIGNS AND (2) STOP SIGNS AT CROSSING FURNISHED AND INSTALLED BY BNSF.
 - 3) RAILROAD CROSSING MESSAGE SHALL BE STD. HWY-RAIL GRADE CROSSING MESSAGE PER MN MUTCD, BOTH SIDES OF TRACKS.



EDGE TRAIL POINTS		
POINT NO.	X	Y
E300	458028.62	167856.25
E301	458029.88	167870.94
E302	458030.62	167924.95
E303	458031.88	167939.49
E304	458032.75	168025.18
E310	458032.18	168036.60
E311	458037.77	168059.06
E312	458037.21	168070.48
E313	458037.41	168112.67
E314	458038.01	168124.09
E315	458032.47	168146.55
E316	458033.07	168157.39

RADIUS POINTS			
POINT NO.	X	Y	RADIUS
R100	458124.62	167855.43	96'
R101	457935.88	167940.47	96'
R102	457936.75	168026.16	96'
R103	458133.20	168069.50	96'
R104	458133.41	168113.40	96'
R105	457937.07	168157.24	96'

- NOTES:**
1. SEE TYPICAL SECTIONS FOR TYPICAL BITUMINOUS PATH CROSS SLOPES.
 2. TRANSITION PATH TO MATCH RR CROSSINGS AND DRIVEWAY ENTRANCE.
- ① FURNISH & INSTALL

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BUNKER LAKE BLVD.

RAMSEY BLVD.

SUNFISH LAKE BLVD.

SUNFISH LAKE BLVD.

BUNKER LAKE BLVD.

Burlington Northern & Santa Fe Railway Co.
TH 10

MC KINLEY ST.

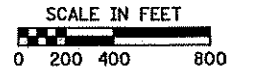
CONSTRUCTION AREA

ANOKA

HENNEPIN

NOTES:

1. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTCD
2. INSTALL 10 DAYS PRIOR TO CLOSURE. AT THE TIME OF CLOSURE, CHANGE BOTTOM PANEL TO: "FOLLOW DETOUR"
3. ACTUAL NUMBER OF BARRICADES VARIES WITH THE WIDTH OF ROAD.



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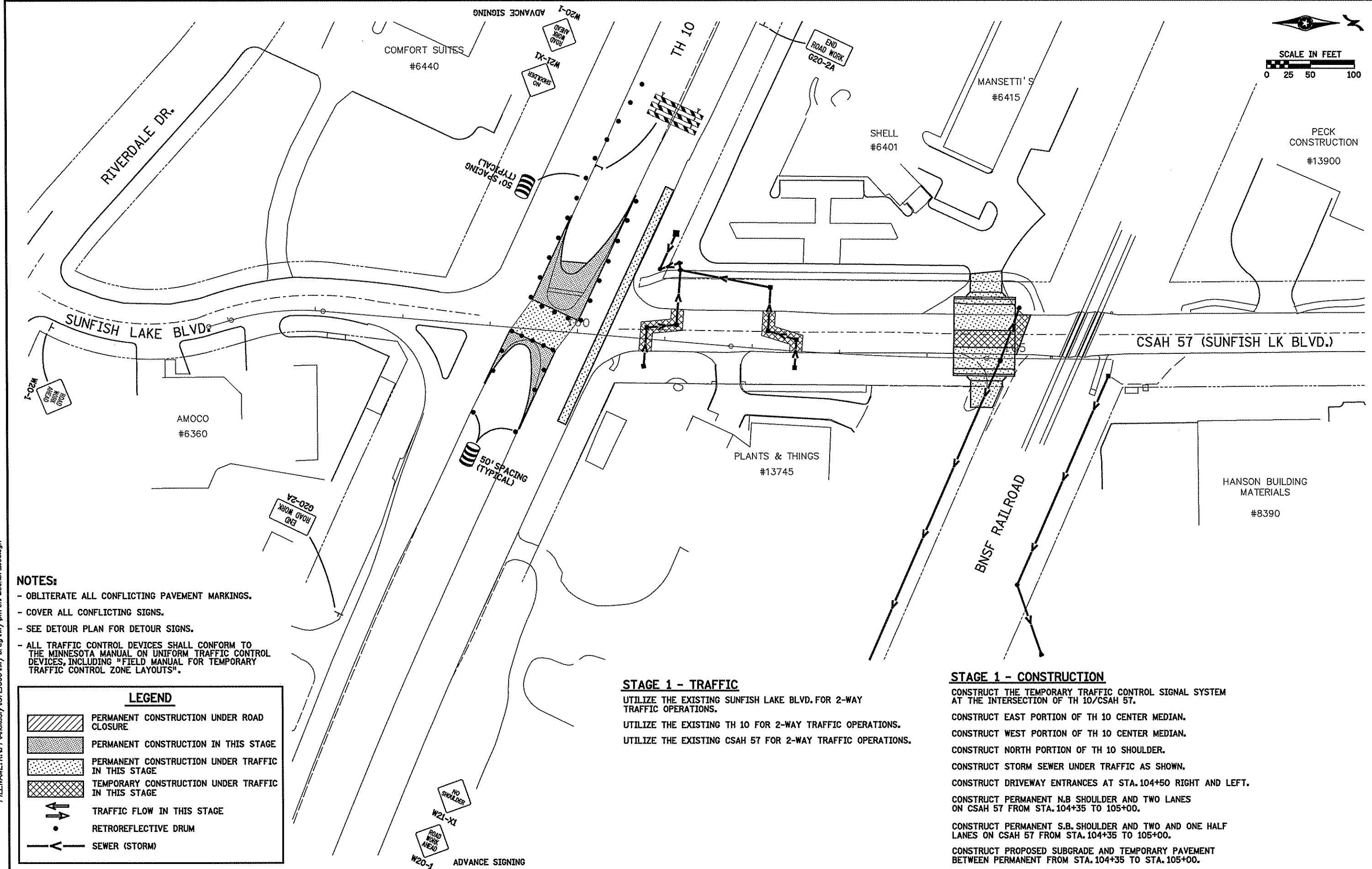
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

DETOUR LAYOUT

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

Sheet No. 15 of 82 Sheets



- NOTES:**
- OBLITERATE ALL CONFLICTING PAVEMENT MARKINGS.
 - COVER ALL CONFLICTING SIGNS.
 - SEE DETOUR PLAN FOR DETOUR SIGNS.
 - ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

LEGEND	
	PERMANENT CONSTRUCTION UNDER ROAD CLOSURE
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TEMPORARY CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	SEWER (STORM)

STAGE 1 - TRAFFIC
 UTILIZE THE EXISTING SUNFISH LAKE BLVD. FOR 2-WAY TRAFFIC OPERATIONS.
 UTILIZE THE EXISTING TH 10 FOR 2-WAY TRAFFIC OPERATIONS.
 UTILIZE THE EXISTING CSAH 57 FOR 2-WAY TRAFFIC OPERATIONS.

STAGE 1 - CONSTRUCTION
 CONSTRUCT THE TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM AT THE INTERSECTION OF TH 10/CSAH 57.
 CONSTRUCT EAST PORTION OF TH 10 CENTER MEDIAN.
 CONSTRUCT WEST PORTION OF TH 10 CENTER MEDIAN.
 CONSTRUCT NORTH PORTION OF TH 10 SHOULDER.
 CONSTRUCT STORM SEWER UNDER TRAFFIC AS SHOWN.
 CONSTRUCT DRIVEWAY ENTRANCES AT STA. 104+50 RIGHT AND LEFT.
 CONSTRUCT PERMANENT N.B. SHOULDER AND TWO LANES ON CSAH 57 FROM STA. 104+35 TO 105+00.
 CONSTRUCT PERMANENT S.B. SHOULDER AND TWO AND ONE HALF LANES ON CSAH 57 FROM STA. 104+35 TO 105+00.
 CONSTRUCT PROPOSED SUBGRADE AND TEMPORARY PAVEMENT BETWEEN PERMANENT FROM STA. 104+35 TO STA. 105+00.

DATE: 7/18/2008 TIME: 11:53:34 AM
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 CHECKED BY: JMW

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.

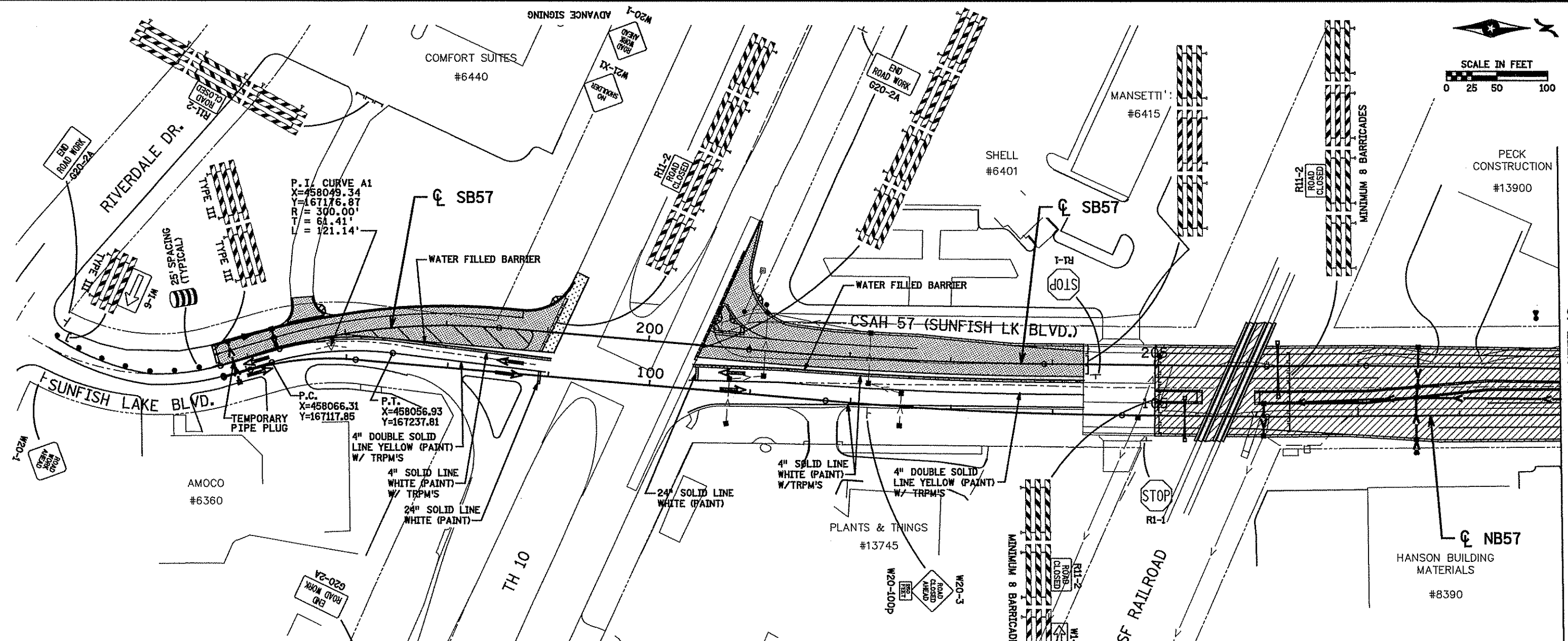
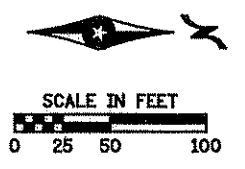
SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/18/2008 LIC. NO. 22405

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

STAGING AND TRAFFIC CONTROL
 STAGE 1

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 16 of 82 Sheets



P.I. CURVE A1
 X=458049.34
 Y=167176.87
 R=300.00'
 T=62.41'
 L=121.14'

P.C. X=458066.31
 Y=167117.85
 P.T. X=458056.93
 Y=167237.81

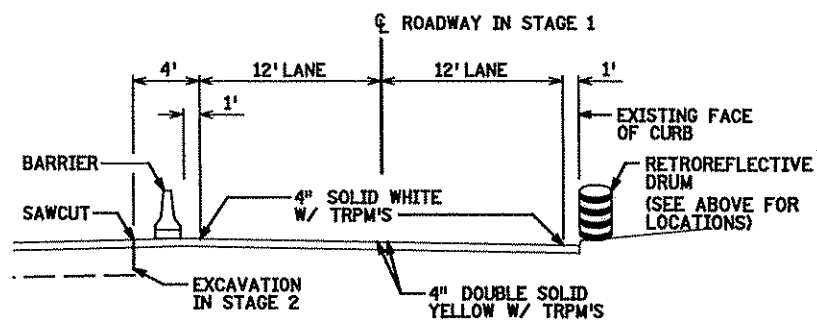
- NOTES:**
- OBLITERATE ALL CONFLICTING PAVEMENT MARKINGS.
 - COVER ALL CONFLICTING SIGNS.
 - SEE DETOUR PLAN FOR DETOUR SIGNS.
 - ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

LEGEND

- PERMANENT CONSTRUCTION UNDER ROAD CLOSURE
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- SEWER (STORM)

STAGE 2 - TRAFFIC
 SOUTH OF TH10, UTILIZE THE EXISTING SUNFISH LAKE BLVD. N.B. LANE AND SHOULDER FOR 2-WAY TRAFFIC OPERATIONS.
 UTILIZE THE EXISTING TH 10 FOR 2-WAY TRAFFIC OPERATIONS.
 FROM TH10 TO SB57 STA. 205+00, UTILIZE THE EXISTING CSAH 57 N.B. LANE AND SHOULDER FOR 2-WAY TRAFFIC OPERATIONS.
 UTILIZE THE TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM.

STAGE 2 - CONSTRUCTION
 CONSTRUCT S.B. SUNFISH LAKE BLVD. EXCLUDING WEAR COURSE FROM STA. 95+77 TO TH 10.
 CONSTRUCT S.B. CSAH 57 EXCLUDING WEAR COURSE FROM STA. 200+50 TO 204+35.
 BEGIN CONSTRUCTION OF CSAH 57 EXCLUDING WEAR COURSE FROM SB57 STA. 205+00 TO NORTH END OF PROJECT.
 BNSF WILL CONSTRUCT RAILROAD CROSSINGS, GATE ARMS AND ALL RAILROAD SIGNAL RELATED WORK UNDER SEPARATE CONTRACT (SP 02-00133). CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF PAVEMENT BETWEEN CROSSING PANELS WITH BNSF.



STAGE 2 TYPICAL SECTION

DRAWN BY: TJV
 CHECKED BY: JMW

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.

SIGNATURE: *Joseph M. Weaver*
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 DATE: 6/17/2008 LIC. NO. 22405

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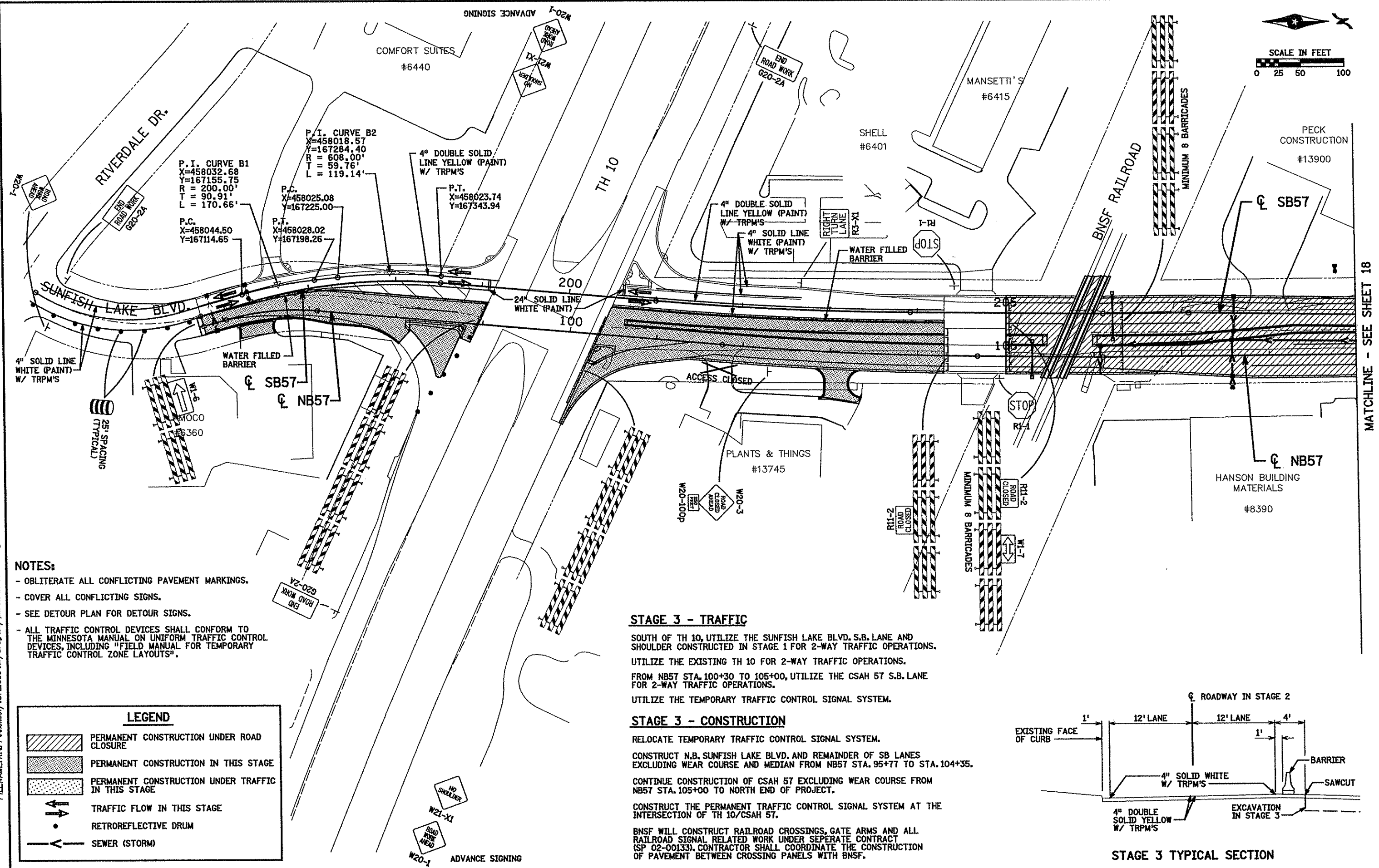
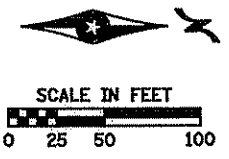
ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

STAGING AND TRAFFIC CONTROL
 STAGE 2

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 16A of 82 Sheets

DATE: 6/17/2008 TIME: 5:49:21 PM FILENAME: k:\p\work\02-00133\0202-85\stg2\0202-85-16a.dgn

MATCHLINE - SEE SHEET 18



- NOTES:**
- OBLITERATE ALL CONFLICTING PAVEMENT MARKINGS.
 - COVER ALL CONFLICTING SIGNS.
 - SEE DETOUR PLAN FOR DETOUR SIGNS.
 - ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

LEGEND

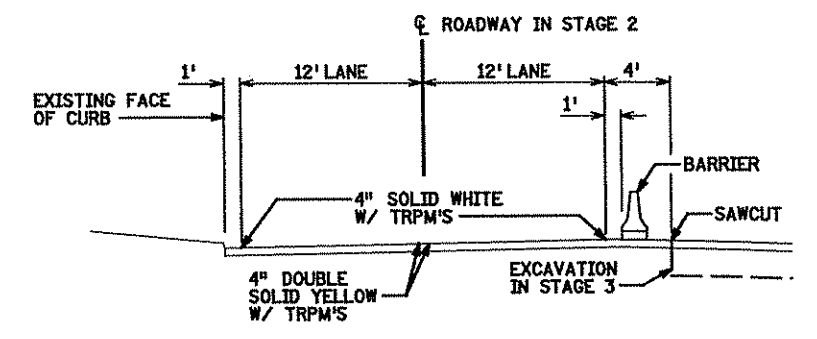
- PERMANENT CONSTRUCTION UNDER ROAD CLOSURE
- PERMANENT CONSTRUCTION IN THIS STAGE
- PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- RETROREFLECTIVE DRUM
- SEWER (STORM)

STAGE 3 - TRAFFIC

SOUTH OF TH 10, UTILIZE THE SUNFISH LAKE BLVD. S.B. LANE AND SHOULDER CONSTRUCTED IN STAGE 1 FOR 2-WAY TRAFFIC OPERATIONS. UTILIZE THE EXISTING TH 10 FOR 2-WAY TRAFFIC OPERATIONS. FROM NB57 STA. 100+30 TO 105+00, UTILIZE THE CSAH 57 S.B. LANE FOR 2-WAY TRAFFIC OPERATIONS. UTILIZE THE TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM.

STAGE 3 - CONSTRUCTION

RELOCATE TEMPORARY TRAFFIC CONTROL SIGNAL SYSTEM. CONSTRUCT N.B. SUNFISH LAKE BLVD. AND REMAINDER OF SB LANES EXCLUDING WEAR COURSE AND MEDIAN FROM NB57 STA. 95+77 TO STA. 104+35. CONTINUE CONSTRUCTION OF CSAH 57 EXCLUDING WEAR COURSE FROM NB57 STA. 105+00 TO NORTH END OF PROJECT. CONSTRUCT THE PERMANENT TRAFFIC CONTROL SIGNAL SYSTEM AT THE INTERSECTION OF TH 10/CSAH 57. BNSF WILL CONSTRUCT RAILROAD CROSSINGS, GATE ARMS AND ALL RAILROAD SIGNAL RELATED WORK UNDER SEPERATE CONTRACT (SP 02-00133). CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF PAVEMENT BETWEEN CROSSING PANELS WITH BNSF.



STAGE 3 TYPICAL SECTION

DATE: 6/17/2008 TIME: 5:49:27 PM FILENAME: K:\p\akachy\13721000\my-bridg\my\plan-stk\csah57_road.dgn

DRAWN BY: TJV
 CHECKED BY: JMW
 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.
 SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 6/17/2008 LIC. NO. 22405

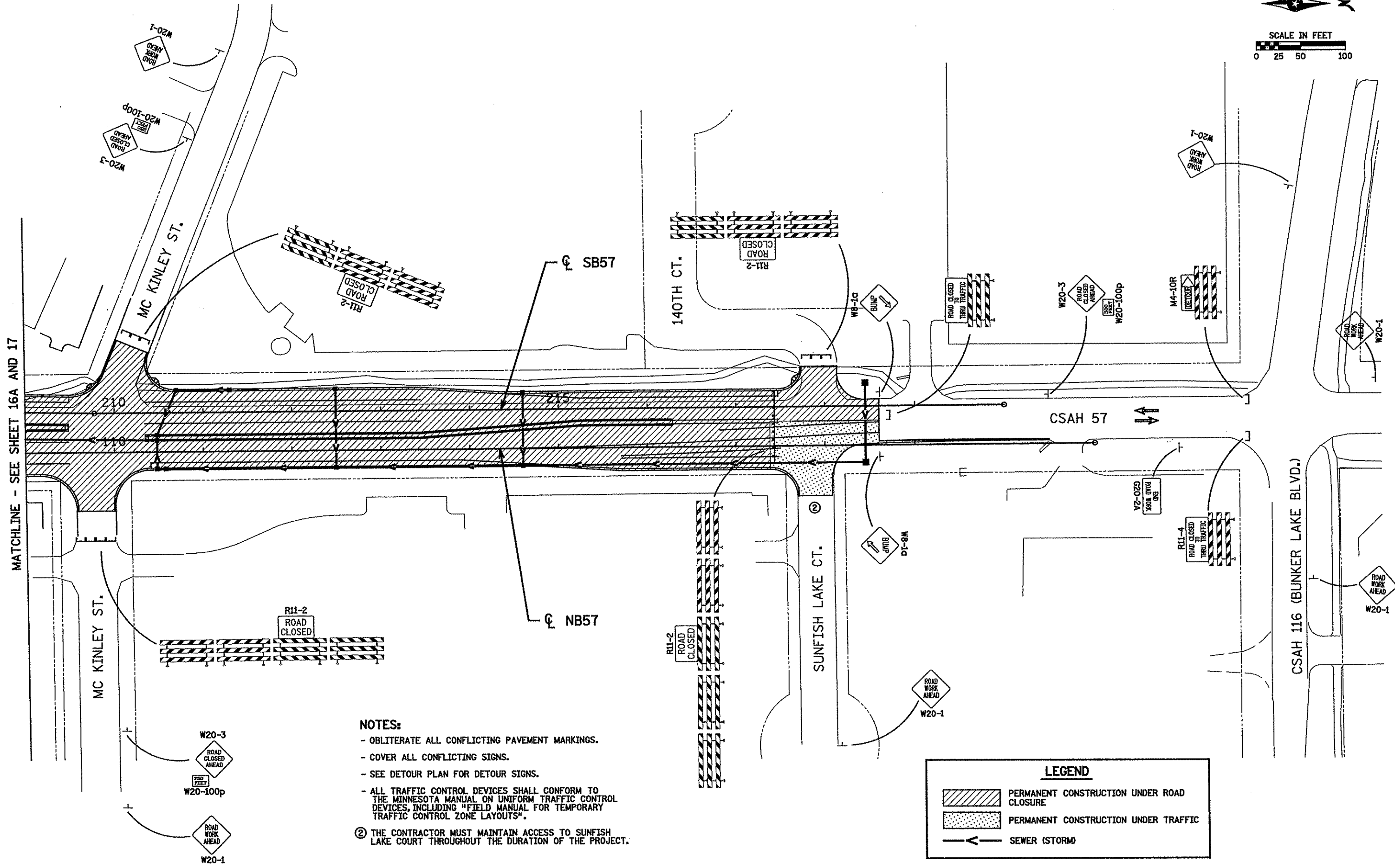
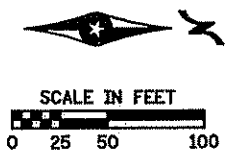


ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

STAGING AND TRAFFIC CONTROL
 STAGE 3

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 17 of 82 Sheets

MATCHLINE - SEE SHEET 18



NOTES:

- OBLITERATE ALL CONFLICTING PAVEMENT MARKINGS.
- COVER ALL CONFLICTING SIGNS.
- SEE DETOUR PLAN FOR DETOUR SIGNS.
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

② THE CONTRACTOR MUST MAINTAIN ACCESS TO SUNFISH LAKE COURT THROUGHOUT THE DURATION OF THE PROJECT.

LEGEND	
	PERMANENT CONSTRUCTION UNDER ROAD CLOSURE
	PERMANENT CONSTRUCTION UNDER TRAFFIC
	SEWER (STORM)

DATE: 6/17/2008 TIME: 5:49:32 PM FILENAME: K:\P\Anoka\CSA 57\21000\wp-by-dg\wp\tr-sit\csah57_asd.dgn

DRAWN BY: TJV
CHECKED BY: JMW

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.

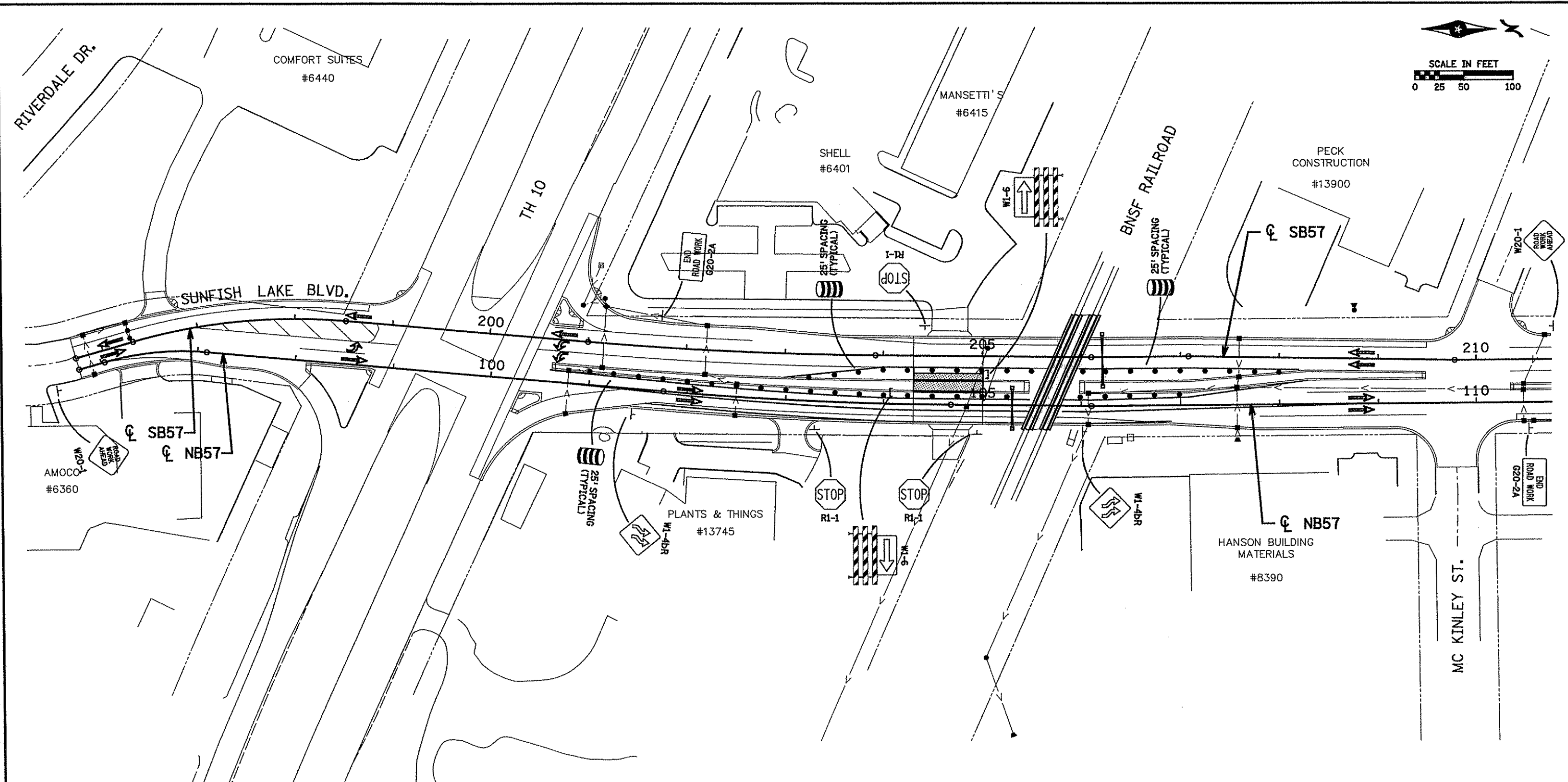
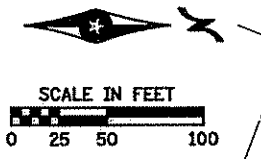
SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 6/17/2008 LIC. NO. 22405

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

STAGING AND TRAFFIC CONTROL
STAGES 2 AND 3

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 18 of 82 Sheets



- NOTES:**
- OBLITERATE ALL CONFLICTING PAVEMENT MARKINGS.
 - COVER ALL CONFLICTING SIGNS.
 - SEE DETOUR PLAN FOR DETOUR SIGNS.
 - ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

LEGEND

	PERMANENT CONSTRUCTION UNDER ROAD CLOSURE
	PERMANENT CONSTRUCTION IN THIS STAGE
	PERMANENT CONSTRUCTION UNDER TRAFFIC IN THIS STAGE
	TRAFFIC FLOW IN THIS STAGE
	RETROREFLECTIVE DRUM
	SEWER (STORM)

STAGE 4 - TRAFFIC

SHIFT TWO N.B. LANES ON CSAH 57 BETWEEN TH 10 AND MC KINLEY ST.

UTILIZE LEFT TWO LANES FOR S.B. TRAFFIC ON CSAH 57

UTILIZE PERMANENT TH 10 / CSAH 57 TRAFFIC SIGNAL.

STAGE 4 - CONSTRUCTION

CONSTRUCT MEDIAN AND REMAINING ONE HALF S.B. LANE FROM STA. 104+35 TO 105+00.

CONSTRUCT WEAR COURSE OF ALL BITUMINOUS PAVEMENTS.

DATE: 6/18/2008 TIME: 8:24:19 AM FILENAME: K:\p\Arakoc\N3721000\hw\p\tr-st\osinf57_cse.dgn

DRAWN BY: TJV
 CHECKED BY: JMW

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.

SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 6/18/2008 LIC. NO. 22405

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

STAGING AND TRAFFIC CONTROL
 STAGE 4

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 18A of 82 Sheets

DATE: 7/18/2008 TIME: 11:45:50 AM
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TRAFFIC CONTROL DEVICES

SIGN OR DEVICE	SIGN NO.	COLOR	SIZE	STAGE 1	STAGE 2	STAGE 3	STAGE 4
				EACH	EACH	EACH	EACH
	G20-2A	BLACK ON ORANGE	48" x 24"	2	4	4	2
	M4-10R	BLACK ON ORANGE	48" x 18"	0	1	1	0
	R1-1	WHITE ON RED	30" x 30"	0	2	2	3
	R3-X1	BLACK ON WHITE	30" x 30"	0	0	1	0
	R11-2	BLACK ON WHITE	48" x 30"	0	8	6	0
	R11-4	BLACK ON WHITE	48" x 30"	0	2	2	0
	W1-4bL	BLACK ON ORANGE	48" x 48"	0	0	0	1
	W1-4bR	BLACK ON ORANGE	48" x 48"	0	0	0	1
	W1-6	BLACK ON ORANGE	48" x 24"	0	1	1	2
	W1-7	BLACK ON ORANGE	48" x 24"	0	1	1	0
	W8-11a	BLACK ON ORANGE	48" x 48"	0	2	2	0
	W20-1	BLACK ON ORANGE	48" x 48"	3	9	9	2
	W20-3	BLACK ON ORANGE	48" x 48"	0	4	4	0
	W20-100P	BLACK ON ORANGE	42" x 24"	0	4	1	0
	W21-X1	BLACK ON ORANGE	48" x 48"	2	2	2	0
	TYPE III BARRICADE	ORANGE ON WHITE	8 FOOT	1	65	38	2
	REFLECTOR DRUM	ORANGE ON WHITE		33	7	13	42

SIGNING:

- WHEN SIGNS ARE INSTALLED, THEY SHALL BE MOUNTED AT THE PROPER HEIGHT AND LATERAL OFFSET AS DETAILED IN THE MNMUTCD.
- ALL ORANGE SIGNS SHALL BE MADE OF HIGH PERFORMANCE FLUORESCENT SIGN SHEETING OR AN APPROVED SUBSTITUTE.
- LONGITUDINAL DROP OFFS SHALL BE SIGNED AS SHOWN ON PAGES 6K-100 THROUGH 6K-102 OF THE "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" UNLESS OTHERWISE SPECIFIED IN THESE PLANS.
- REMOVAL OF EXISTING SIGNS SHALL BE COORDINATED WITH THE SIGNING PLANS. ANY CONFLICTING SIGNS SHALL BE REMOVED.
- THE REMOVAL OF THE TEMPORARY SIGNS WILL BE COORDINATED TO ASSURE THAT THE FINAL SIGNS ARE INSTALLED AS NEEDED, OR TEMPORARY SIGNING WILL BE PROVIDED UNTIL THE FINAL SIGNING IS INSTALLED.
- EXISTING SIGNS MAY BE RE-USED FOR CONSTRUCTION SIGNING.

NOTES:

- QUANTITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE USED FOR PAY ITEMS.
- ALL TRAFFIC CONTROL ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR TRAFFIC CONTROL.

GENERAL NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD) AND "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF LAYOUTS AS DEEMED NECESSARY BY THE ENGINEER.
- ALL DISTANCES ARE APPROXIMATE.
- BARRICADES ARE 8 FOOT TYPE III AND SHALL BE REFLECTORIZED ON BOTH SIDES.
- OBLITERATING ANY CONFLICTING PAVEMENT MARKINGS SHALL BE INCIDENTAL.
- ALL TRAFFIC CONTROL DEVICES ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATIONS SHALL BE COVERED, REMOVED, OR REVISED (INCIDENTAL).
- THE CONTRACTOR IS RESPONSIBLE FOR EXTRA SIGNING NEEDED TO FACILITATE TRAFFIC SWITCHES OR FOR TRANSITIONING TRAFFIC FROM ONE STAGE TO ANOTHER.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MNMUTCD INCLUDING THE "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- THE CONTRACTOR SHALL COORDINATE THE PERMANENT SIGNING SO THAT THE INSTALLATION OF THE PERMANENT SIGNS IS COMPLETED BEFORE THE ROADWAYS ARE OPEN TO TRAFFIC.
- IF THE CONTRACTOR DESIRES TO PERFORM WORK IN A SEQUENCE OTHER THAN SHOWN IN THE PLANS, THE CONTRACTOR SHALL SUBMIT THE PROPOSED CHANGES, IN WRITING, TO THE ENGINEER FOR APPROVAL AT LEAST 10 WORKING DAYS PRIOR TO THE COMMENCEMENT OF THE WORK. IF THE SEQUENCE OF CONSTRUCTION CHANGES ARE APPROVED AND THE CHANGES RESULT IN CHANGES TO THE TRAFFIC CONTROL, THE CONTRACTOR SHALL SUBMIT, IN WRITING, REVISED TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL AT LEAST 14 DAYS PRIOR TO IMPLEMENTING THE TRAFFIC CONTROL.
- SEE SIGNING DETAIL SHEETS FOR TYPICAL ERECTION DETAILS (FOR SIGNS TYPES "C & D").
- ALL DRUMS, BARRICADES, AND SIGNS SHALL BE RETRO-REFLECTIVE.
- THE DEVICES IN THIS TRAFFIC CONTROL PLAN SHALL BE FURNISHED, INSTALLED AND MAINTAINED UNLESS OTHERWISE NOTED.

TEMPORARY STRIPING (1) TAB J

STATION TO STATION	4" SOLID LINE WHITE - PAINT			4" DOUBLE LINE YELLOW - PAINT			24" SOLID LINE WHITE - PAINT	
	STAGE 2	STAGE 3	STAGE 4	STAGE 2	STAGE 3	STAGE 4	STAGE 2	STAGE 3
	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT
NB57 95+00 TO 109+00	895	1105	1383	895	925	1204	24	24
NB57 109+00 TO 120+00								
TOTAL	895	1105	1383	895	925	1204	24	24
PROJECT TOTALS		3383			3024		48	

SPECIFIC NOTES:

- (1) QUANTITIES ARE BASED ON STRIPING ALL NON-WEAR BITUMINOUS COURSES, TEMPORARY STRIPING MAY NOT BE NECESSARY IF CONTRACTOR PAVES WEAR COURSE PRIOR TO OPENING TO TRAFFIC.

DRAWN BY: TJV

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.

SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/18/2008 L.T.C. NO. 22405

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 ENGINEERS • ARCHITECTS • PLANNERS

ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

STAGING AND TRAFFIC CONTROL
 TABULATION AND NOTES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 19 of 82 Sheets

DATE: 6/17/2008 TIME: 5:49:37 PM
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EB TH 10 CURVE DATA

CURVE TH10EB-1

PI 322+55.62
 X 458,080.422
 Y 167,399.369
 Δ 1° 27' 18.31" (RT)
 D 1° 02' 30.27"
 T 69.843'
 L 139.678'
 R 5,500.000'

CURVE TH10EB-2

PI 327+02.51
 X 458,480.909
 Y 167,201.067
 Δ 7° 42' 39.81" (LT)
 D 1° 01' 26.74"
 T 377.051'
 L 752.963'
 R 5,594.768'

CURVE 57SB-1

PI 197+43.45
 X 458,022.082
 Y 167,232.444
 Δ 21° 00' 12.73" (RT)
 D 9° 32' 57.47"
 T 111.223'
 L 219.949'
 R 600.000'

CURVE 57SB-2

PI 202+46.01
 X 458,065.807
 Y 167,735.608
 Δ 4° 23' 03.73" (LT)
 D 1° 29' 59.60"
 T 146.228'
 L 292.313'
 R 3,820.000'

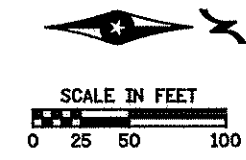
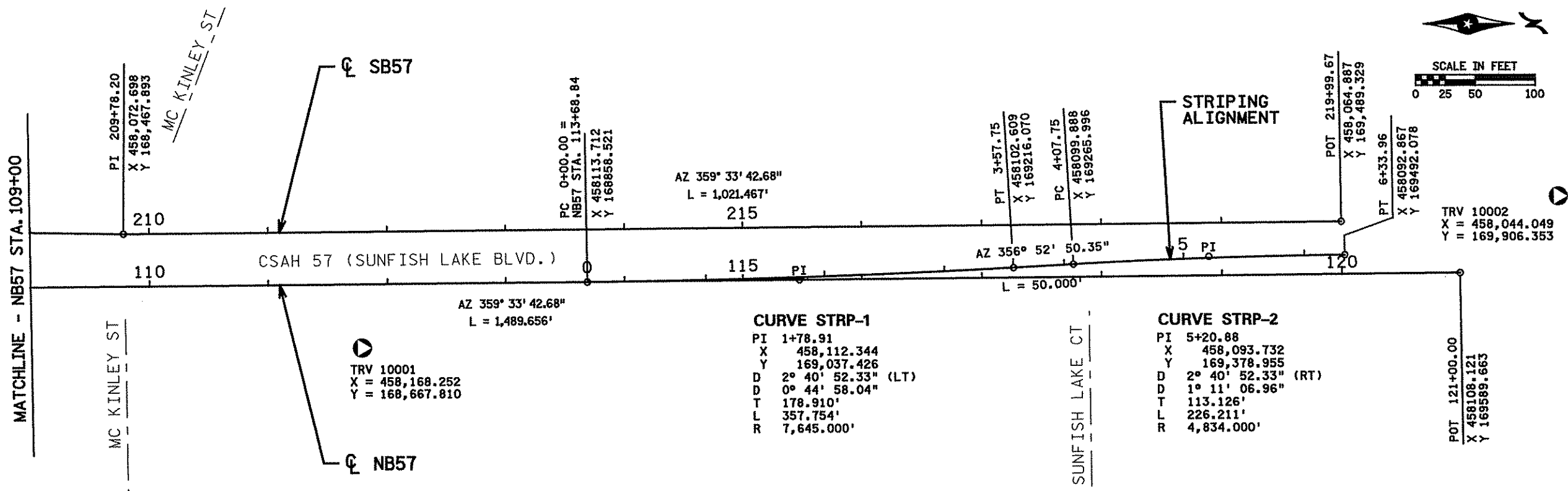
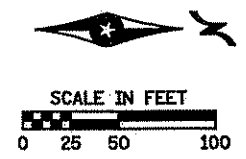
CURVE 57NB-1

PI 96+56.93
 X 458,058.894
 Y 167,147.817
 Δ 21° 00' 12.73" (RT)
 D 19° 53' 39.72"
 T 53.387'
 L 105.575'
 R 288.000'

CURVE 57NB-2

PI 103+22.09
 X 458,116.582
 Y 167,811.668
 Δ 4° 23' 03.73" (LT)
 D 1° 29' 59.60"
 T 146.228'
 L 292.313'
 R 3,820.000'

HORIZONTAL CONTROL
 THE HORIZONTAL CONTROL SHOWN ON THIS PLAN IS ENGLISH IN NAD 83 DATUM (1996 HARN ADJUSTMENT), STATE PLANE MINNESOTA SOUTH ZONE, MINNESOTA COUNTY COORDINATE, ANOKA COUNTY



DRAWN BY: TJV

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.

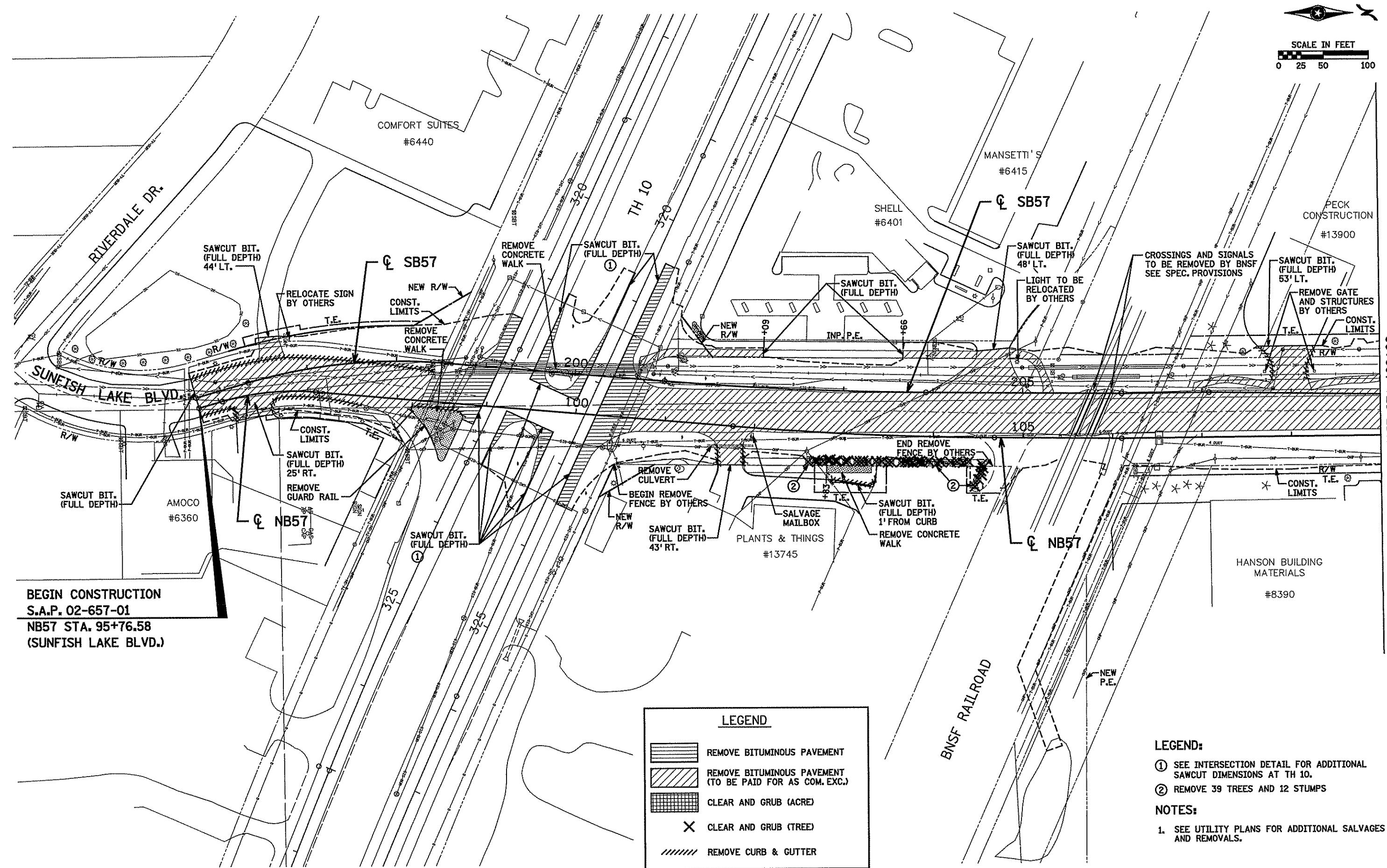
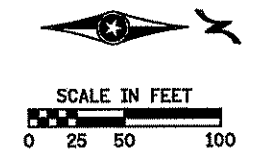
SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 6/17/2008 LIC. NO. 22405

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

ALIGNMENT PLAN
 NB57 STA. 95+76.58 TO NB57 STA. 120+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 20 of 82 Sheets



BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

LEGEND

	REMOVE BITUMINOUS PAVEMENT
	REMOVE BITUMINOUS PAVEMENT (TO BE PAID FOR AS COM. EXC.)
	CLEAR AND GRUB (ACRE)
	CLEAR AND GRUB (TREE)
	REMOVE CURB & GUTTER

LEGEND:

① SEE INTERSECTION DETAIL FOR ADDITIONAL SAWCUT DIMENSIONS AT TH 10.

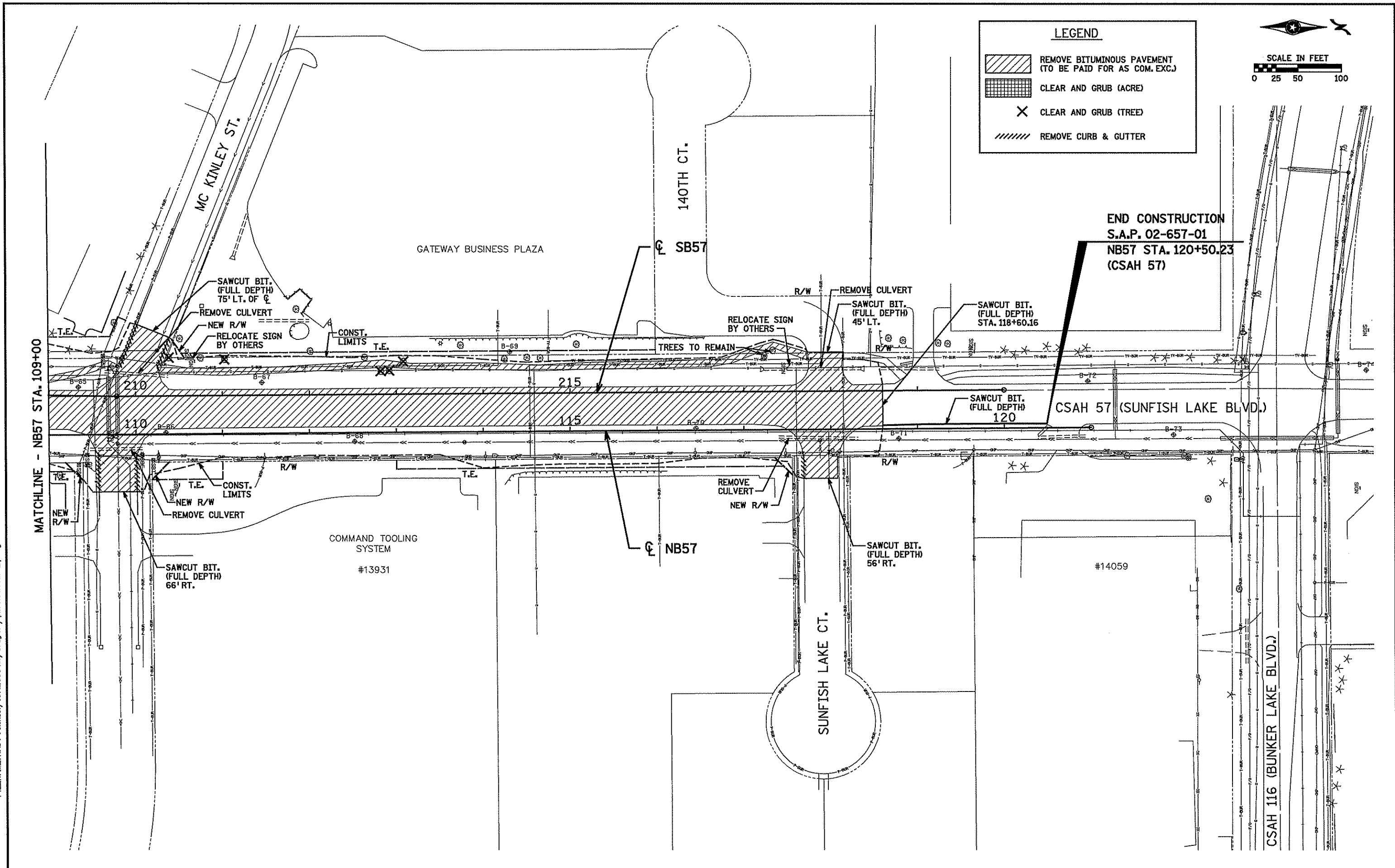
② REMOVE 39 TREES AND 12 STUMPS

NOTES:

1. SEE UTILITY PLANS FOR ADDITIONAL SALVAGES AND REMOVALS.

DATE: 7/9/2008 TIME: 10:53:56 AM
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DATE: 7/9/2008 TIME: 11:19:40 AM
 FILENAME: K:\P\A\okc\N\3721000\hwy-brdg\hwy\plan\stat57_fpb.dgn



DRAWN BY: TJV
 CHECKED BY: JMW

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.

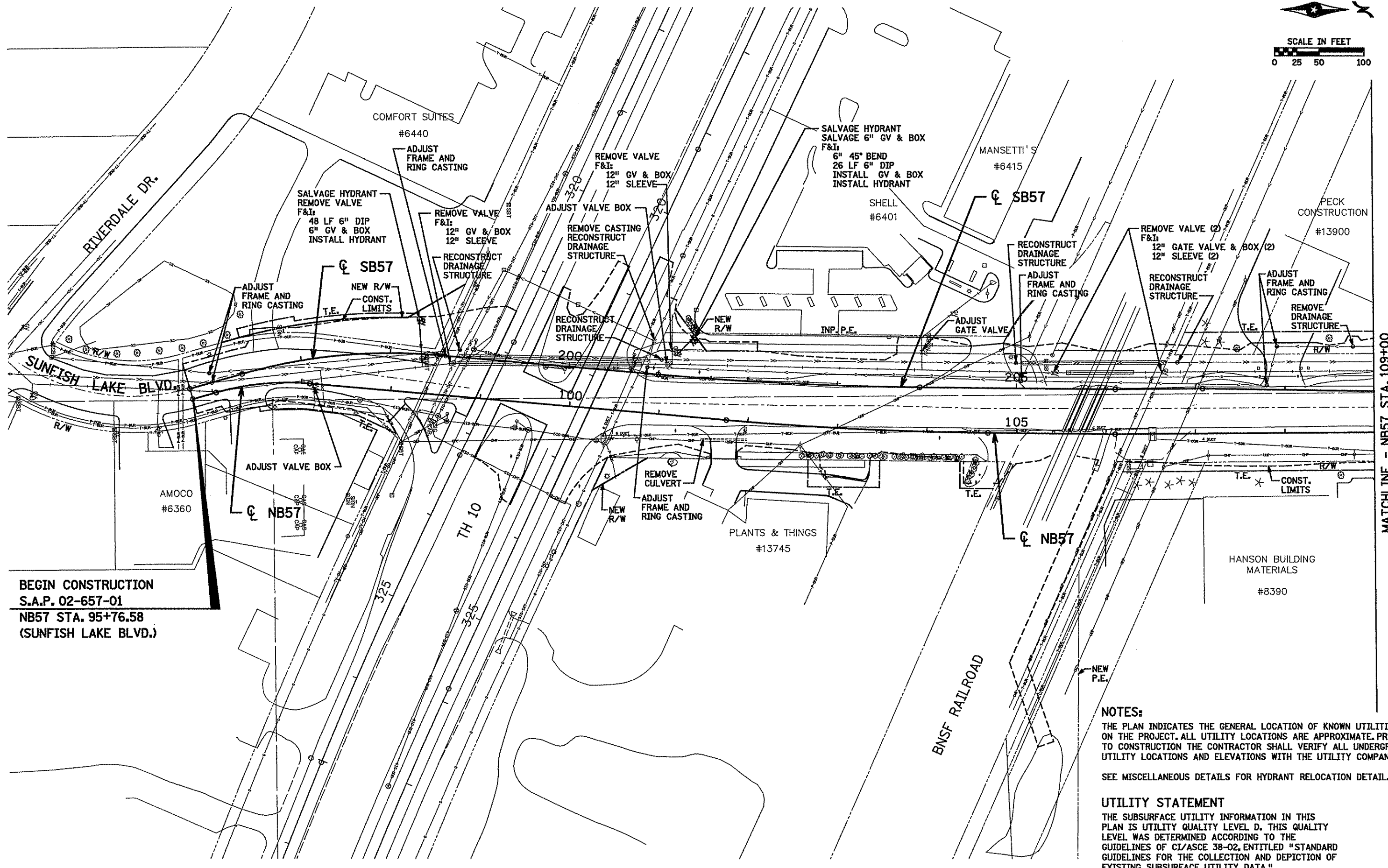
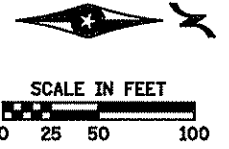
SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/9/2008 LIC. NO. 22405

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

INPLACE TOPOGRAPHY AND REMOVAL PLAN
 NB57 STA. 109+00 TO NB57 STA. 120+50.23

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 22 of 82 Sheets



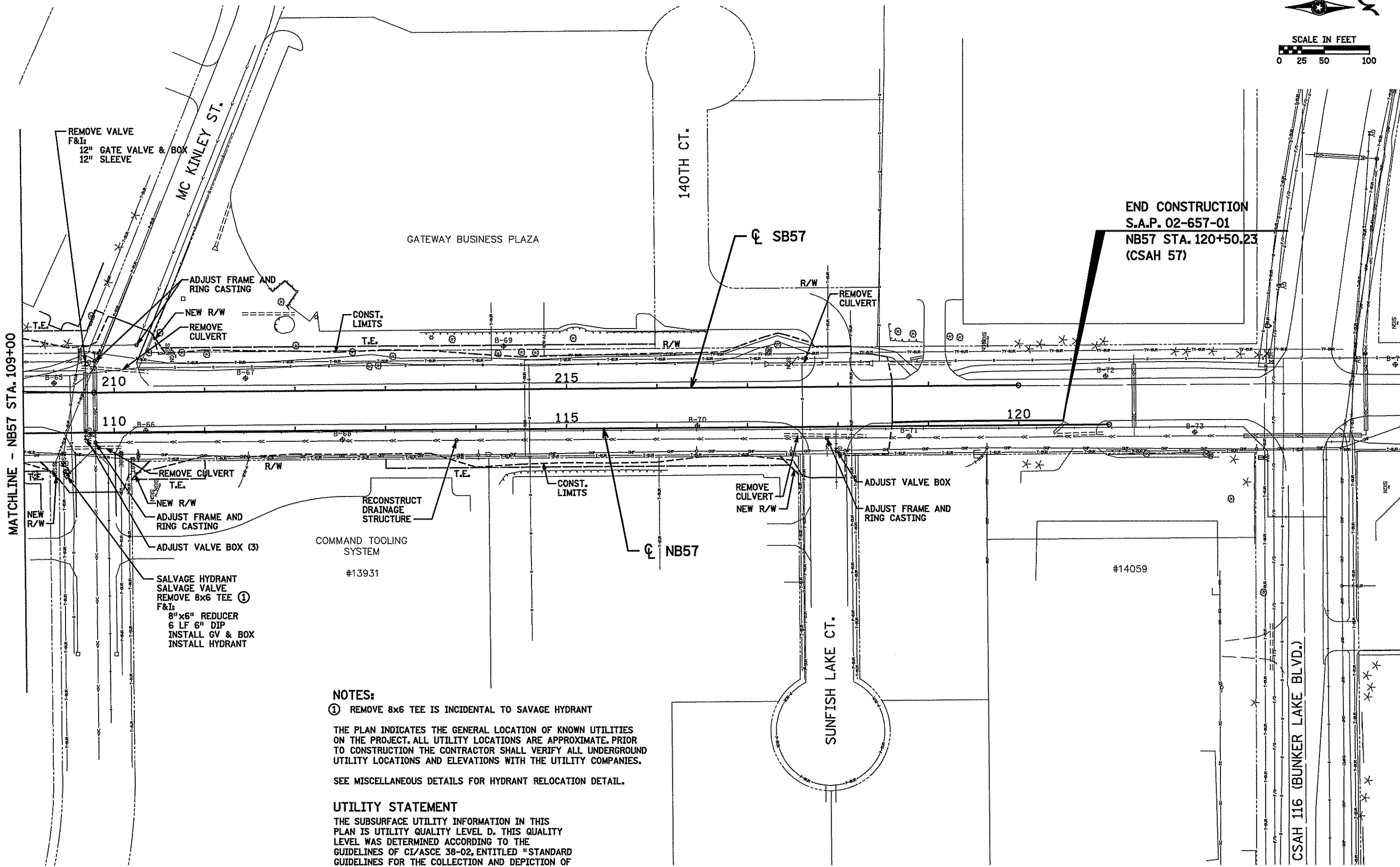
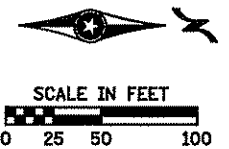
BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

NOTES:
 THE PLAN INDICATES THE GENERAL LOCATION OF KNOWN UTILITIES ON THE PROJECT. ALL UTILITY LOCATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS WITH THE UTILITY COMPANIES.
 SEE MISCELLANEOUS DETAILS FOR HYDRANT RELOCATION DETAIL.

UTILITY STATEMENT
 THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

DATE: 7/31/2008 TIME: 3:21:37 PM
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DRAWN BY: TJV	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.	SIGNATURE: <i>Joseph M. Weaver</i> PRINTED NAME: JOSEPH M. WEAVER		ANOKA COUNTY CSAH 57 RECONSTRUCTION	UTILITY PLAN NB57 STA. 95+76.58 TO NB57 STA. 109+00	S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
CHECKED BY: JMW	DATE: 7/31/2008 LIC. NO. 22405	Sheet No. 23 of 82 Sheets				



NOTES:
 ① REMOVE 8x6 TEE IS INCIDENTAL TO SAVAGE HYDRANT

THE PLAN INDICATES THE GENERAL LOCATION OF KNOWN UTILITIES ON THE PROJECT. ALL UTILITY LOCATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS WITH THE UTILITY COMPANIES.

SEE MISCELLANEOUS DETAILS FOR HYDRANT RELOCATION DETAIL.

UTILITY STATEMENT

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

DATE: 7/18/2008 TIME: 11:50:01 AM FILENAME: K:\p\Anoka\CSA 57\21000\hwy\p\tr-st\csah57_util.dgn

DRAWN BY: TJV
 CHECKED BY: JMW

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.

SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/18/2008 LIC. NO. 22405

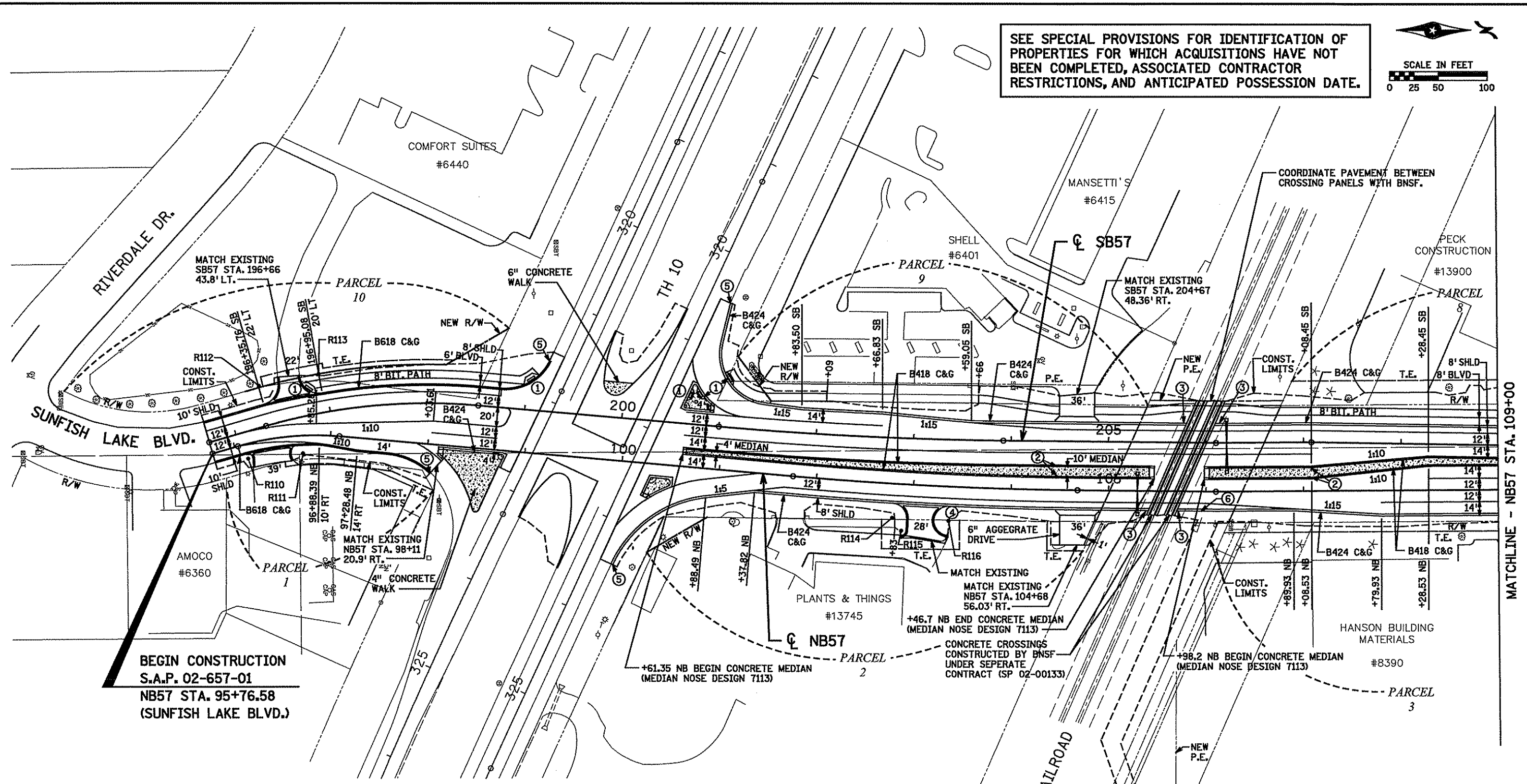
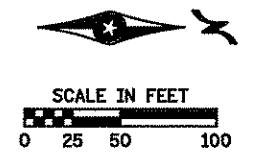
TKDA
 ENGINEERS • ARCHITECTS • PLANNERS

ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

UTILITY PLAN
 NB57 STA. 109+00 TO NB57 STA. 120+50.23

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 24 of 82 Sheets

SEE SPECIAL PROVISIONS FOR IDENTIFICATION OF PROPERTIES FOR WHICH ACQUISITIONS HAVE NOT BEEN COMPLETED, ASSOCIATED CONTRACTOR RESTRICTIONS, AND ANTICIPATED POSSESSION DATE.



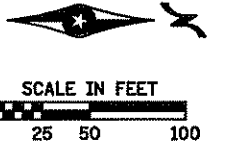
BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

DRIVEWAY RADIUS POINTS			
POINT NO.	X	Y	RADIUS
R110	458086.32	167106.98	5'
R111	458080.90	167163.39	12.3'
R112	458011.29	167118.00	20'
R113	457999.24	167179.81	20'
R114	458146.44	167767.44	15'
R115	458159.58	167776.73	5'
R116	458149.46	167825.36	15'

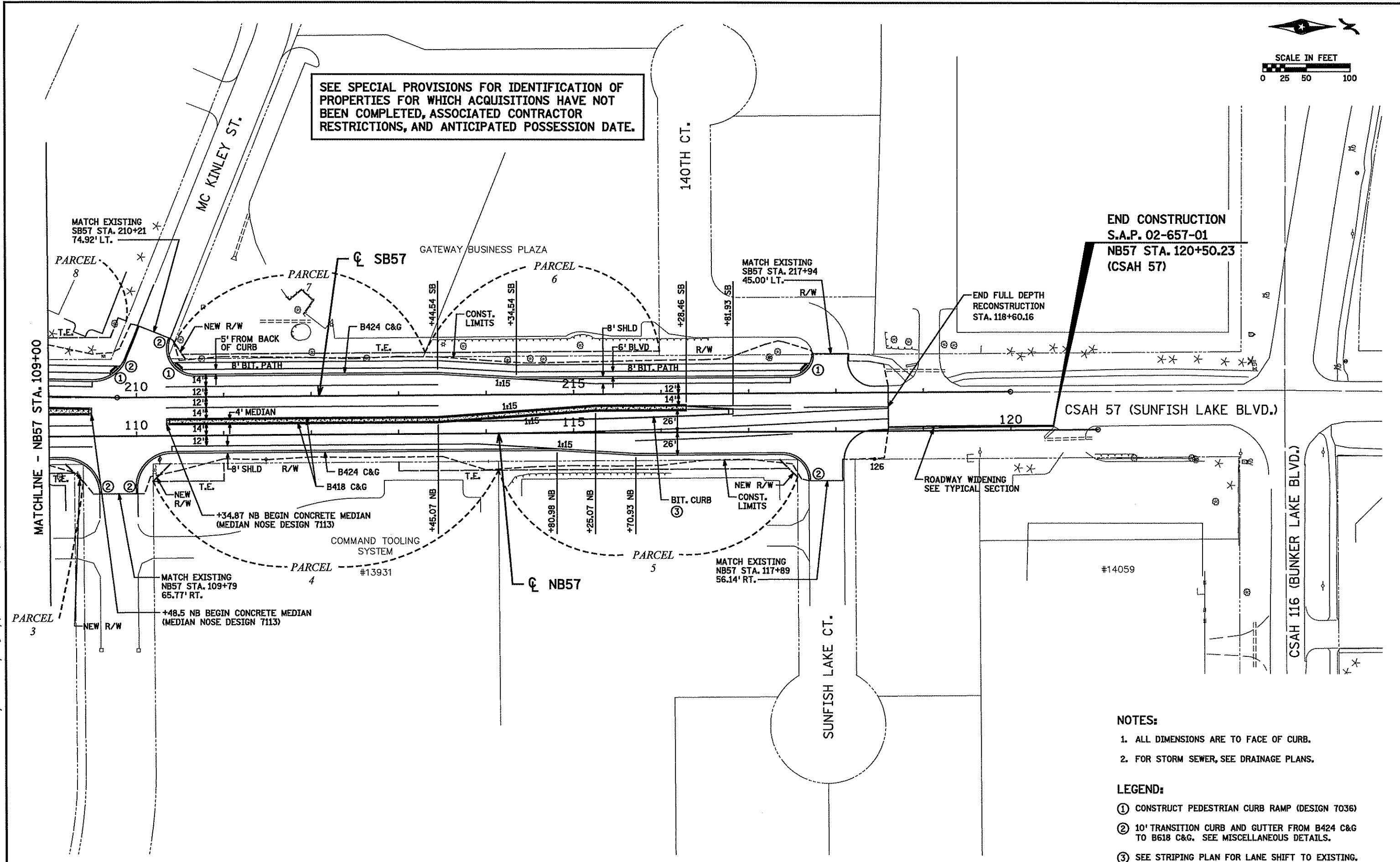
- NOTES:**
1. ALL DIMENSIONS ARE TO FACE OF CURB.
 2. FOR STORM SEWER, SEE DRAINAGE PLANS.
 3. SEE INTERSECTION DETAILS FOR ADDITIONAL DIMENSIONS.
 4. SEE SHEET 14 FOR BITUMINOUS PATH DETAILS.
 5. SEE UTILITY PLANS FOR UTILITY INSTALLATIONS AND ADJUSTMENTS.
 6. CONSTRUCT ALL ISLANDS PER STD. PLATE 7113.

- LEGEND:**
- ① CONSTRUCT PEDESTRIAN CURB RAMP (DESIGN 7036)
 - ② 10' TRANSITION CURB AND GUTTER FROM B418 C&G TO B618 C&G.
 - ③ TRANSITION CURB AT RR TRACKS. SEE MISCELLANEOUS DETAILS.
 - ④ MAILBOX SUPPORT, SEE MISCELLANEOUS DETAILS.
 - ⑤ 4' TRANSITION CURB HEIGHT.
 - ⑥ PROVIDE A 10' CURB CUT AT RAILROAD BUNGALOW.

DATE: 7/25/2008 TIME: 3:03:04 PM FILENAME: K:\n\work\02-657-01\02-657-01\02-657-01\02-657-01.dwg



SEE SPECIAL PROVISIONS FOR IDENTIFICATION OF PROPERTIES FOR WHICH ACQUISITIONS HAVE NOT BEEN COMPLETED, ASSOCIATED CONTRACTOR RESTRICTIONS, AND ANTICIPATED POSSESSION DATE.



END CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 120+50.23
(CSAH 57)

END FULL DEPTH
RECONSTRUCTION
STA. 118+60.16

NOTES:

- 1. ALL DIMENSIONS ARE TO FACE OF CURB.
- 2. FOR STORM SEWER, SEE DRAINAGE PLANS.

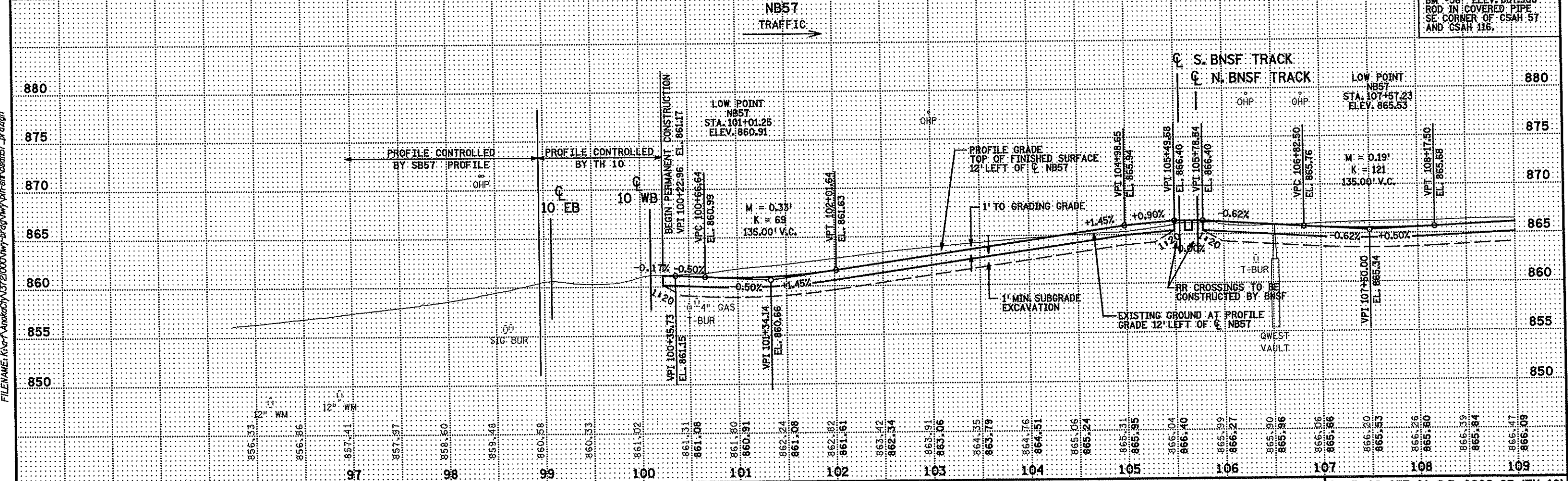
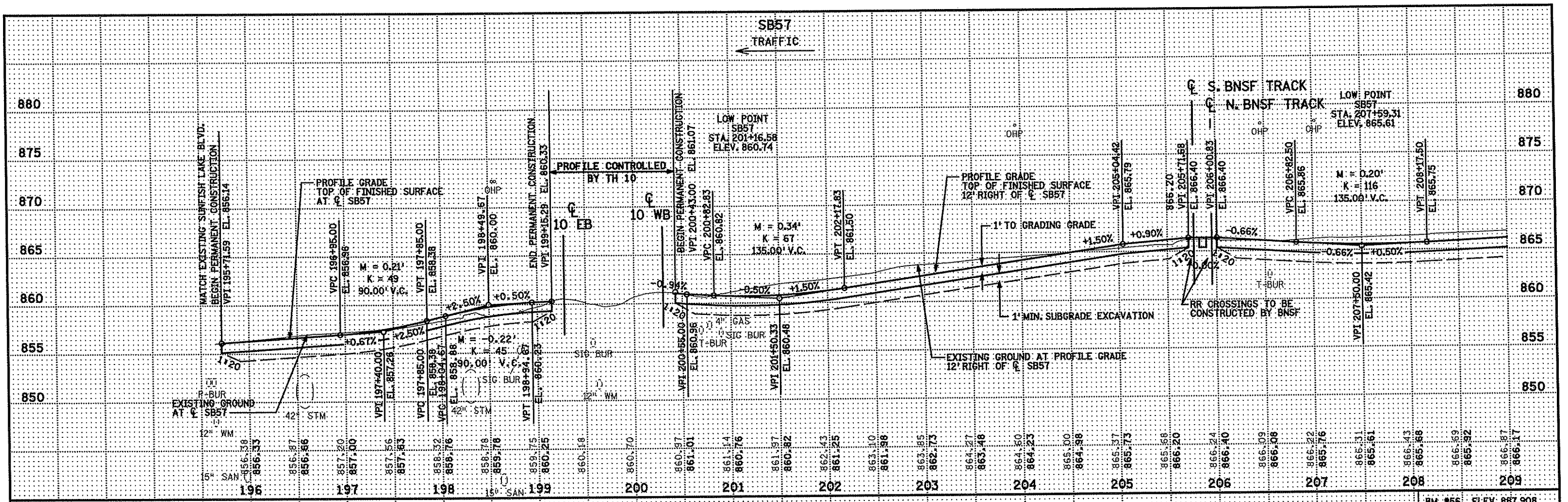
LEGEND:

- ① CONSTRUCT PEDESTRIAN CURB RAMP (DESIGN 7036)
- ② 10' TRANSITION CURB AND GUTTER FROM B424 C&G TO B618 C&G. SEE MISCELLANEOUS DETAILS.
- ③ SEE STRIPING PLAN FOR LANE SHIFT TO EXISTING.

DATE: 7/25/2008 TIME: 3:01:08 PM
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DRAWN BY: TJV	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.	SIGNATURE: <i>Joseph M. Weaver</i>	TKDA ENGINEERS • ARCHITECTS • PLANNERS	ANOKA COUNTY CSAH 57 RECONSTRUCTION	CONSTRUCTION PLAN NB57 STA. 109+00 TO NB57 STA. 120+50.23	S.A.P. 02-657-01, S.P. 0202-85 (TH 10) Sheet No. 26 of 82 Sheets
CHECKED BY: JMW		PRINTED NAME: JOSEPH M. WEAVER DATE: 7/25/2008 LIC. NO. 22405				

DATE: 6/17/2008 TIME: 5:50:10 PM
 FILENAME: K:\proj\Anoka\cst 21000\w\p\tr-81\csah57 -_pr.dgn



BM #56 ELEV. 867.908
 ROD IN COVERED PIPE
 SE CORNER OF CSAH 57
 AND CSAH 116.

DRAWN BY: TJV
 CHECKED BY: JMW

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.

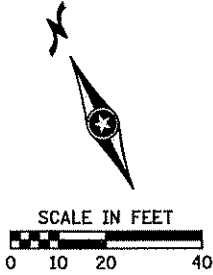
SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 6/17/2008 LIC. NO. 22405

TKDA
 ENGINEERS-ARCHITECTS-PLANNERS

ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

PROFILES (NB57, SB57)

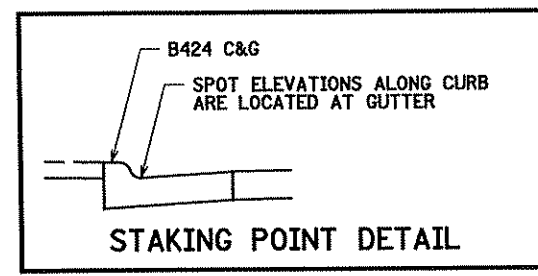
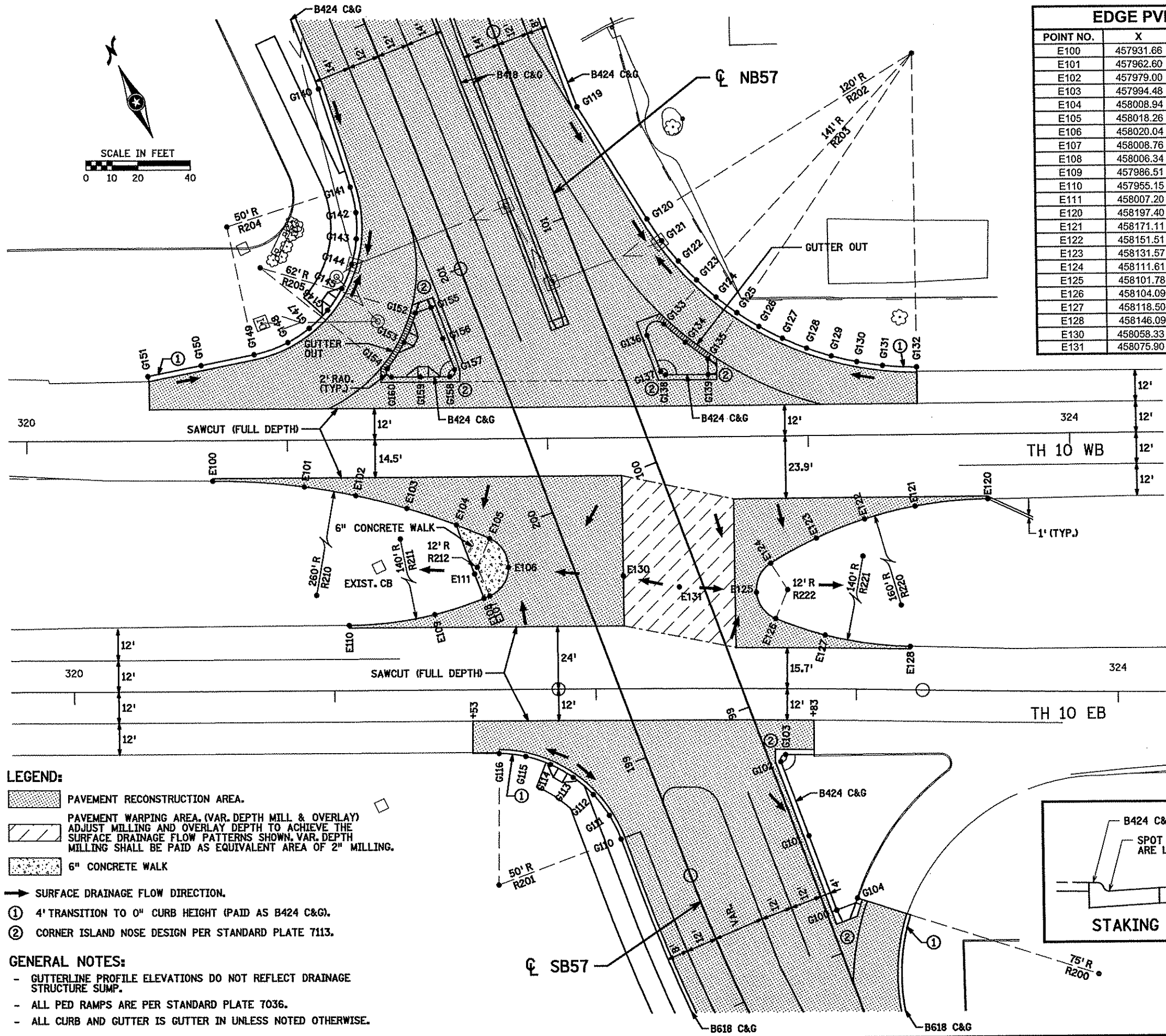
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 27 of 82 Sheets



EDGE PVMT. POINTS			
POINT NO.	X	Y	ELEV.
E100	457931.66	167557.09	860.84
E101	457962.60	167540.10	860.75
E102	457979.00	167528.66	860.75
E103	457994.48	167516.00	860.60
E104	458008.94	167502.19	860.30
E105	458018.26	167492.04	860.20
E106	458020.04	167478.98	859.85
E107	458008.76	167472.17	859.80
E108	458006.34	167472.28	859.80
E109	457986.51	167474.80	859.90
E110	457955.15	167485.07	859.90
E111	458007.20	167482.25	859.70
E120	458197.40	167423.52	860.72
E121	458171.11	167432.98	860.50
E122	458151.51	167436.86	860.40
E123	458131.57	167438.28	860.30
E124	458111.61	167437.19	860.20
E125	458101.78	167429.50	860.15
E126	458104.09	167417.24	860.30
E127	458118.50	167403.38	860.30
E128	458146.09	167385.43	860.30
E130	458058.33	167457.21	860.17
E131	458075.90	167444.13	860.32

GUTTER POINTS			
POINT NO.	X	Y	ELEV.
G100	458076.76	167307.21	858.15
G101	458079.37	167337.20	858.88
G102	458081.97	167367.18	859.80
G103	458084.83	167368.81	859.99
G104	458085.89	167307.92	858.45
G110	458013.71	167367.13	859.63
G111	458013.58	167377.11	859.78
G112	458011.46	167386.87	859.89
G113	458007.45	167396.01	859.96
G114	458001.71	167404.18	859.91
G115	457994.45	167411.03	859.86
G116	457985.79	167416.41	859.81
G119	458120.55	167626.36	860.87
G120	458126.11	167576.36	859.96
G121	458127.63	167566.48	859.82
G122	458129.97	167556.76	859.86
G123	458133.10	167547.26	859.93
G124	458137.02	167538.07	860.02
G125	458141.68	167529.22	860.11
G126	458147.07	167520.80	860.19
G127	458153.14	167512.86	860.28
G128	458159.85	167505.45	860.35
G129	458167.15	167498.62	860.42
G130	458175.00	167492.42	860.47
G131	458183.33	167486.90	860.51
G132	458194.88	167480.76	860.45
G133	458114.40	167537.40	860.62
G134	458118.76	167527.58	860.64
G135	458123.85	167518.12	860.63
G136	458106.70	167536.27	860.77
G137	458105.42	167521.51	861.00
G138	458106.57	167519.52	860.98
G139	458121.32	167512.68	860.74
G140	458033.54	167675.08	860.10
G141	458028.39	167636.17	859.76
G142	458026.11	167626.46	859.69
G143	458021.93	167617.39	859.58
G144	458016.04	167609.33	859.54
G145	458008.66	167602.60	859.72
G146	458000.10	167597.47	859.98
G147	457990.68	167594.15	860.23
G148	457980.80	167592.76	860.42
G149	457967.09	167594.12	860.61
G150	457946.83	167599.01	860.80
G151	457926.58	167603.90	860.89
G152	458030.07	167582.05	860.25
G153	458021.22	167573.83	860.53
G154	458010.93	167567.48	860.80
G155	458036.36	167581.51	860.09
G156	458035.25	167568.79	860.33
G157	458034.15	167556.08	860.54
G158	458031.31	167554.44	860.73
G159	458021.14	167559.16	860.81
G160	458010.97	167563.87	860.75

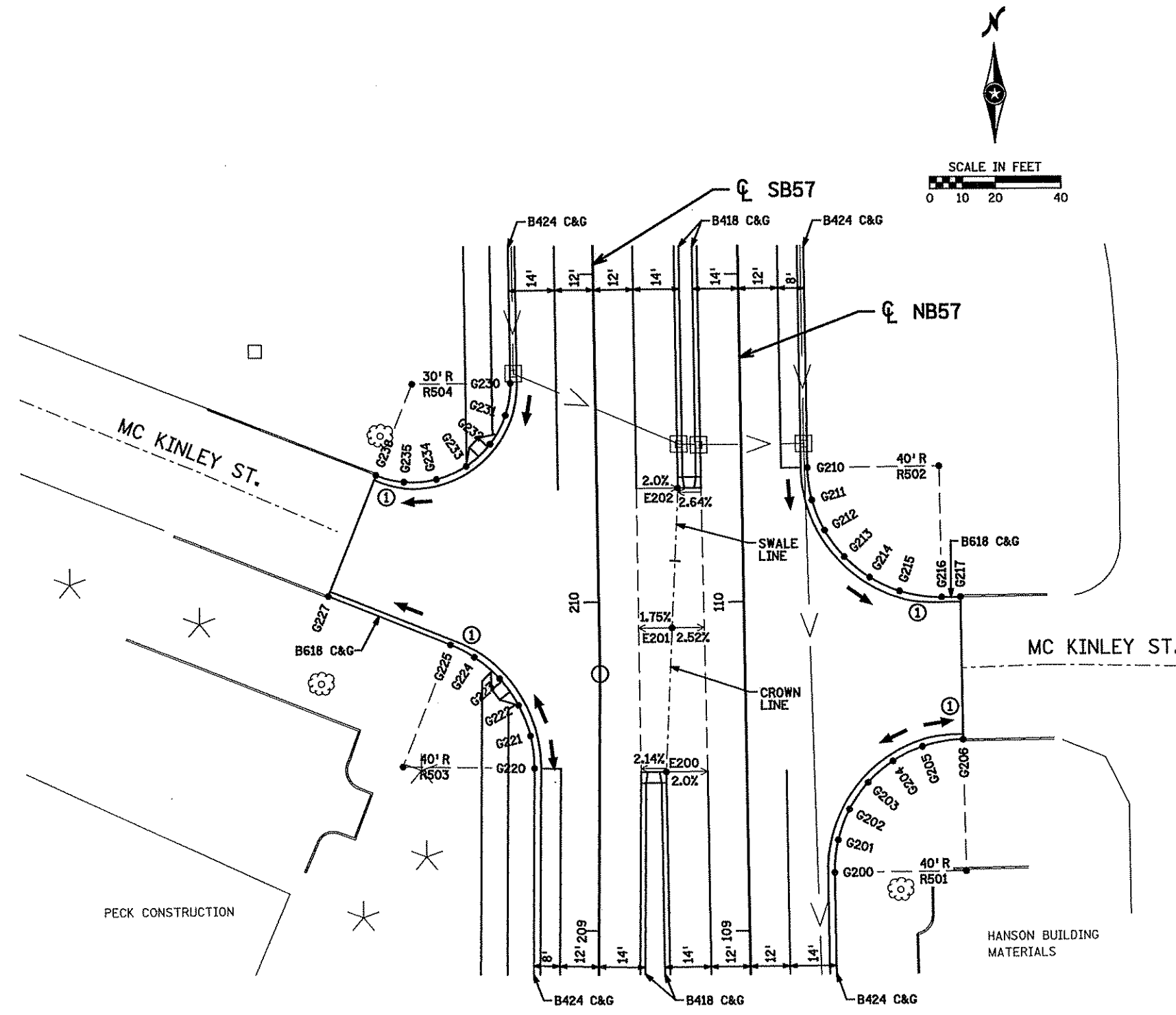
RADIUS POINTS			
POINT NO.	X	Y	RADIUS
R200	458156.45	167242.41	75'
R201	457963.90	167371.46	50'
R202	458245.38	167589.62	120'
R203	458245.38	167589.62	141'
R204	457978.83	167642.72	50'
R205	457983.67	167623.17	62'
R210	457822.24	167321.24	260'
R211	458014.07	167612.07	140'
R212	458009.22	167484.16	12'
R220	458130.27	167278.28	160'
R221	458208.11	167510.95	140'
R222	458113.01	167425.27	12'



- LEGEND:**
- PAVEMENT RECONSTRUCTION AREA.
 - PAVEMENT WARPING AREA. (VAR. DEPTH MILL & OVERLAY)
 - ADJUST MILLING AND OVERLAY DEPTH TO ACHIEVE THE SURFACE DRAINAGE FLOW PATTERNS SHOWN. VAR. DEPTH MILLING SHALL BE PAID AS EQUIVALENT AREA OF 2" MILLING.
 - 6" CONCRETE WALK
 - SURFACE DRAINAGE FLOW DIRECTION.
 - ① 4' TRANSITION TO 0" CURB HEIGHT (PAID AS B424 C&G).
 - ② CORNER ISLAND NOSE DESIGN PER STANDARD PLATE 7113.
- GENERAL NOTES:**
- GUTTERLINE PROFILE ELEVATIONS DO NOT REFLECT DRAINAGE STRUCTURE SUMP.
 - ALL PED RAMPS ARE PER STANDARD PLATE T036.
 - ALL CURB AND GUTTER IS GUTTER IN UNLESS NOTED OTHERWISE.

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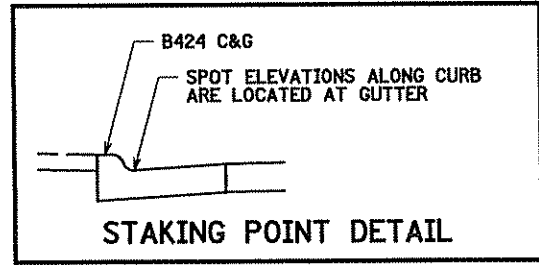
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GUTTER POINTS			
POINT NO.	X	Y	ELEV.
G200	458143.16	168407.27	865.21
G201	458144.33	168417.17	865.26
G202	458147.91	168426.48	865.34
G203	458153.69	168434.62	865.46
G204	458161.29	168441.07	865.58
G205	458170.26	168445.44	865.63
G206	458182.63	168447.57	865.59
G210	458136.22	168530.51	865.97
G211	458137.54	168520.62	865.89
G212	458141.26	168511.37	865.79
G213	458147.16	168503.33	865.70
G214	458154.87	168496.99	865.62
G215	458163.90	168492.76	865.55
G216	458176.67	168490.82	865.50
G217	458182.29	168490.88	865.48
G220	458052.28	168439.17	865.60
G221	458051.18	168449.08	865.65
G222	458047.66	168458.41	865.56
G223	458041.95	168468.58	865.50
G224	458034.38	168473.09	865.44
G225	458027.13	168476.89	865.38
G227	457990.10	168491.69	864.80
G230	458046.02	168556.58	866.03
G231	458044.44	168546.75	865.94
G232	458039.74	168537.98	865.77
G233	458032.42	168531.23	865.50
G234	458023.30	168527.24	865.17
G235	458013.38	168526.46	864.89
G236	458004.82	168528.52	864.71

EDGE PVMT. POINTS			
POINT NO.	X	Y	ELEV.
E200	458092.43	168438.04	866.58
E201	458094.63	168481.83	866.86
E202	458096.77	168524.42	866.59

RADIUS POINTS			
POINT NO.	X	Y	RADIUS
R501	458183.16	168407.57	40'
R502	458176.22	168530.81	40'
R503	458012.28	168439.75	40'
R504	458016.02	168556.35	30'

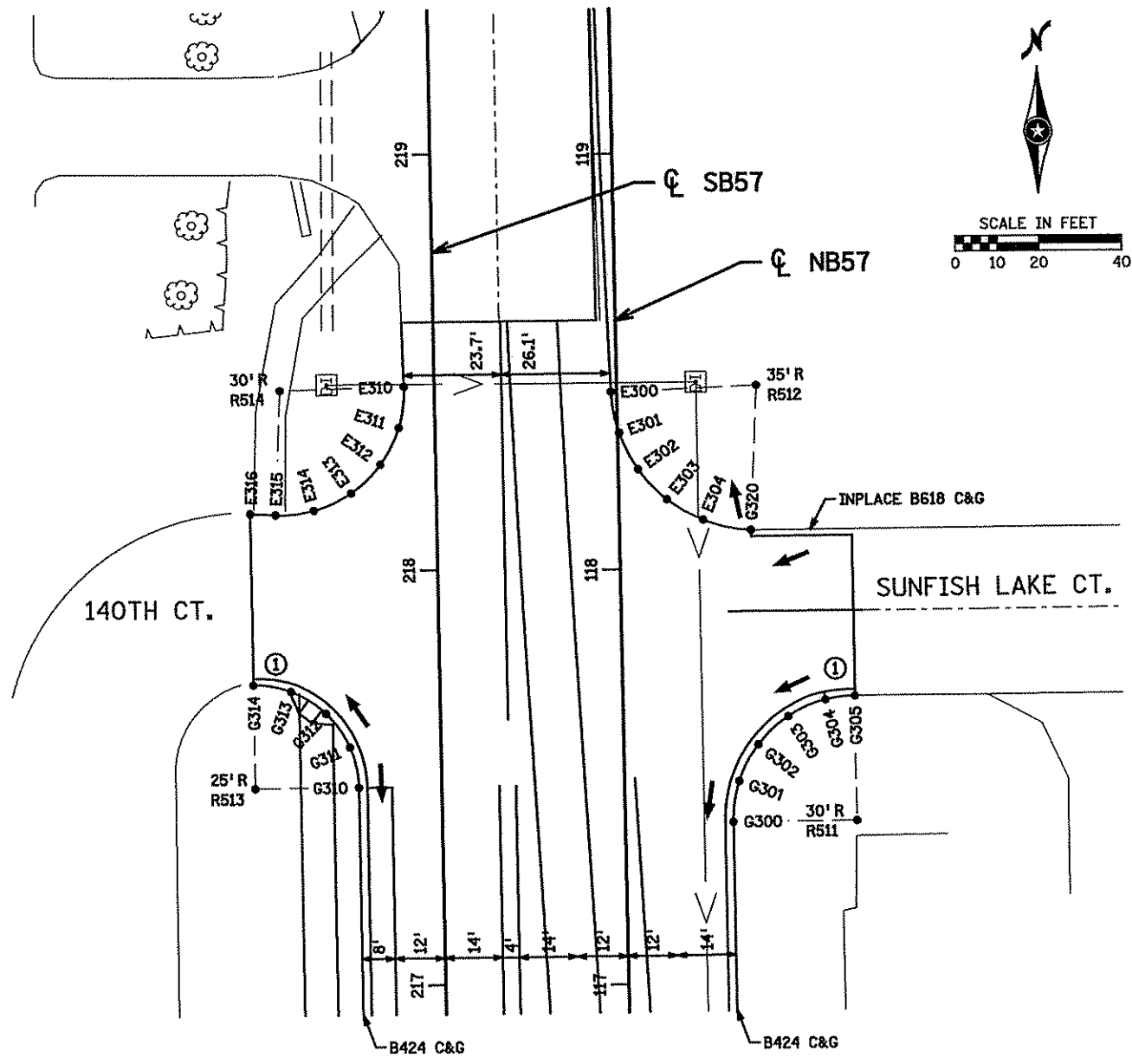


GENERAL NOTES:

- GUTTERLINE PROFILE ELEVATIONS DO NOT REFLECT DRAINAGE STRUCTURE SUMP.
- ALL PED RAMPS ARE PER STANDARD PLATE T036.
- ALL CURB AND GUTTER IS GUTTER IN.

LEGEND:

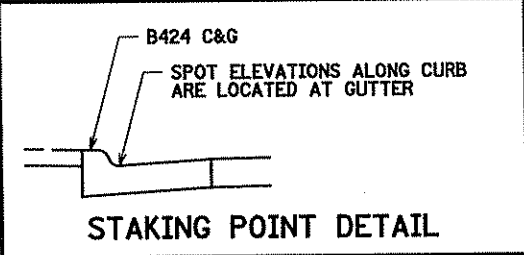
- SURFACE DRAINAGE FLOW DIRECTION.
- ① 10' TRANSITION CURB AND GUTTER FROM B424 C&G TO B618 C&G. (PAID AS B424 C&G)



GUTTER POINTS			
POINT NO.	X	Y	ELEV.
G300	458136.88	169228.59	874.38
G301	458138.46	169238.42	874.61
G302	458143.16	169247.19	875.00
G303	458150.48	169253.94	875.43
G304	458159.60	169257.93	875.95
G305	458166.78	169258.82	876.17
G310	458046.81	169237.25	874.77
G311	458044.77	169246.97	874.92
G312	458039.10	169255.13	874.77
G313	458030.70	169260.43	874.41
G314	458021.62	169262.06	873.98
G320	458142.05	169298.99	876.11

EDGE PVMT. POINTS			
POINT NO.	X	Y	ELEV.
E300	458108.73	169332.53	877.15
E301	458110.55	169322.73	876.94
E302	458115.06	169313.84	876.69
E303	458121.89	169306.58	876.36
E304	458130.49	169301.54	876.21
E310	458058.77	169333.99	877.17
E311	458057.41	169324.13	876.97
E312	458052.91	169315.26	876.71
E313	458045.75	169308.34	876.27
E314	458036.72	169304.15	875.71
E315	458027.45	169303.11	875.12
E316	458021.31	169303.39	874.76

RADIUS POINTS			
POINT NO.	X	Y	RADIUS
R511	458166.88	169228.82	30'
R512	458143.70	169333.95	35'
R513	458021.82	169237.06	25'
R514	458028.78	169333.08	30'



- GENERAL NOTES:**
- GUTTERLINE PROFILE ELEVATIONS DO NOT REFLECT DRAINAGE STRUCTURE SUMP.
 - ALL PED RAMPS ARE PER STANDARD PLATE 7036.
 - ALL CURB AND GUTTER IS GUTTER IN.

- LEGEND:**
- SURFACE DRAINAGE FLOW DIRECTION.
 - ① 10' TRANSITION CURB AND GUTTER FROM B424 C&G TO B618 C&G. (PAID AS B424 C&G)

DATE: 6/17/2008 TIME: 5:50:27 PM FILENAME: K:\p\Anoka\317\21000\my-pln-sit\050157.dwg

DRAWN BY: SFH
CHECKED BY: JMW

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.

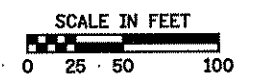
SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 6/17/2008 LIC. NO. 22405

TKDA
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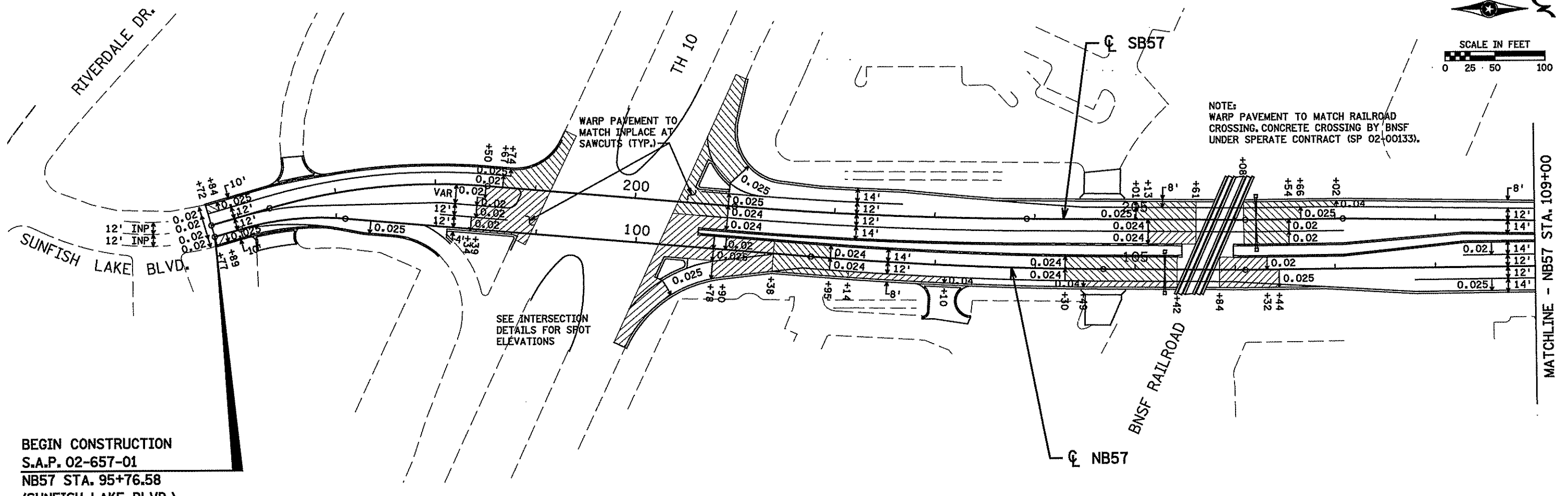
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

INTERSECTION DETAIL
CSAH 57 (SUNFISH LAKE BLVD.) / 140TH CT.

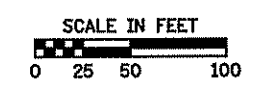
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 31 of 82 Sheets



NOTE:
WARP PAVEMENT TO MATCH RAILROAD
CROSSING. CONCRETE CROSSING BY BNSF
UNDER SPERATE CONTRACT (SP 02-00133).



BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

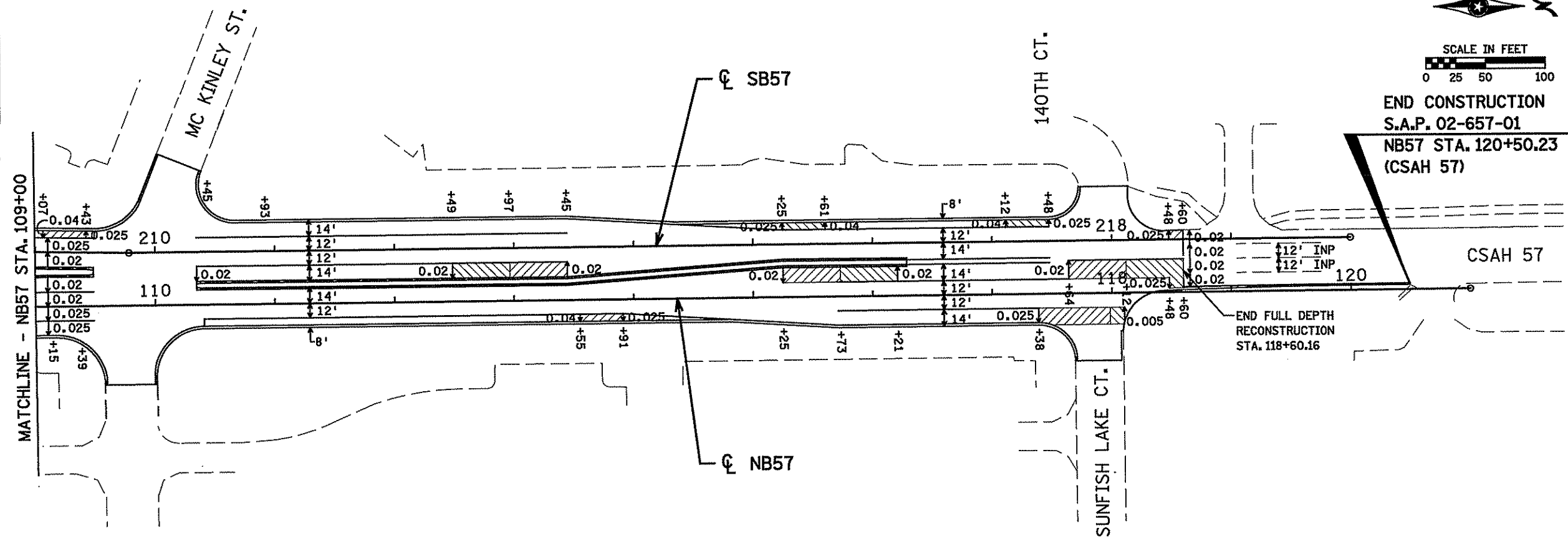


END CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 120+50.23
(CSAH 57)

LEGEND

- INPLACE ROADWAY
- NEW CONSTRUCTION
- SUPERELEVATION TRANSITION

NOTE:
ALL CROSS SLOPES ARE EXPRESSED IN FT/FT.
SEE INTERSECTION DETAILS FOR
INTERSECTION PAVEMENT WARPING.



MATCHLINE NB57 STA. 100+60

END FULL DEPTH
RECONSTRUCTION
STA. 118+60.16

DATE: 7/9/2008 TIME: 10:54:40 AM FILENAME: K:\P\Anoka\CH 57\21000\wp\brdg\wp\in-st\csah57_spc.dgn

DRAWN BY: TJV
CHECKED BY: JMW

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.

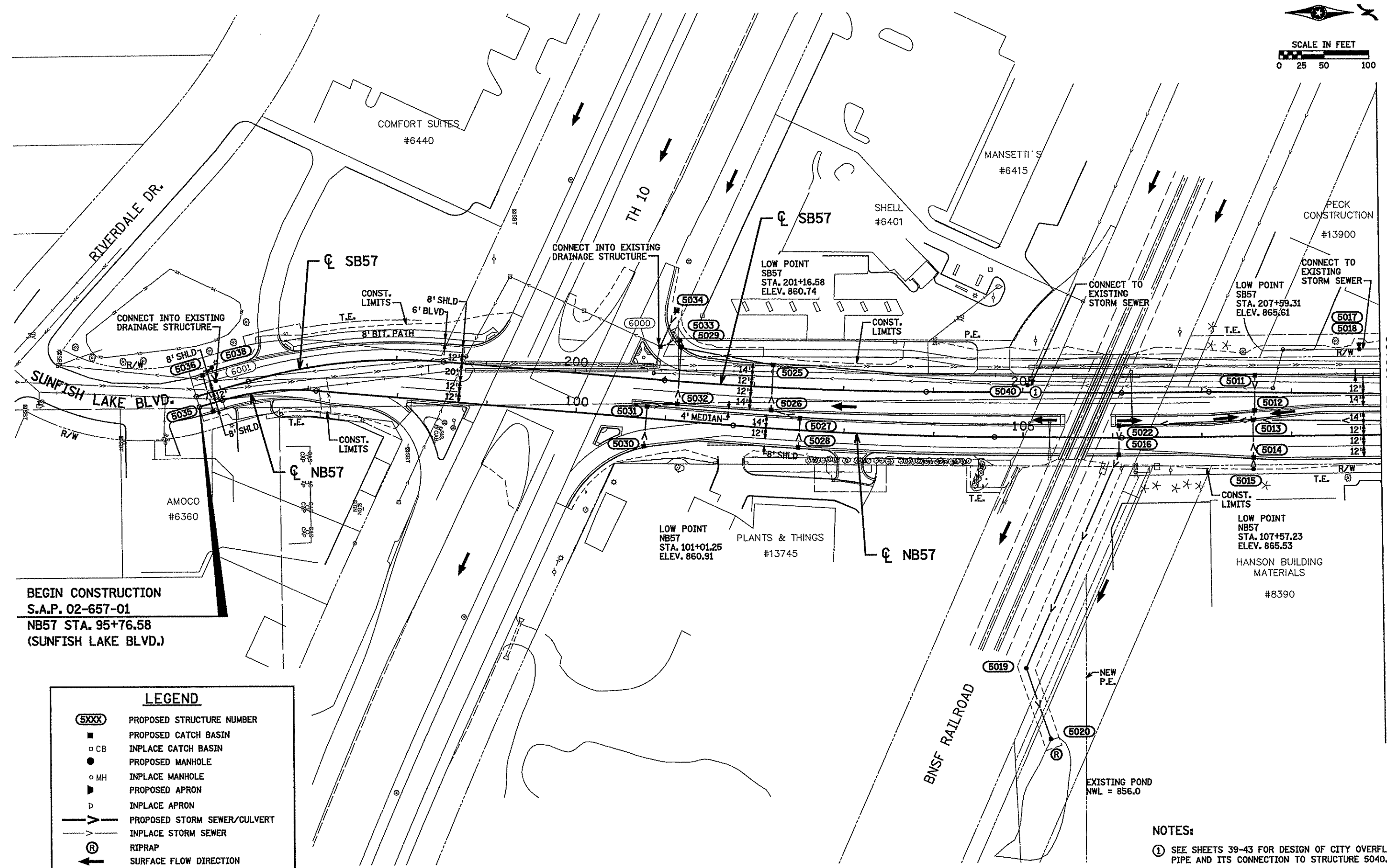
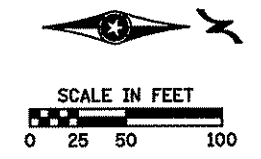
SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 7/9/2008 LIC. NO. 22405

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

SUPERELEVATION PLAN
NB57 STA. 95+76.58 TO NB57 STA. 120+50.23

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 32 of 82 Sheets

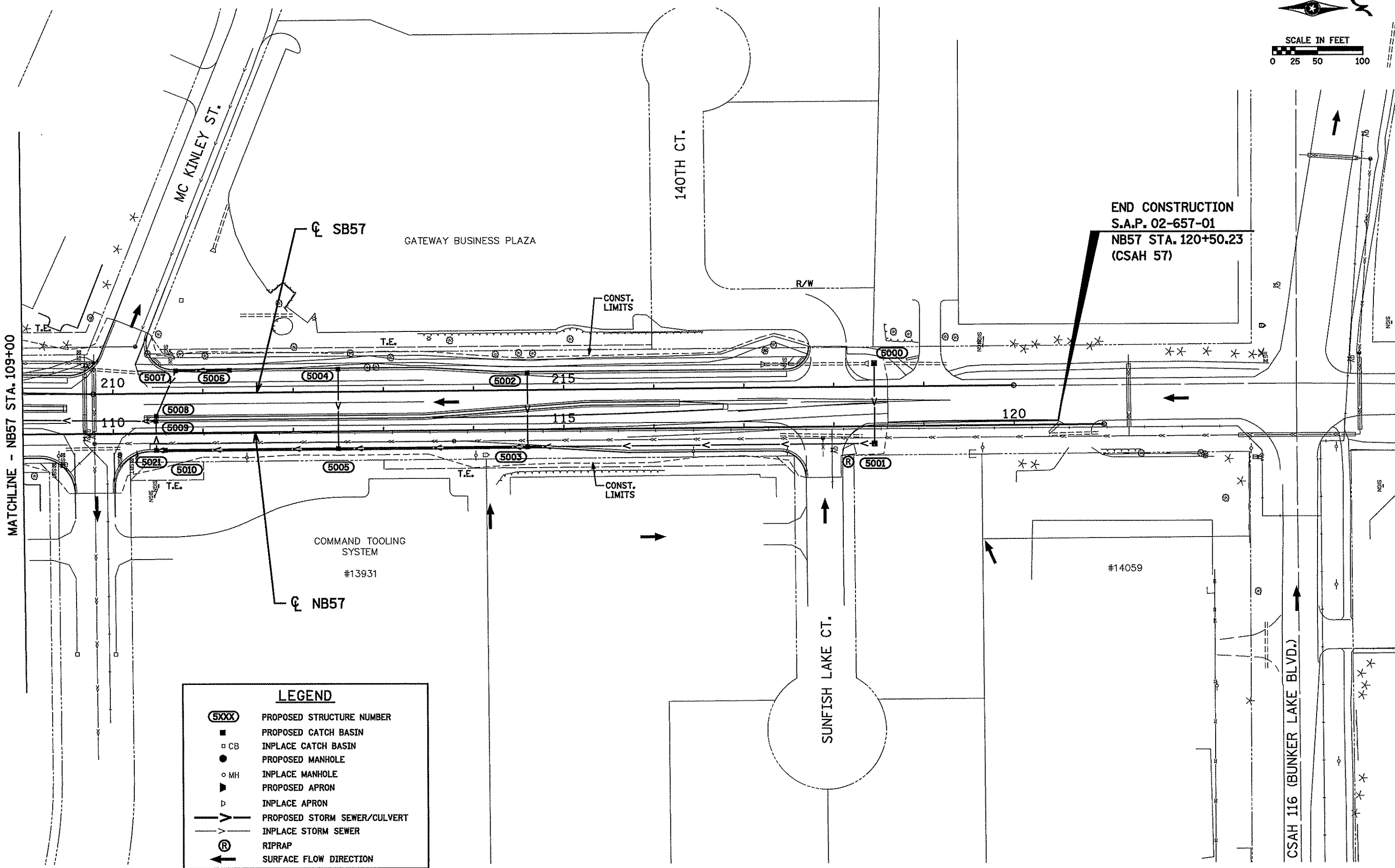
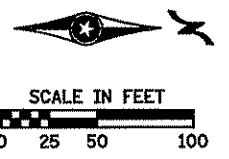


BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

LEGEND	
(5XXX)	PROPOSED STRUCTURE NUMBER
■	PROPOSED CATCH BASIN
□ CB	INPLACE CATCH BASIN
●	PROPOSED MANHOLE
○ MH	INPLACE MANHOLE
▽	PROPOSED APRON
▾	INPLACE APRON
— V —	PROPOSED STORM SEWER/CULVERT
- - - V - - -	INPLACE STORM SEWER
Ⓜ	RIPRAP
→	SURFACE FLOW DIRECTION

NOTES:
 ① SEE SHEETS 39-43 FOR DESIGN OF CITY OVERFLOW PIPE AND ITS CONNECTION TO STRUCTURE 5040.

DATE: 7/9/2008 TIME: 10:54:48 AM
 FILENAME: K:\er\AnokaCity\13721000\Nwy-brdg\Nwy-plr-sif\csat57_dra.dgn



END CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 120+50.23
(CSAH 57)

LEGEND	
(5XXX)	PROPOSED STRUCTURE NUMBER
■	PROPOSED CATCH BASIN
□ CB	INPLACE CATCH BASIN
●	PROPOSED MANHOLE
○ MH	INPLACE MANHOLE
▼	PROPOSED APRON
▷	INPLACE APRON
—V—	PROPOSED STORM SEWER/CULVERT
-V-	INPLACE STORM SEWER
Ⓡ	RIPRAP
←	SURFACE FLOW DIRECTION

DATE: 7/9/2008 TIME: 10:54:55 AM
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DRAWN BY: SFH
CHECKED BY: EN

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.

SIGNATURE: *Eric J. Nelson*
PRINTED NAME: ERIC J. NELSON
DATE: 7/9/2008 LIC. NO. 43560

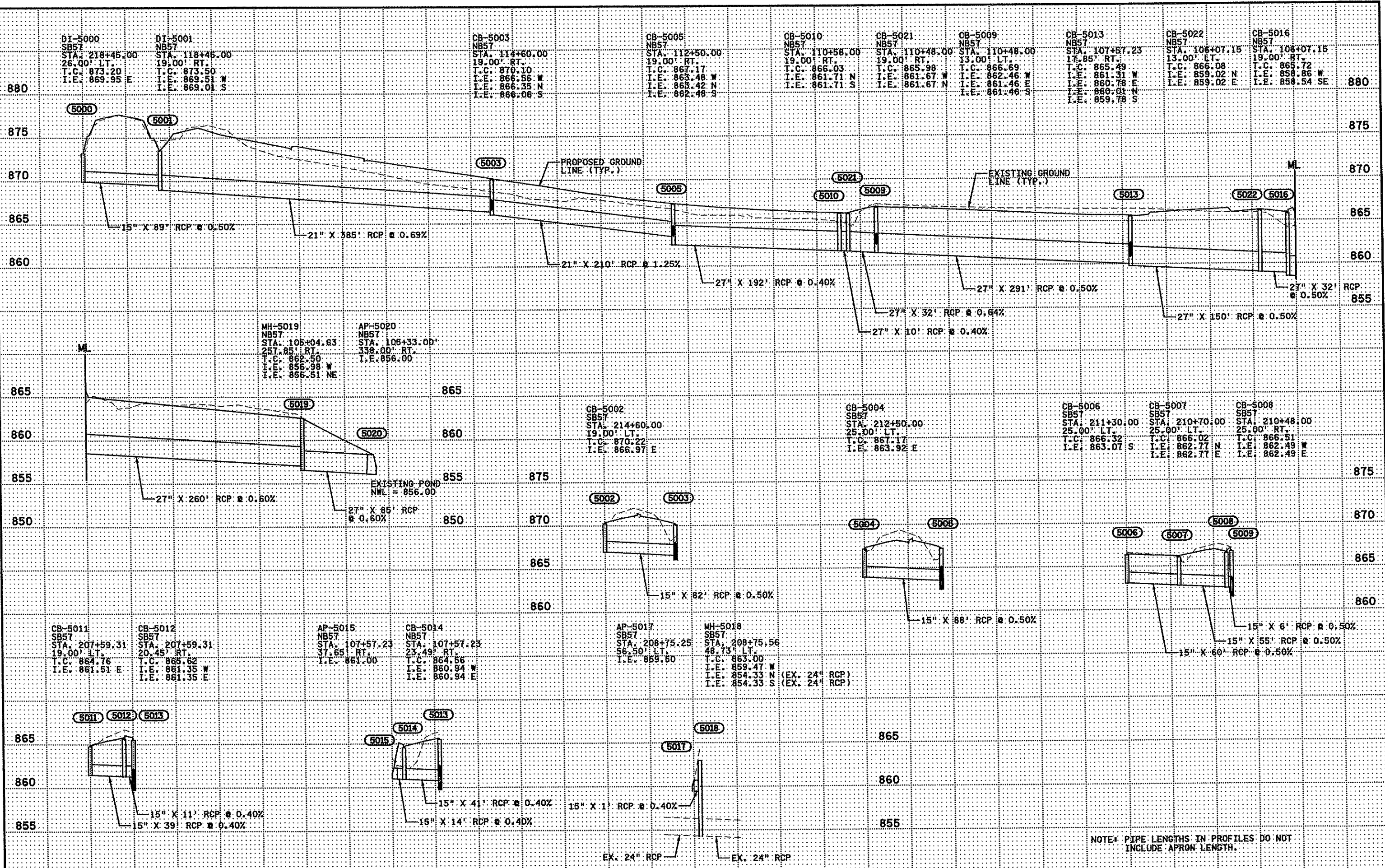
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

DRAINAGE PLAN
NB57 STA. 109+00 TO NB57 STA. 120+50.23

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 34 of 82 Sheets

DATE: 6/17/2008 TIME: 5:50:42 PM FILENAME: K:\proj\work\CSAH 57\21000\dwg\brdg\brdg\plan\st\asat57_d.rdg



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SIGNATURE: *Eric J. Nelson*
 PRINTED NAME: ERIC J. NELSON
 DATE: 6/17/2008 LIC. NO. 43560

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

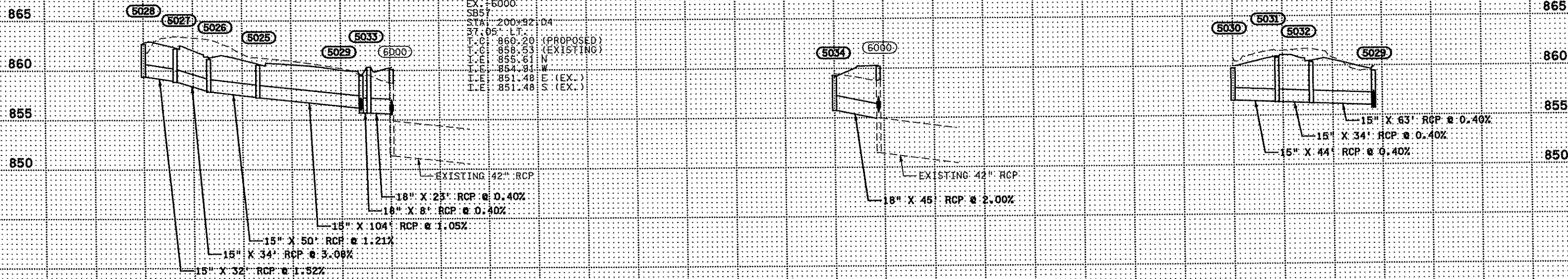
DRAINAGE PROFILES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 35 of 82 Sheets

NOTE: PIPE LENGTHS IN PROFILES DO NOT INCLUDE APRON LENGTH.

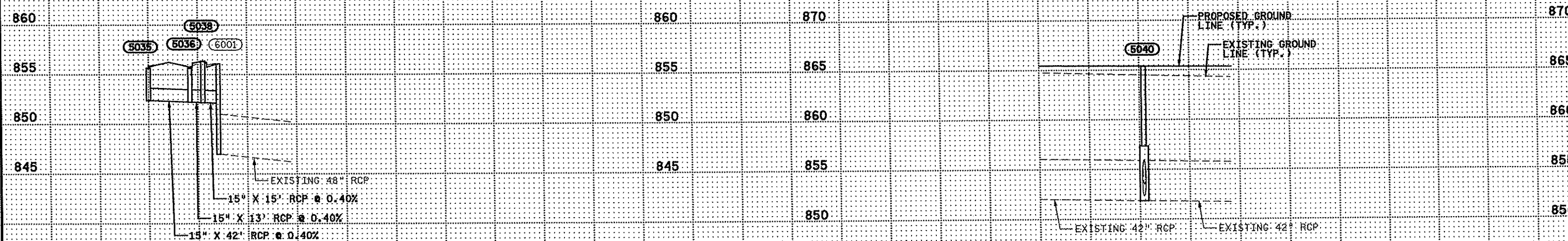
CB-5028 NB57 STA. 102+50.00 19.00' RT. T.C. 862.66 I.E. 859.41 W
 CB-5027 NB57 STA. 102+50.00 13.00' LT. T.C. 862.18 I.E. 858.93 E
 CB-5026 SB57 STA. 202+20.00 25.00' RT. T.C. 861.14 I.E. 857.89 NE
 CB-5025 SB57 STA. 202+20.00 25.00' LT. T.C. 860.53 I.E. 857.28 E
 CB-5029 SB57 STA. 201+15.48 37.82' LT. T.C. 859.44 I.E. 856.19 N
 MH-5033 DESIGN SPECIAL (GRIT CHAMBER) SB57 STA. 201+13.62 45.74' LT. T.C. 860.32 I.E. 855.98 E
 DI-5034 SB57 STA. 201+06.98 79.16' LT. T.C. 859.30 I.E. 855.80 SE
 CB-5030 NB57 STA. 100+78.50 31.27' RT. T.C. 859.80 I.E. 856.55 W
 CB-5031 NB57 STA. 100+78.50 13.00' LT. T.C. 860.81 I.E. 856.37 E
 CB-5032 SB57 STA. 201+16.00 25.00' RT. T.C. 860.36 I.E. 856.23 S

EX.-6000 SB57 STA. 200+92.04 37.05' LT. T.C. 860.20 (PROPOSED) T.C. 858.53 (EXISTING) I.E. 855.61 N I.E. 854.81 W I.E. 851.48 E (EX.) I.E. 851.48 S (EX.)



CB-5035 SB57 STA. 195+85.00 21.00' RT. T.C. 855.64 I.E. 852.39 W
 CB-5036 SB57 STA. 195+85.00 21.00' LT. T.C. 855.64 I.E. 852.23 E
 MH-5038 DESIGN SPECIAL (GRIT CHAMBER) SB57 STA. 195+97.17 26.17' LT. T.C. 856.36 I.E. 852.17 SE
 EX.-6001 SB57 STA. 195+97.17 10.93' LT. T.C. 856.09 I.E. 852.11 W I.E. 847.02 N I.E. 847.02 S (EX.)

MH-5040 SB57 STA. 205+05.40 8.16' LT. T.C. 855.37 I.E. 853.35 W (EX. 24\"/>



DATE: 6/17/2008 TIME: 5:50:48 PM FILENAME: K:\A\Anoka\2121000\dwg-by\dwg\m\p\m\drain15.dwg

DRAWN BY: SFH

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.

SIGNATURE: *[Signature]*
 PRINTED NAME: ERIC J. NELSON
 DATE: 6/17/2008 LIC. NO. 43560

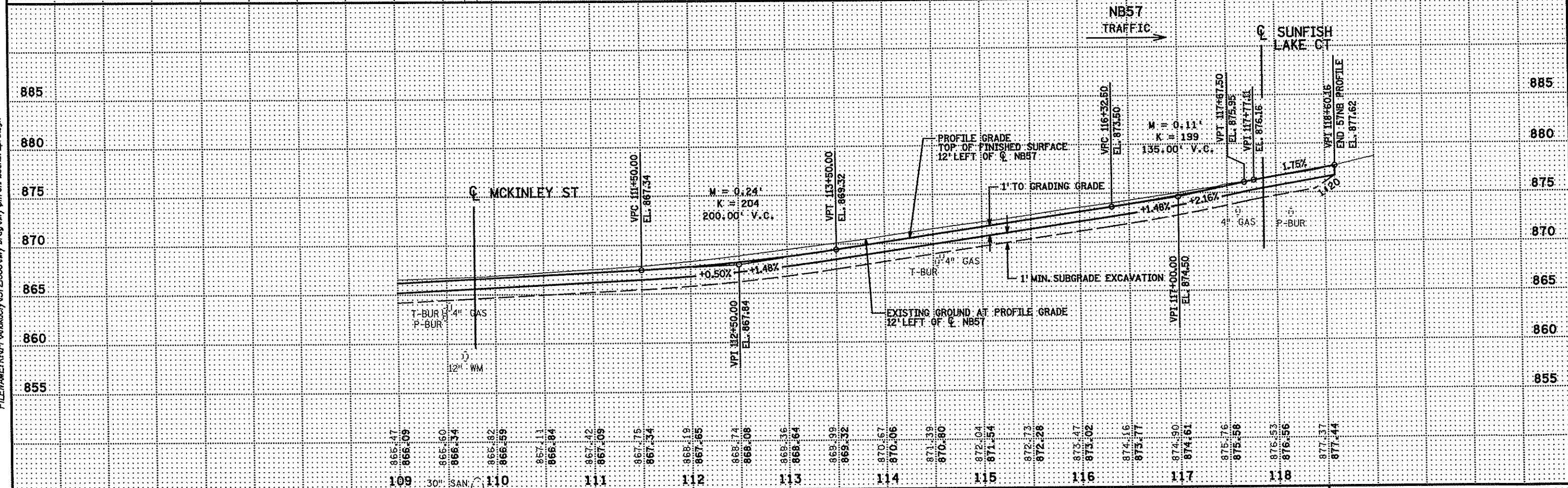
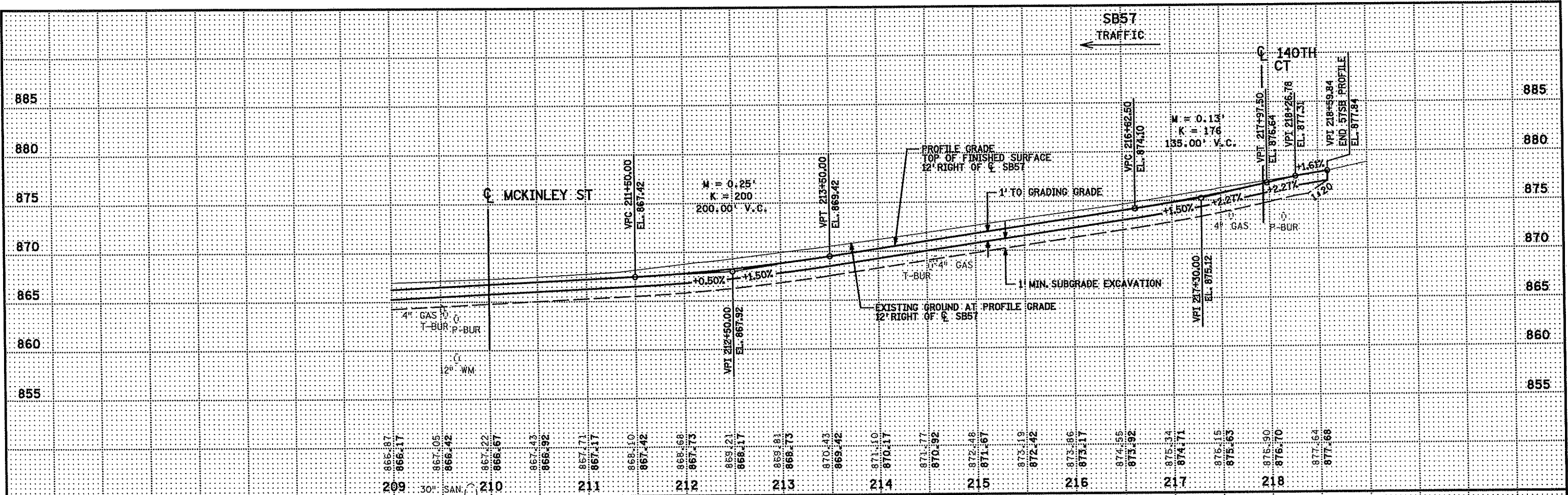
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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

DRAINAGE PROFILES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 36 of 82 Sheets

DATE: 6/17/2008 TIME: 5:50:17 PM
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DRAWN BY: TJV
 CHECKED BY: JMW

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.

SIGNATURE: *Joseph M. Weaver*
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 6/17/2008 LIC. NO. 22405

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

PROFILES (NB57, SB57)

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 28 of 82 Sheets

DATE: 6/17/2008 TIME: 5:50:52 PM
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CASTING ASSEMBLIES SUMMARY						
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING (1)	CURB BOX	STANDARD PLATE NO.	QUANTITY	REMARKS
A - 7D	700-7			4101	10	MANHOLE
		715		4110		
B - 17	806			4125	17	CATCH BASIN
		816		4154		
			825	4134		
M - 11	ROUND CONCRETE			4143	3	CATCH BASIN
		731		4143		
			N/A			
C - 1	R-3448C (2)				9	CATCH BASIN
		R-3448C (2)				
			N/A			

NOTES:

- (1) USE BENT BOLT WITH 816 GRATE.
- (2) NEENAH MODEL R-3448C OR APPROVED EQUAL.

DRAWN BY: SFH
 CHECKED BY: EN

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.

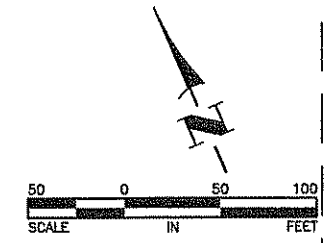
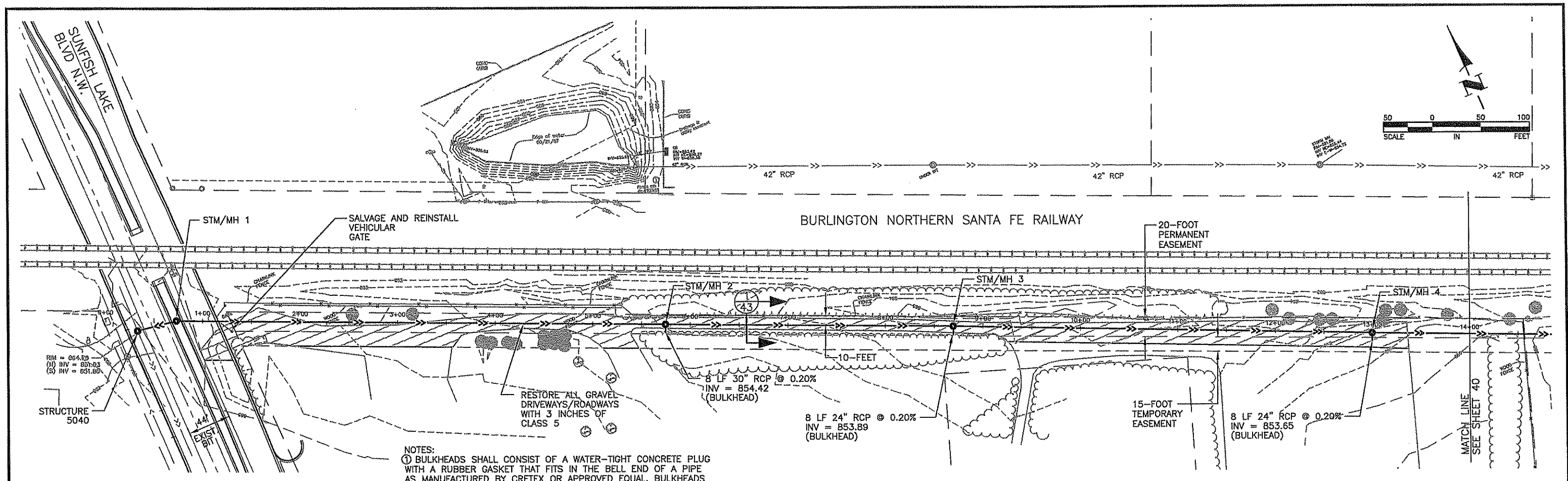
SIGNATURE: 
 PRINTED NAME: ERIC J. NELSON
 DATE: 6/17/2008 LIC. NO. 43560

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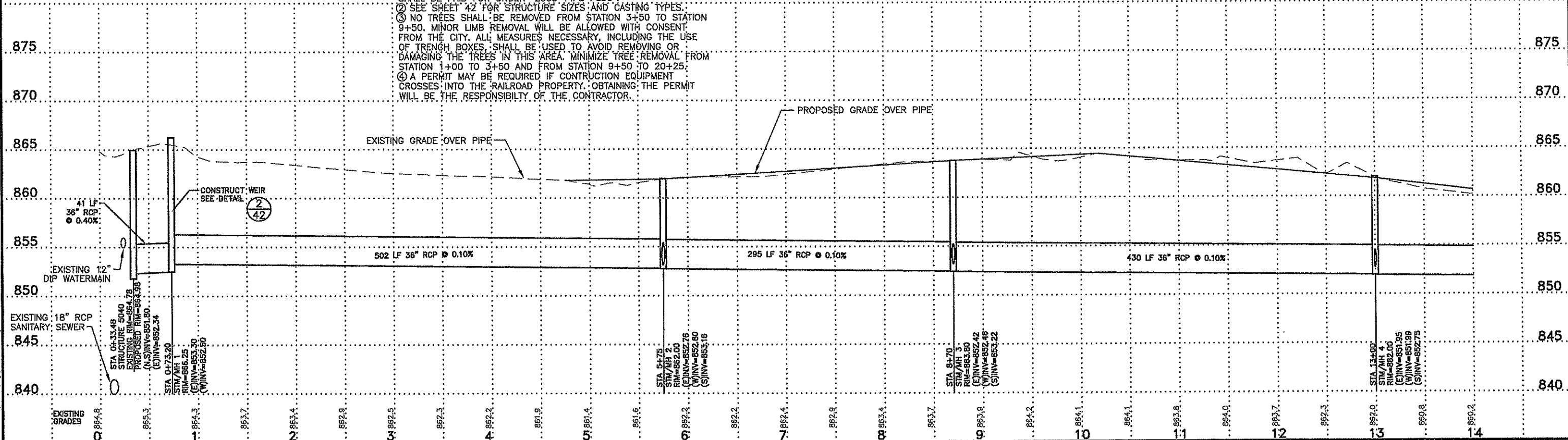
ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

DRAINAGE TABULATION
 CASTING ASSEMBLIES

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 38 of 82 Sheets



- NOTES:
- BULKHEADS SHALL CONSIST OF A WATER-TIGHT CONCRETE PLUG WITH A RUBBER GASKET THAT FITS IN THE BELL END OF A PIPE AS MANUFACTURED BY CRETEX OR APPROVED EQUAL. BULKHEADS SHALL BE PAID FOR UNDER "2503-PIPE PLUG".
 - SEE SHEET 42 FOR STRUCTURE SIZES AND CASTING TYPES.
 - NO TREES SHALL BE REMOVED FROM STATION 3+50 TO STATION 9+50. MINOR LIMB REMOVAL WILL BE ALLOWED WITH CONSENT FROM THE CITY. ALL MEASURES NECESSARY, INCLUDING THE USE OF TRENCH BOXES, SHALL BE USED TO AVOID REMOVING OR DAMAGING THE TREES IN THIS AREA. MINIMIZE TREE REMOVAL FROM STATION 1+00 TO 3+50 AND FROM STATION 9+50 TO 20+25.
 - A PERMIT MAY BE REQUIRED IF CONSTRUCTION EQUIPMENT CROSSES INTO THE RAILROAD PROPERTY. OBTAINING THE PERMIT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.



DATE	REVISION
4/10/08	REVISED TITLE BLOCK
4/30/08	REVISED SHEET NUMBERS
6/16/08	REVISED LOCATION OF STM/MH 1
6/18/08	REVISED TOTAL SHEETS
6/27/08	REVISED NOTE 3
7/14/08	REVISED STORM SEWER LOCATION AND NOTE 3 AND ADDED NOTE 5
7/18/08	REVISED NOTES 1 AND 4

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tim E. O.
TIMOTHY A. EGORICH, P.E.
Date 10/1/07 Lic. No. 43362

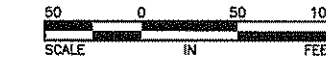
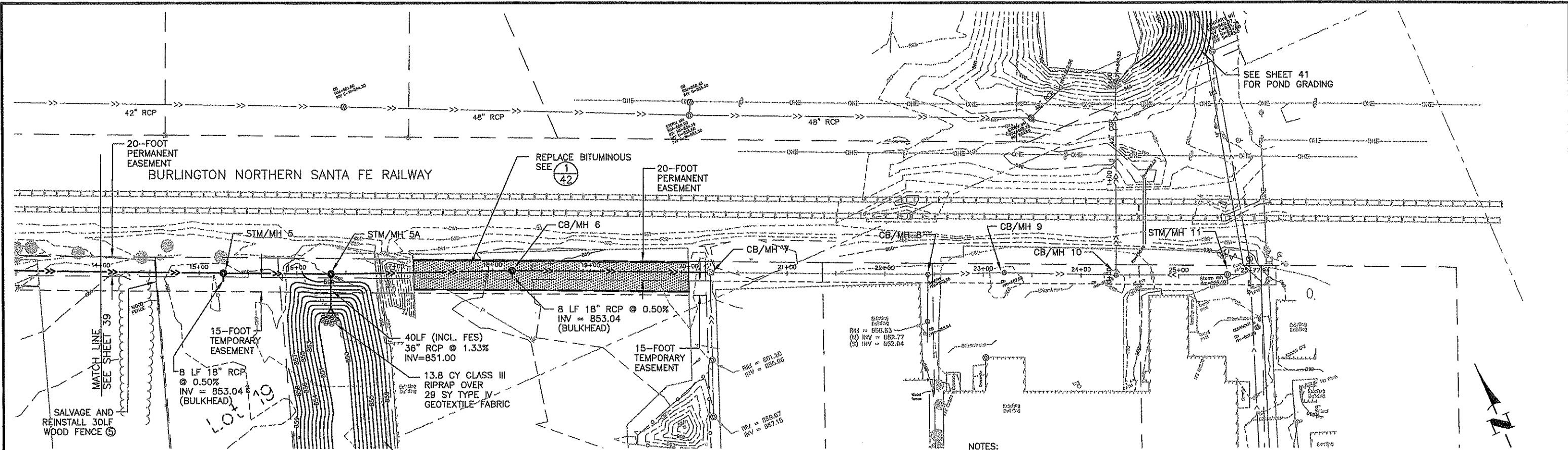
DESIGNED BY: TAE
DRAWN BY: CKJ
CHECKED BY: PRR

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3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
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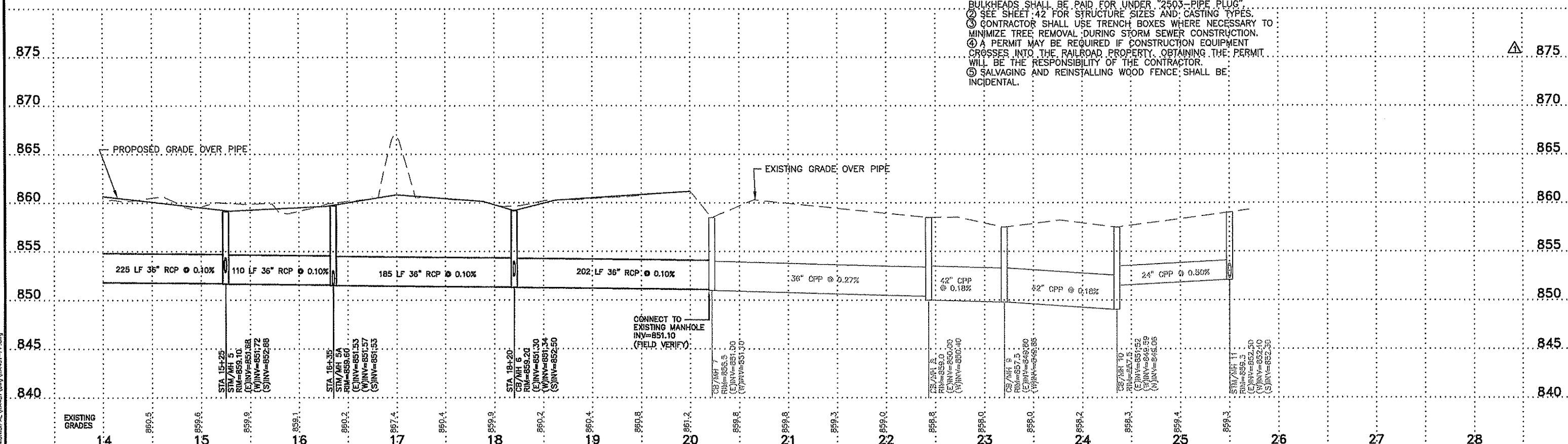
**SUNFISH LAKE BOULEVARD
DRAINAGE IMPROVEMENTS
IMPROVEMENT PROJECT 08-20**
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

**STORM SEWER
CONSTRUCTION PLAN**
CITY OF RAMSEY, MINNESOTA

SHEET 39 OF 82 SHEETS
RA431



- NOTES:
- ① BULKHEADS SHALL CONSIST OF A WATER-TIGHT CONCRETE PLUG WITH A RUBBER GASKET THAT FITS IN THE BELL END OF A PIPE AS MANUFACTURED BY CRETEX OR APPROVED EQUAL.
 - ② BULKHEADS SHALL BE PAID FOR UNDER "2503-PIPE PLUG".
 - ③ SEE SHEET 42 FOR STRUCTURE SIZES AND CASTING TYPES.
 - ④ CONTRACTOR SHALL USE TRENCH BOXES WHERE NECESSARY TO MINIMIZE TREE REMOVAL DURING STORM SEWER CONSTRUCTION.
 - ⑤ A PERMIT MAY BE REQUIRED IF CONSTRUCTION EQUIPMENT CROSSES INTO THE RAILROAD PROPERTY. OBTAINING THE PERMIT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - ⑥ SALVAGING AND REINSTALLING WOOD FENCE SHALL BE INCIDENTAL.



DATE	REVISION
4/10/08	REVISED TITLE BLOCK
4/30/08	REVISED SHEET NUMBERS
6/18/08	REVISED TOTAL SHEETS
6/27/08	REVISED NOTE 3
7/14/08	ADDED NOTES 4 AND 5
7/18/08	REVISED NOTE 1
7/22/08	REVISED NOTE 5

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

TIMOTHY A. EGGERTS, P.E.
 Lic. No. 43362

DESIGNED BY: TAE
 DRAWN BY: CKJ
 CHECKED BY: PRR

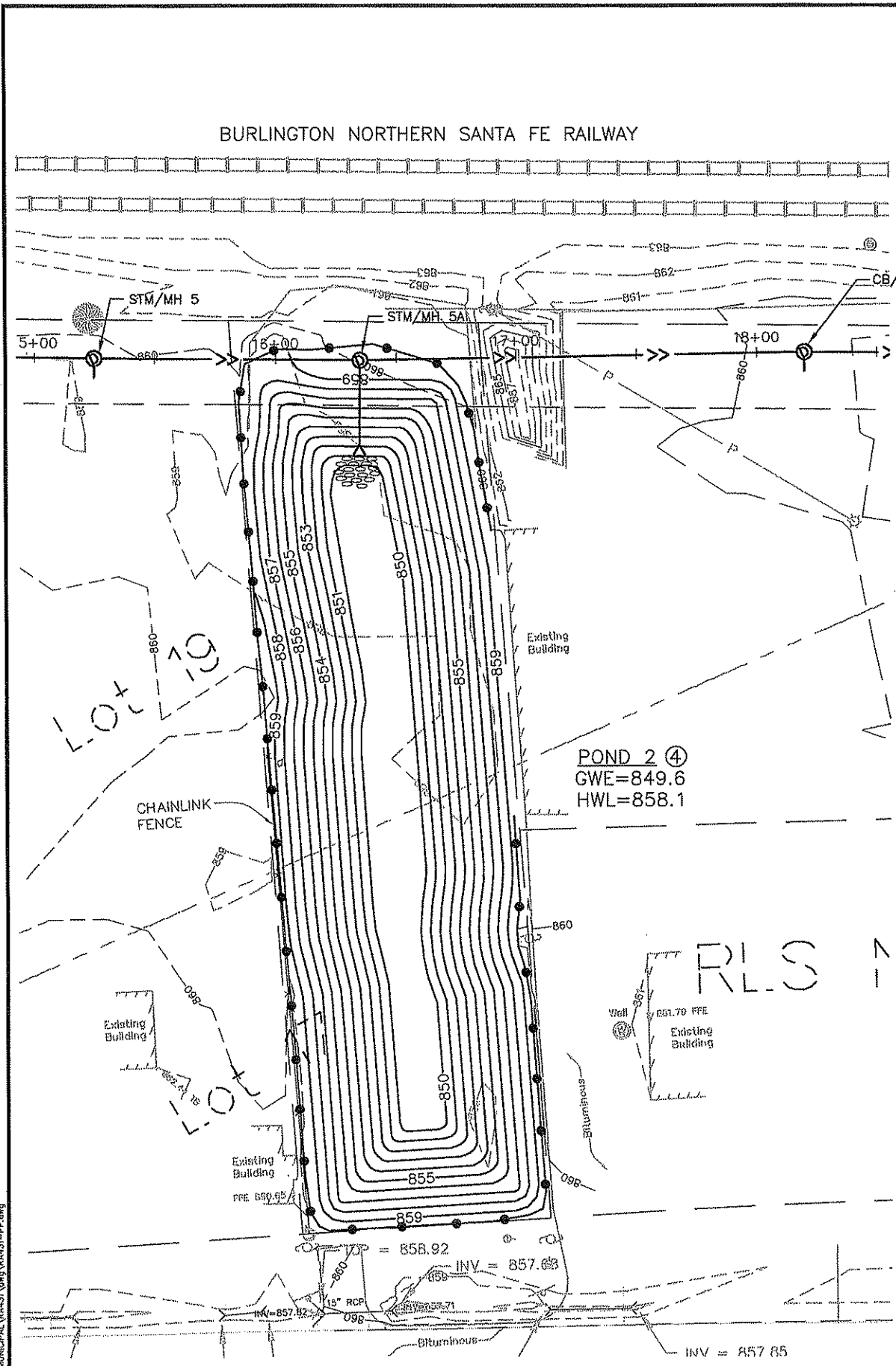
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**SUNFISH LAKE BOULEVARD
 DRAINAGE IMPROVEMENTS
 IMPROVEMENT PROJECT 08-20**
 S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

**STORM SEWER
 CONSTRUCTION PLAN**
 CITY OF RAMSEY, MINNESOTA

SHEET **40** OF **82**
 SHEETS

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GENERAL NOTES:

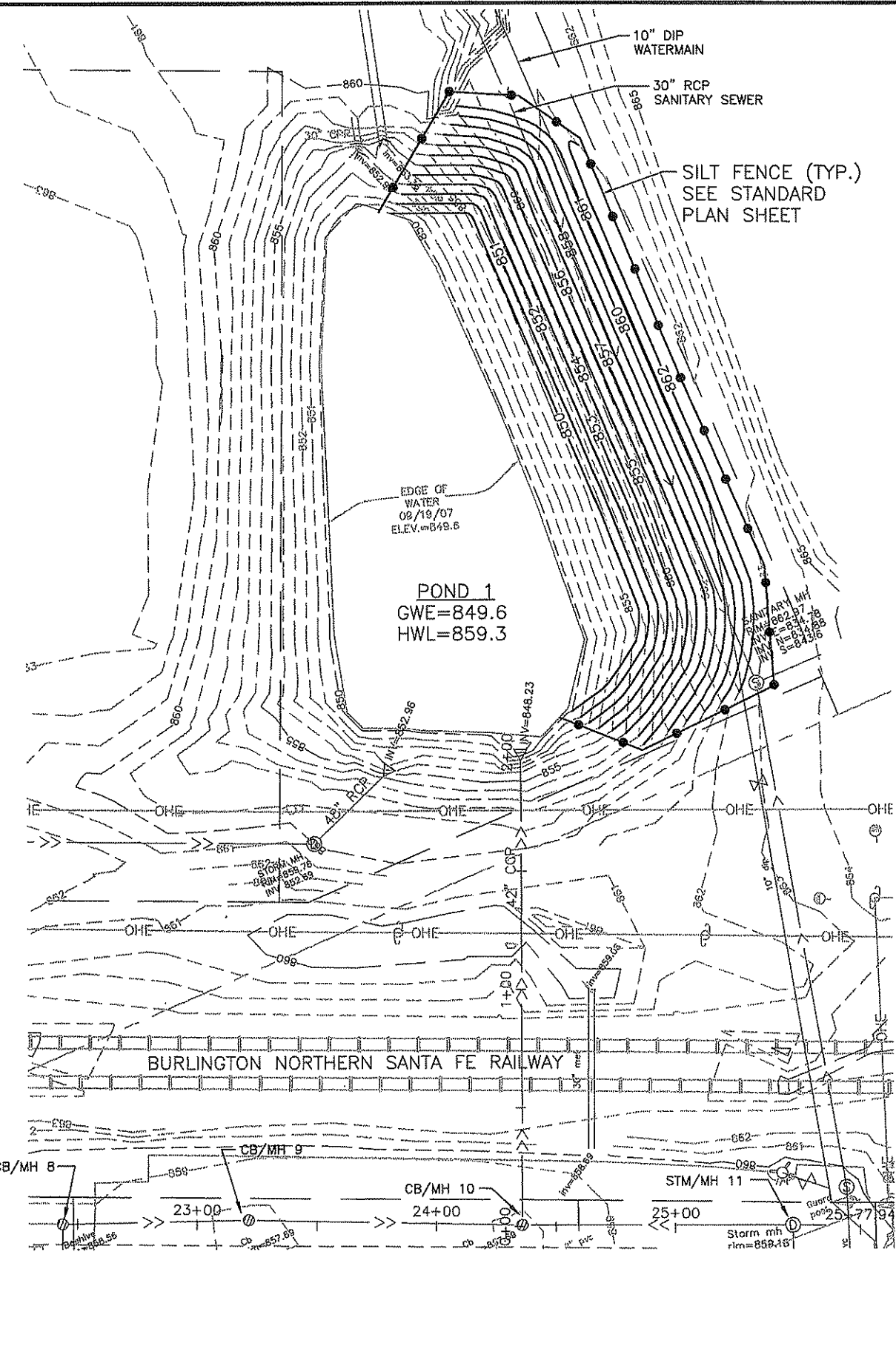
- ① MINIMUM APPLICATION RATES AND TYPES FOR SEED, MULCH AND FERTILIZER SHALL BE AS FOLLOWS:
 SEED MIXTURE 32B 88 LBS/ACRE
 TYPE 1 MULCH (DISC ANCHORED) 2 TONS/ACRE
 COMMERCIAL FERTILIZER TYPE 1 (20-0-10) 500 LBS/ACRE
- ② SEED MIXTURE SHALL MEET THE REQUIREMENTS OF Mn/DOT SPEC. 3876.2, MIXTURE 32B, EXCEPT BIG BLUESTEM SHALL BE REMOVED FROM THE MIX AND THE PLS RATE FOR INDIAN GRASS SHALL BE 4 LB/ACRE.
- ③ EXCESS MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF BY THE CONTRACTOR OFF SITE. DISPOSAL OF EXCESS MATERIAL SHALL BE INCIDENTAL.
- ④ FOR POND 2, THE CONTRACTOR SHALL SUBCUT 4 INCHES BELOW FINAL GRADES AND PLACE 4 INCHES OF TOPSOIL BORROW THAT MEETS THE REQUIREMENTS OF MN/DOT SPEC. 3877.2A.

POND 1 EARTHWORK SUMMARY

POND EXCAVATION WITH SUBCUT	2,652 C.Y.
SALVAGED TOPSOIL	(-) 350 C.Y.
COMMON EXCAVATION	2,302 C.Y.

POND 2 EARTHWORK SUMMARY

POND EXCAVATION WITH SUBCUT	7,098 C.Y.
TOPSOIL REQUIRED	458 C.Y.
COMPACTION FACTOR	(*) 1.40
TOPSOIL BORROW, LV	641 C.Y.



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DATE	REVISION
2/1/08	REVISED TOTAL SHEETS
3/28/08	REVISED TOPSOIL BORROW QUANTITY
4/10/08	REVISED TITLE BLOCK
4/30/08	REVISED SHEET NUMBERS
6/18/08	REVISED TOTAL SHEETS
7/18/08	REVISED NOTES
7/22/08	REVISED SILT FENCE NOTE

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Timothy A. Edwards
 TIMOTHY A. EDWARDS, P.E.
 Date 10/1/07 Lic. No. 43362

DESIGNED BY: TAE
 DRAWN BY: CKJ
 CHECKED BY: PRR

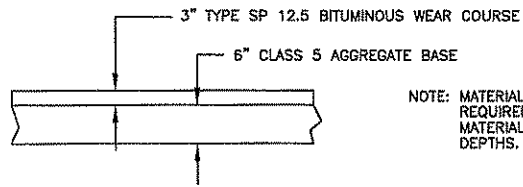


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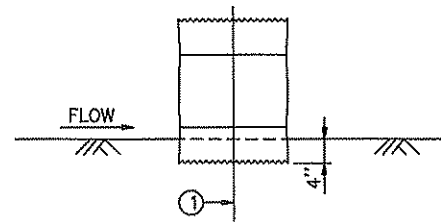
**SUNFISH LAKE BOULEVARD
 DRAINAGE IMPROVEMENTS
 IMPROVEMENT PROJECT 08-20**
 S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

POND GRADING PLAN
 CITY OF RAMSEY, MINNESOTA

SHEET 41 OF 82 SHEETS
 RA431



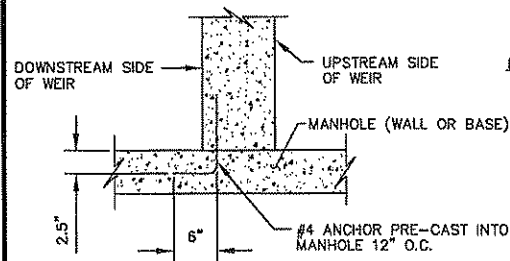
1
42 TYPICAL BITUMINOUS PARKING LOT PATCH



BALE CHECK DETAIL

NOTE:
① TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10 IN. MINIMUM.

3
42 BALE CHECK DETAIL

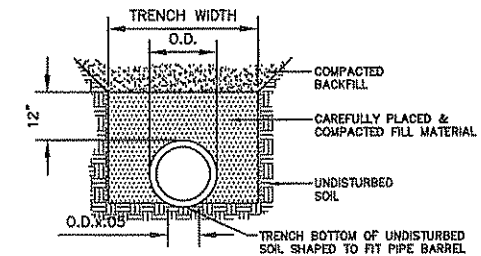


NOTE:
1. THE FOLLOWING MAY BE USED AS AN ALTERNATIVE TO THE PRE-CAST ANCHORS: HVA ADHESIVE ANCHOR SYSTEM, WITH HEA ADHESIVE CAPSULES AND #5 REBAR, AS MANUFACTURED BY HILTI CORP OR APPROVED EQUAL.
2. REINFORCEMENT BARS IN WEIR NOT SHOWN.

WEIR REINFORCEMENT

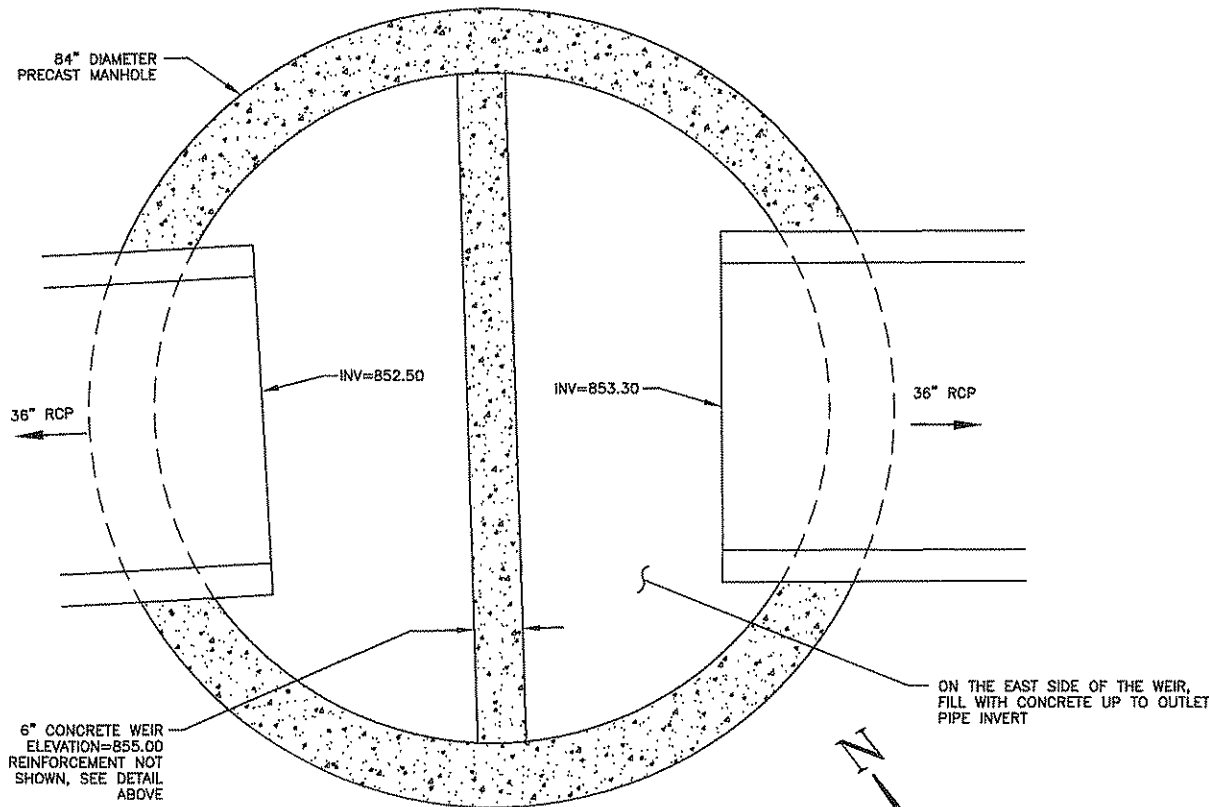
DRAINAGE STRUCTURE SCHEDULE		
STRUCTURE NO.	CASTING TYPE	STRUCTURE DIAMETER (INCHES)
1	1	84
2	1	72
3	1	66
4	1	66
5	1	66
5A	1	78
6	2	66

1. TYPE 1 CASTING - NEENAH R-1733
2. TYPE 2 CASTING - NEENAH R-2573

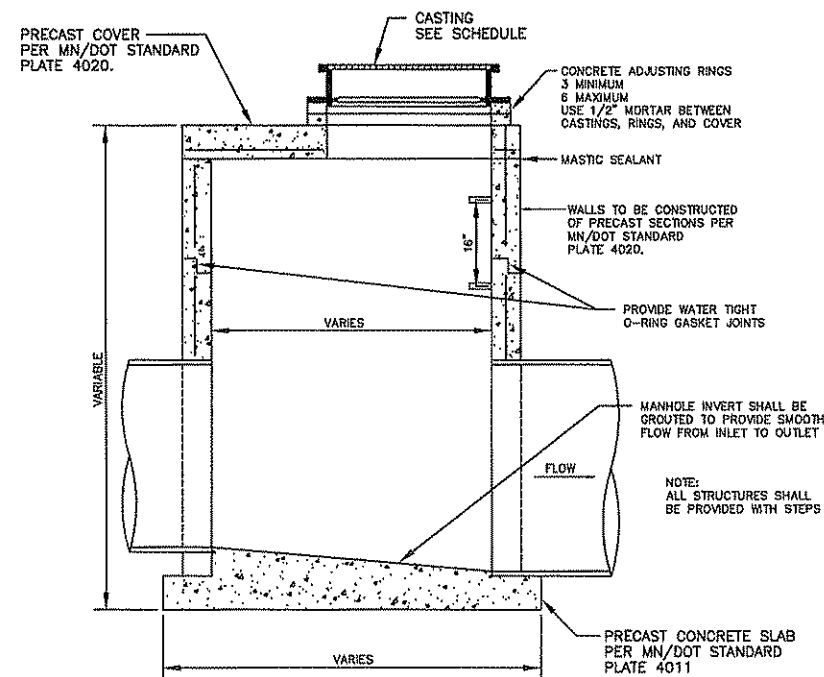


NOTE: WORKING SPACE ON EACH SIDE OF PIPE SHALL BE NOT LESS THAN 12", OR ONE THIRD (1/3) THE INSIDE DIAMETER OF THE PIPE, BUT NOT TO EXCEED 24" EACH SIDE OF THE PIPE. IF THE TRENCH WIDTH EXCEEDS THIS MAXIMUM, THE CONTRACTOR SHALL FURNISH & INSTALL A BETTER GRADE OF BEDDING MATERIAL OR A HIGHER CLASS OF PIPE AS REQUIRED FOR THE ACTUAL TRENCH WIDTH AT NO EXTRA COST TO OWNER.

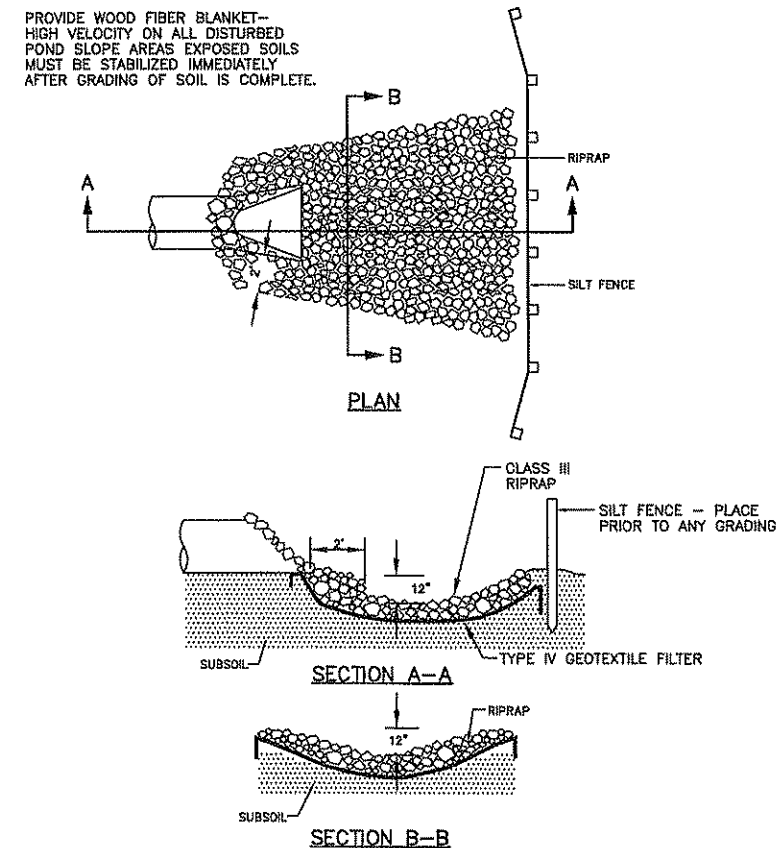
5
42 PIPE BEDDING



2
42 STM/MH 1 DETAIL
DRAINAGE STRUCTURE DESIGN SPECIAL



4
42 SLAB-TOP MANHOLE OR CATCH BASIN



6
42 RIP-RAP AT OUTLETS

Jul 22, 2008 - 2:54pm
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DATE	REVISION
2/1/08	REVISED TOTAL SHEETS
4/10/08	REVISED TITLE BLOCK
4/30/08	REVISED SHEET NUMBERS AND ADDED SILT FENCE DETAIL
6/16/08	REVISED STM/MH 1 DETAIL
6/18/08	REVISED TOTAL SHEETS
7/18/08	REVISED DETAIL NOTES
7/22/08	REMOVED SILT FENCE DETAIL

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Timothy A. Eggenrichs, P.E.
Date 10/1/07 Lic. No. 43362

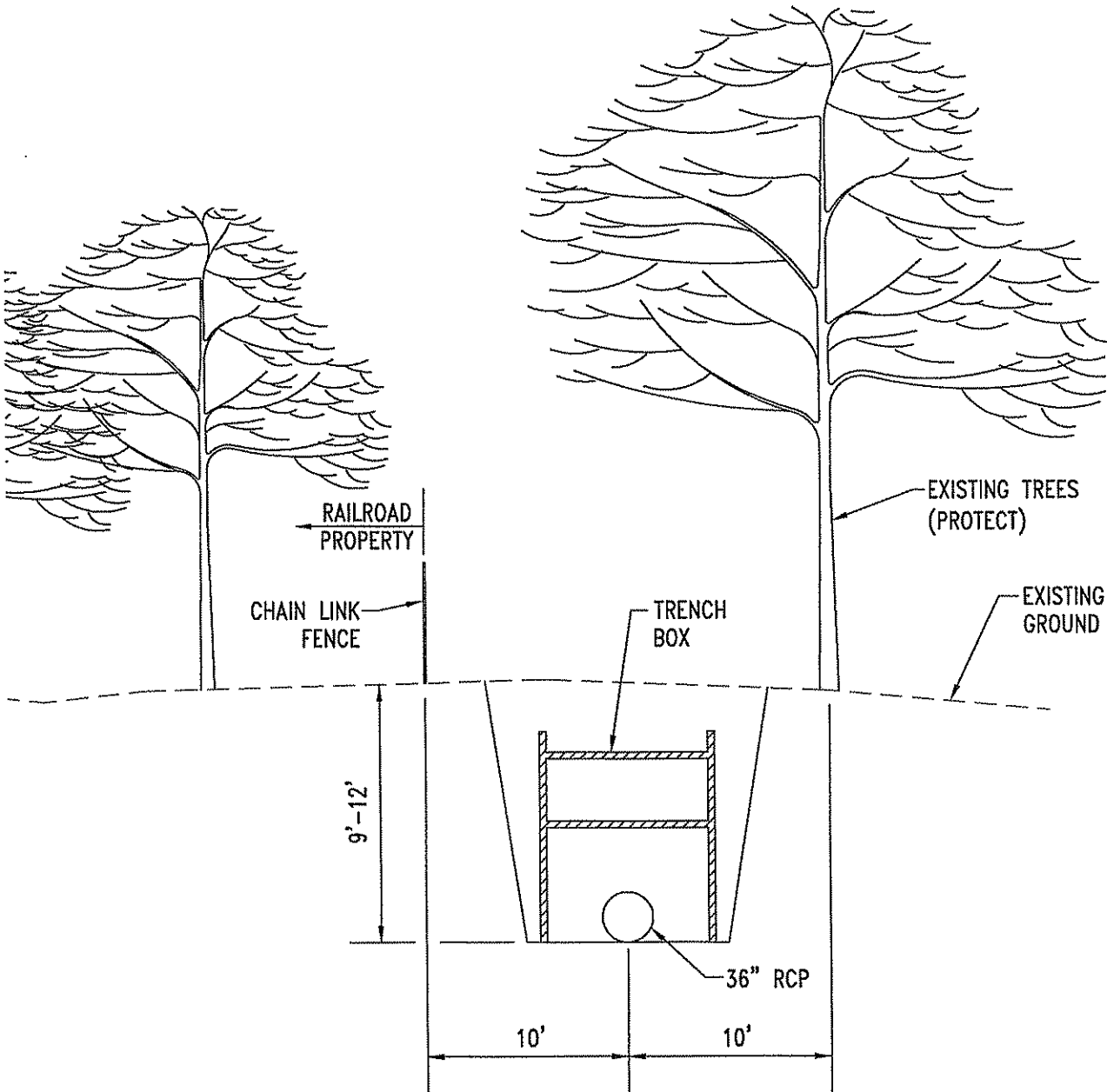
DESIGNED BY: TAE
DRAWN BY: CKJ
CHECKED BY: PRR

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SUNFISH LAKE BOULEVARD
DRAINAGE IMPROVEMENTS
IMPROVEMENT PROJECT 08-20
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

DETAILS
CITY OF RAMSEY, MINNESOTA

SHEET 42 OF 82 SHEETS
RA431



①
43
TRENCH DETAIL

CITY DRAINAGE SYSTEM - TAB Z

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	CLEARING	ACRE	0.35
2	GRUBBING	ACRE	0.35
3	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	562
4	SALVAGE VEHICULAR GATE	EACH	1
5	COMMON EXCAVATION	CU YD	9,828
6	TOPSOIL EMBANKMENT (LV)	CU YD	641
7	GEOTEXTILE FILTER TYPE IV	SQ YD	29
8	AGGREGATE BASE CLASS 5	CU YD	632
9	TYPE SP 12.5 WEAR COURSE MIX	TON	170
10	18" RC PIPE SEWER DESIGN 3006, CL V	LIN FT	16
11	24" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	16
12	30" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	8
13	36" RC PIPE SEWER DESIGN 3006, CL III	LIN FT	2,022
14	18" PIPE PLUG	EACH	2
15	24" PIPE PLUG	EACH	2
16	30" PIPE PLUG	EACH	1
17	CONSTRUCT DRAINAGE STRUCTURE DESIGN 66-4020	LIN FT	37.23
18	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4020	LIN FT	9.36
19	CONSTRUCT DRAINAGE STRUCTURE DESIGN 78-4020	LIN FT	8.19
20	CONSTRUCT DRAINAGE STRUCTURE DESIGN SPECIAL	LIN FT	13.75
21	CASTING ASSEMBLY TYPE 1	EACH	7
22	CASTING ASSEMBLY TYPE 2	EACH	1
23	CONNECT INTO EXISTING DRAINAGE STRUCTURE	EACH	1
24	RANDOM RIPRAP CLASS III	CU YD	13.8
25	INSTALL VEHICULAR GATE	EACH	1
26	SILT FENCE, TYPE MACHINE SLICED	LIN FT	1,270
27	SEEDING	ACRE	2.2
28	SEED MIXTURE 328	POUND	194
29	MULCH MATERIAL TYPE I	TON	4.4
30	DISK ANCHORING	ACRE	2.2
31	FERTILIZER TYPE 1 (20-0-10)	POUND	1,100

① THE COMMON EXCAVATION QUANTITY INCLUDES 78 CU. YDS. OF BITUMINOUS PAVEMENT REMOVAL AND 350 CU. YDS. OF TOPSOIL EXCAVATION. BITUMINOUS PAVEMENT IS ASSUMED TO BE 3 INCHES THICK.

M:\7_2008-08-Main\PROJECTS\UNGPAL\RA431\RA431-DETAILS.dwg

DATE	REVISION
3/28/08	REVISED TABULATION PER MN/DOT AND COUNTY REVIEW COMMENTS
4/10/08	REVISED TITLE BLOCK AND TOPSOIL DESCRIPTION
4/30/08	REVISED SHEET NUMBERS AND TABULATION
6/16/08	REVISED TAB Z
6/18/08	REVISED TOTAL SHEETS
7/14/08	REVISED QUANTITIES FOR ITEMS 1, 2, 8 AND 13 AND ADDED DETAIL
7/18/08	REVISED QUANTITIES

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Timothy A. Eggenrichs
TIMOTHY A. EGGENRICHS, P.E.
Lic. No. 43362

Date 10/1/07

DESIGNED BY: TAE
DRAWN BY: CKJ
CHECKED BY: PRR

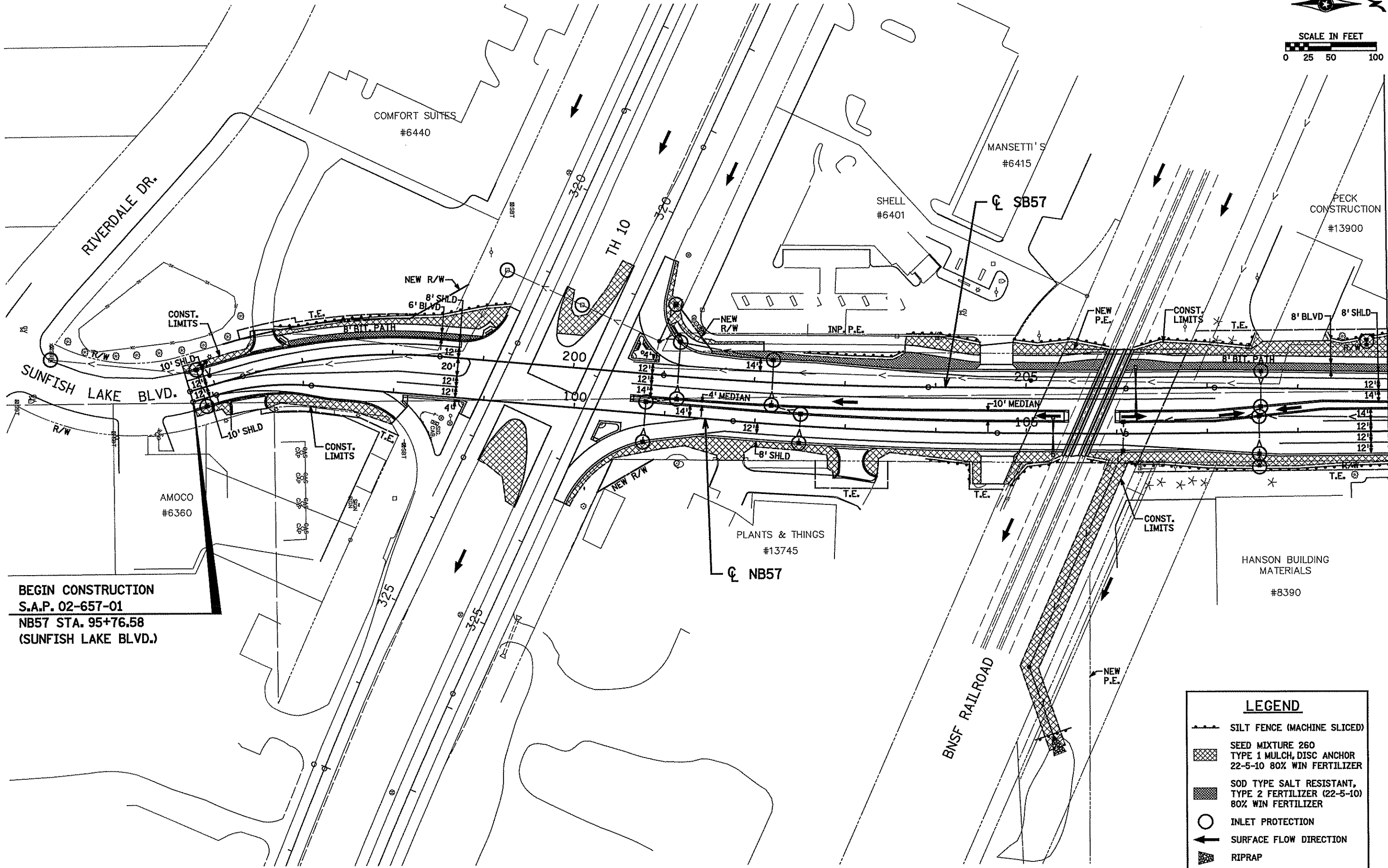
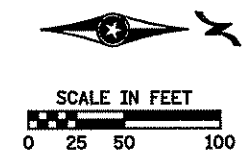


Hakanson Anderson Assoc., Inc.
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

SUNFISH LAKE BOULEVARD
DRAINAGE IMPROVEMENTS
IMPROVEMENT PROJECT 08-20
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

QUANTITY TABULATION
CITY OF RAMSEY, MINNESOTA

SHEET 43 OF 82 SHEETS
RA431



BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

LEGEND	
	SILT FENCE (MACHINE SLICED)
	SEED MIXTURE 260
	TYPE 1 MULCH, DISC ANCHOR
	22-5-10 80% WIN FERTILIZER
	SOD TYPE SALT RESISTANT,
	TYPE 2 FERTILIZER (22-5-10)
	80% WIN FERTILIZER
	INLET PROTECTION
	SURFACE FLOW DIRECTION
	RIPRAP

DATE: 7/18/2008 TIME: 2:34:08 PM
 FILENAME: K:\p\Anoka\N3721000\hwy-brdg\hwy\plan-sf\erotic151_road.dgn

DRAWN BY: SFH
 CHECKED BY: EN

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.

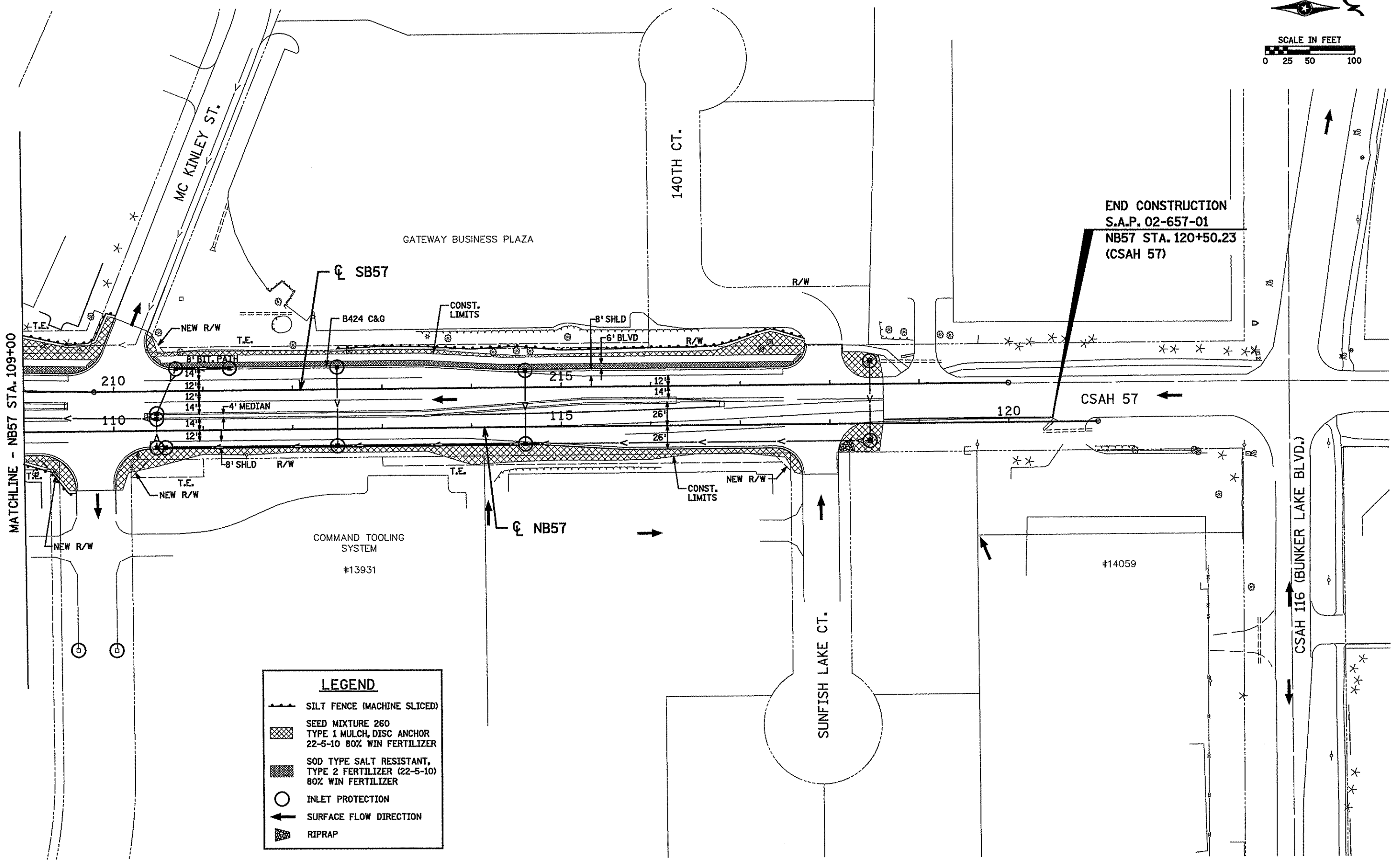
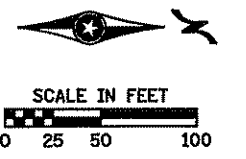
SIGNATURE:
 PRINTED NAME: ERIC J. NELSON
 DATE: 7/18/2008 LIC. NO. 43560

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

EROSION CONTROL & TURF ESTABLISHMENT PLAN
 NB57 STA. 95+76.58 TO NB57 STA. 109+00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 44 of 82 Sheets



LEGEND	
	SILT FENCE (MACHINE SLICED)
	SEED MIXTURE 260 TYPE 1 MULCH, DISC ANCHOR 22-5-10 80% WIN FERTILIZER
	SOD TYPE SALT RESISTANT, TYPE 2 FERTILIZER (22-5-10) 80% WIN FERTILIZER
	INLET PROTECTION
	SURFACE FLOW DIRECTION
	RIPRAP

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STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NOTES

1. THE CONTRACTOR MUST IDENTIFY A PERSON (EROSION CONTROL SUPERVISOR) KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs). PROVIDING THE EROSION CONTROL SUPERVISOR SHALL BE CONSIDERED INCIDENTAL FOR WHICH NO DIRECT PAYMENT WILL BE MADE.
2. THE EROSION CONTROL SUPERVISOR WILL WORK WITH THE PROJECT ENGINEER TO OVERSEE THE IMPLEMENTATION OF THE SWPPP, AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPs BEFORE AND DURING CONSTRUCTION.
3. THE CONTRACTOR MUST KEEP THE SWPPP, ALL CHANGES TO IT, AND INSPECTION AND MAINTENANCE RECORDS AT THE SITE DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL DEVELOP A CHAIN OF RESPONSIBILITY WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE, THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION, AND A NOTICE OF TERMINATION HAS BEEN SUBMITTED TO THE MPCA.
5. THE CONTRACTOR SHALL PROVIDE FOR TEMPORARY AND PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL BMPs AS SHOWN IN THE PLANS AND THEY SHALL BE KEPT IN A FUNCTIONAL CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION. THESE MEASURES MAY BE MODIFIED AS APPROPRIATE FOR CONSTRUCTION STAGING AS DIRECTED BY THE EROSION CONTROL SUPERVISOR OR THE PROJECT ENGINEER. THE CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL NPDES AND OTHER PERMIT REQUIREMENTS AT ALL TIMES.
6. ALL EXPOSED SOIL AREAS WITH A CONTINUOUS POSITIVE SLOPE WITHIN 200 LINEAL FEET OF A SURFACE WATER MUST HAVE TEMPORARY OR PERMANENT COVER FOR THE EXPOSED SOIL AREAS YEAR ROUND, ACCORDING TO THE FOLLOWING TABLE OF SLOPES AND TIME FRAMES:


TYPE OF SLOPE	TIME *	* MAXIMUM TIME AN AREA CAN REMAIN OPEN WHEN THE AREA IS NOT ACTIVELY BEING WORKED.
STEEPER THAN 1:3	7 DAYS	
FROM 1:10 TO 1:3	14 DAYS	
FLATTER THAN 1:10	21 DAYS	

THESE AREAS INCLUDE ANY EXPOSED SOIL AREAS WITH A POSITIVE SLOPE TO A STORM WATER CONVEYANCE SYSTEM, SUCH AS A CURB AND GUTTER SYSTEM, STORM SEWER INLET, TEMPORARY OR PERMANENT DRAINAGE DITCH, OR OTHER NATURAL OR MAN MADE SYSTEMS THAT DISCHARGE TO A SURFACE WATER. THESE AREAS MUST BE KEPT STABILIZED AT ALL TIMES.
7. ALL EXPOSED SOIL AREAS WILL BE STABILIZED PRIOR TO THE ONSET OF WINTER. ANY WORK STILL BEING PERFORMED WILL BE SNOW MULCHED OR SNOW BLANKETED AND SNOW SEEDED.
8. THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT DRAINS WATER FROM A CONSTRUCTION SITE, OR DIVERTS WATER AROUND A SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER. STABILIZATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER. THESE AREAS MUST BE KEPT STABILIZED AT ALL TIMES.
9. PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.
10. SEDIMENT CONTROL DEVICES MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE DEVICES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED IN ACCORDANCE WITH PART IV.G OF THE NPDES PERMIT. THE TIMING OF THE INSTALLATION OF SEDIMENT CONTROL DEVICES MAY BE ADJUSTED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING AND GRUBBING, OR PASSAGE OF VEHICLES. ANY SHORT-TERM ACTIVITY MUST BE COMPLETED AS QUICKLY AS POSSIBLE AND THE SEDIMENT CONTROL DEVICES MUST BE INSTALLED IMMEDIATELY AFTER THE ACTIVITY IS COMPLETED. HOWEVER, SEDIMENT CONTROL DEVICES MUST BE INSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE ACTIVITY IS NOT COMPLETE.
11. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN SURFACE WATERS.
12. VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE MUST BE MINIMIZED BY BMPs SUCH AS A SLASH MULCH PAD, CONCRETE OR STEEL WASH RACKS, OR EQUIVALENT SYSTEMS. STREET SWEEPING MUST BE USED IF SUCH BMPs ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET.
13. DEWATERING AND CONCRETE TRUCK WASHING RELATED TO THE CONSTRUCTION ACTIVITY THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO A TEMPORARY SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMPs, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER DOWNSTREAM LANDOWNERS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING OR OTHER ENERGY DISSIPATION MEASURES APPROVED BY THE EROSION CONTROL SUPERVISOR OR THE PROJECT ENGINEER. ADEQUATE SEDIMENTATION CONTROL MEASURES ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS.
14. ANY FUEL OR CHEMICAL TANK STORED ON THE PROJECT AREA MUST BE PROTECTED BY A SOIL BERM OR HAVE A NEGATIVE GRADIENT TO ANY WATER RESOURCE AREA. A CONTINGENCY PLAN MUST BE CREATED BY THE CONTRACTOR IN THE EVENT OF A SPILL OR LEAK OF ANY CHEMICAL, INCLUDING PETROCHEMICALS, DEEMED HARMFUL TO THE ENVIRONMENT, AND HAVE ON HAND THE MATERIALS NECESSARY TO CAPTURE AND CONTAIN SAID CHEMICALS.
15. THE CONTRACTOR WILL USE CONTINUOUS AND PROGRESSIVE SEEDING PROCESSES. DORMANT SEEDING WILL NOT ALLOW THE NOTICE OF TERMINATION TO BE FILED WITH THE MPCA UNTIL 70 PERCENT OF THE PERENNIAL VEGETATIVE COVER IS ACHIEVED.
16. THE EROSION CONTROL SUPERVISOR MUST ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. THE EROSION CONTROL SUPERVISOR SHALL BE AVAILABLE TO BE ON THE PROJECT WITHIN 24 HOURS AT ALL TIMES FROM INITIAL DISTURBANCE TO FINAL STABILIZATION AS WELL AS PERFORM THE DUTIES LISTED IN SPEC. 2573.
17. ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION MUST BE RECORDED IN WRITING AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP IN ACCORDANCE WITH PART III.D OF THE NPDES PERMIT.
18. WHERE PARTS OF THE CONSTRUCTION SITE HAVE UNDERGONE FINAL STABILIZATION, BUT WORK REMAINS ON OTHER PARTS OF THE SITE, INSPECTIONS OF THE STABILIZED AREAS MAY BE REDUCED TO ONCE PER MONTH. WHERE WORK HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE REQUIRED INSPECTIONS AND MAINTENANCE MUST TAKE PLACE AS SOON AS RUNOFF OCCURS AT THE SITE OR PRIOR TO RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.
19. ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs MUST BE INSPECTED BY THE CONTRACTOR TO ENSURE INTEGRITY AND EFFECTIVENESS. ALL NONFUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPs AS DIRECTED BY THE EROSION CONTROL SUPERVISOR OR THE PROJECT ENGINEER.
20. ALL SILT FENCE MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/3 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
21. TEMPORARY SEDIMENT TRAPS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITH 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
22. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION. THE CONTRACTOR MUST REMOVE ALL SEDIMENT DEPOSITED IN SURFACE WATERS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN 7 DAYS OF DISCOVERY.
23. THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPs, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPs, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE.
24. SOLID WASTE SUCH AS COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS, AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
25. HAZARDOUS MATERIALS SUCH AS OIL, GASOLINE, AND PAINT MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.
26. ALL DITCHES AND SLOPES SHALL BE KEPT IN A SMOOTH ROUGH GRADED CONDITION FOR CORRECT APPLICATION OF EROSION CONTROL MULCHES AND BLANKETS.
27. CONTACT NAMES:
MPCA - DUANE DUNCANSON (651) 296-7072

DATE: 6/17/2008 TIME: 5:51:01 PM FILENAME: K:\vrt\Aradoc\N\ST21000\swppp-aradoc\swppp-aradoc.dwg

DRAWN BY: SFH
CHECKED BY: JMW

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.

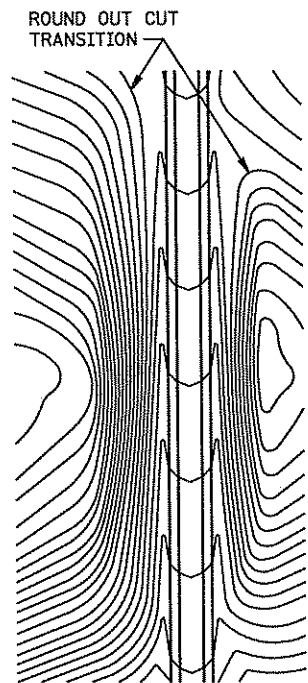
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PRINTED NAME: ERIC J. NELSON
DATE: 6/17/2008 LIC. NO. 43560

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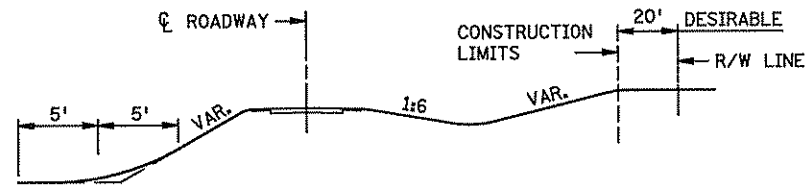
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

EROSION CONTROL DETAILS
STORM WATER POLLUTION PREVENTION NOTES

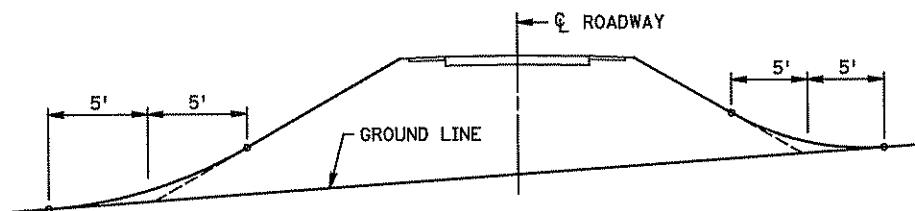
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Sheet No. 46 of 82 Sheets



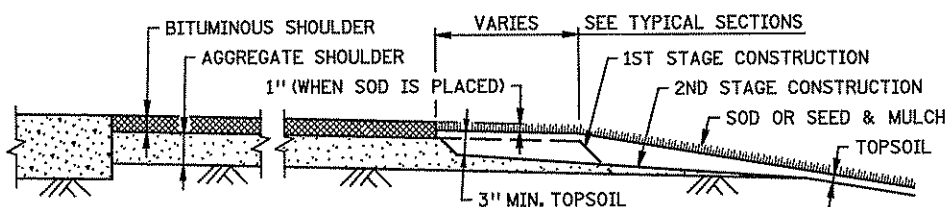
CONTOURING ROAD CUTS



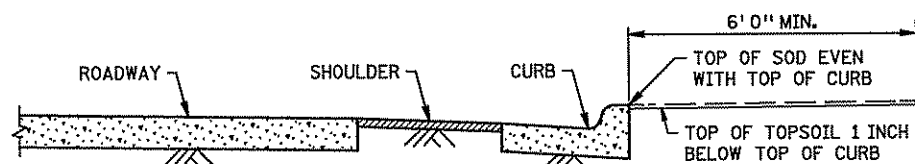
ROUNDING SHOULDERS AND BACKSLOPES



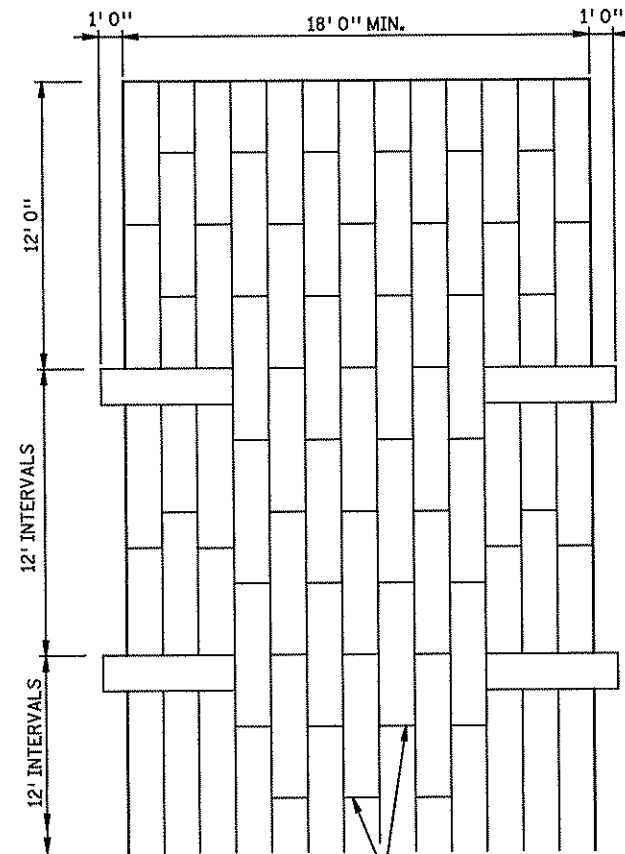
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



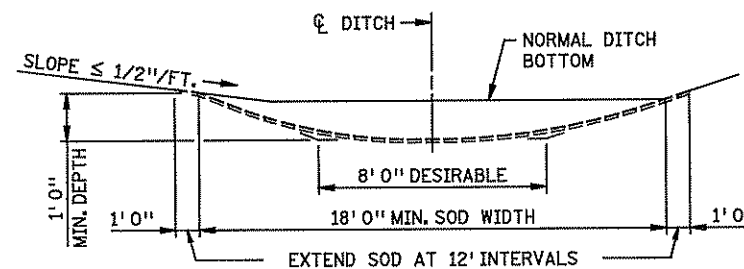
SHAPING AND TOPSOILING INSLOPES



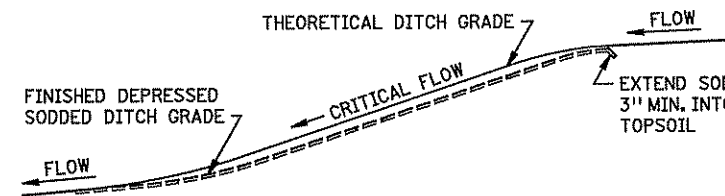
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



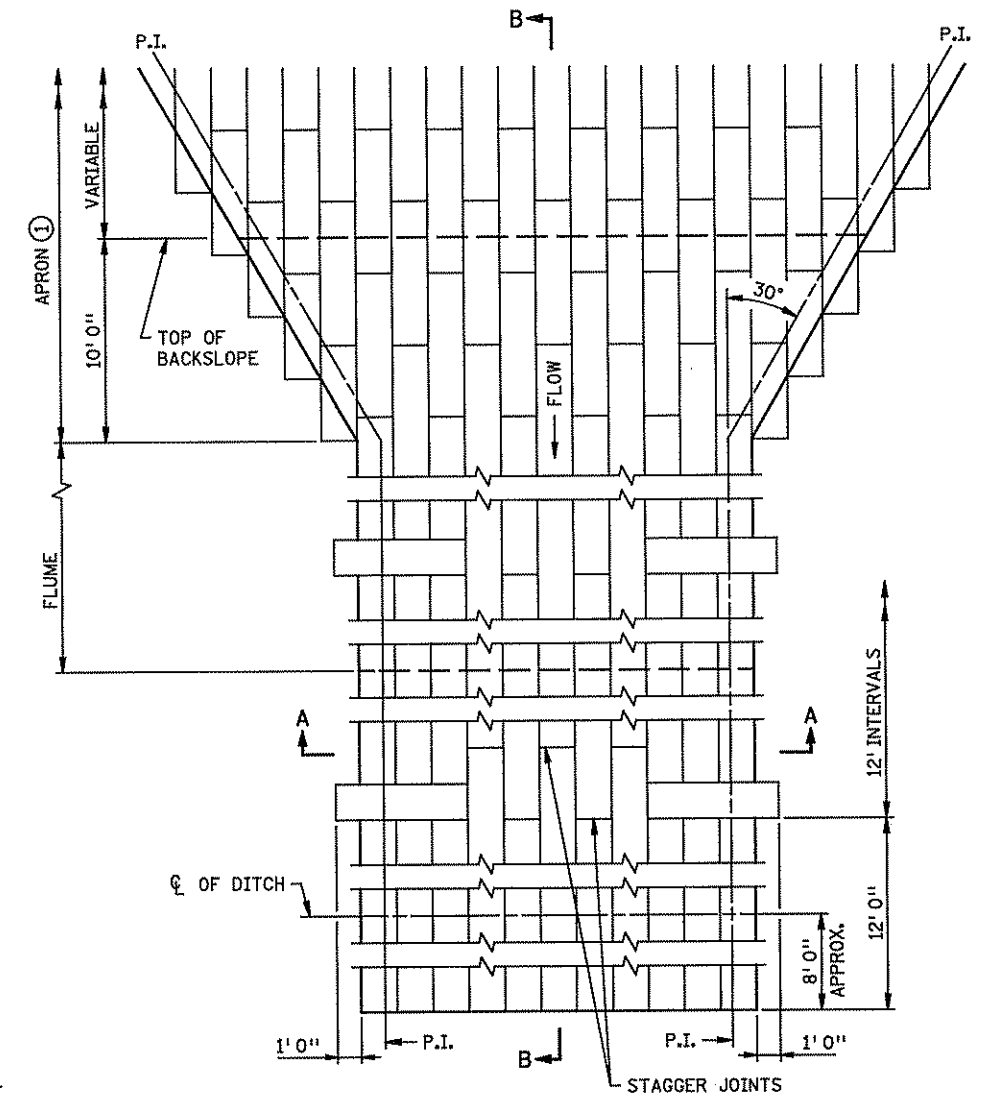
PLAN VIEW



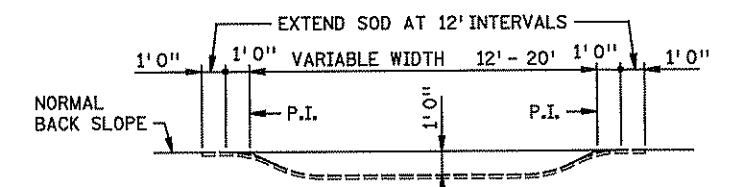
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.),
FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



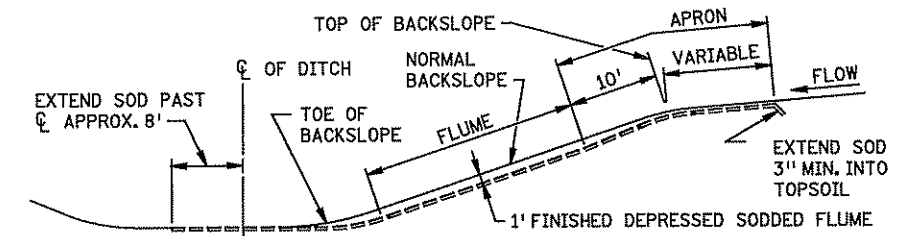
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A

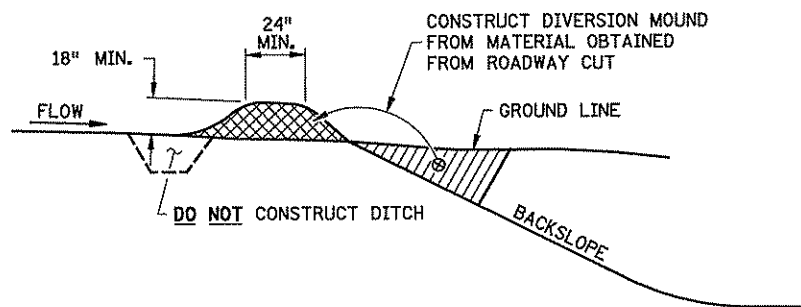


SECTION B-B
SODDED FLUME DETAILS

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

STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD APPROVED: NOVEMBER 20, 2002	
S.A.P. 02-657-01, 0202-85 (TH 10)	SHEET NO. 47 OF 82 SHEETS

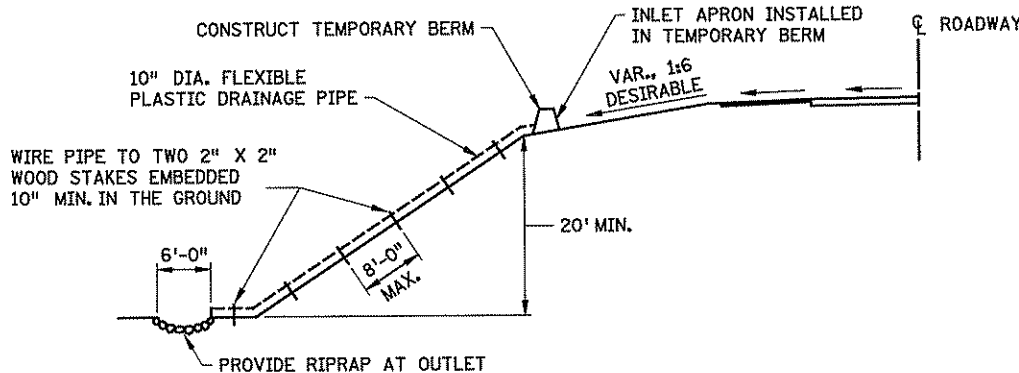
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DIVERSION MOUND

DESIGN GUIDELINES:

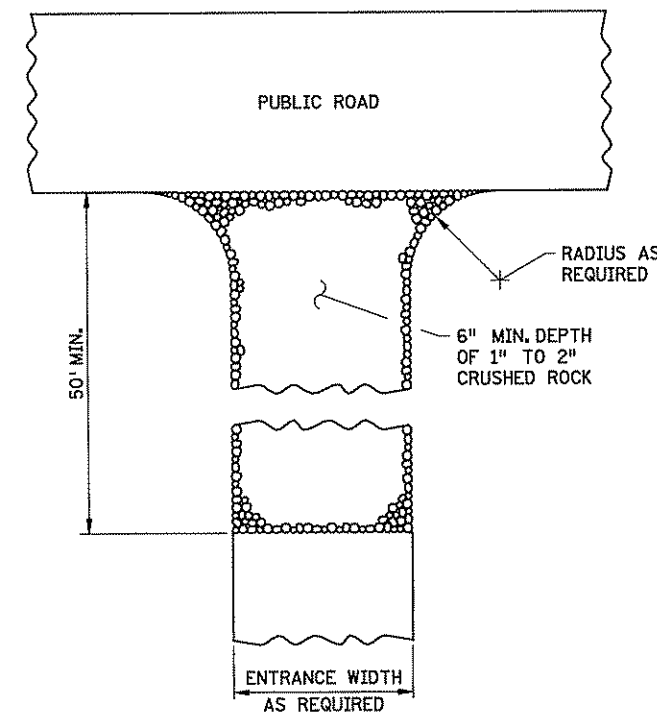
STORM FREQUENCY: 10 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 5 ACRES
 MAXIMUM DIVERSION: GRADE 5%



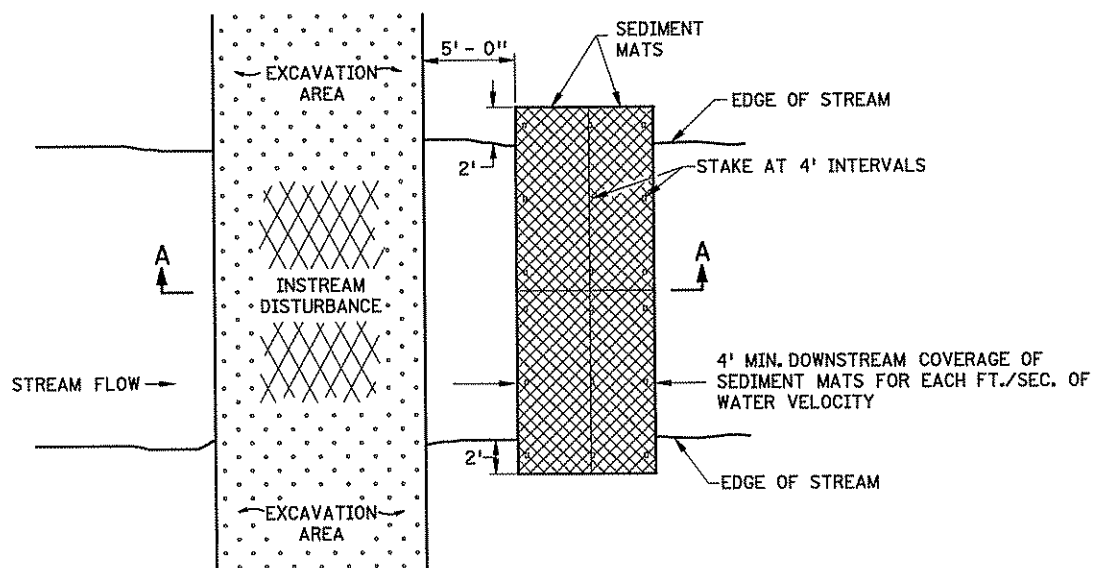
TEMPORARY DOWN DRAIN ON FILL SLOPE

DESIGN GUIDELINES:

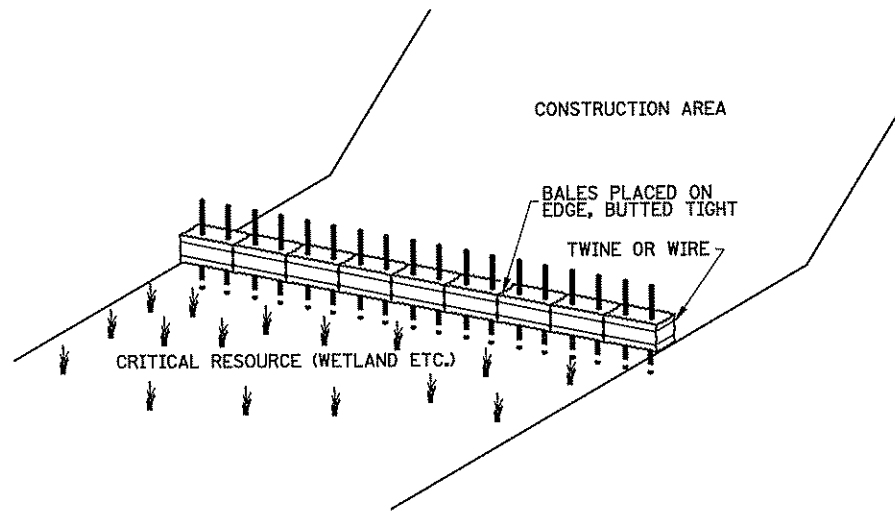
STORM FREQUENCY: 2 YEAR - 24 HOUR
 MAXIMUM DRAINAGE AREA: 3 ACRES



ROCK CONSTRUCTION ENTRANCE ①

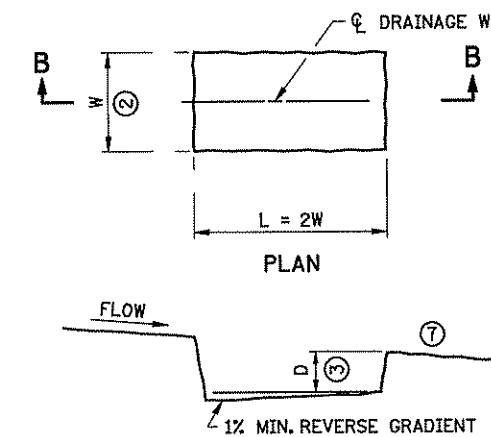


PLAN VIEW

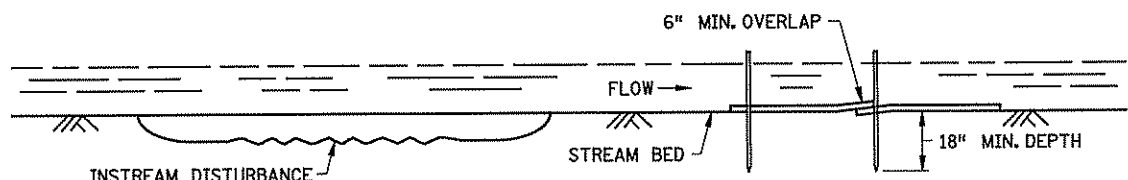


BALE BARRIERS

TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS



**SECTION B-B
 SEDIMENT TRAP DETAIL**

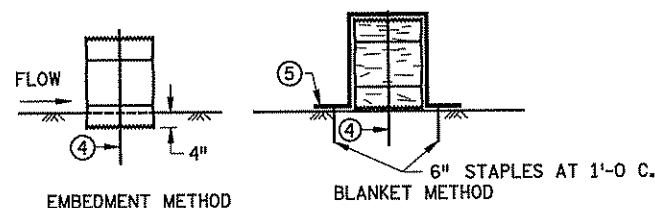


SECTION A-A

SEDIMENT MAT ⑥

TYPICAL STREAM BED INSTALLATION

DESIGN GUIDELINES:
 MAXIMUM FLOW VELOCITY: 5 FT./SEC.
 MAXIMUM FLOW DEPTH: 2 FT.



BALE BARRIER DETAIL

APPROX. BALE SIZE: 14" X 18" X 36" LONG

NOTES:

SEE SPECS. 2573, 3892, & 3894.

- ① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE TRUCKS ENTER MAIN ROAD. KEEPING MUD OFF THE ROAD WILL PREVENT AUTO DAMAGE AND KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS. GEOTEXTILE MAY BE PLACED UNDER THE ROCK TO KEEP ROCKS SEPARATE FROM SOIL.
- ② W = 10 FT. MIN., 20 FT. MAX.
- ③ D = 2 FT.
- ④ TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE EMBEDDED 10 INCHES MINIMUM IN THE GROUND.
- ⑤ PLACE A CATEGORY 3 EROSION CONTROL BLANKET, 6 FT. WIDE MINIMUM, OVER THE BALE INSTEAD OF TRENCHING.
- ⑥ THIS DETAIL MAY NOT BE ACCEPTABLE FOR WORK ON PUBLIC WATERS, SEE GENERAL PUBLIC WATERS PERMIT (GP) 2004-0001.
- ⑦ LOCATION OF DOWNSTREAM TEMPORARY SEDIMENT CONTROL DEVICE.

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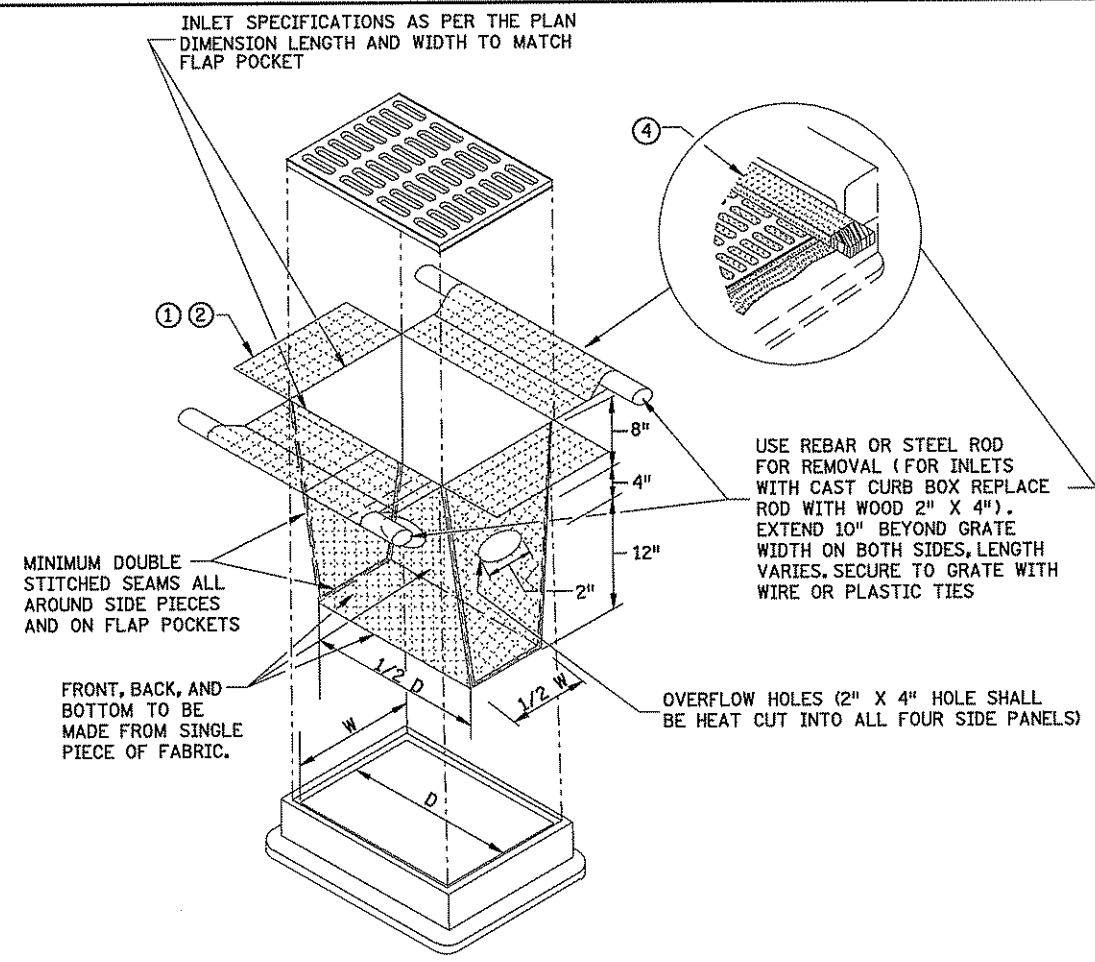
STANDARD SHEET NO. 5-297.405 (2 of 4)	TITLE:
STANDARD APPROVED: SEPTEMBER 27, 2006	

**TEMPORARY SEDIMENT CONTROL
 MISCELLANEOUS DETAILS**

S.A.P. 02-657-01, 0202-85 (TH 10)

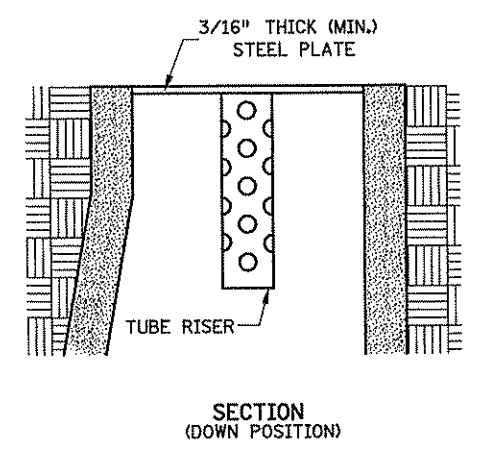
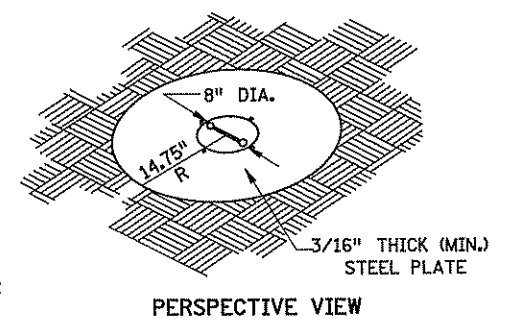
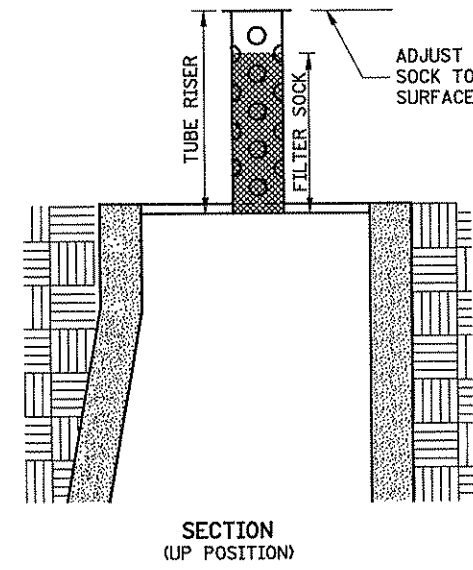
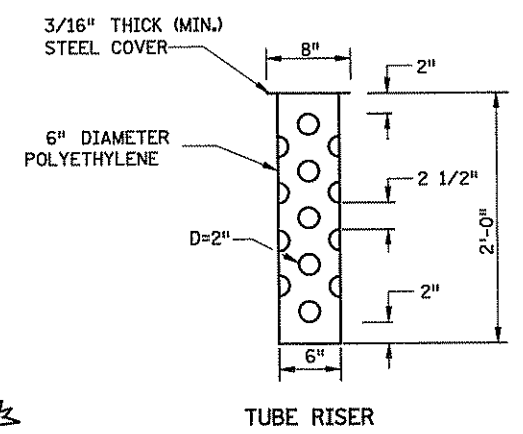
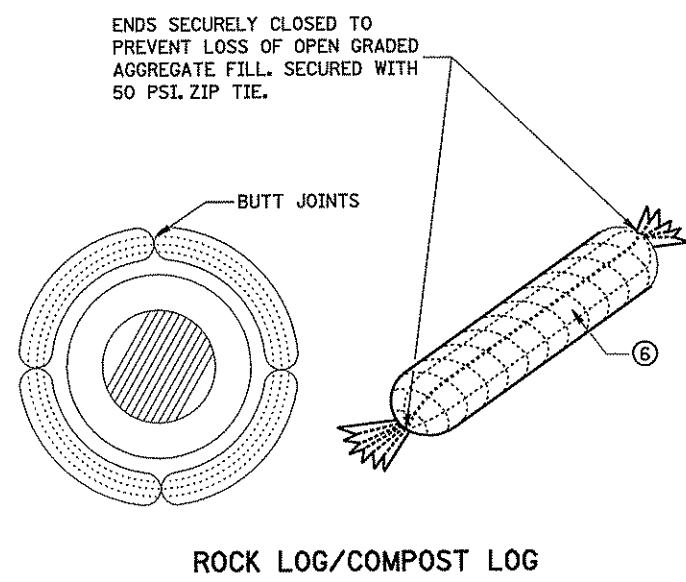
SHEET NO. 48 OF 82 SHEETS

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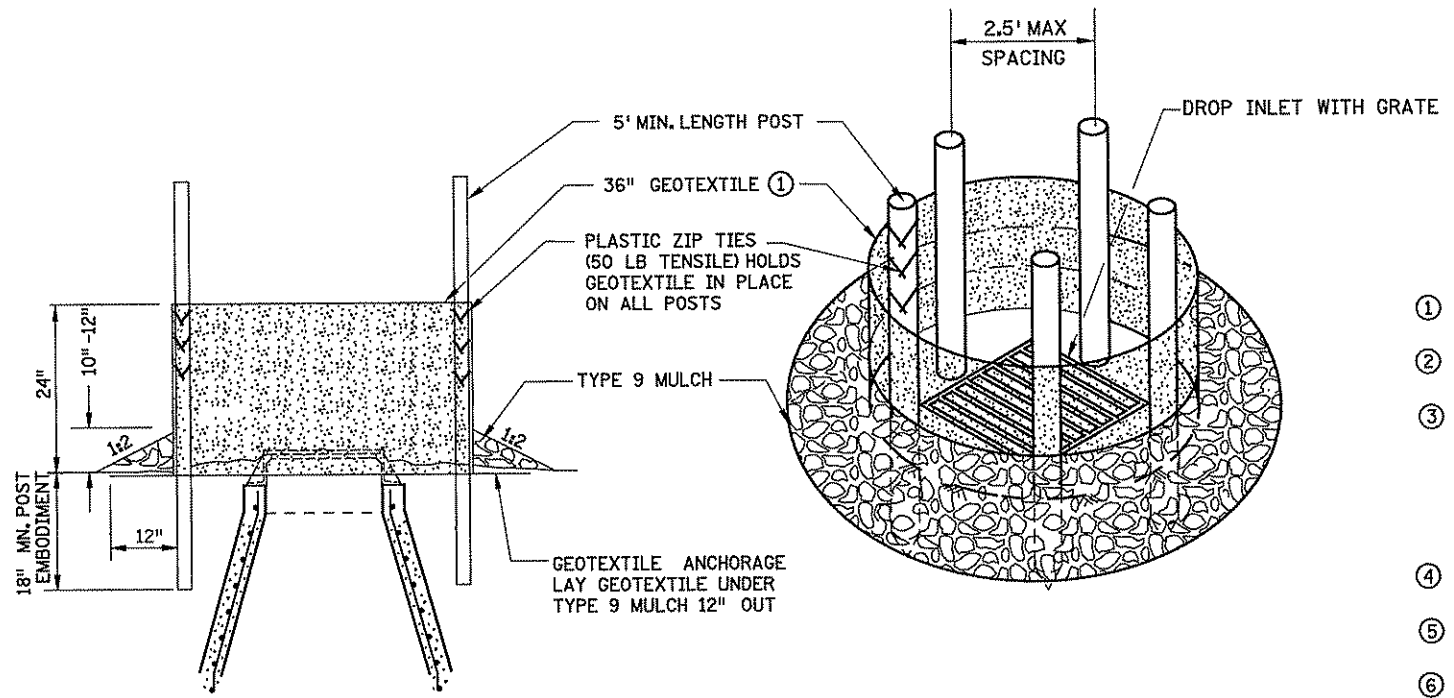


FILTER BAG INSERT ③

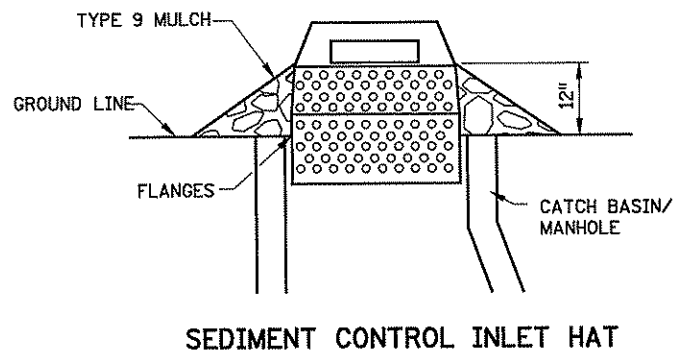
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)



POP-UP HEAD



USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 OR LESS

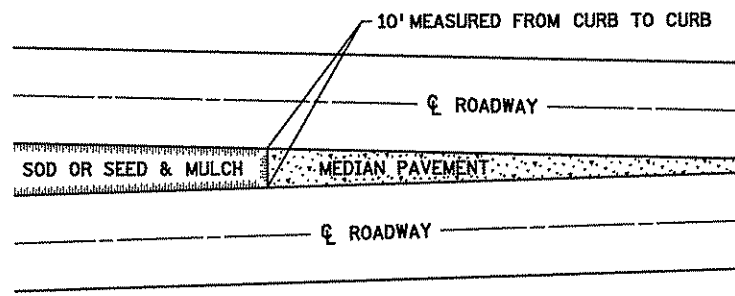


NOTE: THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

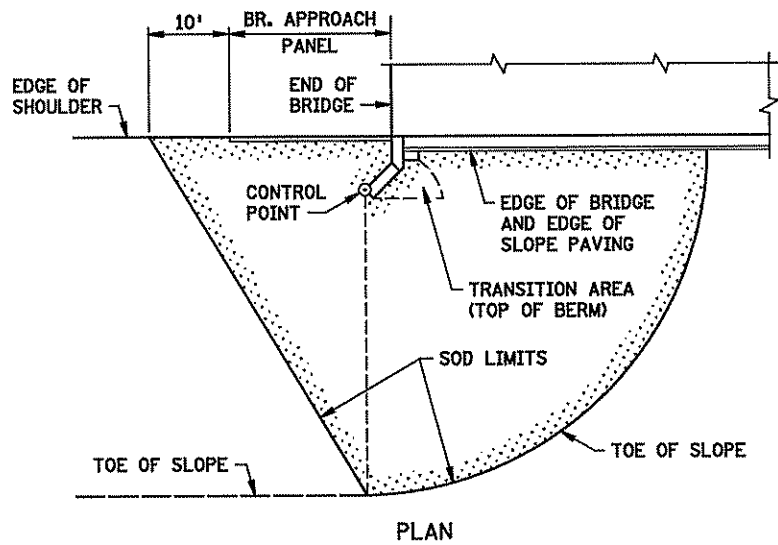
NOTES:

- 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 SIDE, 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.

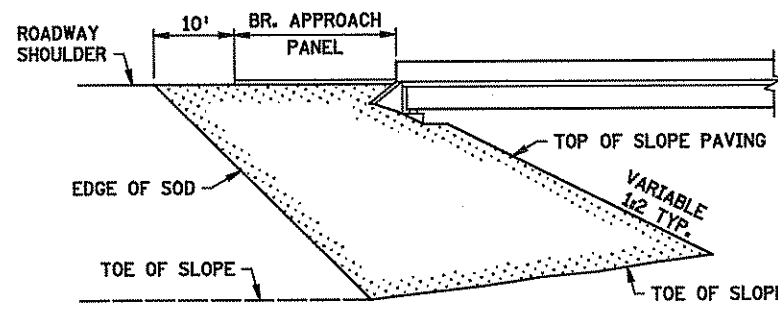
STANDARD SHEET NO. 297.405 (4 OF 4)	TITLE TEMPORARY SEDIMENT CONTROL STORM DRAIN INLET PROTECTION
STANDARD APPROVED: SEPTEMBER 27, 2006	
S.A.P. 02-657-01, 0202-85 (TH 10)	SHEET NO. 49 OF 82 SHEETS



SODDING LIMITS AT GORE AREA

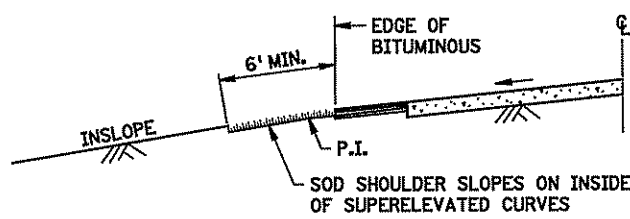


PLAN

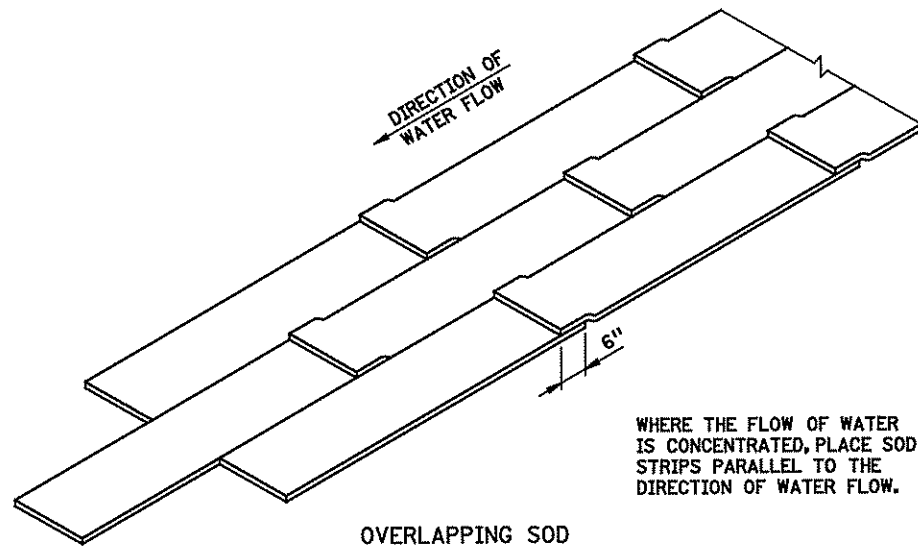


ELEVATION

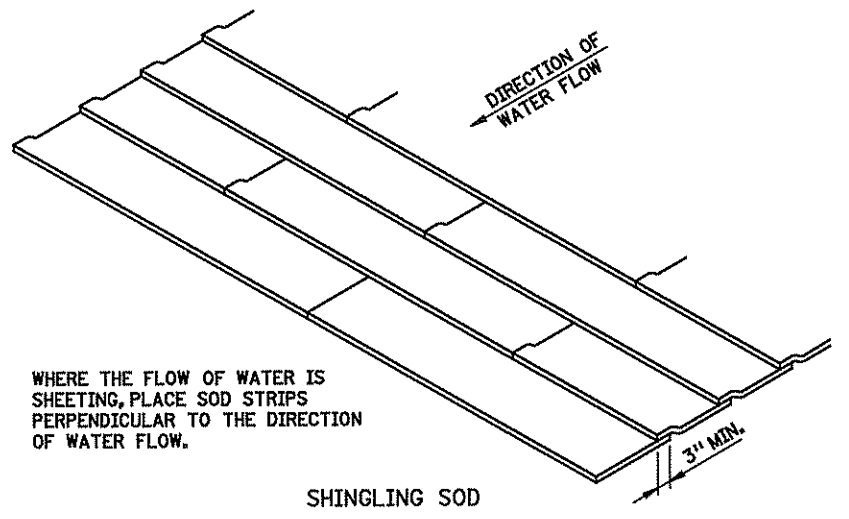
SODDING LIMITS AT BRIDGE APPROACH FILLS



SODDING INSLOPES OF SUPERELEVATED CURVES

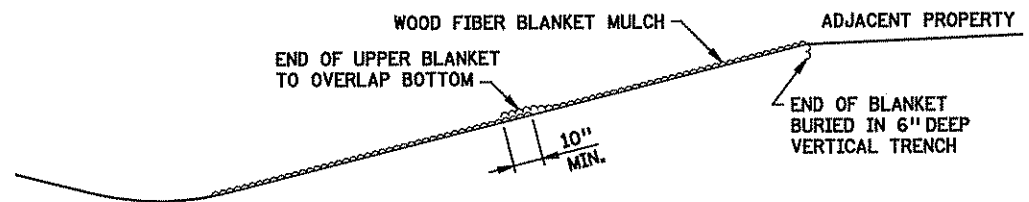


OVERLAPPING SOD

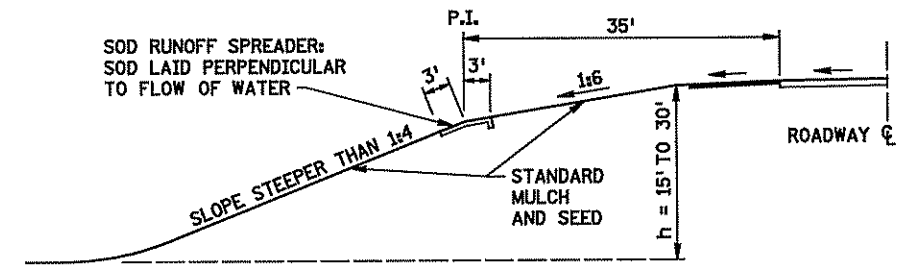


SHINGLING SOD

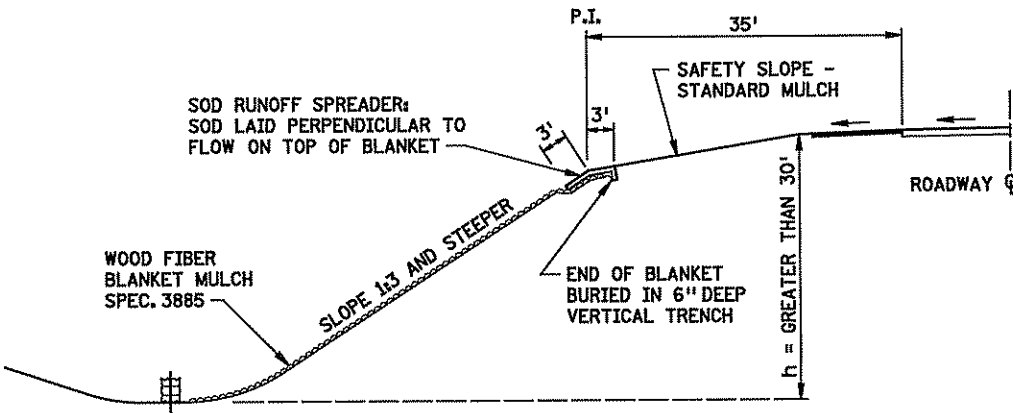
SPECIAL SOD PLACEMENT TECHNIQUES



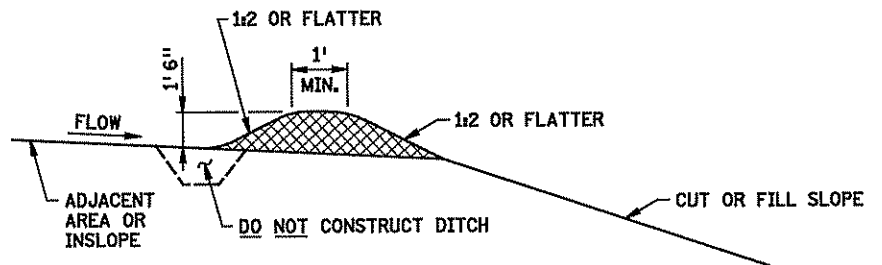
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



BROKEN-BACK SAFETY FILL SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE (WHEN REQUIRED)



PERMANENT SLOPE PROTECTION DIKE

DATE: 7/19/2008 TIME: 10:55:37 AM FILENAME: K:\C:\vnmkch\LT21000\lwy-bridge\lwy\lwy-sil\9406_0100_spridgm

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.A.P. 02-657-01, 0202-85 (TH 10) SHEET NO. 50 OF 82 SHEETS

LOCATION	PAVEMENT MARKINGS - ROADWAY - TAB L													
	PAVEMENT MESSAGES				4" SOLID WHITE	24" SOLID WHITE	CROSS-WALK MARKING	4" SOLID WHITE	24" SOLID WHITE	4" BROKEN WHITE	8" DOTTED WHITE	4" SOLID YELLOW	4" DOUBLE SOLID YELLOW	24" SOLID YELLOW
	LEFT ARROW	RIGHT ARROW	ONLY	RR CROSSING										
	POLY PREFORM				EPOXY									
EACH	EACH	EACH	EACH	SQ FT	SQ FT	SQ FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	
NB57 ALIGNMENT														
STA. 95+76 TO STA. 109+00	7	2	1	2	137	116	360	5174	116	759	192	1572	611	171
STA. 109+00 TO STA. 118+60				2				3084		1053	701	1382	584	72
TOTALS	7	2	1	4	137	116	360	8258	116	1812	893	2954	1195	243

SALVAGE AND INSTALL SIGN TYPE SPECIAL - TAB Q			
SIGN NO.	QUANT.	CODE NO.	PANEL LEGEND
SP-201	2	STREET SIGN	McKINLEY ST
SP-202	1	STREET SIGN	SUNFISH LAKE CT
TOTAL	3		

SIGN PANELS TYPE "C" - ROADWAY - TAB N											
SIGN NO.	QUANT.	POSTS				MTG. HT. (1)	PANEL			CODE NO.	PANEL LEGEND
		NO. & TYPE	KNEE BRACES QUANT.	LEN. FEET	SIZE INCHES		AREA SQ. FT.	TOTAL AREA SQ. FT.			
C-1	1	2U	1	13	7	54 x 30	11.25	11.25	R3-30ACA	LEFT - THROUGH - RIGHT	
C-2	3	(2)		10	7	24 x 30	5.00	15.00	R4-7	KEEP RIGHT	
C-3	1	2U	1	13	7	36 x 36	9.00	9.00	R1-2	YIELD	
C-4	1	1U		13	7	24 x 12	2.00	2.00	M4-6A	NORTH	
						24 x 24	4.00	4.00	M1-6A	COUNTY MARKER 57	
C-5	1	1U		13	7	24 x 12	2.00	2.00	M4-6A	END	
						24 x 24	4.00	4.00	M1-6A	COUNTY MARKER 57	
C-6	2	2U		13	7	36" DIA.	7.07	14.14	W10-1	RR CROSSING	
C-7	1	(2)		10	7	36 x 30	7.50	7.50	R3-30AB	LEFT - LEFT	
C-8	5	(2)		10	7	30 x 30	6.25	31.25	R5-1	DO NOT ENTER	
C-9	4	1U		13	7	30 x 30	6.25	25.00	R3-X1	RIGHT TURN LANE	
C-10	1	2U	1	14	7	36 x 48	12.00	12.00	R2-1	SPEED LIMIT 45	
C-11	3	(2)		9	7	48 x 18	6.00	18.00	R6-1R	ONE WAY	
C-12	3	1U		14	7	36 x 12	3.00	9.00	R6-1R	ONE WAY	
						30 x 30	6.25	18.75	R1-1	STOP	
C-13	2	1U		13	7	24 x 30	5.00	10.00	R8-8	DO NOT STOP ON TRACKS	
C-14	1	2U		13	7	36 x 36	9.00	9.00	W3-3	SIGNAL	
C-15	3	(2)		12	7	24 x 24	4.00	12.00	R3-4	NO U TURN	
						24 x 30	5.00	15.00	R4-7	KEEP RIGHT	
C-16	1	(2)		10	7	36 x 30	7.50	7.50	R3-30AB	LEFT - LEFT	
C-17	2	(2)		10	7	30 x 30	6.25	12.50	R3-X2	LEFT TURN LANE	
C-18	1	(2)		10	7	30 x 30	6.25	6.25	R3-7	LEFT LANE MUST TURN LEFT	
C-19	2	1U		15	7	36 x 12	3.00	6.00	R6-1L	ONE WAY	
						36 x 12	3.00	6.00	R6-1R	ONE WAY	
						30 x 30	6.25	12.50	R1-1	STOP	
C-20	1	(2)		10	7	24 x 24	4.00	4.00	W9-1R	RIGHT LANE ENDS	
						18 x 12	1.50	1.50	W16-2	800 FEET	
C-21	1	(2)	1	13	7	48 x 48	16.00	16.00	W9-1R	RIGHT LANE ENDS	
						24 x 18	3.00	3.00	W16-2	800 FEET	
						24 x 24	4.00	4.00	W3-1	STOP AHEAD	
C-22	1	(2)		12	7	24 x 24	4.00	4.00	W9-1L	LEFT LANE ENDS	
						18 x 12	1.50	1.50	W16-2	800 FEET	
C-23	1	2U	1	14	7	48 x 48	16.00	16.00	W3-1	STOP AHEAD	
C-24	1	2U	1	16	7	48 x 48	16.00	16.00	W9-1L	LEFT LANE ENDS	
						24 x 18	3.00	3.00	W16-2	800 FEET	
C-25	1	1U		14	7	21 x 15	2.19	2.19	M2-1A	JCT	
						24 x 24	4.00	4.00	M1-6A	COUNTY MARKER 116	
C-26	2	1U		13	7	30 x 30	6.25	12.50	R1-1	STOP	
C-27	2	1U		13	7	30 x 30	6.25	12.50	R3-7	RIGHT LANE MUST TURN LEFT	
TOTAL								379.83			

PAVEMENT MARKINGS - CITY PATH - TAB M		
LOCATION	RR CROSSING	12" SOLID WHITE
	PAINT	
	EACH	LIN FT
NB57 ALIGNMENT		
STA. 95+76 TO STA. 109+00	2	16
TOTALS	2	16

DELINEATORS AND MARKERS (4) - TAB R		
TYPE	QUANT.	LOCATION
(4) (5) (6) (X4-2)	5	ISLAND
(4) (7) (X4-2)	4	MEDIAN NOSE
(4) (8) (X4-2)	2	MEDIAN NOSE
(X4-5)	2	
(9)(10)(11) (X4-13)	8	MOUNTED WITH STOP SIGN

SALVAGE AND INSTALL SIGN TYPE "C" - TAB P									
SIGN NO.	QUANT.	POSTS			MTG. HT. (1)	PANEL		CODE NO.	PANEL LEGEND
		NO. & TYPE	KNEE BRACES QUANT.	LEN. FEET		SIZE INCHES			
C-201	2	2U	1	14	7	36 x 36	R5-1	DO NOT ENTER	
C-202	1	2U	1	14	7	60 x 36	I-X1	ADOPT A HIGHWAY	
C-203	1	2U		14	7	24 x 12	M2-1A	WEST	
						24 x 24	M1-6A	US 10	
C-204	1	2U		14	7	24 x 12	M2-1A	NORTH	
						24 x 24	M1-6A	US 169	
TOTAL	5								

SALVAGE SIGN TYPE C (12) - TAB S						
SIGN NO	QTY	POSTS		PANEL		PANEL LEGEND
		NO & TYPE	KNEE BRACES QTY	SIZE INCH		
C-101	1	1-U		24 x 12		NORTH
				24 x 24		COUNTY MARKER 57
C-102	1	1-U		24 x 12		END
				24 x 24		COUNTY MARKER 57
C-103	2	2-U		36" DIA.		RR CROSSING
C-104	1	1-U		36 x 48		SPEED LIMIT 45
C-105	7	1-U		30 x 30		STOP
C-106	2	1-U		24 x 30		DO NOT STOP ON TRACKS
C-107	1	2-U		36 x 36		SIGNAL
C-108	2	1-U		30 x 36		NO PASSING ON SHOULDER
C-109	1	2-U		36 x 48 x 48		NO PASSING ZONE
C-110	2	2-U		24 x 24		STOP AHEAD
				21 x 15		JUNCTION
C-111	1	1-U		24 x 24		COUNTY MARKER 116
C-112	1	1-U		30 x 30		RIGHT TURN LANE
TOTAL	22					

SIGN PANELS TYPE "C" - CITY PATH - TAB O											
SIGN NO.	QUANT.	POSTS				MTG. HT. (1)	PANEL			CODE NO.	PANEL LEGEND
		NO. & TYPE	KNEE BRACES QUANT.	LEN. FEET	SIZE INCHES		AREA SQ. FT.	TOTAL AREA SQ. FT.			
C-30	2	1U		9	4	18" DIA.	1.77	3.54	W10-1	RR CROSSING	
TOTAL								3.54			

- SPECIFIC NOTES:**
- (1) Mounting height is minimum, see sheet 64 for Typical Mounting.
 - (2) Mounted in concrete, see sheet 62.
 - (3) Mounted back to back.
 - (4) See Standard Signs Manual for Hazard Marker (x4-2) (black background).
 - (5) Install on 3 lb./ft post (MnDOT 3401).
 - (6) Mount 5 (qty.) in concrete Island, See sheet 62.
 - (7) Mount 3 (qty.) below sign C-2.
 - (8) Mount 3 (qty.) below sign C-15.
 - (9) Mount 3 (qty.) below sign C-12.
 - (10) Mount 2 (qty.) below sign C-19.
 - (11) Mount 3 (qty.) below sign C-26.
 - (12) Sign panels are to be salvaged and returned to Anoka County.

- GENERAL NOTES:**
1. Post lengths are approximate and include embedment but do not include additional length required for splice.
 2. See sheets 63-65 for structural details.
 3. See Standard Signs Manual for punching code and detailed drawings of type C sign panels.
 4. See Bituminous Trail Detail for City path signing and pavement markings.

DRAWN BY: TJV

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.

SIGNATURE: 
 PRINTED NAME: JOSEPH M. WEAVER
 DATE: 7/21/2008 LIC. NO. 22405

TKDA

ENGINEERS • ARCHITECTS • PLANNERS

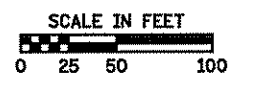
ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

SIGNING AND STRIPING TABULATION

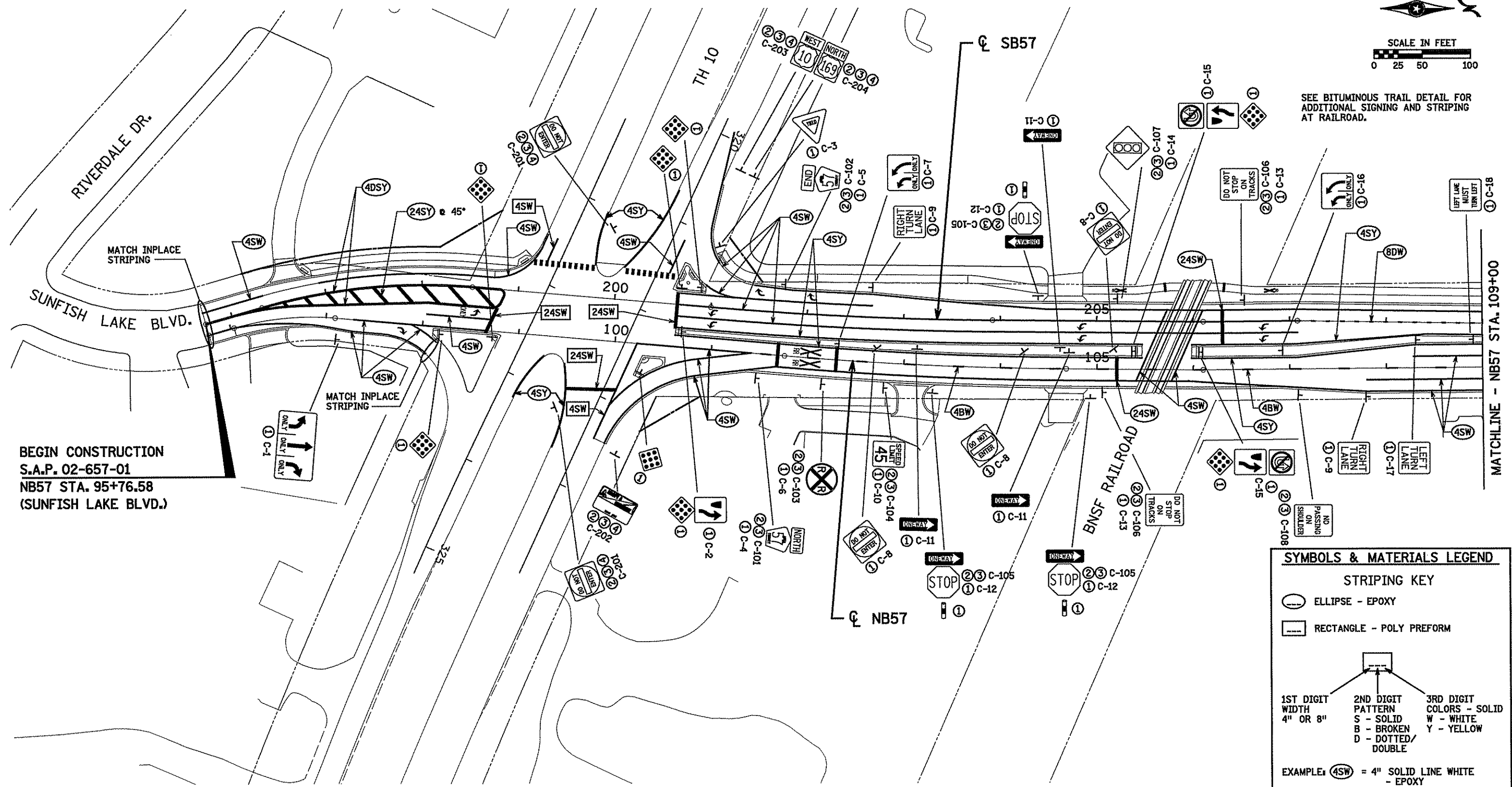
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

Sheet No. 53 of 82 Sheets

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SEE BITUMINOUS TRAIL DETAIL FOR ADDITIONAL SIGNING AND STRIPING AT RAILROAD.



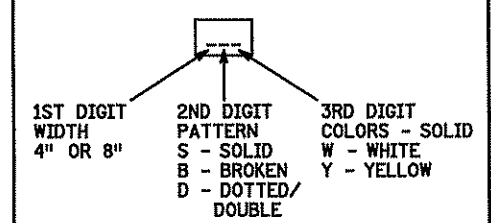
BEGIN CONSTRUCTION
S.A.P. 02-657-01
NB57 STA. 95+76.58
(SUNFISH LAKE BLVD.)

MATCHLINE - NB57 STA. 109+00

SYMBOLS & MATERIALS LEGEND

STRIPING KEY

- ELLIPSE - EPOXY
- RECTANGLE - POLY PREFORM



EXAMPLE: (4SW) = 4" SOLID LINE WHITE - EPOXY

MESSAGE KEY

- PAVEMENT MESSAGE (LT ARROW)
 - PAVEMENT MESSAGE (RT ARROW)
 - PAVEMENT MESSAGE (ONLY)
 - PAVEMENT MESSAGE (RR CROSSING)
 - CROSSWALK MARKING
- NOTE: ALL MESSAGES TO BE POLY PREFORM

NOTES:

- 1 FURNISH & INSTALL
- 2 INPLACE
- 3 SALVAGE
- 4 INSTALL

DATE: 7/21/2008 TIME: 11:47:23 AM
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DRAWN BY: TJV
CHECKED BY: JMW

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.

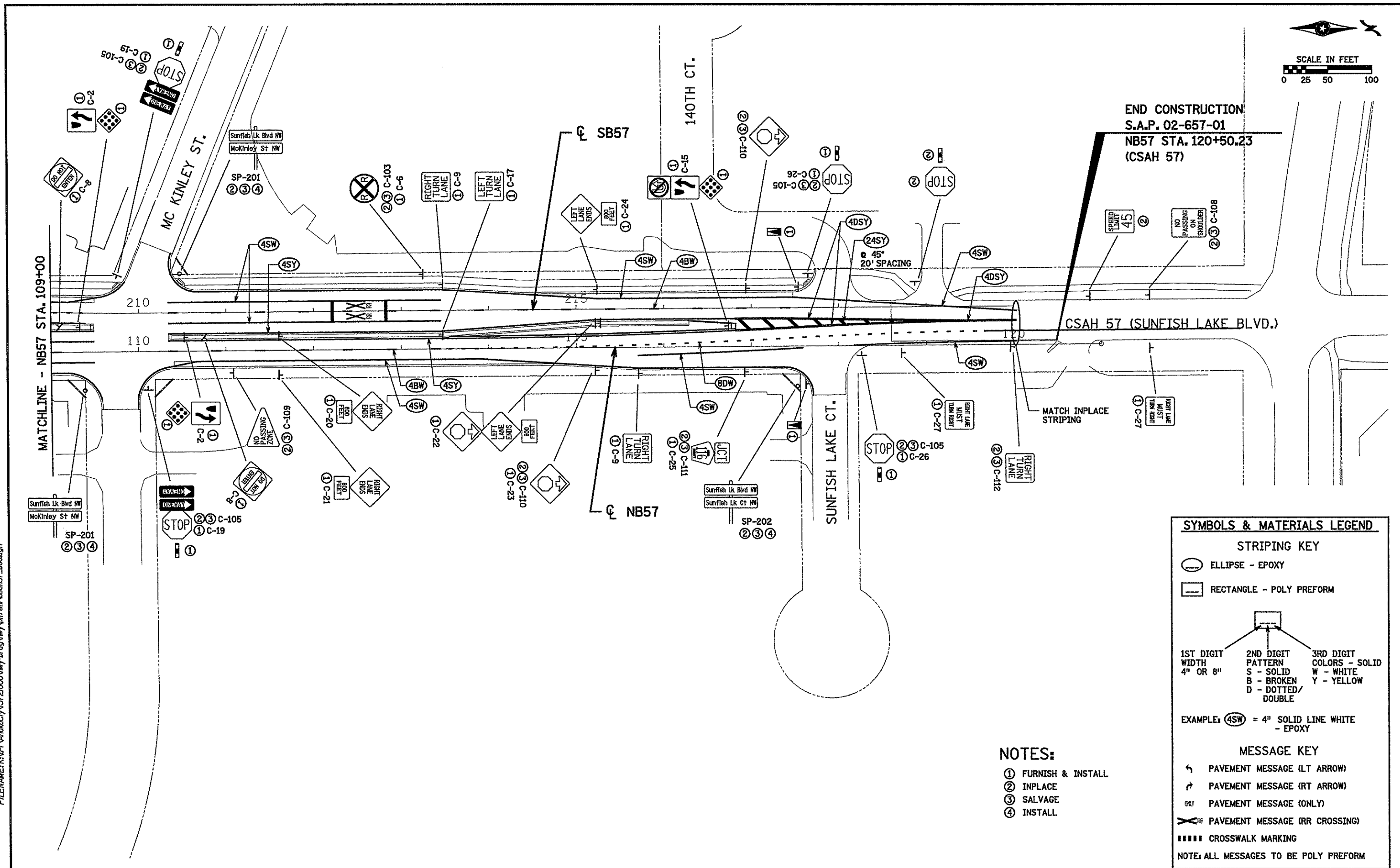
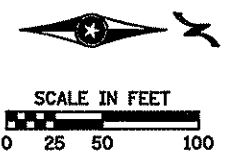
SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 7/21/2008 LIC. NO. 22405

TKDA
ENGINEERS • ARCHITECTS • PLANNERS

ANOKA COUNTY
CSAH 57 RECONSTRUCTION

SIGNING AND STRIPING PLAN
NB57 STA. 95+76.58 TO NB57 STA. 109+00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 54 of 82 Sheets



SYMBOLS & MATERIALS LEGEND

STRIPING KEY

- ELLIPSE - EPOXY
- RECTANGLE - POLY PREFORM

1ST DIGIT WIDTH 4" OR 8"	2ND DIGIT PATTERN S - SOLID B - BROKEN D - DOTTED/ DOUBLE	3RD DIGIT COLORS - SOLID W - WHITE Y - YELLOW
-----------------------------	---	---

EXAMPLE: 4SW = 4" SOLID LINE WHITE - EPOXY

MESSAGE KEY

- PAVEMENT MESSAGE (LT ARROW)
- PAVEMENT MESSAGE (RT ARROW)
- ONLY PAVEMENT MESSAGE (ONLY)
- PAVEMENT MESSAGE (RR CROSSING)
- CROSSWALK MARKING

NOTE: ALL MESSAGES TO BE POLY PREFORM

NOTES:

- ① FURNISH & INSTALL
- ② INPLACE
- ③ SALVAGE
- ④ INSTALL

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GENERAL REQUIREMENTS

THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD SPOTTING, LOCATION AND INSPECTION. THE ENGINEER WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. BROKEN LINE INTERVALS WILL NOT BE MARKED. LONGITUDINAL JOINTS, PAVEMENT EDGES, AND EXISTING MARKINGS SHALL 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" OVER OR UNDER 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 6" FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 2". MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINT. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.

IF OVERLAY APPLICATION FOR POLY PREFORM MARKINGS ARE SPECIFIED OR AUTHORIZED BY THE ENGINEER

1. TEMPERATURE REQUIREMENTS
 - . MINIMUM AIR TEMPERATURE 60°F (16°C) AND RISING
 - . MINIMUM PAVEMENT TEMPERATURE 70°F (21°C) AND RISING
 - . MINIMUM OVERNIGHT TEMPERATURE 60°F (16°C) AND RISING
2. SURFACE PREPARATION
 - A. ASPHALT-LESS THAN 11 DAYS OLD
 1. ALL - SWEEP OR BLOW CLEAN
 2. 0 - 3 DAYS OLD - NO PRIMER
 3. 4 - 10 DAYS OLD - STAMARK™ SP44 ONLY
 4. 11+ DAYS - STAMARK™ E44 OR SP44 DEPENDING ON APPLICATION. SEE MANUFACTURERS SPECIFICATION
3. OLD MARKINGS
 - A. DO NOT APPLY OVER PAINT, EPOXY, OR THERMOPLASTIC UNLESS VERY WELL WORN AND WELL ADHERED TO THE ROAD. OLD MARKINGS MUST BE AT LEAST 75%-80% WORN AWAY
 - B. GRIND OR SANDBLAST OLD MARKINGS AND SWEEP OR BLOW SURFACE CLEAN
 - C. APPLY REQUIRED PRIMER
3. WORN STAMARK™ MARKINGS
 - A. OK TO APPLY NEW MATERIAL OVER WORN STAMARK™. REMOVE ALL LOOSE MATERIAL WITH SCRAPER OR KNIFE.
 - B. SWEEP OR BLOW SURFACE CLEAN.
 - C. APPLY REQUIRED PRIMER

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 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 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.

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 (NONMETALLIC), 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 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 BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOXY RESIN LINE 4 INCHES WIDE AND 15 MIL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF (1) GAL OF COMPONENTS FOR 320 FT 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°F OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY MARKINGS.

POLY PREFORM

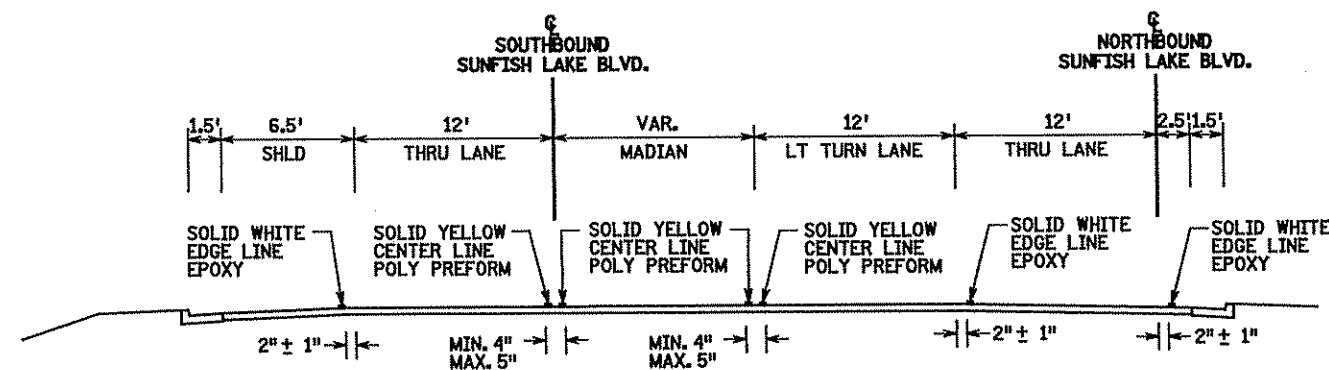
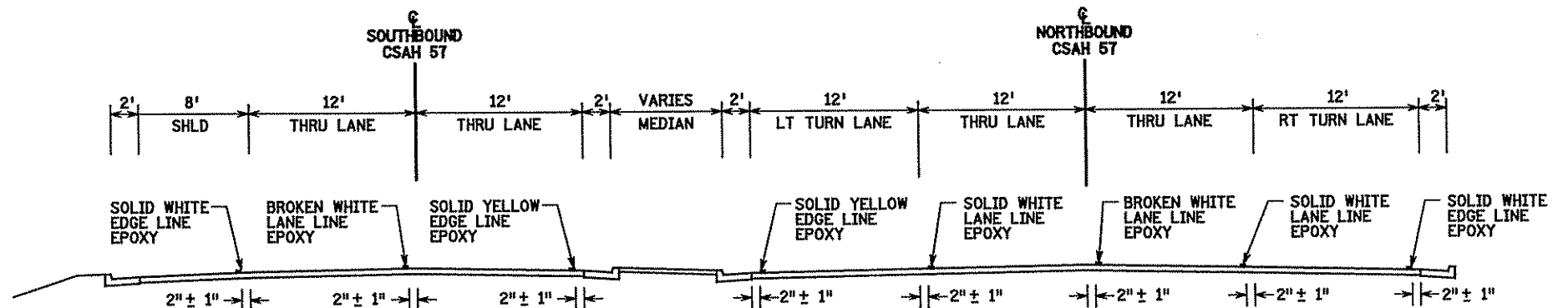
1. THE INSTALLERS OF THIS MATERIAL MUST CARRY A CARD CERTIFYING THAT THEY HAVE ATTENDED A TRAINING SESSION THAT ADDRESSES SURFACE PREPARATIONS AND ALL APPLICATION REQUIREMENTS AND TECHNIQUES NECESSARY FOR SUCCESSFUL APPLICATION.
2. ALL MARKINGS SHALL BE OF THE "INLAY" METHOD UNLESS THE "OVERLAY" PROCEDURE IS SPECIFIED.

INLAY APPLICATION

MAT TEMPERATURE SHALL BE CHECKED USING A THERMOMETER TO MAKE SURE THE INLAY IS BEING DONE IN THE PROPER TEMPERATURE RANGE. THE TEMPERATURE SHOULD MEASURE BETWEEN 150°F (ASPHALT FIRM ENOUGH TO WALK ON) AND 118°F. APPLICATION BELOW 118°F MAY NOT GET A PROPER INLAY. INLAIS ARE NOT RECOMMENDED AFTER SEPTEMBER 15 AS THE ASPHALT COOLS TOO FAST AT THIS TIME OF THE YEAR.

1. NO PRIMERS ARE USED FOR INLAY APPLICATION.
2. DO NOT INSTALL LANE LINES ON AN ASPHALT SEAM.
3. ROLLING OF ALL THE MARKINGS SHOULD BE LENGTHWISE IN THE DIRECTION THEY WERE LAID.
4. FOR CROSSWALKS AND STOP BARS, INITIAL TAMPING WITH THE TAMPING CART IS RECOMMENDED USING ONLY 45.4 kg OF MASS

USE COMPACTION ROLLER TO EMBED (INLAY) MARKINGS INTO PAVEMENT SURFACE. USE MINIMUM SPEED AND WATER ON ROLLER. DO NOT USE VIBRATOR. IF MARKING BUCKLES OR DISTORTS SEVERELY IN FRONT OF ROLLER, MAT TEMPERATURE OR ROLLER SPEED MAY BE TOO HIGH.



TYPICAL STRIPING DETAILS

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DRAWN BY: TJV
CHECKED BY: JMW

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.

SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 6/17/2008 LIC. NO. 22405

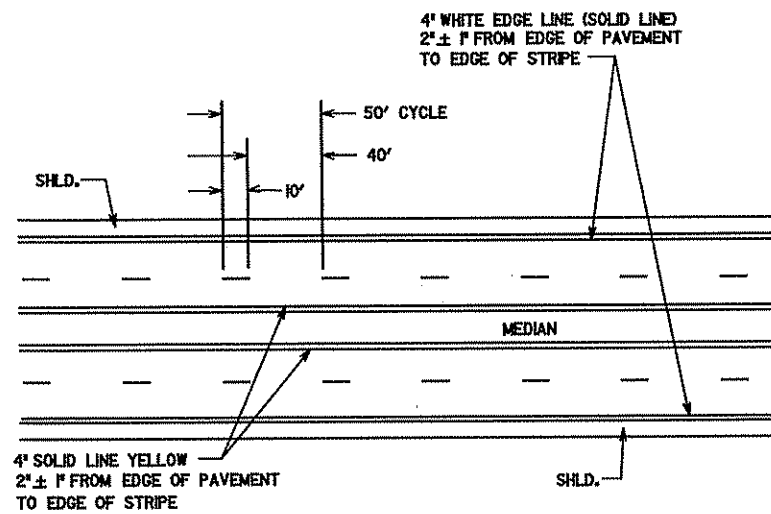
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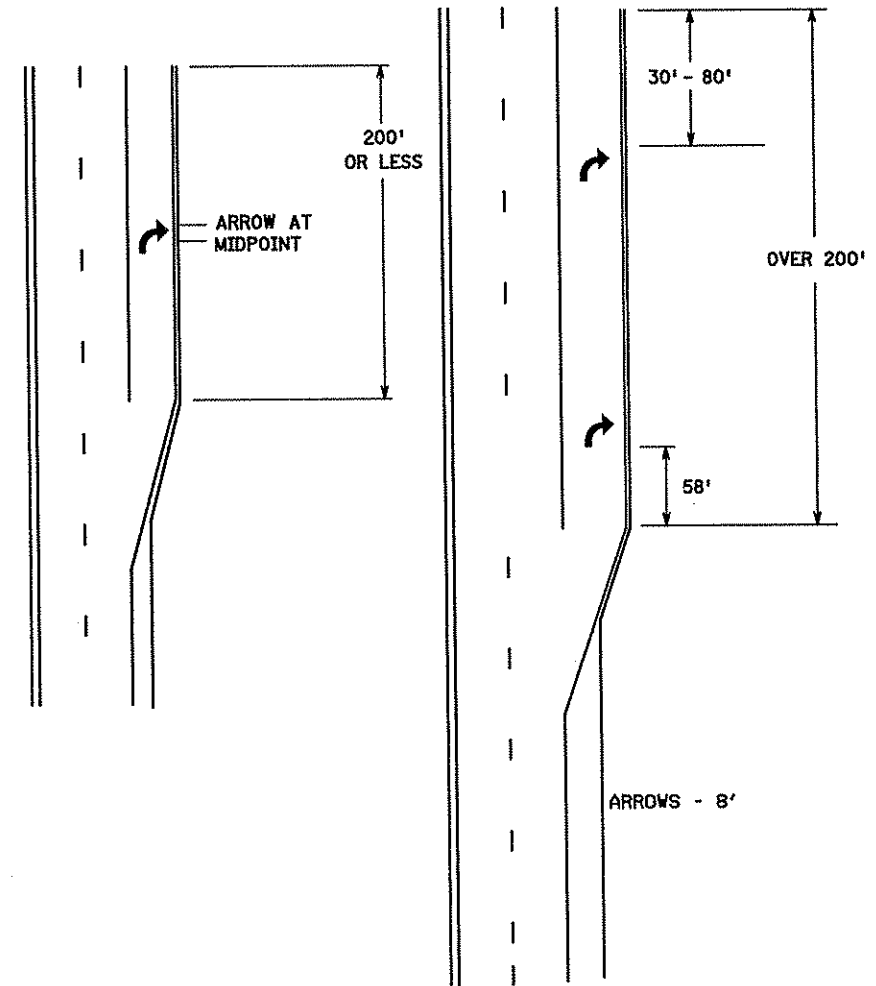
SIGNING AND STRIPING DETAILS
STRIPING DETAILS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 56 of 82 Sheets

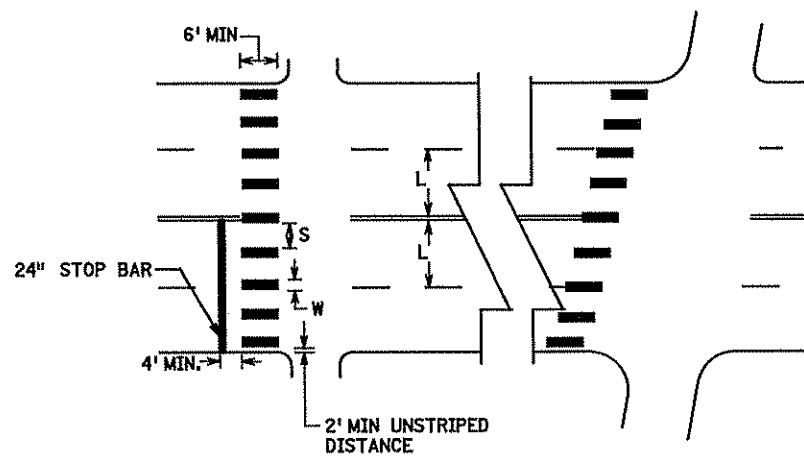
(L) WIDTH OF INSIDE LANE	(W) WIDTH OF PAINTED AREA	(S) WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'



TYPICAL FOUR-LANE DIVIDED LANE MARKINGS



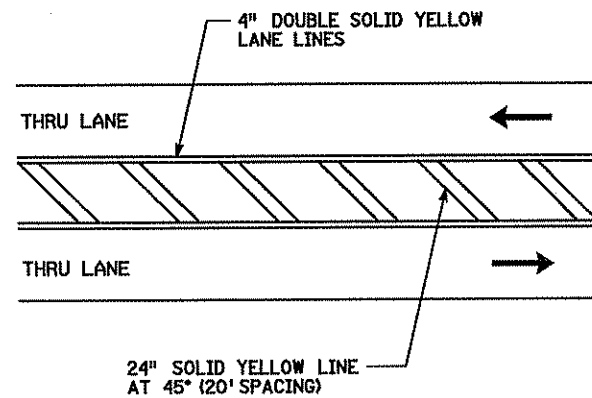
TYPICAL MESSAGE PLACEMENT FOR TURN LANES



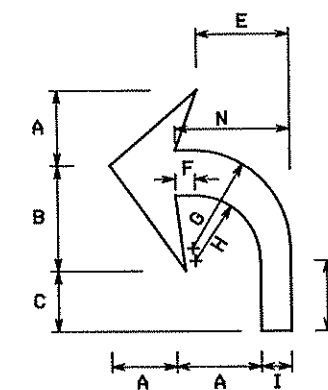
NOTES:

1. PAINTED AREAS TO BE CENTERED ON CENTERLINE AND LANE LINES.
2. A MINIMUM OF 2' CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
3. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
4. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.

MARKINGS FOR PEDESTRIAN CROSSINGS
(POLY-PREFORM)



STRIPED MEDIAN DETAIL



PAVEMENT MARKING DETAILS
(POLY-PREFORM)

DIMENSION TABLE	
A	2'- 6"
B	3'- 6"
C	2'- 0"
D	2'- 6"
E	3'- 1"
F	0'- 8"
G	3'- 3"
H	2'- 2"
I	1'- 0"
J	1'- 0"
K	1'- 3"
L	5'- 0"
M	7'- 8"
N	3'- 10"
P	4'- 6"

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SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 6/17/2008 LIC. NO. 22405

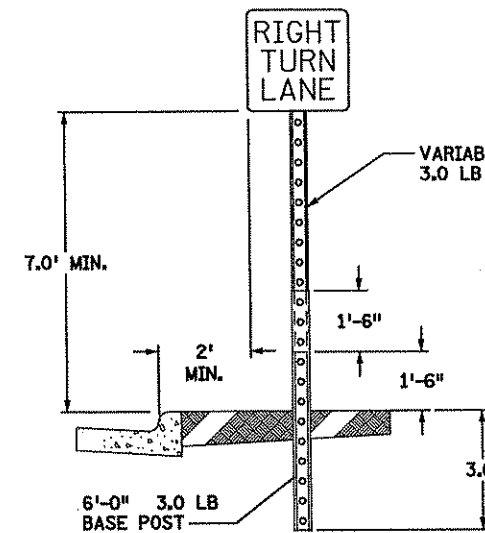
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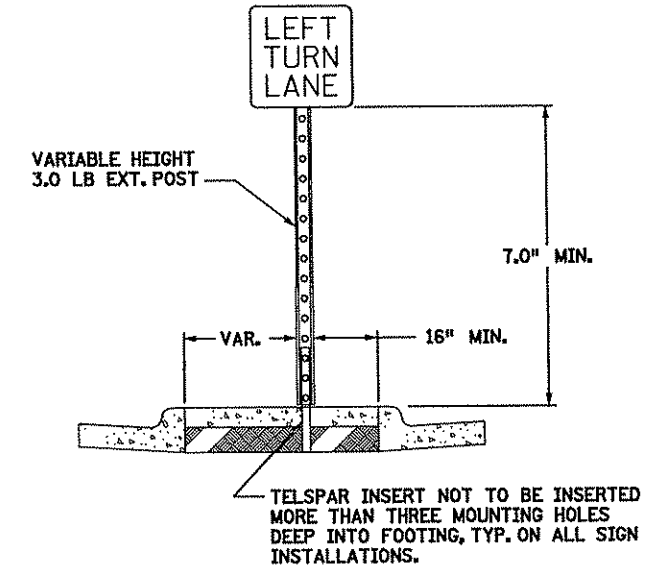
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STRIPING DETAILS

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Sheet No. 57 of 82 Sheets

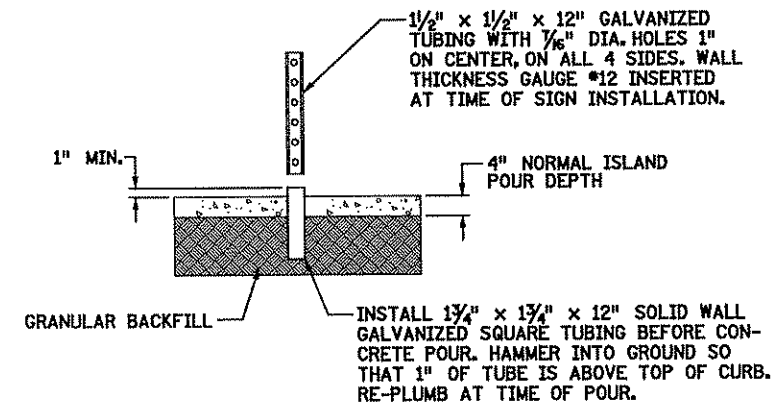
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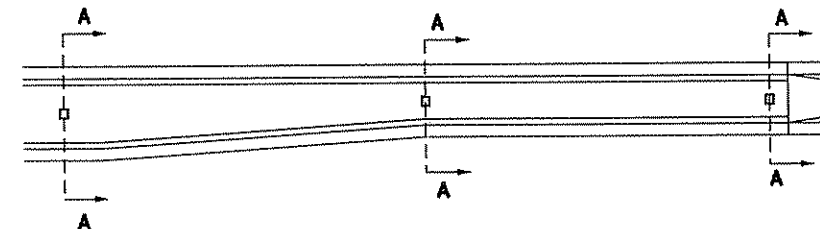
GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN
INSTALLATION TYPICAL



SECTION A-A



DRAWN BY: TJV

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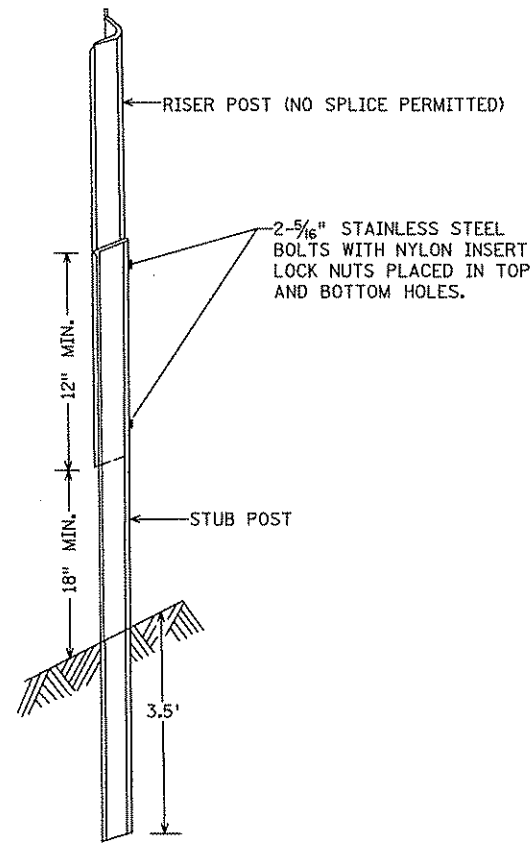
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CSAH 57 - SIGN DETAILS

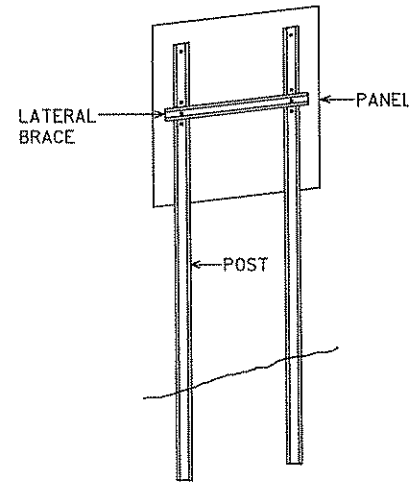
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Sheet No. 58 of 82 Sheets

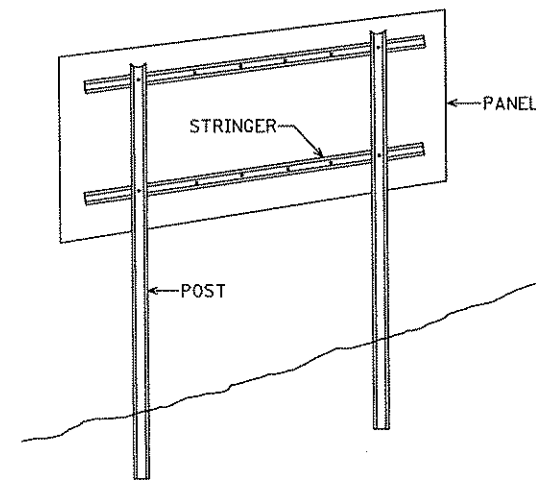
TYPE C & D POST



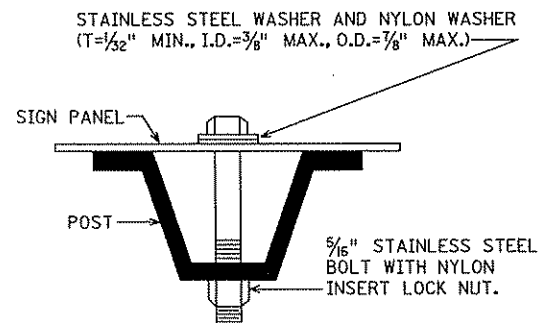
U POST SPLICE



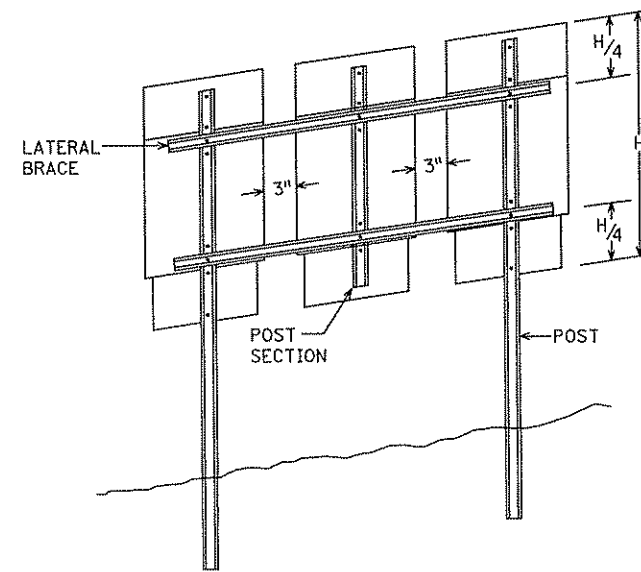
TYPICAL TYPE C INSTALLATION



TYPICAL TYPE D INSTALLATION



**U POST MOUNTING
TYPE C SIGNS**



MODIFIED TYPE C INSTALLATION

NOTES:

1. USE 3# STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. FOR TYPE D SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE D SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH THE TYPE D STRINGER AND PANEL-JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCH CODE) FOR TYPE C SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) U POSTS SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 5/16" BOLTS, WASHERS AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3 1/2'.
9. A-FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MN/DOT 3352.2A5.
11. 2 POST TYPE C SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 SINGLE POST TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS.
13. WHERE 3 OR MORE TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED Laterally BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND POST SECTION AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN MODIFIED TYPE C INSTALLATION.

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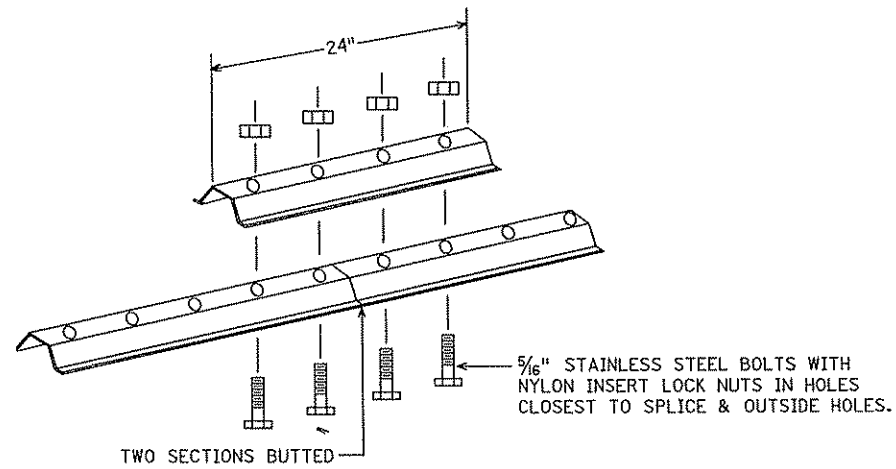
SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 6/17/2008 LIC. NO. 22405

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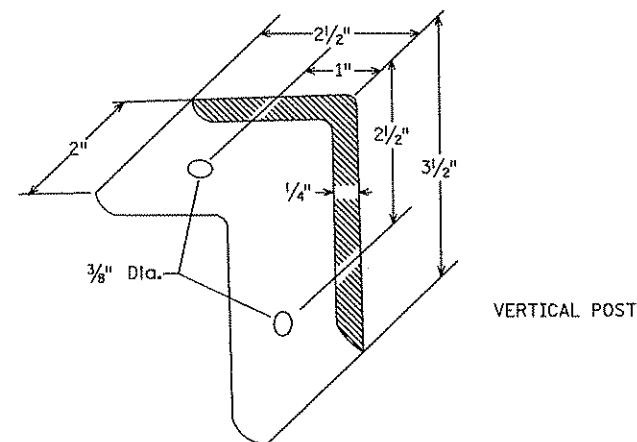
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

TH 10 - TYPE C & D SIGN
STRUCTURAL DETAILS

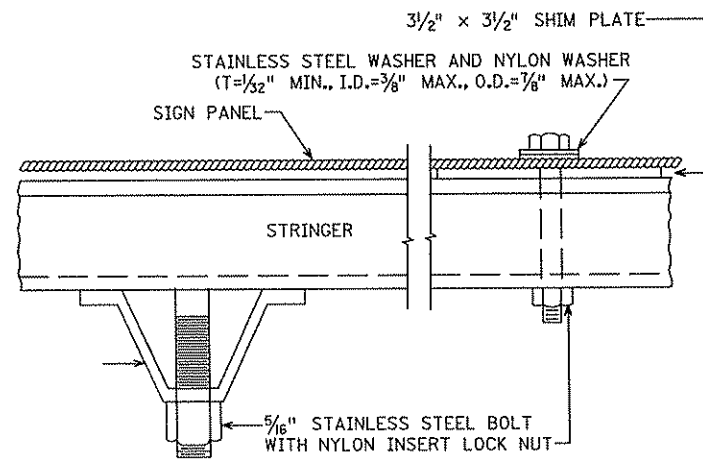
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 59 of 82 Sheets



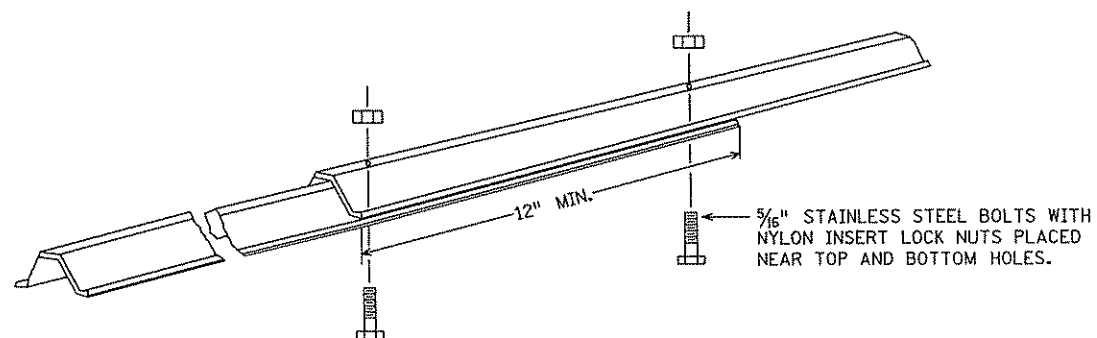
LATERAL BRACE OR STRINGER
SPlice DETAIL (EXPLODED VIEW)



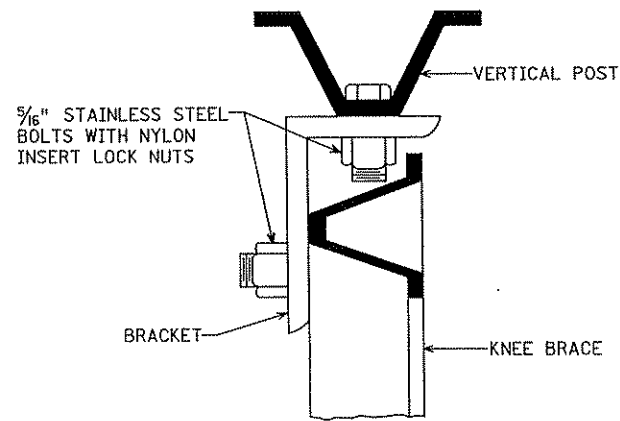
A-FRAME BRACKET
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



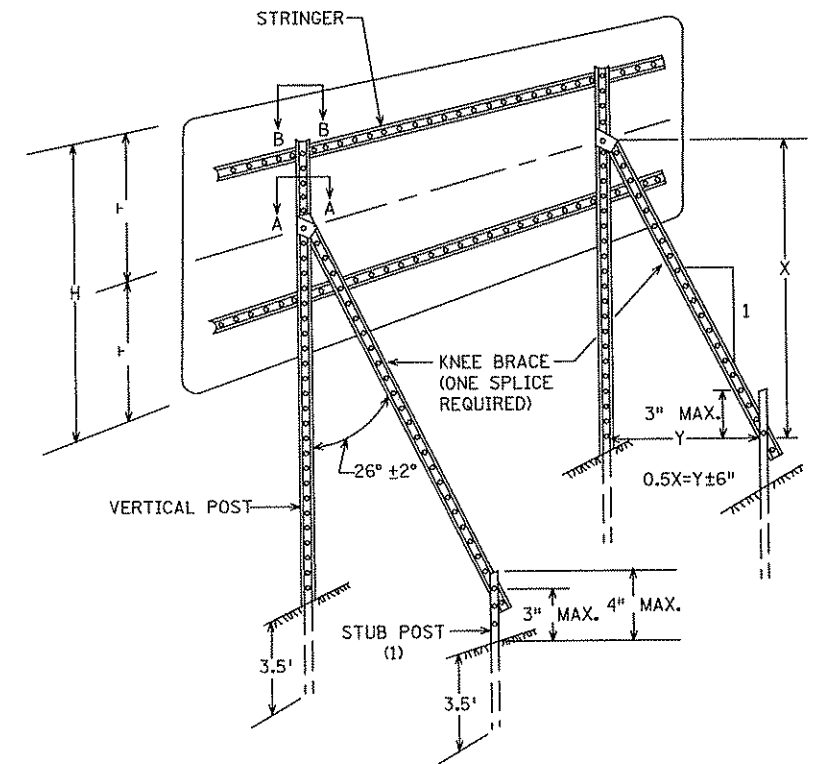
SECTION B-B



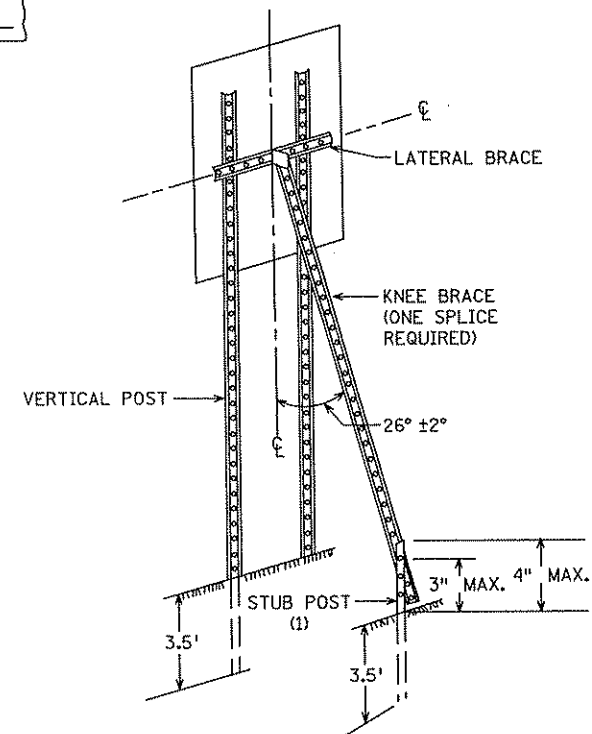
KNEE BRACE SPlice



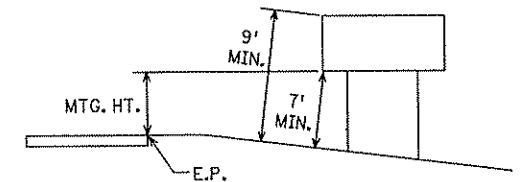
SECTION A-A



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



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



TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST. ATTACH STUB
POST AND KNEE BRACE BACK TO BACK.

DATE: 6/17/2008 TIME: 5:51:46 PM
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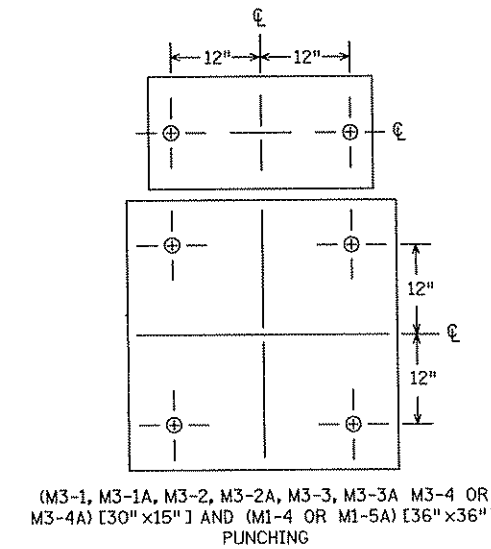
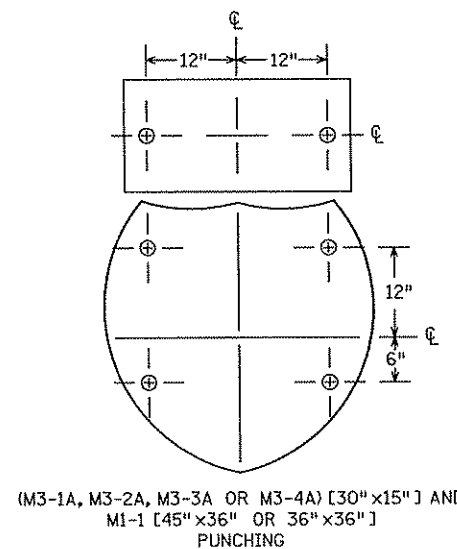
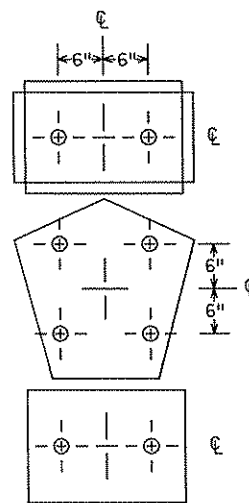
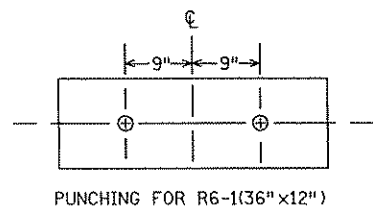
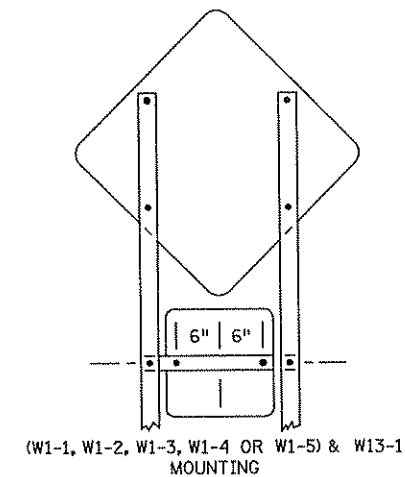
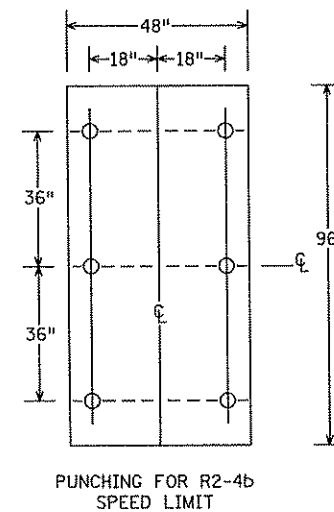
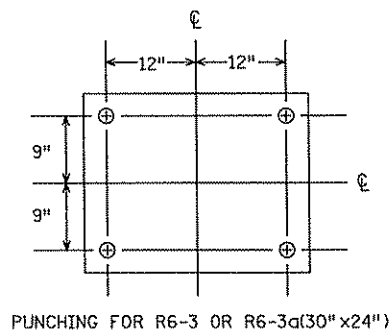
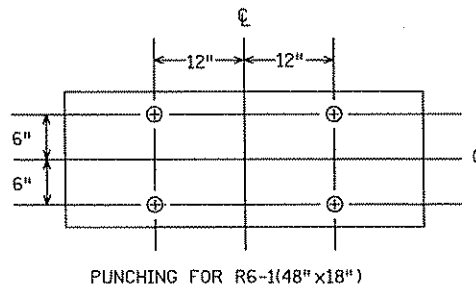
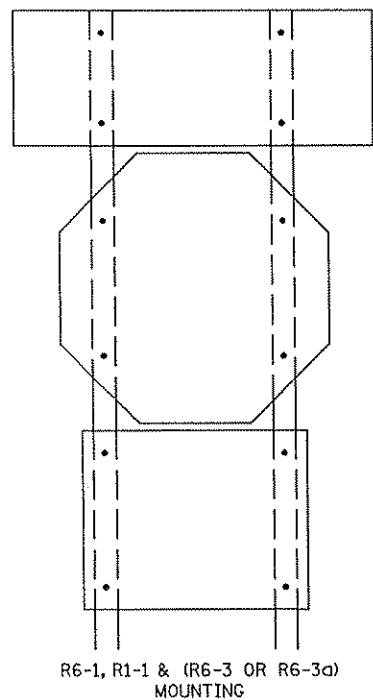
SIGNATURE: *Joseph M. Weaver*
PRINTED NAME: JOSEPH M. WEAVER
DATE: 6/17/2008 LIC. NO. 22405

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

TH 10 - TYPE C & D SIGN
STRUCTURAL DETAILS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 60 of 82 Sheets



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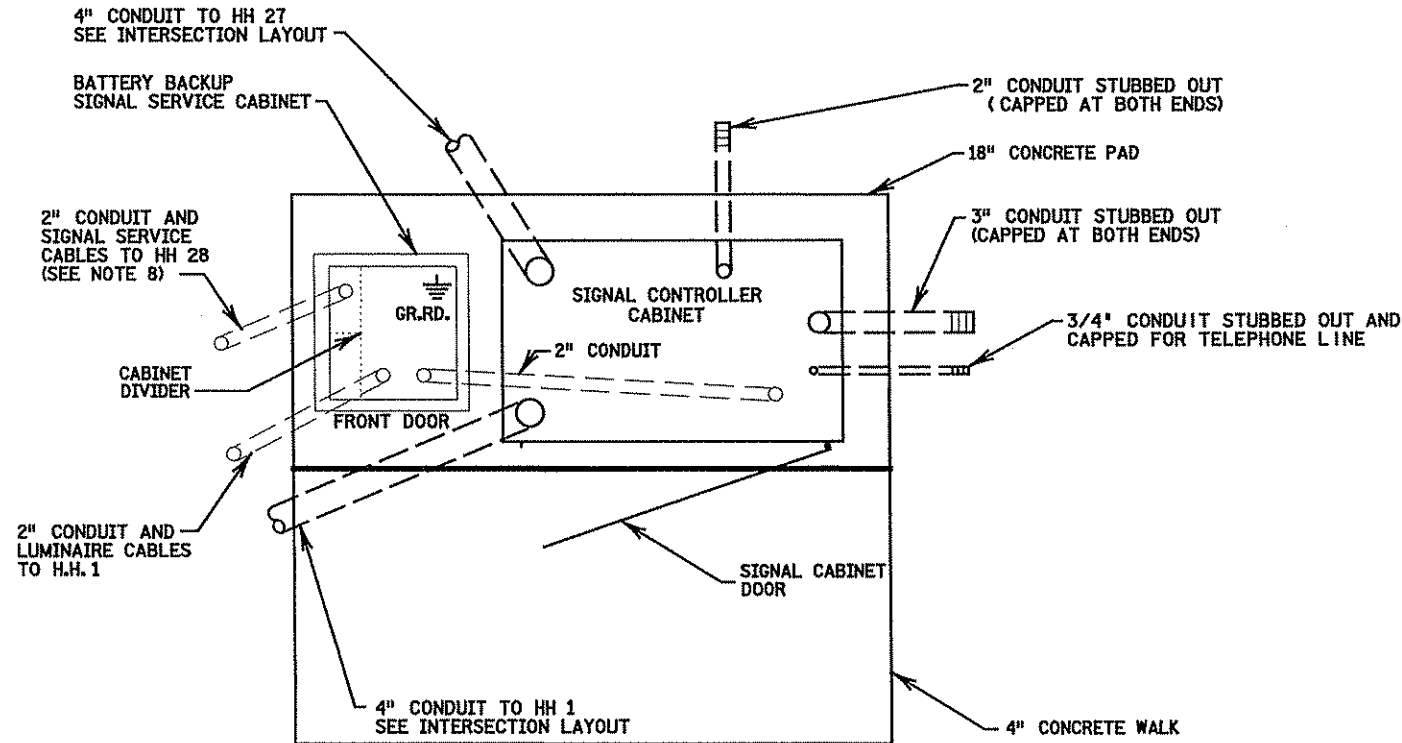
TH 10 - TYPE C & D SIGN
STRUCTURAL DETAILS

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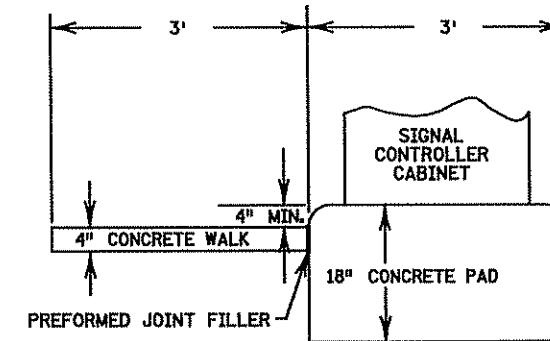
TYPICAL PAD WITH CONTROLLER CABINET AND SERVICE CABINET

SEE INTERSECTION LAYOUT FOR CABLE INFORMATION (NOT TO SCALE)

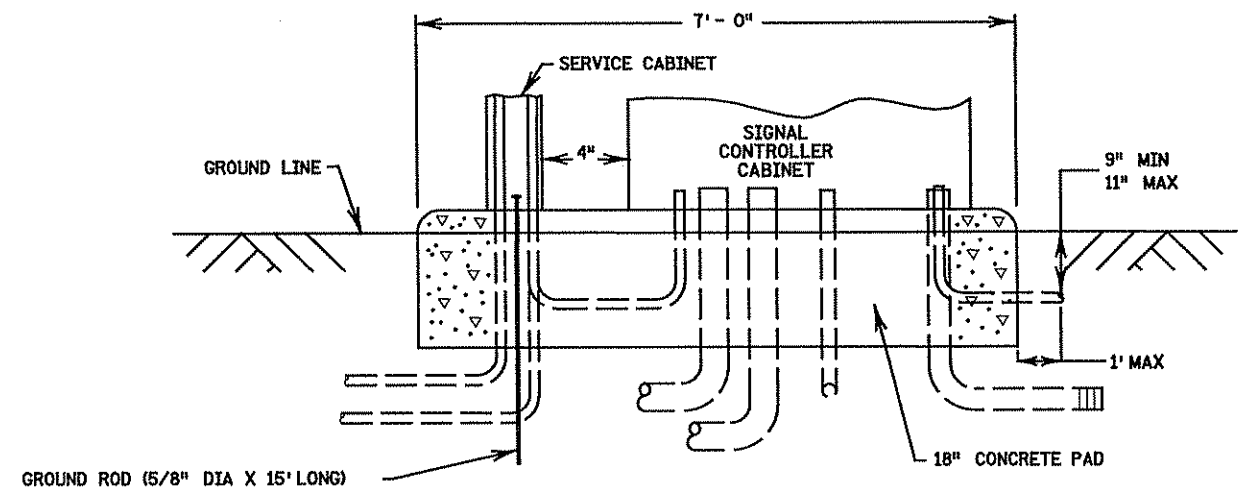
PLAN VIEW



SIDE VIEW



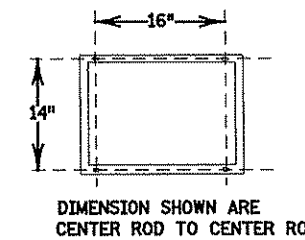
FRONT VIEW



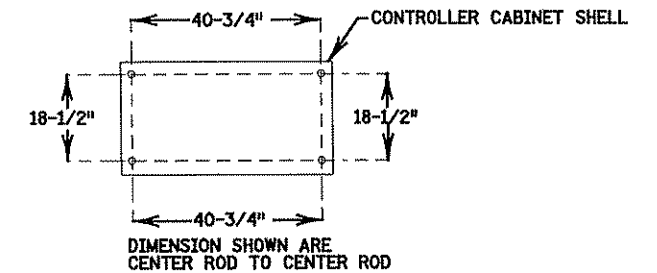
NOTES:

1. THE ANCHOR RODS, NUTS AND WASHERS FOR THE CONTROLLER CABINET SHALL BE FURNISHED BY MNDOT.
2. THE UPPER PART OF THE 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. PLACEMENT OF THIS CONDUIT IN PROPER LOCATION IS CRITICAL.

B.B. SERVICE CABINET BOLT PATTERN



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



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DRAWN BY: SFH
CHECKED BY: BDP

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SIGNATURE: *Bryant J. Fickel*
PRINTED NAME: BRYANT J. FICKEL
DATE: 6/17/2008 LIC. NO. 42802

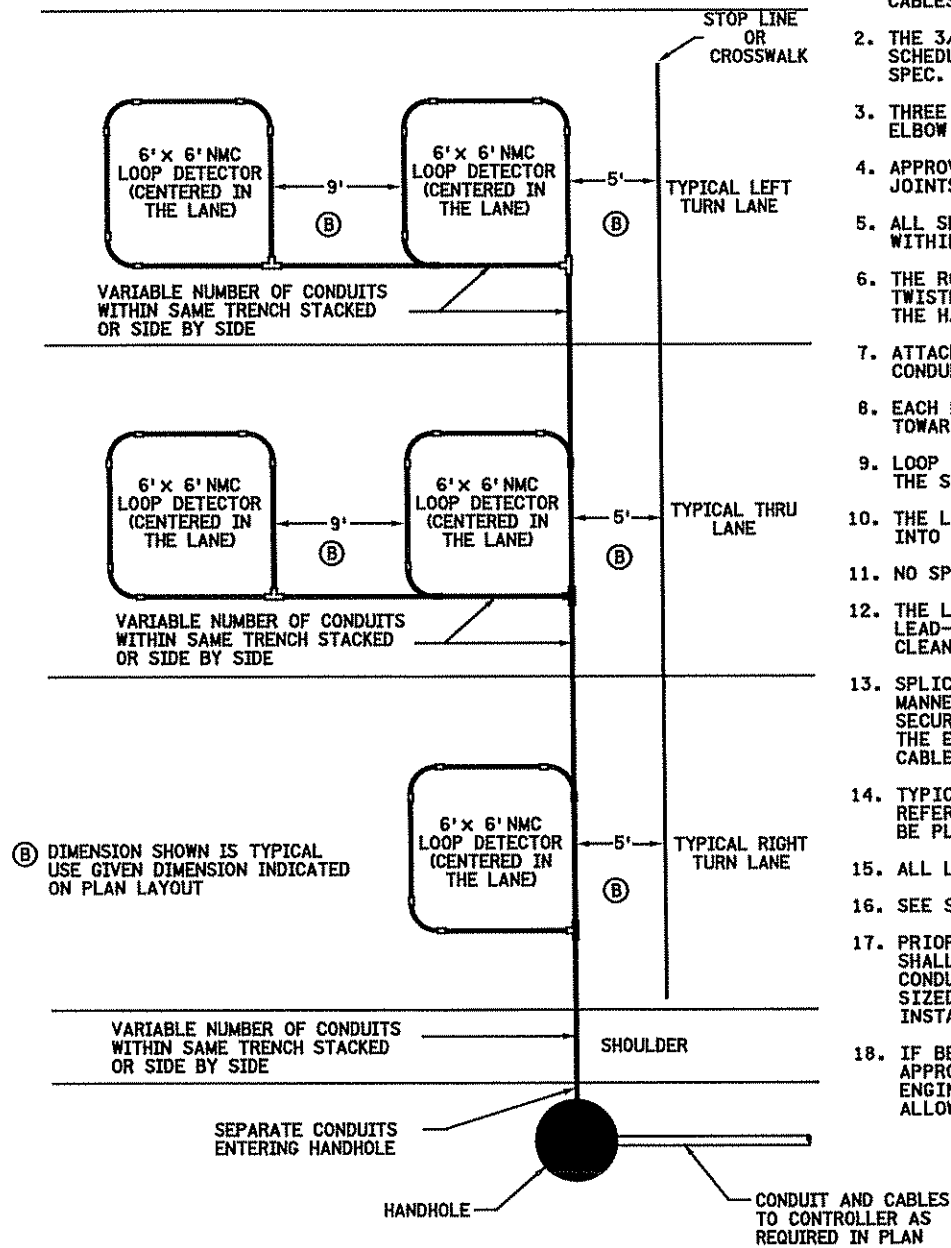
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EQUIPMENT PAD LAYOUT

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 62 of 82 Sheets

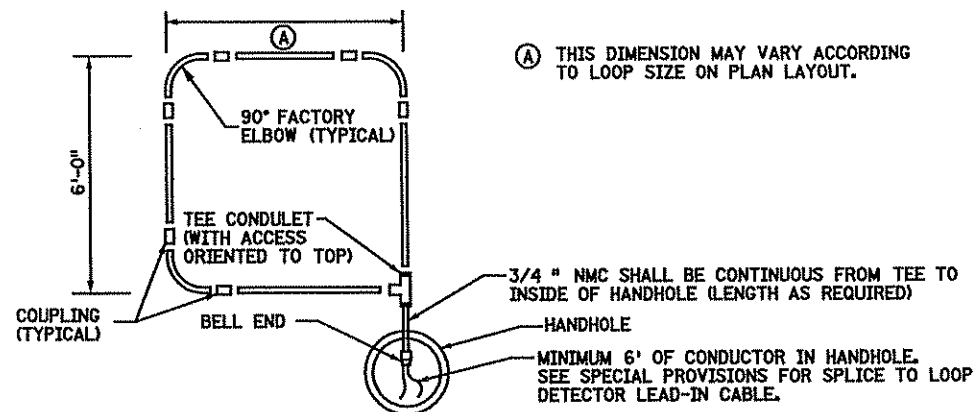
TYPICAL CROSS STREET NMC LOOP DETECTOR LAYOUT



NOTES:

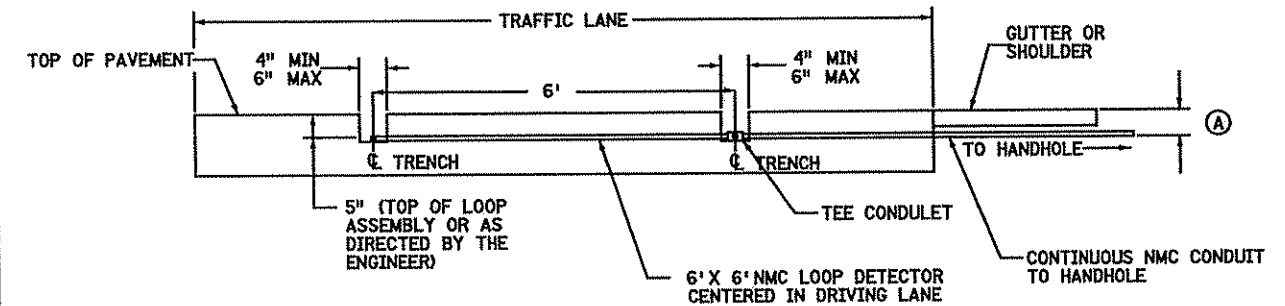
1. ROADWAY LOOP DETECTOR CONDUCTORS AND LOOP DETECTOR LEAD IN CABLES SHALL BE IN ACCORDANCE WITH MN/DOT SPEC 3815.
2. THE 3/4" NON-METALLIC CONDUIT (NMC) AND FITTINGS SHALL BE SCHEDULE 40 HEAVY WALL RIGID POLYVINYL CHLORIDE (PVC). SEE SPEC. 3803.
3. THREE CORNERS OF EACH LOOP DETECTOR SHALL BE A 90° FACTORY ELBOW (6" RADIUS). THE FOURTH SHALL BE AN NMC TEE CONDULET.
4. APPROVED PVC PRIMER AND CEMENT SHALL BE USED FOR THE PVC JOINTS.
5. ALL SLACK MUST BE REMOVED FROM LOOP DETECTOR CONDUCTORS WITHIN THE NMC.
6. THE ROADWAY LOOP DETECTOR CONDUCTORS (1/C*14) SHALL BE TWISTED THREE TURNS PER FOOT FROM THE NMC TEE CONDULET TO THE HANDHOLE.
7. ATTACH A FERROUS METAL ITEM IN OR ADJACENT TO THE TEE CONDULET COVER OR AS DIRECTED BY THE ENGINEER.
8. EACH LOOP DETECTOR CONDUIT TO THE HANDHOLE SHALL BE SLOPED TOWARDS THE HANDHOLE.
9. LOOP DETECTOR CONDUITS TO THE HANDHOLE MAY BE PLACED WITHIN THE SAME TRENCH.
10. THE LOOP DETECTOR ROADWAY CONDUCTORS SHALL EXTEND 6' TO 10' INTO THE HAND HOLE FOR SPLICING.
11. NO SPLICES ALLOWED IN CONDUIT.
12. THE LOOP DETECTOR ROADWAY CONDUCTORS AND THE LOOP DETECTOR LEAD-IN CABLE CONDUCTORS SHALL BE PROPERLY PREPARED AND CLEANED BEFORE SPLICING.
13. SPLICE KITS SHALL BE INSTALLED IN HANDHOLES IN SUCH A MANNER AS TO ENSURE THAT EACH SPLICE KIT IS SUSPENDED AND/OR SECURED NEAR THE TOP OF THE HANDHOLE TO THE SATISFACTION OF THE ENGINEER. (PLACING SPLICE KITS ON TOP OF THE ELECTRICAL CABLES AND CONDUCTORS IS NOT ACCEPTABLE).
14. TYPICAL SIZE OF LOOP DETECTORS ARE 6' x 6' AND 6' x 10'. REFER TO INTERSECTION LAYOUT FOR SPECIFIC LOOP DETECTORS TO BE PLACED.
15. ALL LOOP DETECTORS SHALL HAVE 4 TURNS OF CONDUCTORS.
16. SEE SPECIAL PROVISIONS FOR APPROVED SPLICE KITS.
17. PRIOR TO INSTALLING THE APPROVED SPLICE KIT, THE CONTRACTOR SHALL SOLDER THE ENDS OF THE LOOP DETECTOR LEAD IN CONDUCTOR AND SHALL FURNISH AND INSTALL AN APPROPRIATE SIZED WIRE NUT TO THE SOLDERED ENDS PRIOR TO THE INSTALLATION OF THE SPLICE KITS.
18. IF BENDING OF THE NMC LOOP LEAD-IN CONDUIT IS REQUIRED, AN APPROPRIATE HEATING BLANKET OR DEVICE APPROVED BY THE ENGINEER SHALL BE USED. EXPOSED FLAME OR TORCHES ARE NOT ALLOWED.

TYPICAL NMC LOOP DETECTOR DETAIL



TYPICAL NMC LOOP DETECTOR INSTALLATION

INPLACE PAVEMENT



(A) VARIABLE DEPTH, MAINTAIN DRAINAGE TO HAND HOLE

NOTES:

1. USE THE LOOP DETECTOR TO BE INSTALLED FOR THE PURPOSE OF MARKING THE PAVEMENT LOCATION FOR THE MILLING OPERATION.
2. TO ACHIEVE FULL TRENCH DEPTH FOR CONDUIT PLACEMENT, MILL BEYOND THE DESIRED PAVEMENT MARKING.
3. PROVIDE A MINIMUM 5" CLEARANCE, MEASURED FROM THE TOP OF THE FINISHED PAVEMENT TO HIGHEST POINT OF LOOP ASSEMBLY (INCLUDING CONDULET).
4. AN AIR COMPRESSOR UNIT (50 HP) IS REQUIRED FOR REMOVING ALL LOOSE MATERIAL FROM TRENCH PRIOR TO TACK COAT APPLICATION.
5. APPLY A TACK COAT AT A UNIFORM RATE TO THE BOTTOM AND EDGES OF THE MILLED AREA. USE AN EMULSIFIED ASPHALT PER SPEC. 2357.2A
6. MIXTURE USED TO FILL THE RETROFIT LOOP DETECTOR TRENCHES SHALL MEET THE REQUIREMENTS OF MNDOT SPECIFICATION 2360. AGGREGATE SIZE A OR B WILL BE ALLOWED WHEN 2360 IS UTILIZED. OTHER WEARING COURSE MIXTURE TYPES ARE ALLOWED WHEN APPROVED BY THE ENGINEER.
7. COMPACTION SHALL BE OBTAINED BY THE ORDINARY COMPACTION METHOD. BACKFILL THE TRENCH WITH A MINIMUM OF TWO LIFTS AND COMPACT EACH LIFT. BEFORE COMPACTING THE FIRST LIFT ENSURE THAT THERE IS ADEQUATE MIXTURE ON EACH SIDE AND ABOVE THE CONDUIT SO THAT THE CONDUIT IS NOT DAMAGED DURING COMPACTION OPERATIONS.
8. THE COMPACTED MIXTURE IN THE TRENCH SHOULD BE LEFT 1/4" TO 1/2" ABOVE THE ADJACENT PAVEMENT SURFACE TO PROVIDE FOR ADDITIONAL COMPACTION BY TRAFFIC.
9. WHEN INSTALLING NMC LOOPS INTO PRE-ROADWAY AGGREGATE BASE, DEPTH OF TOP OF CONDUIT TO TOP OF AGGREGATE SHALL NOT EXCEED 2".
10. WHEN LOOP DETECTORS ARE MILLED INTO CONCRETE SURFACES, THE TRENCHES SHALL BE FILLED USING A GROUTING MATERIAL WHICH MEETS MN/DOT SPEC 2520 OR OTHER MATERIAL AS APPROVED BY THE ENGINEER. BITUMINOUS FILL IS ACCEPTABLE WHEN OVERLAYING CONCRETE TRENCHES.
11. MILLING IS REQUIRED FOR ALL NMC LOOP INSTALLATIONS. WHEN LOOPS ARE MILLED INTO EXISTING MILLED SURFACE THAT WILL BE OVERLAYED WITH BITUMINOUS, THE MINIMUM TRENCH DEPTH SHALL BE NO LESS THAN THE HIGHEST LOOP ASSEMBLY IN THE TRENCH.
12. WHEN MILLING INTO EXISTING BITUMINOUS SURFACE, BE ADVISED THAT CONCRETE MAY BE ENCOUNTERED UNDER THE BITUMINOUS SURFACE.

DATE: 6/17/2008 TIME: 5:51:52 PM FILENAME: K:\r\Anoka\city\13721000\my-birdg\my\plan-st\NMC-loop-detector.dgn

DRAWN BY: SFH
CHECKED BY: BJF

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SIGNATURE: *Bryant J. Fick*
PRINTED NAME: BRYANT J. FICK
DATE: 6/17/2008 LIC. NO. 42802

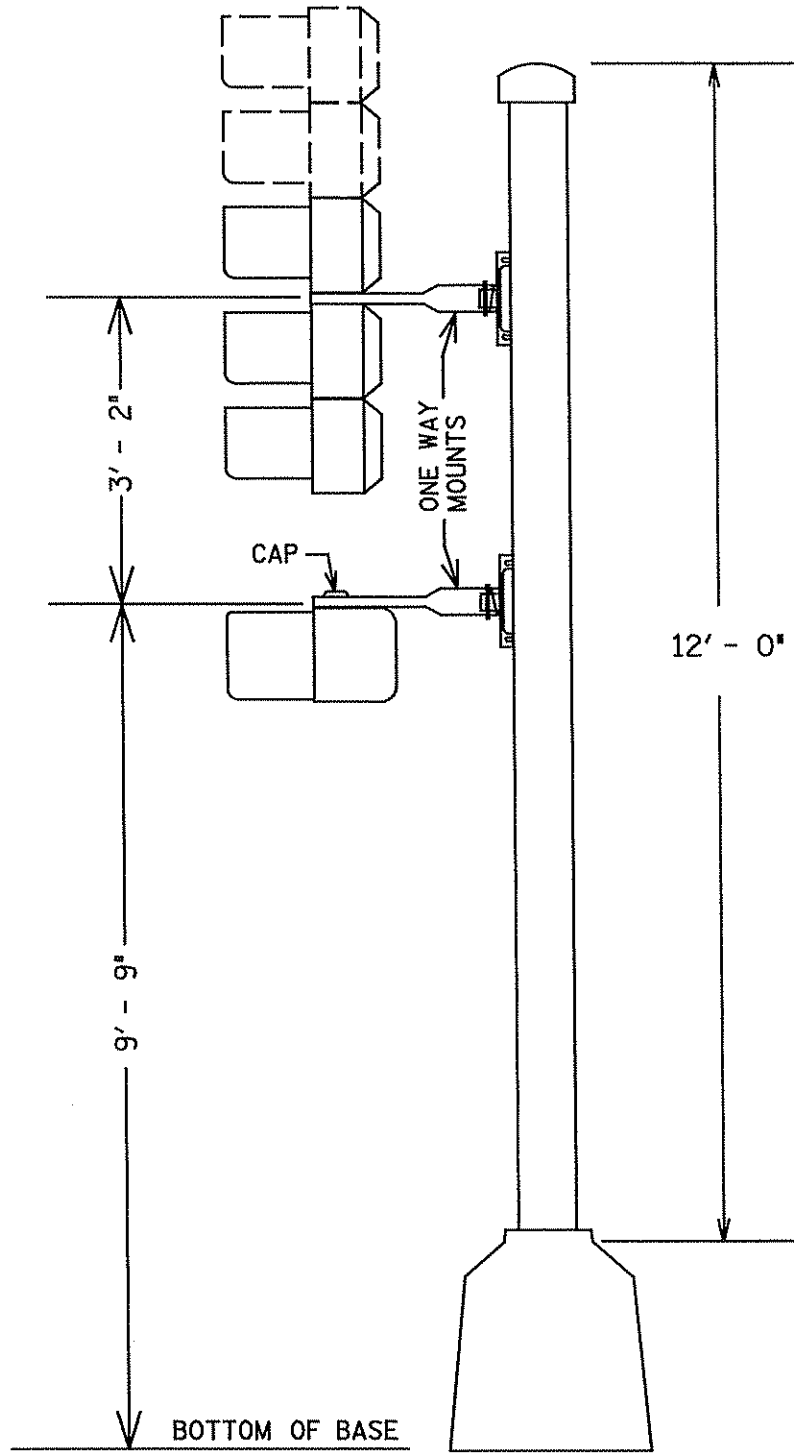
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

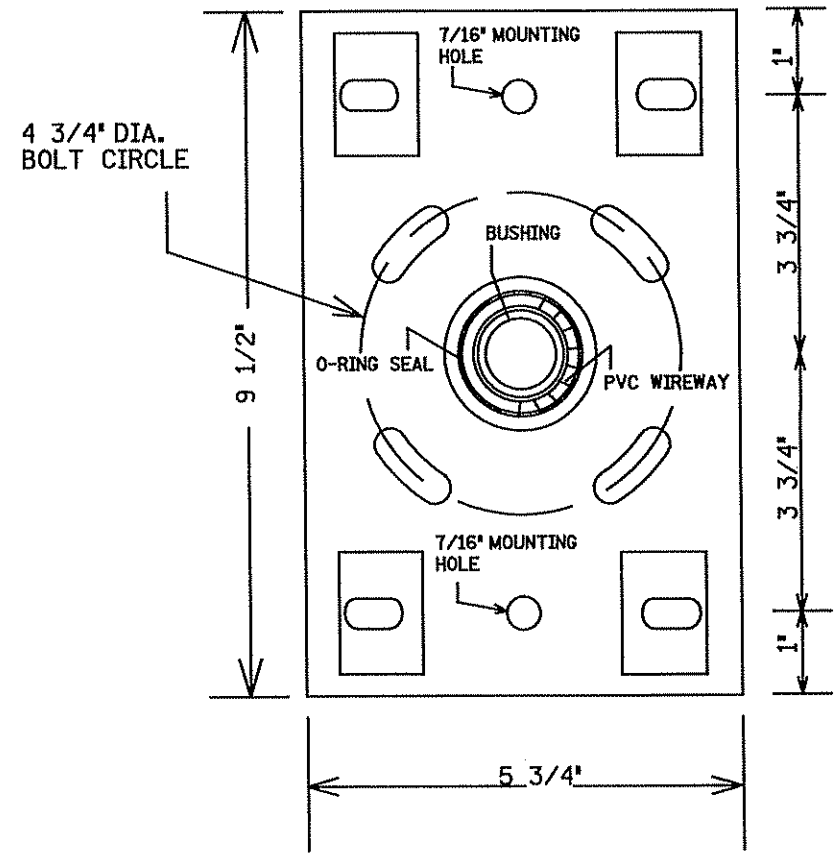
PREFORMED NON-METALLIC CONDUIT
(NMC) LOOP DETECTOR DETAILS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 63 of 82 Sheets

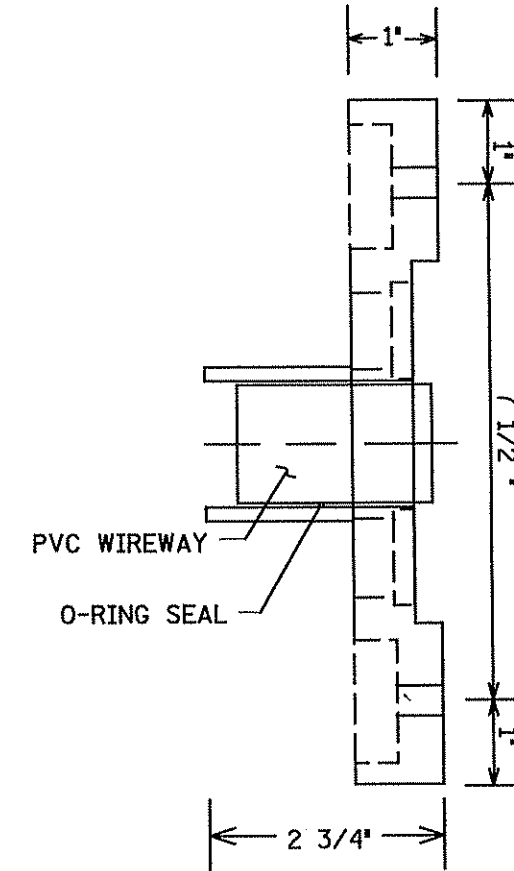
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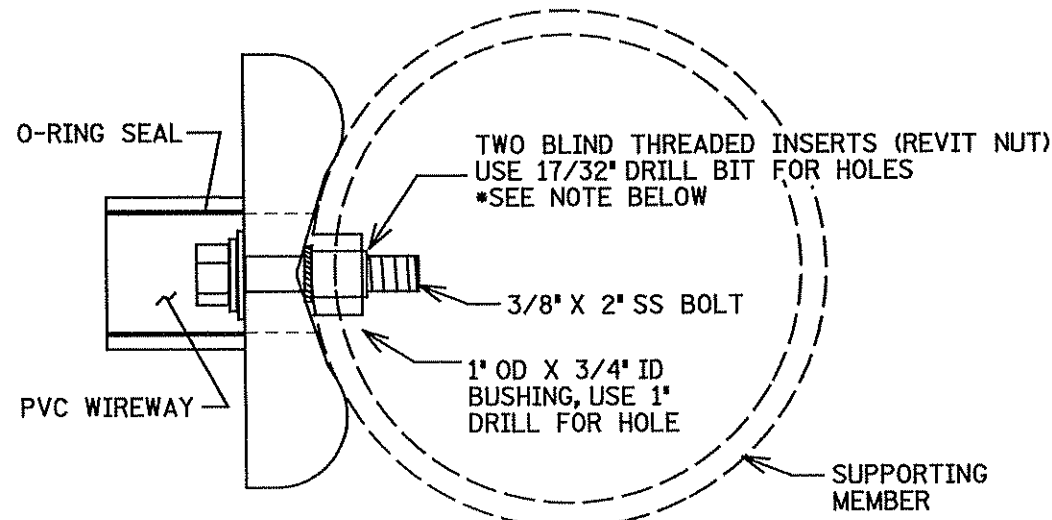
TYPICAL MOUNTING ELEVATION



UNIVERSAL HUB - BOLTED



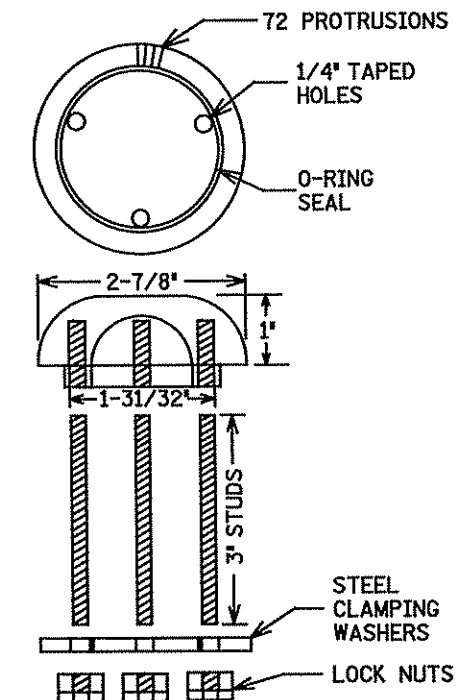
SECTION AA



SECTION BB

TOP VIEW

NOTE:
 BLIND THREADED INSERTS (RIVET NUT) MUST BE INSTALLED USING MANUFACTURERS SPECIFIC INSTALLATION TOOL. NO OTHER METHOD OF INSTALLATION IS ACCEPTABLE.



SEALED CAP

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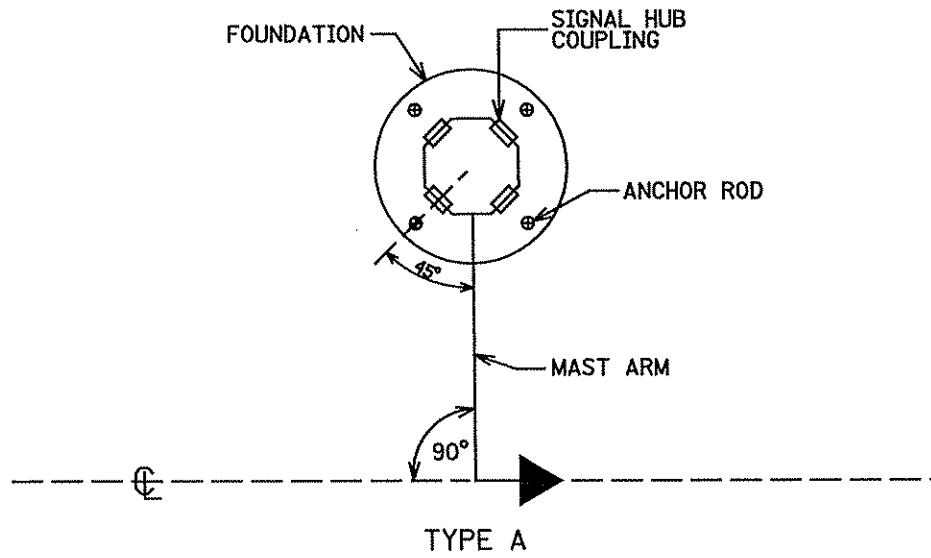
SIGNATURE: *Bryant J. Ficek*
 PRINTED NAME: BRYANT J. FICEK
 DATE: 6/17/2008 LIC. NO. 42802

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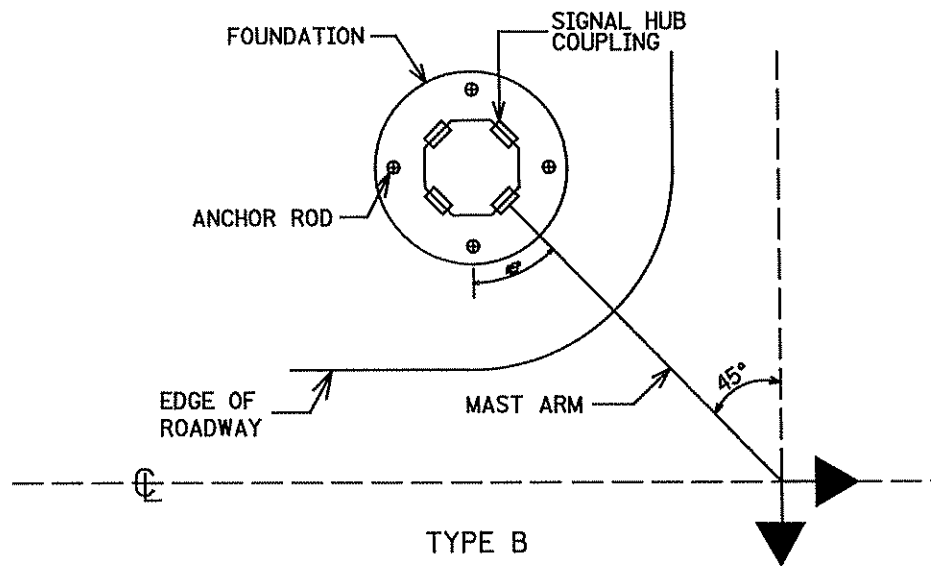
ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

PEDESTAL MOUNTED ONE-WAY SIGNAL
 AND PEDESTRIAN INDICATION DETAILS

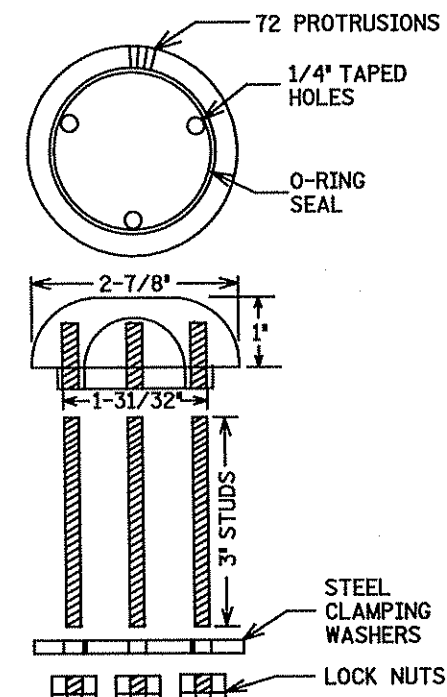
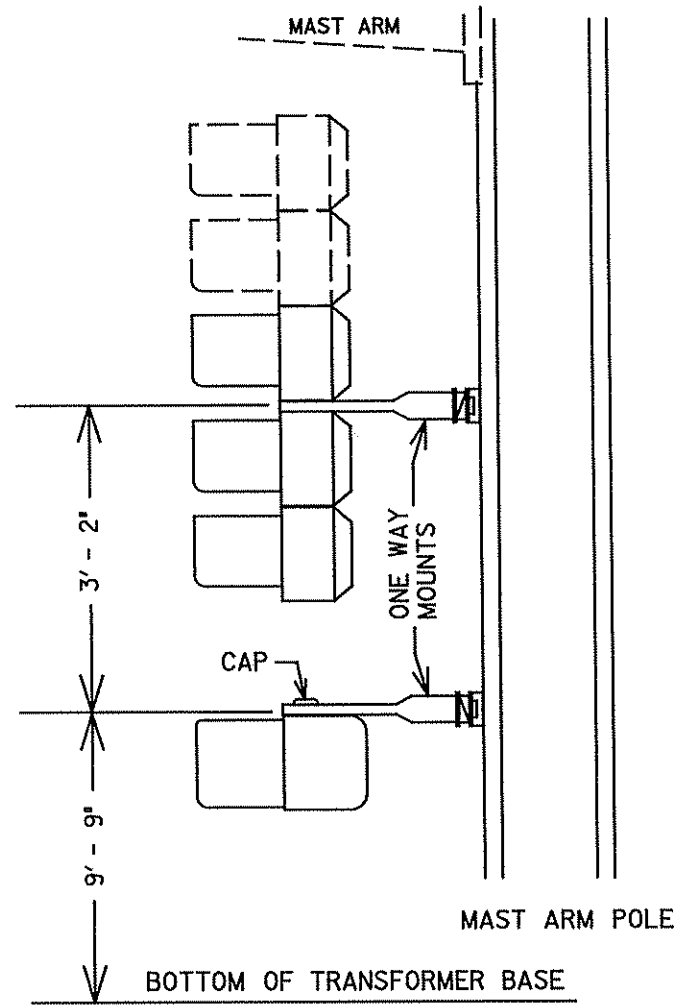
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
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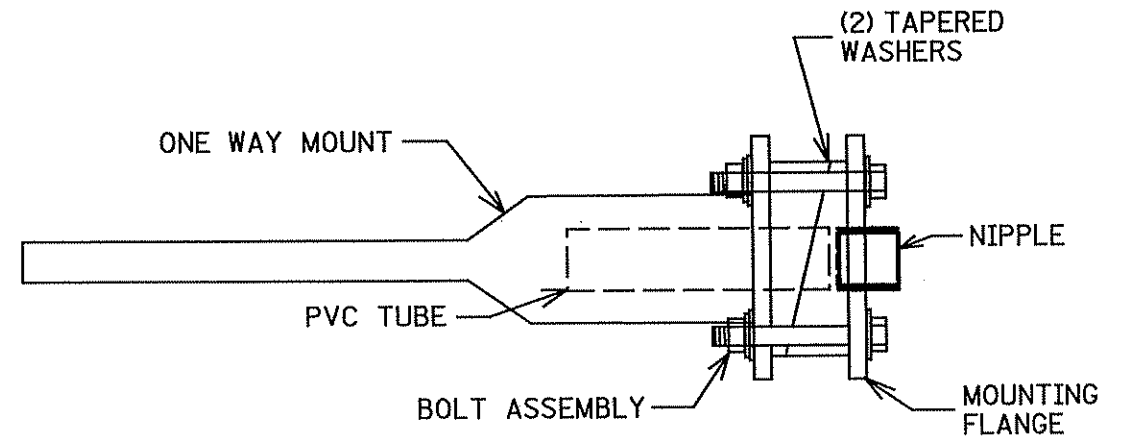
TYPE A
ANCHOR ROD PLACEMENT,
MAST ARM ORIENTATION
AND SIGNAL HUB LOCATIONS



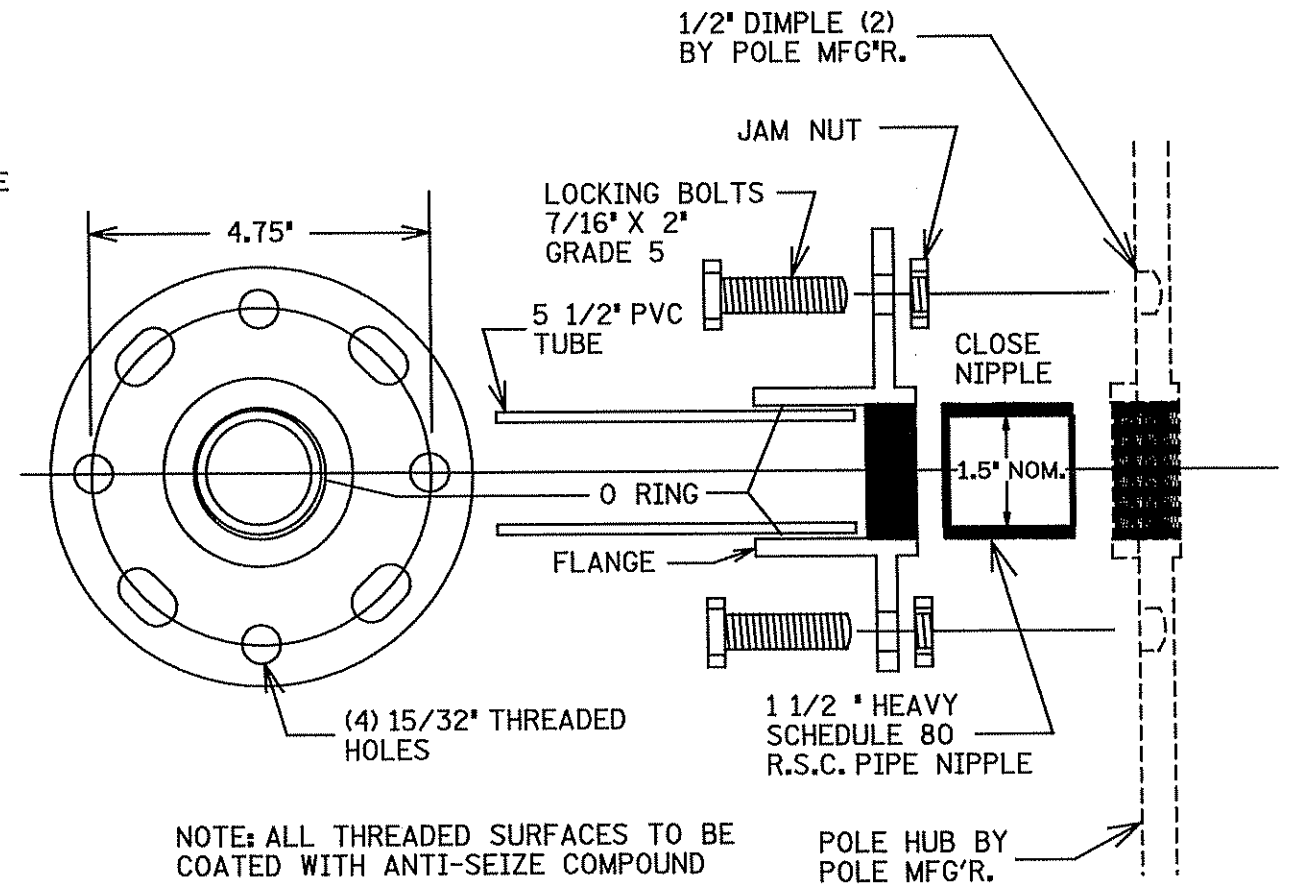
TYPE B
ANCHOR ROD PLACEMENT,
MAST ARM ORIENTATION
AND SIGNAL HUB LOCATIONS



SEALED CAP



MOUNTING DETAIL



MACHINE HUB & NIPPLE

DATE: 6/17/2008 TIME: 5:51:57 PM FILENAME: K:\A\Anoka\13721000\Wwy-brdg\Wwy\Ndr-sht\Detail\mount-detail2.pod.dgn

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DATE: 6/17/2008 LIC. NO. 42802

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POLE MOUNTED ONE-WAY SIGNAL
AND PEDESTRIAN INDICATION DETAILS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 65 of 82 Sheets

DATE: 6/17/2008 TIME: 5:51:59 PM FILENAME: K:\VFP\Anoka\31721000\Wiring\DT-4P-0462-209-16141\DT Connector Detail\0152008.dgn

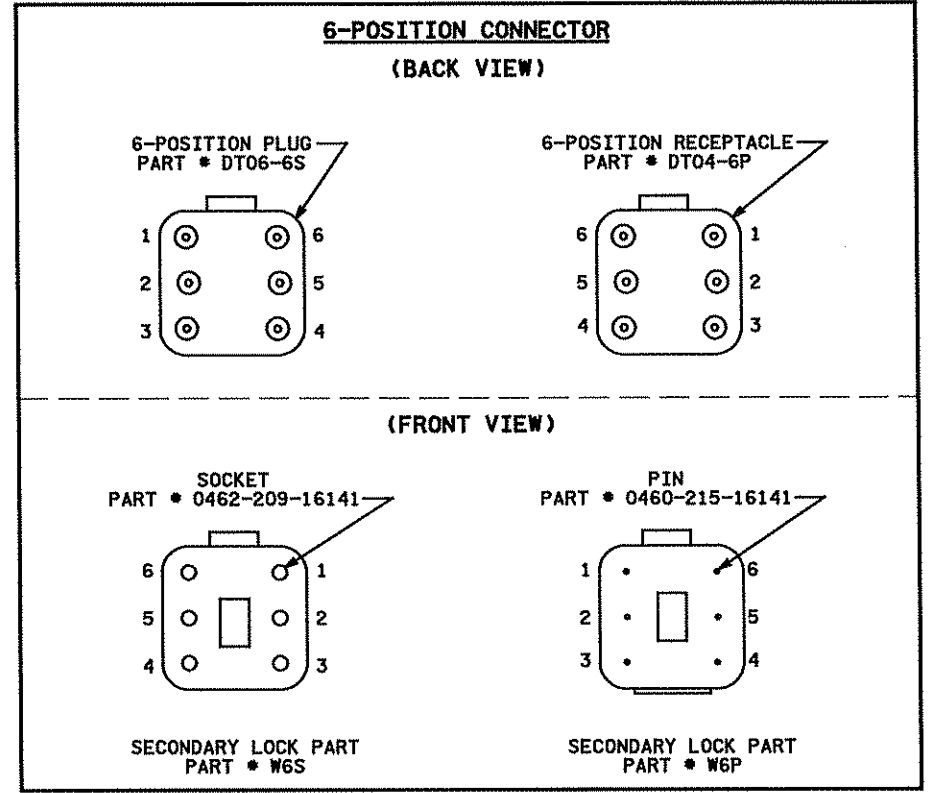
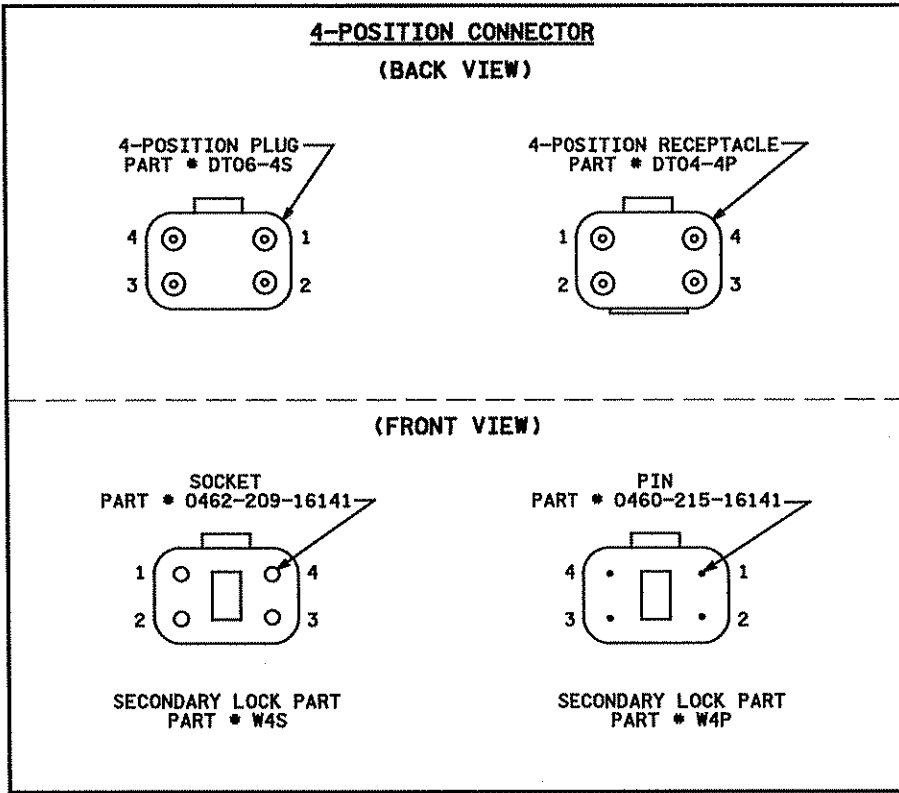
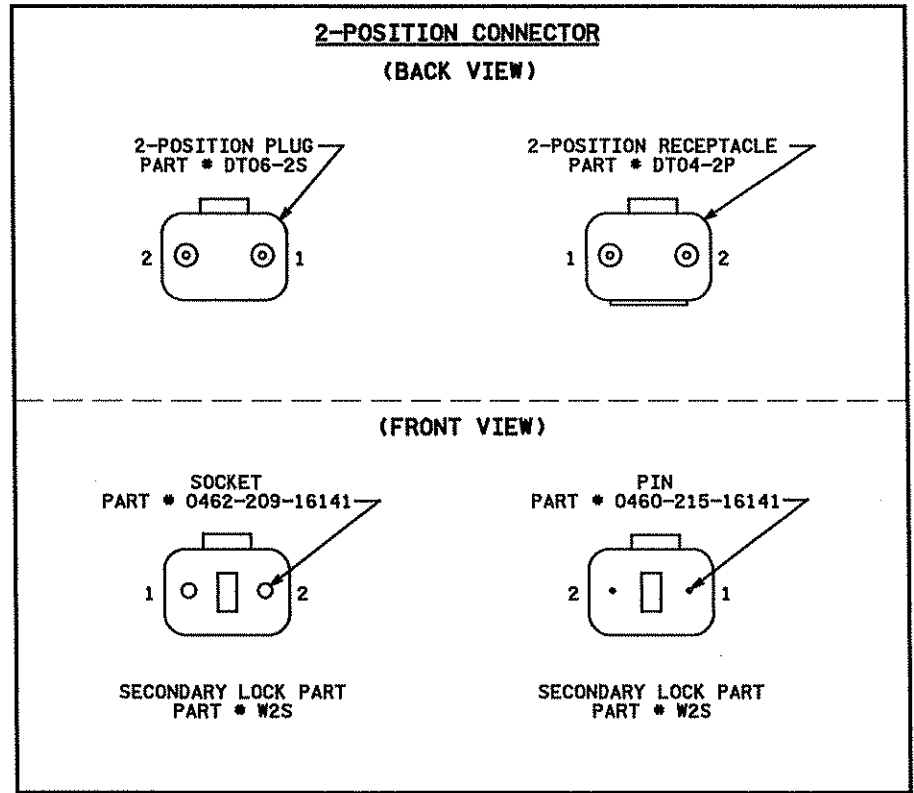


TABLE 1 2 Position DT Connector

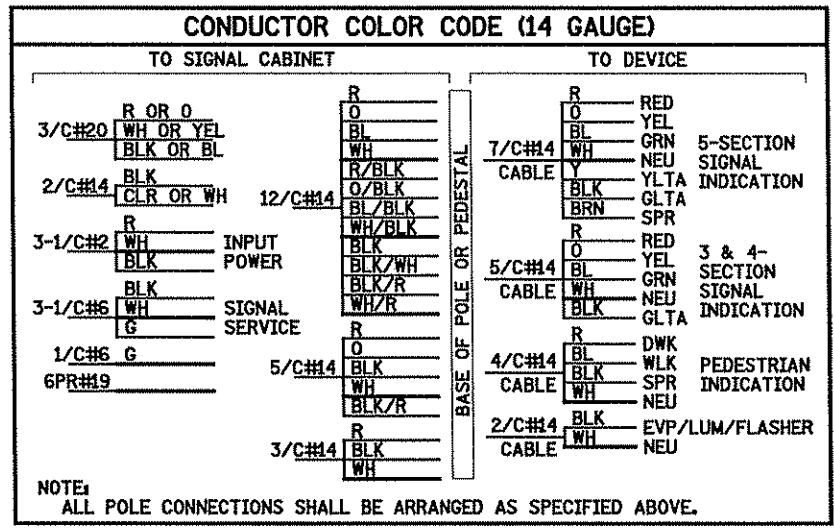
Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R or BLK	1	Black	EVP/FLASHER/LUM
WH or CL	2	White	NEUTRAL

TABLE 2 4 Position DT Connector (3 SECTION/DW/W)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R or R/BLK or BLK	1	Red	RED or DONT WALK
O or O/BLK or BLK/WH or BLK	2	Orange or Blue	YELLOW or WALK
BL or BL/BLK or BLK/R or BLK	3	Blue or Black	GREEN or SPARE
WH or WH/BLK or WH/R	4	White	NEUTRAL

TABLE 3 6 Position DT Connector (4 & 5 SECTION HEADS)

Wire to Control Cabinet	Connector pin #	Wire to Signal Indication	Signal Indication
R	1	Red	RED
O	2	Orange	YELLOW
BL	3	Blue	GREEN
WH	4	White	NEUTRAL
O/BLK	5	Yellow or Black	YELLOW TURN ARROW
BL/BLK	6	Black	GREEN TURN ARROW

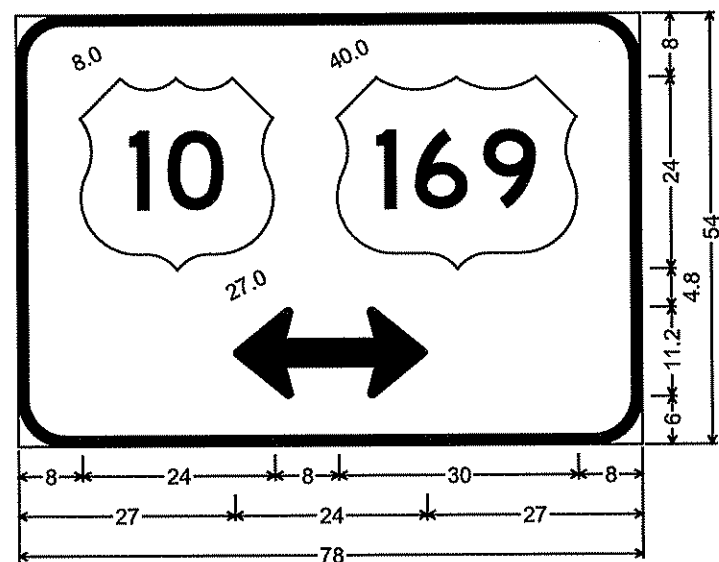


Wire Color Code Key

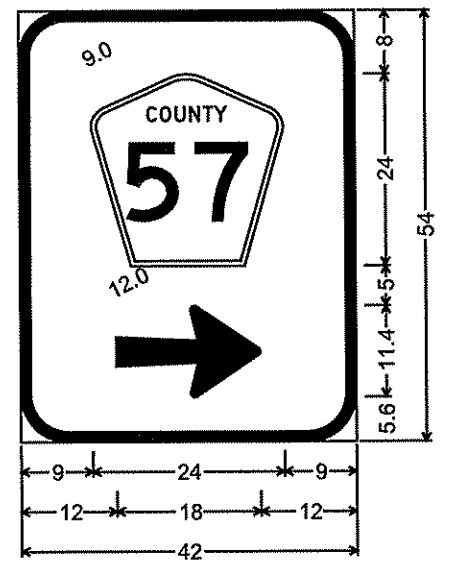
R	Red
O	Orange
BL	Blue
WH	White
Y	Yellow
BLK	Black
BRN	Brown
CL	Clear
G	Green
R/BLK	Red with Black Stripe
O/BLK	Orange with Black Stripe
BL/BLK	Blue with Black Stripe
WH/BLK	White with Black Stripe
WH/R	White with Red Stripe
BLK/WH	Black with White Stripe
BLK/R	Black with Red Stripe

- NOTES:**
- DT04-P RECEPTACLE SHALL BE TERMINATED TO THE WIRING HARNESS RUNNING FROM THE BASE/JUNCTION BOX OF THE POLE TO SIGNAL INDICATIONS.
 - DT06-S PLUG SHALL BE TERMINATED TO THE CABLES RUNNING FROM THE TRAFFIC SIGNAL CABINET TO THE BASE/JUNCTION BOX OF THE POLE.
 - THERE SHALL BE A MINIMUM OF 24 INCHES OF SLACK ON EACH CABLE IN EVERY POLE BASE/JUNCTION BOX.
 - STRIP A MAXIMUM OF 6 INCHES OF THE OUTER JACKET OF EACH SIGNAL CABLE.
 - STRIP .250 INCHES OF INSULATION FROM EACH INDIVIDUAL CONDUCTOR.
 - CRIMP PINS OR SOCKETS USING RATCHETING TYPE CRIMPING TOOL HDT-48-00. NO OTHER CRIMPING TOOL WILL BE ALLOWED.
 - WIRES MUST BE TERMINATED AS DETAILED IN TABLES 1 THRU 3 DEPENDING ON WIRE COUNT.
 - ANY UNUSED PIN MUST HAVE A SEALING PLUG INSTALLED IN BOTH THE PLUG & RECEPTACLE (PART # 114017).
 - LABEL EACH HALF OF THE CONNECTOR (PLUG AND RECEPTACLE) WITH THE DEVICE DESIGNATION (AS INDICATED IN THE WIRING DIAGRAM) USING A PERMANENT BLACK MARKER.

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D-1, Pole 2 & D-4, Pole 5;
 6.0" Radius, 1.3" Border, White on Green;
 Double Headed Arrow 5 - 24.0" 0°;



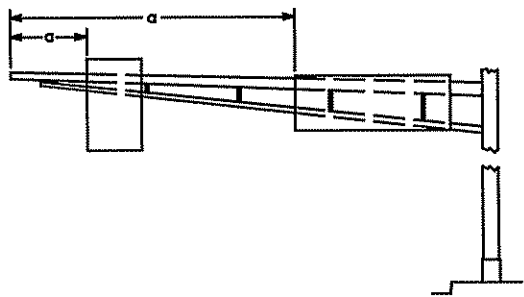
D-2, Pole 4;
 6.0" Radius, 1.3" Border, White on Green;
 Arrow 14 - 18.0" 0°;

MAST ARM MOUNTED SIGNS								
SIGN PANEL OR SIGN NO. (I.E. R10-12)	SIGNAL SYSTEM	POLE NO.	a (FEET)	SIZE (INCHES)	MOUNTING BRACKET		AREA/SIGN (SQ. FT.)	NO. REQ.
					NUMBER	SPACING (1)		
D-1		2	19	78 X 48	3		26	1
D-2		4	37	42 X 54	2		15.8	1
D-3		1	30	132 X 24	5		12	1
D-4		5	13	78 X 48	3		26	1
D-5		1	8	42 X 54	2		15.8	1
D-6		4	25	132 X 24	5		22	1

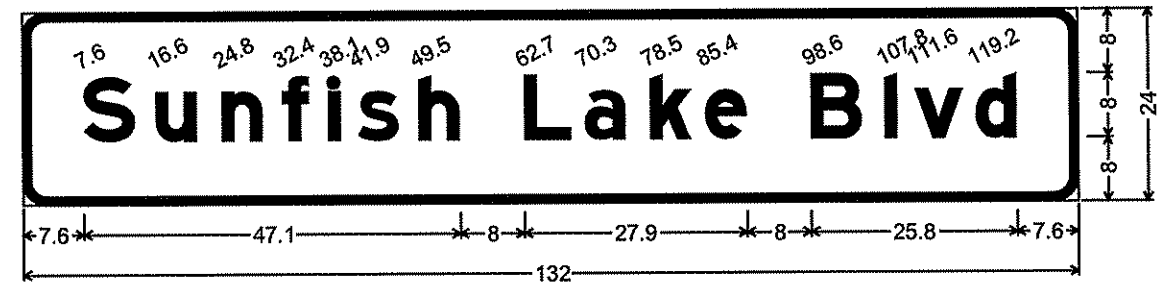
SPECIFIC NOTE:
 (1) SPACING BETWEEN STIFFENERS SHALL NOT EXCEED 36 INCHES AND SHALL BE UNIFORMLY SPACED. SEE STANDARD SIGNS MANUAL, PAGE 105A (REVISION DATE 8/22/05) FOR BRACKET SPACING REQUIREMENTS.

- GENERAL NOTES:**
- CORNERS OF STANDARD SIGN PANELS WITH MARGINS SHALL BE TRIMMED.
 - TYPE D SIGN PANELS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
 - FOR STRUCTURAL DETAILS OF MAST ARM MOUNTED SIGNS SEE STANDARD SIGNS MANUAL, PAGE 105A.
 - FOR TYPE "D" STRINGER AND PANEL JOINT DETAILS SEE STANDARD SIGNS MANUAL, PAGE 105.
 - THE MAST ARM MOUNTED SIGNS ARE INCIDENTAL.

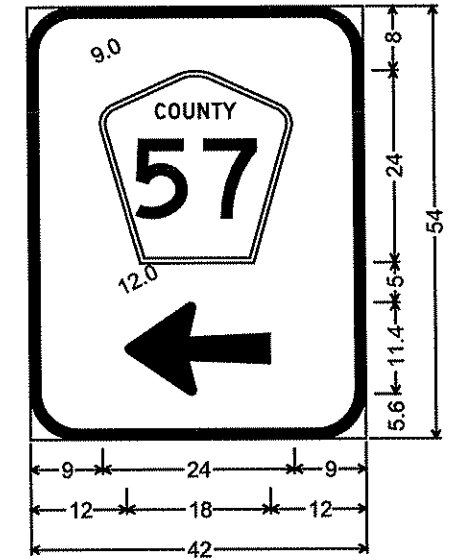
MAST ARM SIGN LOCATION



OVERLAYS				
CODE NO.	QTY	SIZE (IN)	LEGEND	SQ. FT. PER OVERLAY
M1-6a	2	24"x24"	57	4
M1-4a	2	24"x24"	10	4
M1-4a	2	30"x24"	169	5



D-3, Pole 1, & D-6, Pole 4; 3.0" Radius, 1.0" Border, White on Green;
 [Sunfish Lake Blvd] E Mod;



D-5, Pole 1;
 6.0" Radius, 1.3" Border, White on Green;
 Arrow 14 - 18.0" 180°;

DRAWN BY: TJV
 CHECKED BY: BJF

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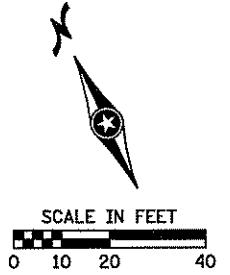
SIGNATURE: *Bryant J. Ficek*
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 DATE: 7/18/2008 LIC. NO. 42802

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

SIGN DETAIL
 T.H. 10 AT C.S.A.H. 57/SUNFISH LAKE BLVD.
 RAMSEY, ANOKA COUNTY

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 67 of 82 Sheets



** LANE DESIGNATION ARROWS SHOWN FOR INFORMATION ONLY **

INPLACE R/W

SIGNAL SYSTEM OPERATION
 - THE SIGNAL SYSTEM FLASH MODE IS ALL RED
 - NORMAL OPERATION IS 8 PHASE WITH PHASES 1, 3, 5 AND 7 BEING PROTECTED LEFT TURN PHASES
 - PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL
 - RAILROAD PREEMPTION

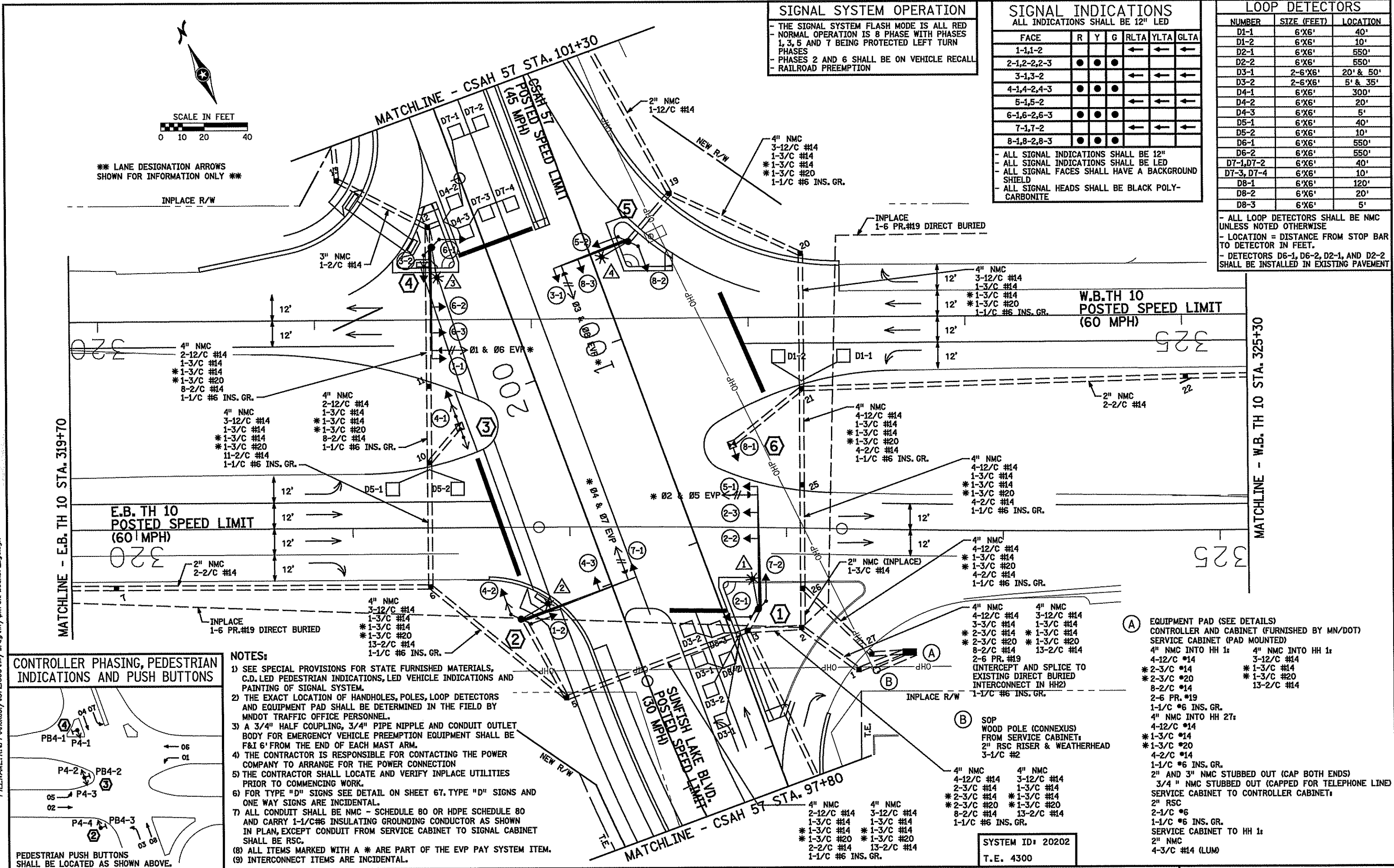
SIGNAL INDICATIONS
 ALL INDICATIONS SHALL BE 12" LED

FACE	R	Y	G	RLTA	YLTA	GLTA
1-1-2				←	←	←
2-1,2-2,2-3	●	●	●			
3-1,3-2				←	←	←
4-1,4-2,4-3	●	●	●			
5-1,5-2				←	←	←
6-1,6-2,6-3	●	●	●			
7-1,7-2				←	←	←
8-1,8-2,8-3	●	●	●			

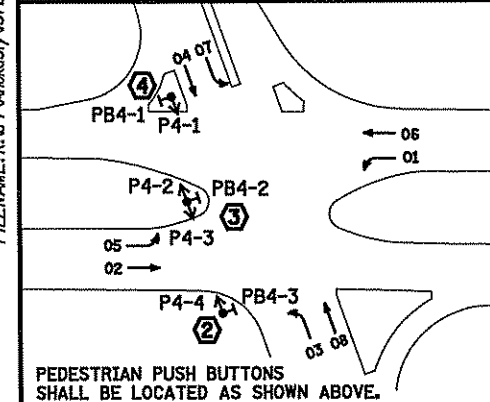
LOOP DETECTORS

NUMBER	SIZE (FEET)	LOCATION
D1-1	6'X6'	40'
D1-2	6'X6'	10'
D2-1	6'X6'	550'
D2-2	6'X6'	550'
D3-1	2-6'X6'	20' & 50'
D3-2	2-6'X6'	5' & 35'
D4-1	6'X6'	300'
D4-2	6'X6'	20'
D4-3	6'X6'	5'
D5-1	6'X6'	40'
D5-2	6'X6'	10'
D6-1	6'X6'	550'
D6-2	6'X6'	550'
D7-1, D7-2	6'X6'	40'
D7-3, D7-4	6'X6'	10'
D8-1	6'X6'	120'
D8-2	6'X6'	20'
D8-3	6'X6'	5'

- ALL LOOP DETECTORS SHALL BE NMC UNLESS NOTED OTHERWISE
 - LOCATION = DISTANCE FROM STOP BAR TO DETECTOR IN FEET.
 - DETECTORS D6-1, D6-2, D2-1, AND D2-2 SHALL BE INSTALLED IN EXISTING PAVEMENT



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



- NOTES:**
- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS, C.D. LED PEDESTRIAN INDICATIONS, LED VEHICLE INDICATIONS AND PAINTING OF SIGNAL SYSTEM.
 - THE EXACT LOCATION OF HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD SHALL BE DETERMINED IN THE FIELD BY MNDOT TRAFFIC OFFICE PERSONNEL.
 - A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY FOR EMERGENCY VEHICLE PREEMPTION EQUIPMENT SHALL BE 6' FROM THE END OF EACH MAST ARM.
 - THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION
 - THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
 - FOR TYPE "D" SIGNS SEE DETAIL ON SHEET 67. TYPE "D" SIGNS AND ONE WAY SIGNS ARE INCIDENTAL.
 - ALL CONDUIT SHALL BE NMC - SCHEDULE 80 OR HDPE SCHEDULE 80 AND CARRY 1-1/C#6 INSULATING GROUNDING CONDUCTOR AS SHOWN IN PLAN, EXCEPT CONDUIT FROM SERVICE CABINET TO SIGNAL CABINET SHALL BE RSC.
 - ALL ITEMS MARKED WITH A * ARE PART OF THE EVP PAY SYSTEM ITEM.
 - INTERCONNECT ITEMS ARE INCIDENTAL.

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 CHECKED BY: BDP

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 DATE: 7/18/2008 L.I.C. NO. 42802

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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

INTERSECTION LAYOUT
 CSAH 57 (SUNFISH LAKE BOULEVARD) / TH 10

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 68 of 82 Sheets

DATE: 7/18/2008 TIME: 11:07:46 AM FILENAME: K:\g-f\anokacy\3721000\hwy-brdg\hwy-pln-sfr\casat57_sgd.dgn

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 T.E. 4300

DATE: 7/1/2008 TIME: 4:29:52 PM FILENAME: K:\V\Arakoc\13721000\Wp\tr-sf\case157_sgb.dgn

- ① PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT @ 350°)
 2-SWING AWAY HINGES
 3-ONE WAY SIGNALS-OVERHEAD (0', 11', 23' FROM END OF MAST ARM)
 2-ONE WAY SIGNALS MOUNTED AT 45° AND 225°
 * 1-ONE WAY EVP DETECTOR AND LIGHT (Ø2 & Ø5)
 2-NO PEDESTRIAN CROSSING SIGNS (R9-3c) FACING POLES 2 & 6
 1-SIGN (D-3)
 1-SIGN (D-5)
 LUMINAIRE - 250 WATT HPS
 EXTEND INTO HH 3:
 3" NMC
 2-12/C #14
 1-3/C #14
 * 1-3/C #14
 1-2/C #14
 * 1-3/C #20
 1-1/C #6 INS. GR.

- ② PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT @ 350°)
 2-ONE WAY SIGNALS-OVERHEAD (0', 17' FROM END OF MAST ARM)
 2-ONE WAY SIGNALS MOUNTED AT 45° AND 225°
 1-ONE WAY C.D. PED. INDICATION MOUNTED AT 225°
 * 1-ONE WAY EVP DETECTOR AND LIGHT (Ø4 & Ø7)
 1-APS PB AND SIGN (RT ARROW) (PB4-3)
 1-NO PEDESTRIAN CROSSING SIGN (R9-3c) FACING POLE 1
 1-SIGN (D-1)
 LUMINAIRE - 250 WATT HPS
 EXTEND INTO HH 5:
 3" NMC
 2-12/C #14
 1-3/C #14
 * 1-3/C #14
 2-2/C #14
 * 1-3/C #20
 2-1/C #6 INS. GR.

- ③ PEDESTAL FOUNDATION
 13' SIGNAL PEDESTAL POLE AND BASE
 1-ONE WAY SIGNAL MOUNTED AT 90°
 2-ONE WAY C.D. PED. INDICATIONS MOUNTED AT 90° AND 270°
 1-APS PB AND SIGN (DOUBLE HEAD ARROWS) (PB4-2)
 EXTEND INTO HH 10:
 3" NMC
 1-12/C #14
 1-2/C #14
 1-1/C #6 INS. GR.

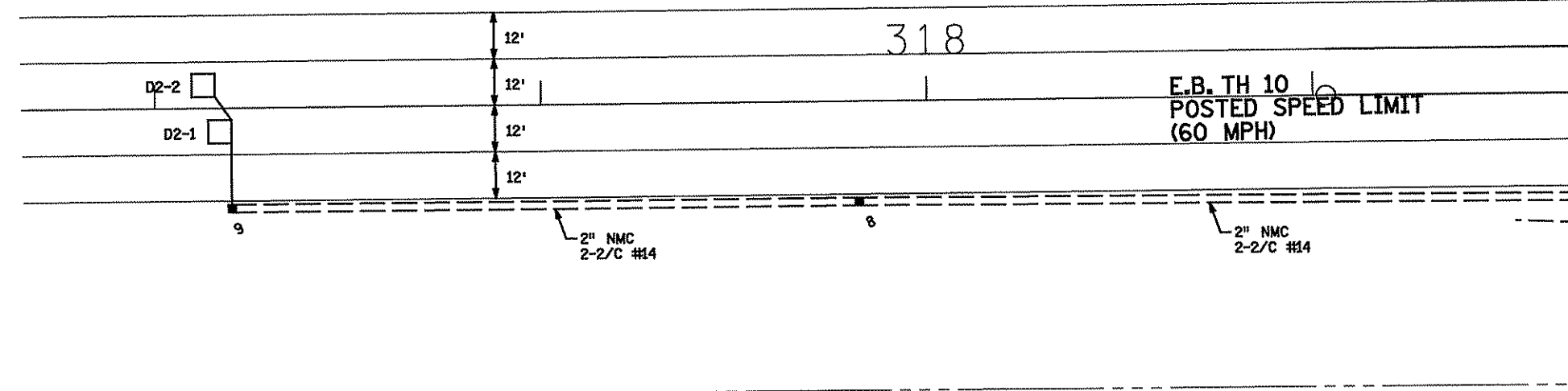
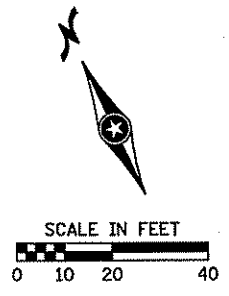
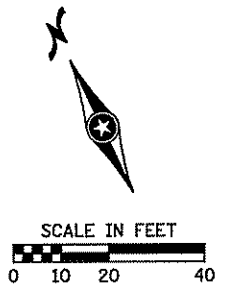
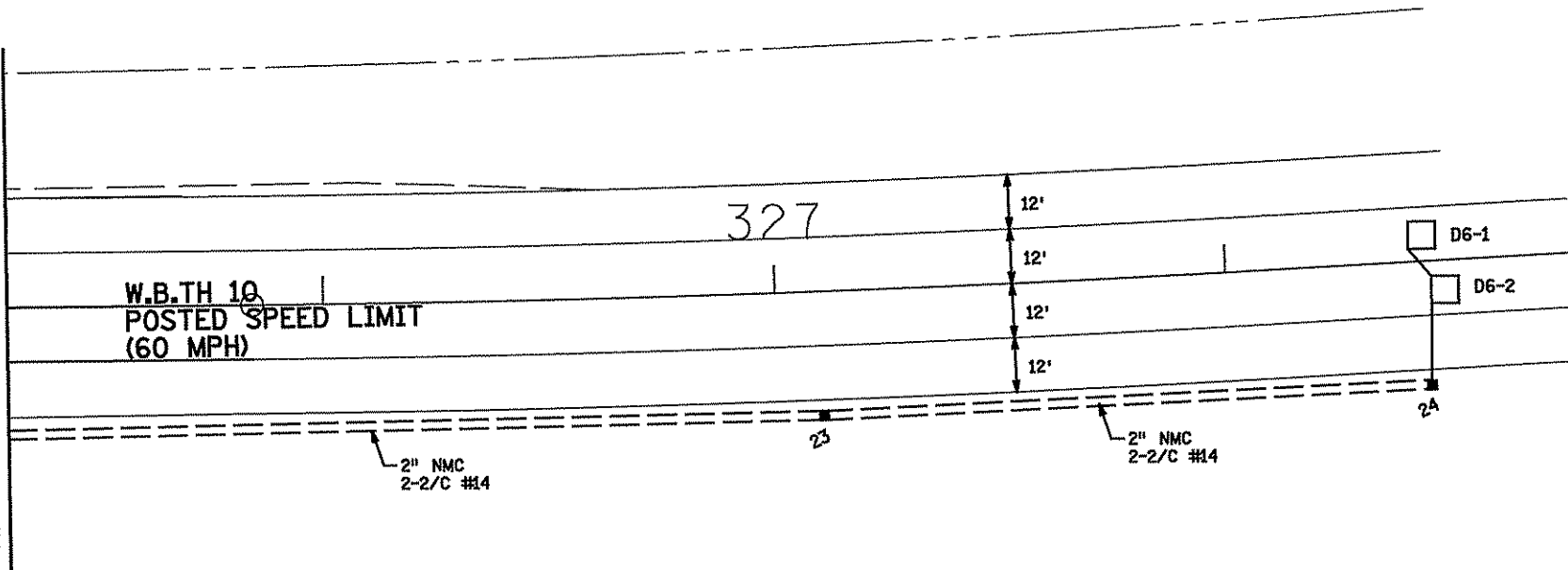
- ④ PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT @ 350°)
 2-SWING AWAY HINGES
 3-ONE WAY SIGNALS-OVERHEAD (0', 11', 23' FROM END OF MAST ARM)
 2-ONE WAY SIGNALS MOUNTED AT 45° AND 225°
 1-ONE WAY C.D. PED. INDICATION MOUNTED AT 45°
 * 1-ONE WAY EVP DETECTOR AND LIGHT (Ø1 & Ø6)
 1-APS PB AND SIGN (RT ARROW) (PB4-1)
 1-NO PEDESTRIAN CROSSING SIGN (R9-3c) FACING POLE 5
 1-SIGN (D-2)
 1-SIGN (D-6)
 LUMINAIRE - 250 WATT HPS
 EXTEND INTO HH 12:
 3" NMC
 2-12/C #14
 1-3/C #14
 * 1-3/C #14
 1-2/C #14
 * 1-3/C #20
 1-1/C #6 INS. GR.

- ⑤ PA90 POLE FOUNDATION
 TYPE PA90-A-35-D40-9 (DAVIT @ 350°)
 2-SWING AWAY HINGES
 2-ONE WAY SIGNALS-OVERHEAD (0', 11' FROM END OF MAST ARM)
 2-ONE WAY SIGNALS MOUNTED AT 45° AND 225°
 * 1-ONE WAY EVP DETECTOR AND LIGHT (Ø3 & Ø8)
 2-NO PEDESTRIAN CROSSING SIGNS (R9-3c) FACING POLES 4 & 6
 1-SIGN (D-4)
 LUMINAIRE - 250 WATT HPS
 EXTEND INTO HH 19:
 3" NMC
 2-12/C #14
 1-3/C #14
 * 1-3/C #14
 * 1-3/C #20
 1-1/C #6 INS. GR.

- ⑥ PEDESTAL FOUNDATION
 13' SIGNAL PEDESTAL POLE AND BASE
 1-ONE WAY SIGNAL MOUNTED AT 270°
 2-NO PEDESTRIAN CROSSING SIGNS (R9-3c) FACING POLES 5 & 1
 EXTEND INTO HH 21:
 3" NMC
 1-12/C #14
 1-1/C #6 INS. GR.

ITEMS MARKED WITH A * ARE PART OF THE EVP PAY ITEM.

MATCHLINE - W.B. TH 10 STA. 325+30



MATCHLINE - E.B. TH 10 STA. 319+70

DRAWN BY: SFH
 CHECKED BY: BJF

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.

SIGNATURE: *Bryant J. Ficek*
 PRINTED NAME: BRYANT J. FICEK
 DATE: 7/7/2008 LIC. NO. 42802

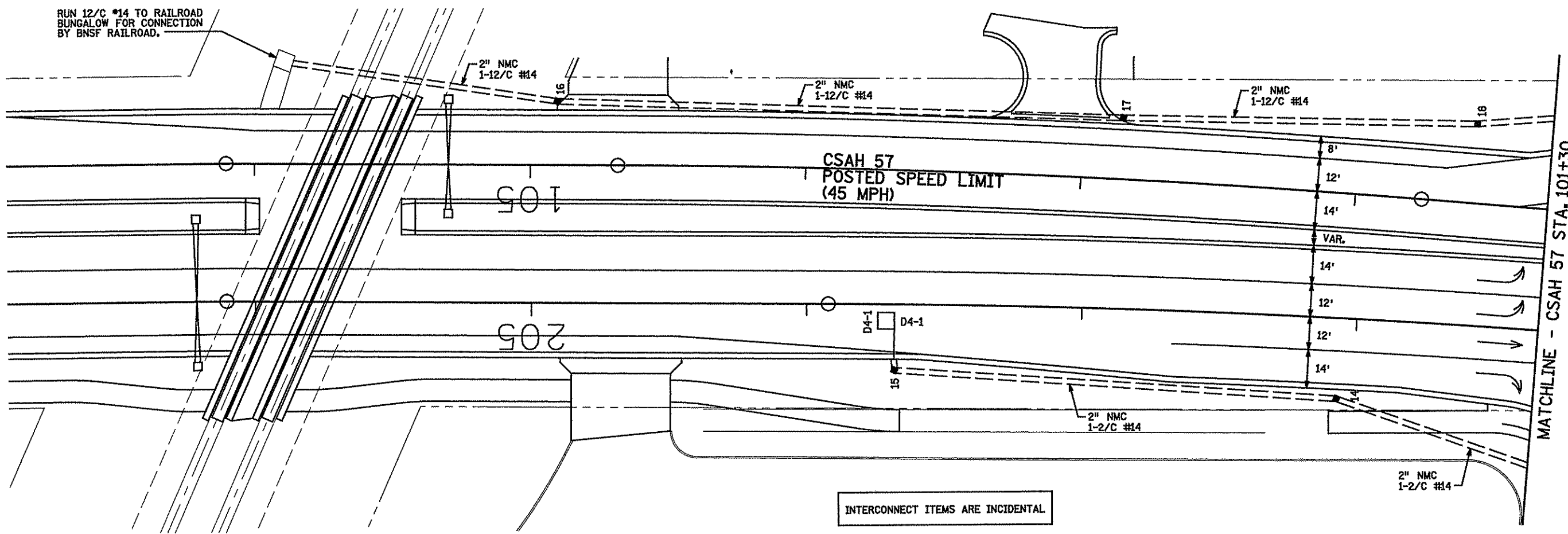
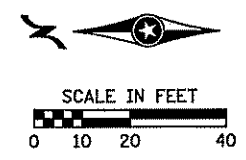
TKDA
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ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

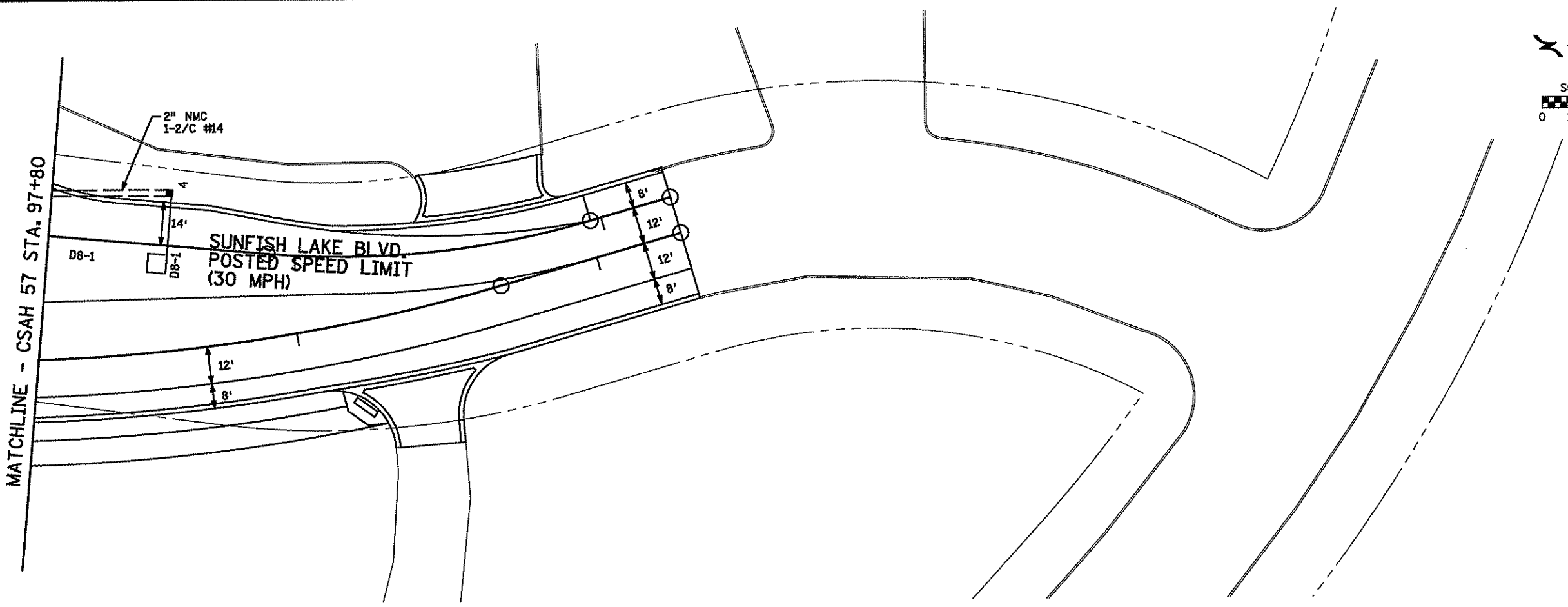
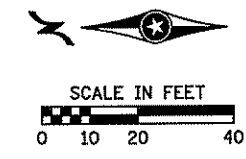
MATCHLINE & POLE NOTES
 CSAH 57 (SUNFISH LAKE BOULEVARD) / T.H. 10

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 69 of 82 Sheets

RUN 12/C #14 TO RAILROAD BUNGALOW FOR CONNECTION BY BNSF RAILROAD.



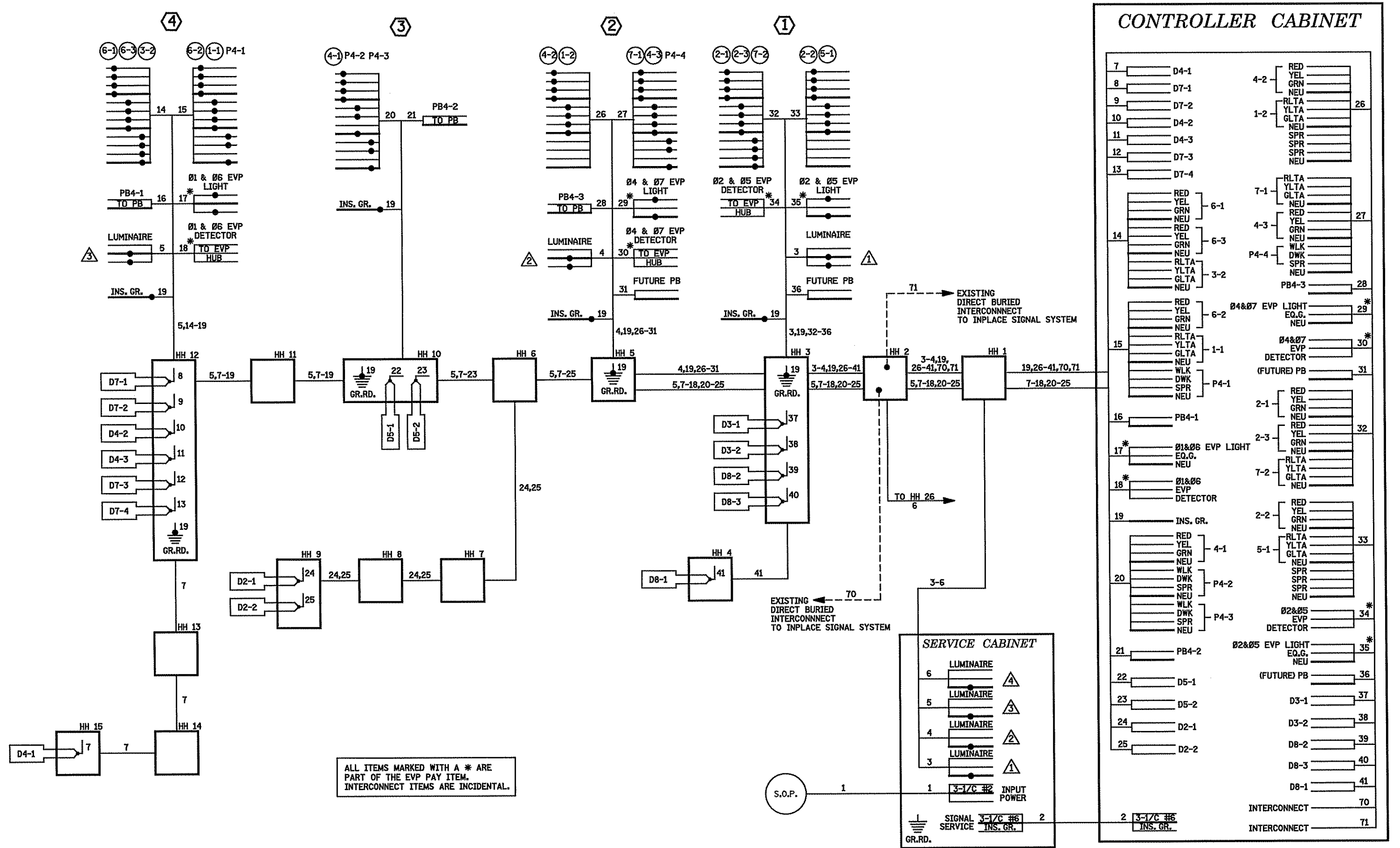
INTERCONNECT ITEMS ARE INCIDENTAL



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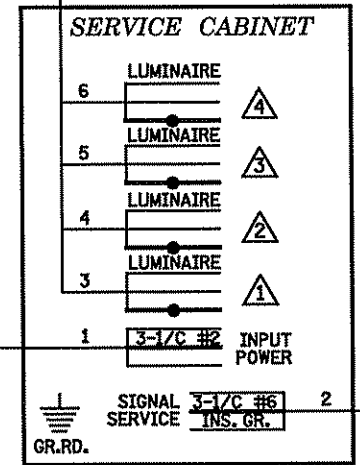
DRAWN BY: SFH	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	SIGNATURE: <i>Bryant J. Ficek</i>	TKDA ENGINEERS • ARCHITECTS • PLANNERS	ANOKA COUNTY CSAH 57 RECONSTRUCTION	MATCHLINE CSAH 57 (SUNFISH LAKE BOULEVARD) / TH 10	S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
CHECKED BY: BDP		PRINTED NAME: BRYANT J. FICEK DATE: 7/18/2008 LIC. NO. 42802				Sheet No. 70 of 82 Sheets

DATE: 7/18/2008 TIME: 11:08:02 AM
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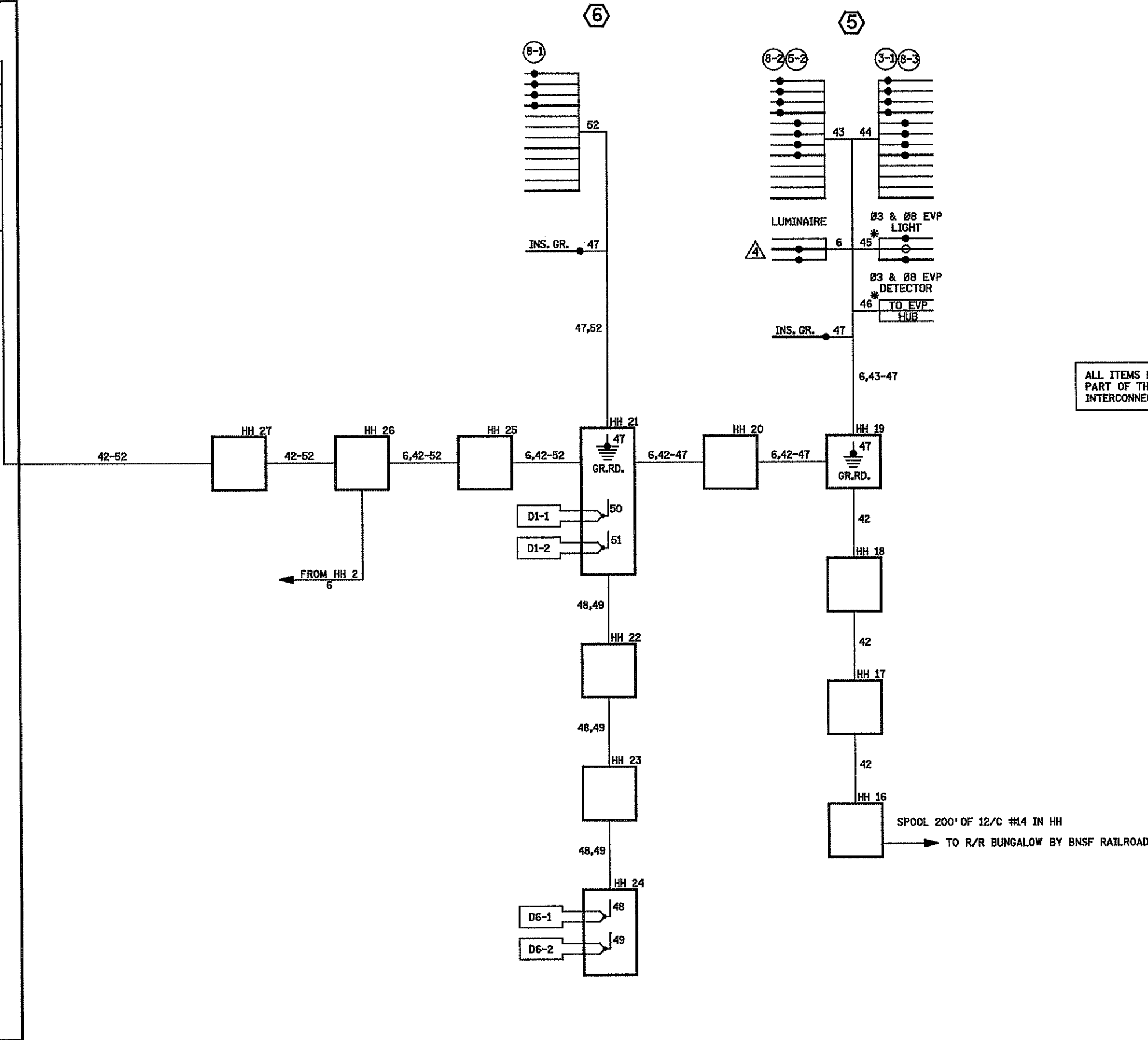
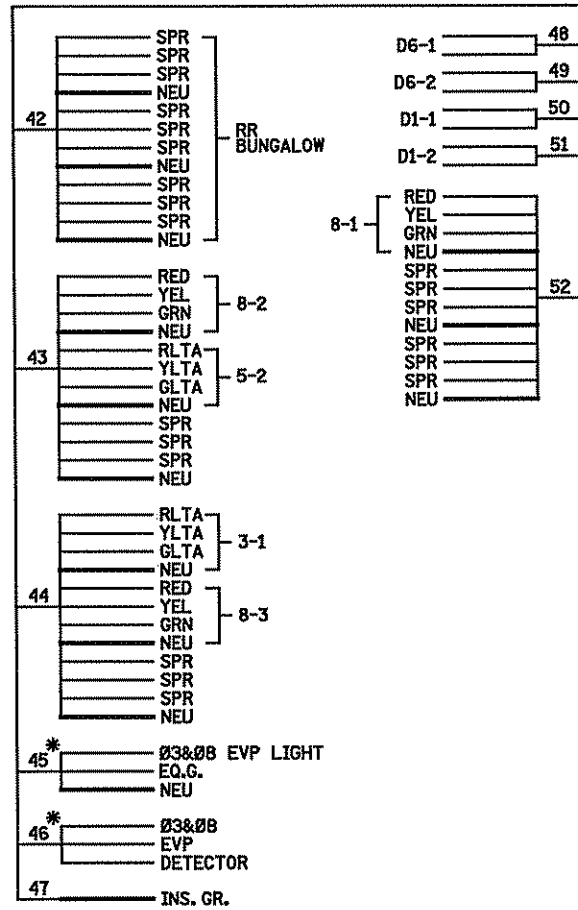
CONTROLLER CABINET

7	D4-1	4-2	RED YEL GRN NEU	26
8	D7-1	1-2	RLTA YLTA GLTA NEU	
9	D7-2		SPR SPR NEU	
10	D4-2			
11	D4-3			
12	D7-3			
13	D7-4			
14		6-1	RED YEL GRN NEU	
		6-3	RED YEL GRN NEU	
		3-2	RLTA YLTA GLTA NEU	
15		6-2	RED YEL GRN NEU	
		1-1	RLTA YLTA GLTA NEU	
		P4-1	WLK DWK SPR NEU	
			Ø4&Ø7 EVP LIGHT EQ.G. NEU	
			Ø4&Ø7 EVP DETECTOR (FUTURE) PB	
16	PB4-1	2-1	RED YEL GRN NEU	
		2-3	RED YEL GRN NEU	
17	* Ø1&Ø6 EVP LIGHT EQ.G. NEU	7-2	RLTA YLTA GLTA NEU	
18	* Ø1&Ø6 EVP DETECTOR	2-2	RED YEL GRN NEU	
		5-1	RLTA YLTA GLTA NEU	
19	INS. GR.		SPR SPR NEU	
			Ø2&Ø5 EVP DETECTOR	
20			RED YEL GRN NEU	
			WLK DWK SPR NEU	
			Ø2&Ø5 EVP LIGHT EQ.G. NEU	
21	PB4-2		(FUTURE) PB	
22	D5-1			
23	D5-2			
24	D2-1			
25	D2-2			
			D3-1	
			D3-2	
			D8-2	
			D8-3	
			D8-1	
			INTERCONNECT	
			INTERCONNECT	



ALL ITEMS MARKED WITH A * ARE PART OF THE EVP PAY ITEM. INTERCONNECT ITEMS ARE INCIDENTAL.

CONTROLLER CABINET



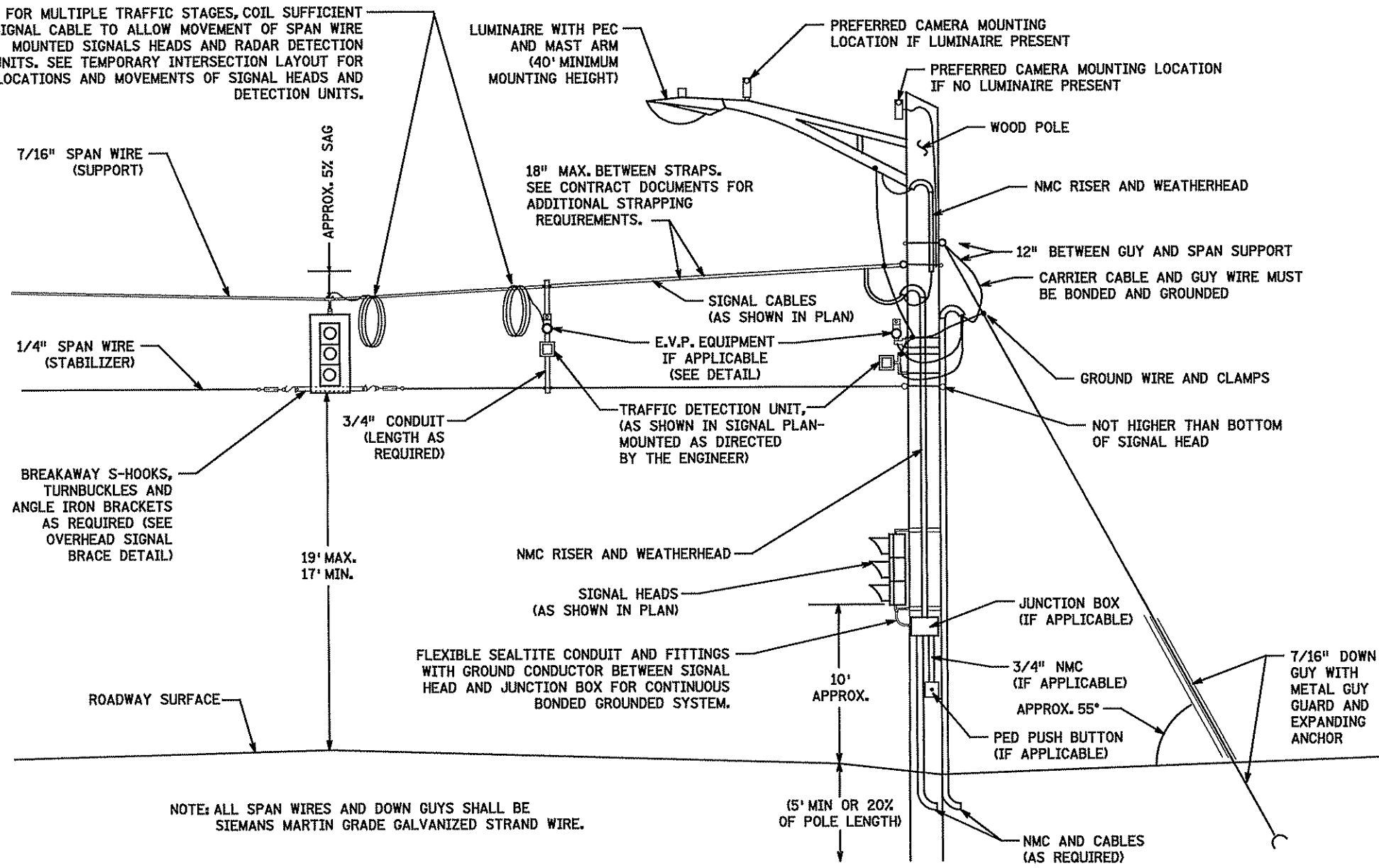
ALL ITEMS MARKED WITH A * ARE PART OF THE EVP PAY ITEM. INTERCONNECT ITEMS ARE INCIDENTAL.

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TYPICAL WOOD POLE AND SPAN WIRE MOUNTED TRAFFIC SIGNALS

(NOT TO SCALE)

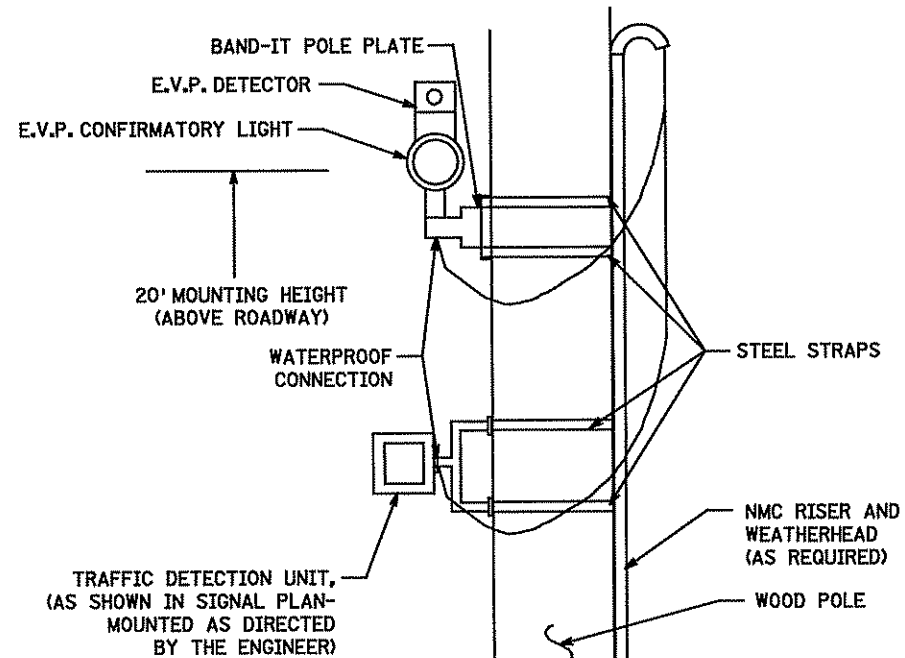
FOR MULTIPLE TRAFFIC STAGES, COIL SUFFICIENT SIGNAL CABLE TO ALLOW MOVEMENT OF SPAN WIRE MOUNTED SIGNALS HEADS AND RADAR DETECTION UNITS. SEE TEMPORARY INTERSECTION LAYOUT FOR LOCATIONS AND MOVEMENTS OF SIGNAL HEADS AND DETECTION UNITS.



NOTE: ALL SPAN WIRES AND DOWN GUYS SHALL BE SIEMANS MARTIN GRADE GALVANIZED STRAND WIRE.

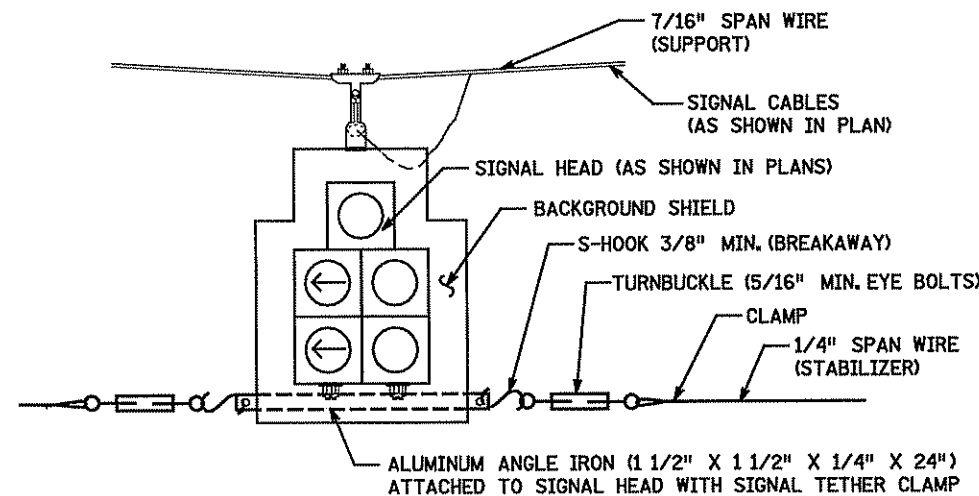
E.V.P. OR TRAFFIC DETECTOR WOOD POLE MOUNT

(NOT TO SCALE)



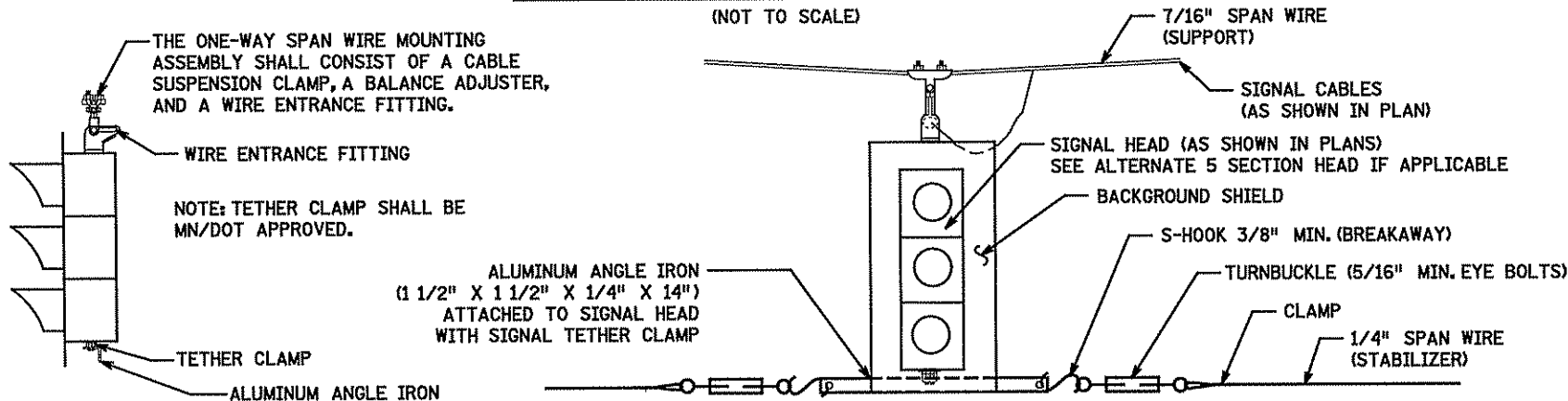
5 SECTION HEAD OVERHEAD SIGNAL BRACE DETAIL

(NOT TO SCALE)



OVERHEAD SIGNAL BRACE DETAIL

(NOT TO SCALE)



THE ONE-WAY SPAN WIRE MOUNTING ASSEMBLY SHALL CONSIST OF A CABLE SUSPENSION CLAMP, A BALANCE ADJUSTER, AND A WIRE ENTRANCE FITTING.

NOTE: TETHER CLAMP SHALL BE MN/DOT APPROVED.

ALUMINUM ANGLE IRON (1 1/2\"/>

DATE: 7/3/2008 TIME: 10:34:50 AM FILENAME: K:\e\Anoka\City\13721000\hwy-brdg\hwy-pln\hwy-pln-ef\csd157_sgn.dgn

DRAWN BY: SFH
CHECKED BY: BJF

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.

SIGNATURE: *Bryant J. Ficek*
PRINTED NAME: BRYANT J. FICEK
DATE: 7/3/2008 LIC. NO. 42802

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

TYPICAL WOOD POLE/SPAN WIRE
SIGNAL SYSTEM DETAIL WITH
LOWER BREAKAWAY STABILIZER WIRE

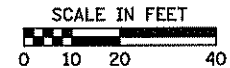
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 73 of 82 Sheets

NOTES:

1. ALL NEW CONDUIT SHALL BE NONMETALLIC CONDUIT SCHEDULE 80 PVC OR SCHEDULE 80 HDPE AND CARRY 1-1/2 #6 INSULATED GROUNDING CONDUCTOR AS SHOWN IN PLAN.
2. SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
3. THE EXACT LOCATION OF HANDHOLES, POLES, DETECTORS AND TEMPORARY CABINET BASE SHALL BE DETERMINED IN THE FIELD BY TRAFFIC PERSONNEL.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION.
5. THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
6. REMOVAL AND SALVAGE OR DISPOSAL OF THE EXISTING SIGNAL SYSTEM IS INCIDENTAL.
7. SEE THE CONSTRUCTION PLAN FOR STAGING, MOVEMENT OF HEADS, EVP COMPONENTS, AND DETECTORS FOR EACH STAGE OF CONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR AND IS INCIDENTAL.
8. COIL A SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES, EVP COMPONENTS, AND DETECTORS TO COORDINATE STAGING SHIFTS.

NOTES: (CONT.)

9. SEE DETAIL SHEET 73 FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS. SEE SHEET 77 FOR TEMPORARY SIGNAL POLE NOTES. SEE SHEET 78 FOR TEMPORARY SIGNAL WIRING DIAGRAM.
10. LUMINAIRES SHALL BE COBRA HEADS.

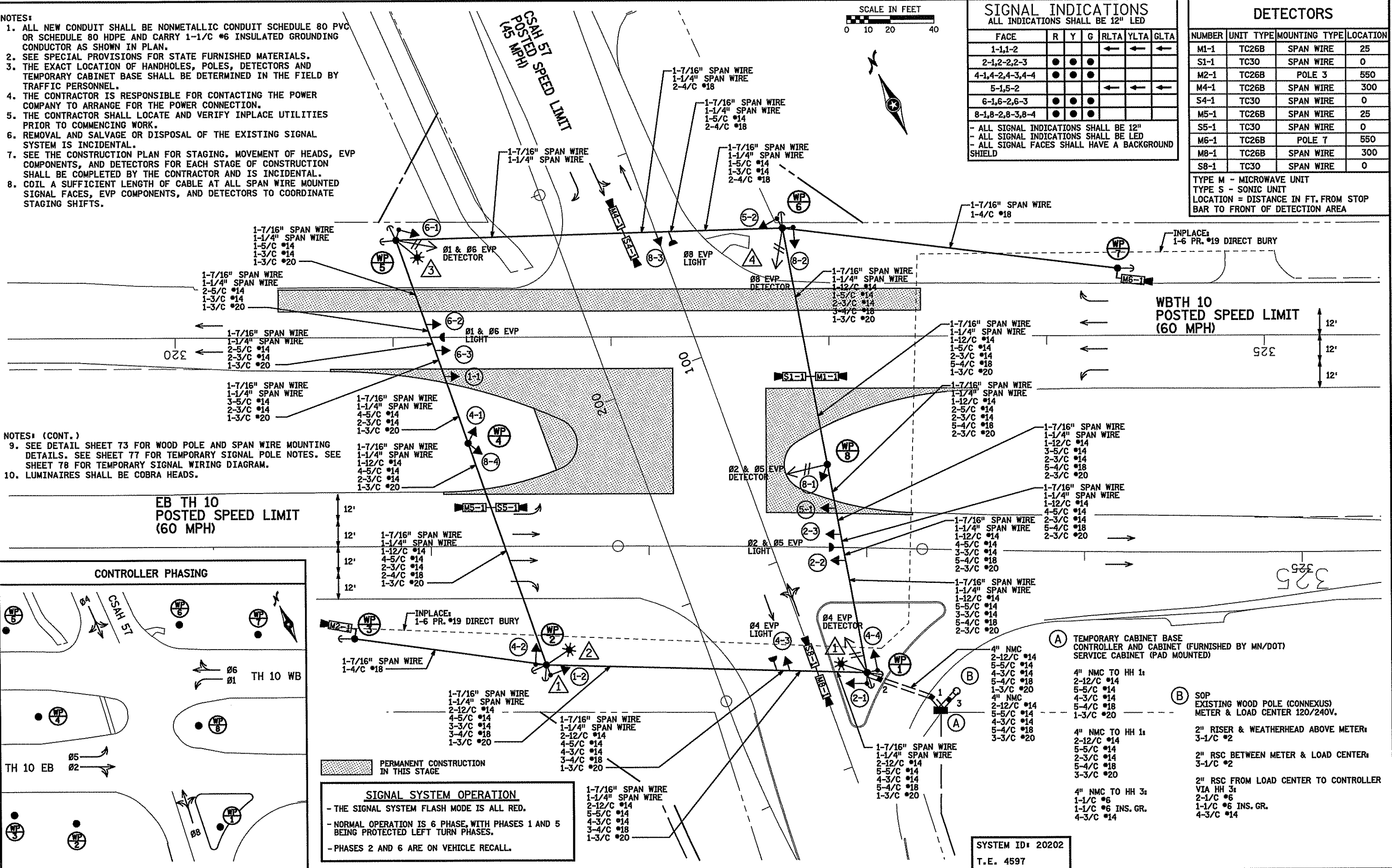


SIGNAL INDICATIONS						
ALL INDICATIONS SHALL BE 12" LED						
FACE	R	Y	G	RLTA	YLTA	GLTA
1-1,1-2				←	←	←
2-1,2-2,2-3	●	●	●			
4-1,4-2,4-3,4-4	●	●	●			
5-1,5-2				←	←	←
6-1,6-2,6-3	●	●	●			
8-1,8-2,8-3,8-4	●	●	●			

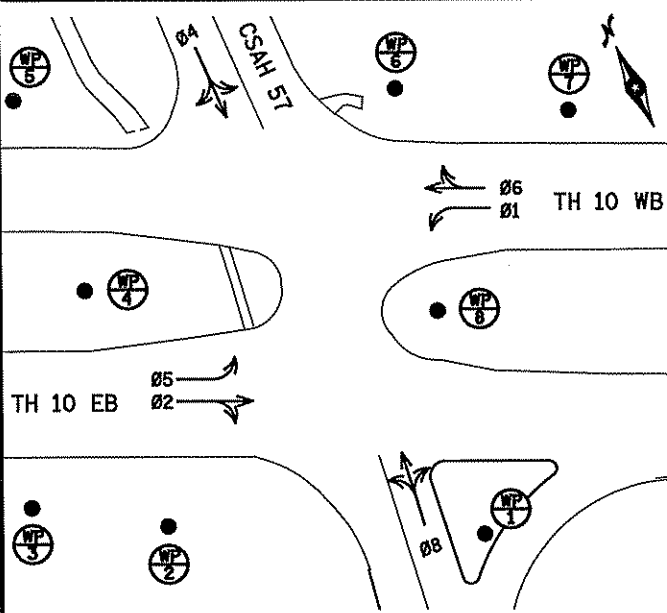
- ALL SIGNAL INDICATIONS SHALL BE 12"
- ALL SIGNAL INDICATIONS SHALL BE LED
- ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD

DETECTORS				
NUMBER	UNIT TYPE	MOUNTING TYPE	LOCATION	
M1-1	TC26B	SPAN WIRE	25	
S1-1	TC30	SPAN WIRE	0	
M2-1	TC26B	POLE 3	550	
M4-1	TC26B	SPAN WIRE	300	
S4-1	TC30	SPAN WIRE	0	
M5-1	TC26B	SPAN WIRE	25	
S5-1	TC30	SPAN WIRE	0	
M6-1	TC26B	POLE 7	550	
M8-1	TC26B	SPAN WIRE	300	
S8-1	TC30	SPAN WIRE	0	

TYPE M - MICROWAVE UNIT
TYPE S - SONIC UNIT
LOCATION = DISTANCE IN FT. FROM STOP BAR TO FRONT OF DETECTION AREA



CONTROLLER PHASING



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ARE ON VEHICLE RECALL.

- (A) TEMPORARY CABINET BASE CONTROLLER AND CABINET (FURNISHED BY MN/DOT) SERVICE CABINET (PAD MOUNTED)**
- 4" NMC TO HH 1s
 - 2-12/C #14
 - 4-3/C #14
 - 5-5/C #14
 - 4-3/C #14
 - 5-4/C #18
 - 1-3/C #20
- (B) SOP EXISTING WOOD POLE (CONNEXUS) METER & LOAD CENTER 120/240V.**
- 2" RISER & WEATHERHEAD ABOVE METER: 3-1/C #2
 - 2" RSC BETWEEN METER & LOAD CENTER: 3-1/C #2
 - 2" RSC FROM LOAD CENTER TO CONTROLLER VIA HH 3s
 - 2-1/C #6
 - 1-1/C #6 INS. GR.
 - 4-3/C #14

DATE: 7/18/2008 TIME: 11:08:12 AM FILENAME: K:\p\anoka\csah71\21000\hwy-brdg\w\m\m\m\csah57_1.sldgn

DRAWN BY: SFH
CHECKED BY: BJF

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.

SIGNATURE: *Bryant J. Ficek*
PRINTED NAME: BRYANT J. FICEK
DATE: 7/18/2008 LIC. NO. 42802

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

INTERSECTION LAYOUT
TEMPORARY SIGNAL SYSTEM - STAGE 1

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 74 of 82 Sheets

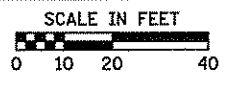
SYSTEM ID: 20202
T.E. 4597

NOTES:

1. ALL NEW CONDUIT SHALL BE NONMETALLIC CONDUIT SCHEDULE 80 PVC OR SCHEDULE 80 HDPE AND CARRY 1-1/2 #6 INSULATED GROUNDING CONDUCTOR AS SHOWN IN PLAN.
2. SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
3. THE EXACT LOCATION OF HANDHOLES, POLES, DETECTORS AND TEMPORARY CABINET BASE SHALL BE DETERMINED IN THE FIELD BY TRAFFIC PERSONNEL.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION.
5. THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
6. REMOVAL AND SALVAGE OR DISPOSAL OF THE EXISTING SIGNAL SYSTEM IS INCIDENTAL.
7. SEE THE CONSTRUCTION PLAN FOR STAGING, MOVEMENT OF HEADS, EVP COMPONENTS, AND DETECTORS FOR EACH STAGE OF CONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR AND IS INCIDENTAL.
8. COIL A SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES, EVP COMPONENTS, AND DETECTORS TO COORDINATE STAGING SHIFTS.

NOTES: (CONT.)

9. SEE DETAIL SHEET 73 FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS. SEE SHEET 77 FOR TEMPORARY SIGNAL POLE NOTES. SEE SHEET 78 FOR TEMPORARY SIGNAL WIRING DIAGRAM.
10. LUMINAIRES SHALL BE COBRA HEADS.



SIGNAL INDICATIONS
ALL INDICATIONS SHALL BE 12" LED

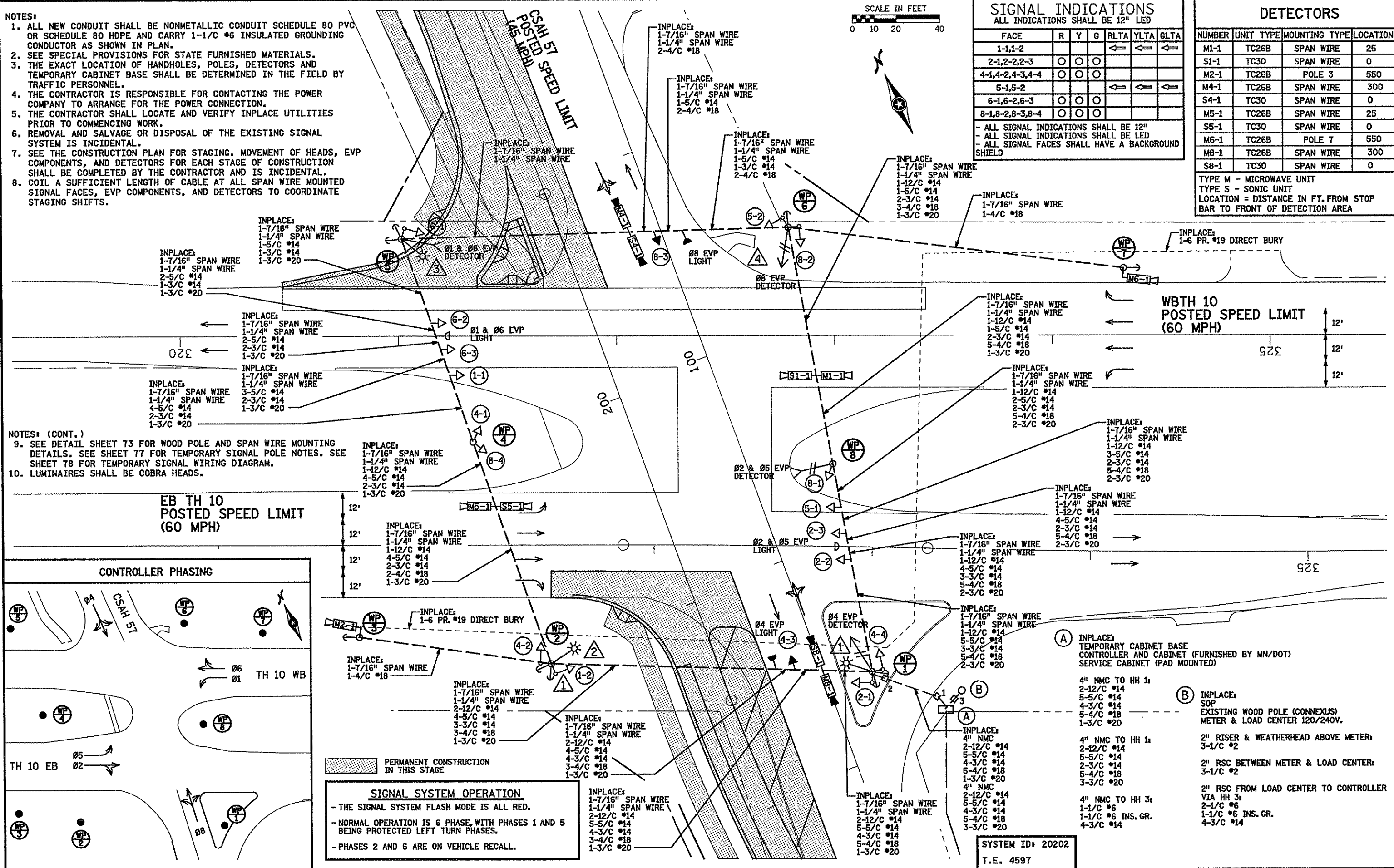
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2-1,2-2,2-3	○	○	○			
4-1,4-2,4-3,4-4	○	○	○			
5-1,5-2				←	←	←
6-1,6-2,6-3	○	○	○			
8-1,8-2,8-3,8-4	○	○	○			

- ALL SIGNAL INDICATIONS SHALL BE 12"
- ALL SIGNAL INDICATIONS SHALL BE LED
- ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD

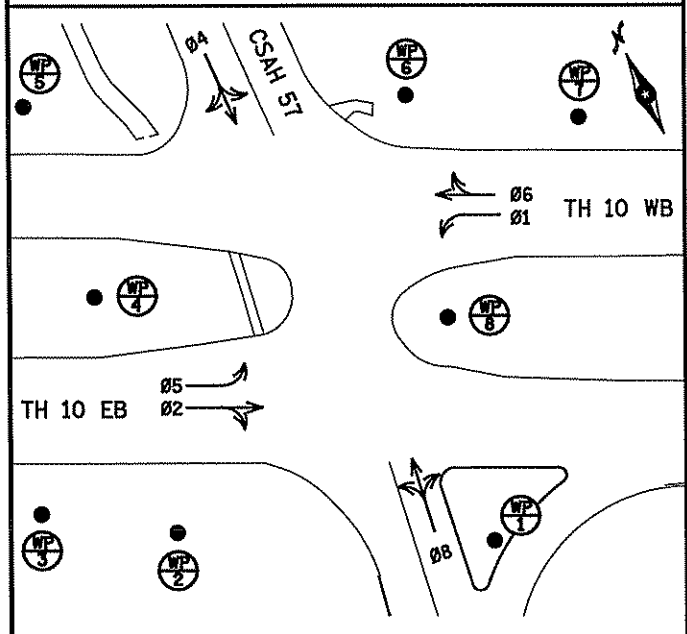
DETECTORS

NUMBER	UNIT TYPE	MOUNTING TYPE	LOCATION
M1-1	TC26B	SPAN WIRE	25
S1-1	TC30	SPAN WIRE	0
M2-1	TC26B	POLE 3	550
M4-1	TC26B	SPAN WIRE	300
S4-1	TC30	SPAN WIRE	0
M5-1	TC26B	SPAN WIRE	25
S5-1	TC30	SPAN WIRE	0
M6-1	TC26B	POLE 7	550
M8-1	TC26B	SPAN WIRE	300
S8-1	TC30	SPAN WIRE	0

TYPE M - MICROWAVE UNIT
TYPE S - SONIC UNIT
LOCATION = DISTANCE IN FT. FROM STOP BAR TO FRONT OF DETECTION AREA



CONTROLLER PHASING



SIGNAL SYSTEM OPERATION
- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ARE ON VEHICLE RECALL.

- (A) INPLACE: TEMPORARY CABINET BASE CONTROLLER AND CABINET (FURNISHED BY MN/DOT) SERVICE CABINET (PAD MOUNTED)**
- 4" NMC TO HH 1: 2-12/C #14, 5-5/C #14, 4-3/C #14, 5-4/C #18, 1-3/C #20
 - 4" NMC TO HH 1: 2-12/C #14, 5-5/C #14, 4-3/C #14, 5-4/C #18, 1-3/C #20
 - 4" NMC TO HH 3: 1-1/C #6, 1-1/C #6 INS. GR., 4-3/C #14
- (B) INPLACE: SOP EXISTING WOOD POLE (CONNEXUS) METER & LOAD CENTER 120/240V.**
- 2" RISER & WEATHERHEAD ABOVE METER: 3-1/C #2
 - 2" RSC BETWEEN METER & LOAD CENTER: 3-1/C #2
 - 2" RSC FROM LOAD CENTER TO CONTROLLER VIA HH 3: 2-1/C #6, 1-1/C #6 INS. GR., 4-3/C #14

SYSTEM ID: 20202
T.E. 4597

DATE: 7/18/2008 TIME: 11:08:21 AM FILENAME: K:\p\work\city\13721000\wp\brdg\wp\brdg\csah57_1s2adgn

DRAWN BY: SFH
CHECKED BY: BJF

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.

SIGNATURE: *Bryant J. Ficek*
PRINTED NAME: BRYANT J. FICEK
DATE: 7/18/2008 LIC. NO. 42802

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

INTERSECTION LAYOUT
TEMPORARY SIGNAL SYSTEM - STAGE 2

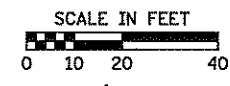
S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 75 of 82 Sheets

NOTES:

1. ALL NEW CONDUIT SHALL BE NONMETALLIC CONDUIT SCHEDULE 80 PVC OR SCHEDULE 80 HDPE AND CARRY 1-1/2" #6 INSULATED GROUNDING CONDUCTOR AS SHOWN IN PLAN.
2. SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
3. THE EXACT LOCATION OF HANDHOLES, POLES, DETECTORS AND TEMPORARY CABINET BASE SHALL BE DETERMINED IN THE FIELD BY TRAFFIC PERSONNEL.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION.
5. THE CONTRACTOR SHALL LOCATE AND VERIFY INPLACE UTILITIES PRIOR TO COMMENCING WORK.
6. REMOVAL AND SALVAGE OR DISPOSAL OF THE EXISTING SIGNAL SYSTEM IS INCIDENTAL.
7. SEE THE CONSTRUCTION PLAN FOR STAGING, MOVEMENT OF HEADS, EVP COMPONENTS, AND DETECTORS FOR EACH STAGE OF CONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR AND IS INCIDENTAL.
8. COIL A SUFFICIENT LENGTH OF CABLE AT ALL SPAN WIRE MOUNTED SIGNAL FACES, EVP COMPONENTS, AND DETECTORS TO COORDINATE STAGING SHIFTS.

NOTES: (CONT.)

9. SEE DETAIL SHEET 73 FOR WOOD POLE AND SPAN WIRE MOUNTING DETAILS. SEE SHEET 77 FOR TEMPORARY SIGNAL POLE NOTES. SEE SHEET 78 FOR TEMPORARY SIGNAL WIRING DIAGRAM.
10. LUMINAIRES SHALL BE COBRA HEADS.



SIGNAL INDICATIONS
ALL INDICATIONS SHALL BE 12" LED

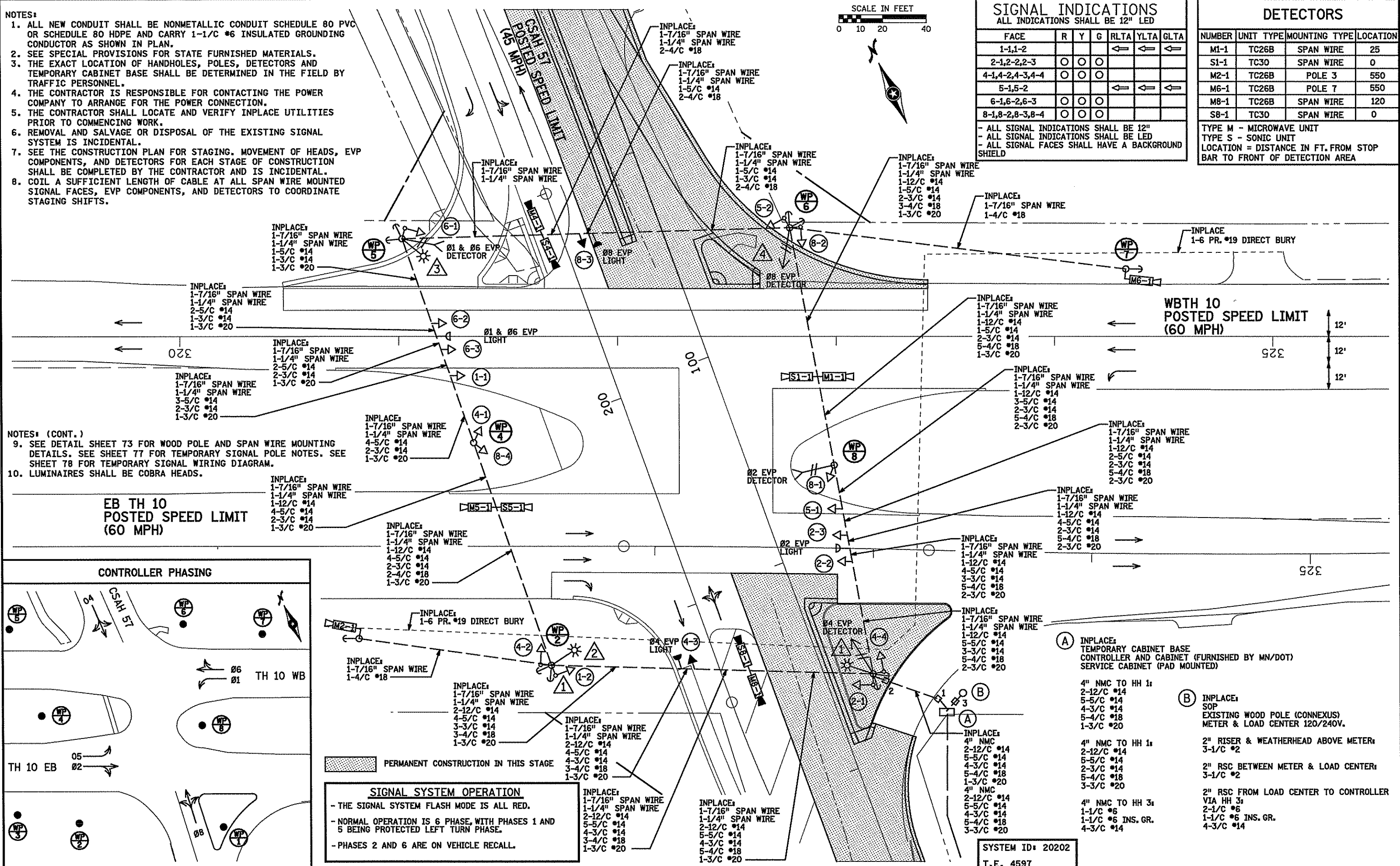
FACE	R	Y	G	RLTA	YLTA	GLTA
1-1,1-2				←	←	←
2-1,2-2,2-3	○	○	○			
4-1,4-2,4-3,4-4	○	○	○			
5-1,5-2				←	←	←
6-1,6-2,6-3	○	○	○			
8-1,8-2,8-3,8-4	○	○	○			

- ALL SIGNAL INDICATIONS SHALL BE 12"
- ALL SIGNAL INDICATIONS SHALL BE LED
- ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD

DETECTORS

NUMBER	UNIT TYPE	MOUNTING TYPE	LOCATION
M1-1	TC26B	SPAN WIRE	25
S1-1	TC30	SPAN WIRE	0
M2-1	TC26B	POLE 3	550
M6-1	TC26B	POLE 7	550
M8-1	TC26B	SPAN WIRE	120
S8-1	TC30	SPAN WIRE	0

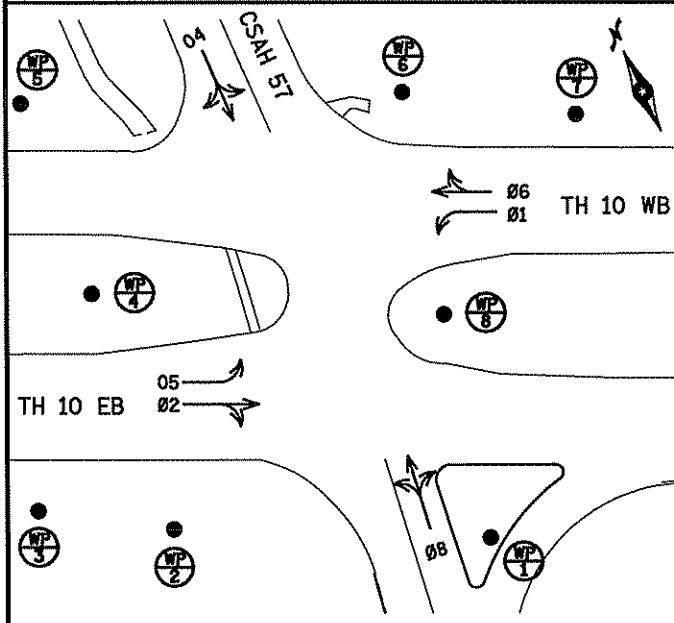
TYPE M - MICROWAVE UNIT
TYPE S - SONIC UNIT
LOCATION = DISTANCE IN FT. FROM STOP BAR TO FRONT OF DETECTION AREA



**EB TH 10
POSTED SPEED LIMIT
(60 MPH)**

**WBTH 10
POSTED SPEED LIMIT
(60 MPH)**

CONTROLLER PHASING



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASE.
- PHASES 2 AND 6 ARE ON VEHICLE RECALL.

- (A) INPLACE: TEMPORARY CABINET BASE CONTROLLER AND CABINET (FURNISHED BY MN/DOT) SERVICE CABINET (PAD MOUNTED)**
- 4" NMC TO HH 1s
 - 2-12/C #14
 - 5-5/C #14
 - 4-3/C #14
 - 5-4/C #18
 - 1-3/C #20
- (B) INPLACE: SOP EXISTING WOOD POLE (CONNEXUS) METER & LOAD CENTER 120/240V.**
- 2" RISER & WEATHERHEAD ABOVE METER: 3-1/C #2
 - 2" RSC BETWEEN METER & LOAD CENTER: 3-1/C #2
 - 2" RSC FROM LOAD CENTER TO CONTROLLER VIA HH 3s
 - 2-1/C #6
 - 1-1/C #6 INS. GR.
 - 4-3/C #14

DRAWN BY: SFH
CHECKED BY: BJF

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SIGNATURE: *Bryant J. Fick*
PRINTED NAME: BRYANT J. FICK
DATE: 7/18/2008 L.C. NO. 42802

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CSAH 57 RECONSTRUCTION

INTERSECTION LAYOUT
TEMPORARY SIGNAL SYSTEM - STAGE 3

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 76 of 82 Sheets

DATE: 7/18/2008 TIME: 11:07:31 AM FILENAME: K:\g-c\Anoka\02\0202\000\wpy-brdg\wpy-pln-sfr\casah57-js3Adgn

SYSTEM ID: 20202
T.E. 4597

WP 1
 45' WOOD POLE
 2-DOWN GUYS, GUARDS, & ANCHOR
 2-TYPE 10A
 ONE-WAY EVP DETECTOR
 15' MAST ARM & LUMINAIRE
 (250W HPS) WITH PEC
 2-R9-3A SIGNS (NO PED)
 1-3/C #20
 METAL JUNCTION BOX WITH TERMINAL BLOCK

4" NMC BELOW JUNCTION BOX TO HH 2 WITH:
 2-12/C #14
 5-5/C #14
 4-3/C #14
 5-4/C #18
 3-3/C #20
 1-1/C #6 INS. GR.

4" NMC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 1-12/C #14
 5-5/C #14
 4-3/C #14
 5-4/C #18
 3-3/C #20
 1-1/C #6 INS. GR.

4" NMC RISER AND WEATHERHEAD FROM HH 2 TO SPAN WIRES WITH:
 2-12/C #14
 5-5/C #14
 4-3/C #14
 5-4/C #18
 1-3/C #20

1" NMC RISER AND WEATHERHEAD ABOVE SPAN WIRES WITH:
 1-3/C #14

WP 2
 45' WOOD POLE
 1-DOWN GUY, GUARD, & ANCHOR
 2-TYPE 10A
 15' MAST ARM & LUMINAIRE (250W HPS) WITH PEC
 2-R9-3A SIGNS (NO PED)
 METAL JUNCTION BOX WITH TERMINAL BLOCK

2" NMC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 1-12/C #14

1" NMC RISER AND WEATHERHEAD ABOVE SPAN WIRES WITH:
 1-3/C #14

WP 3
 30' WOOD POLE
 1-DOWN GUY, GUARD, & ANCHOR
 1-MICROWAVE DETECTOR
 (MODEL TC26B-SIDE MOUNTED)
 1-4/C #18

WP 4
 45' WOOD POLE
 2-TYPE 10A
 2-R9-3A SIGNS (NO PED)
 METAL JUNCTION BOX WITH TERMINAL BLOCK

2" NMC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 1-12/C #14

WP 5
 45' WOOD POLE
 2-DOWN GUYS GUARDS, & ANCHORS
 1-TYPE 10A
 ONE-WAY EVP DETECTOR
 15' MAST ARM & LUMINAIRE
 (250W HPS) WITH PEC
 2-R9-3A SIGNS (NO PED)
 1-3/C #20
 METAL JUNCTION BOX WITH TERMINAL BLOCK

2" NMC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 1-5/C #14

1" NMC RISER AND WEATHERHEAD ABOVE SPAN WIRES WITH:
 1-3/C #14 (LUM)

WP 6
 45' WOOD POLE
 1-DOWN GUY, GUARD, & ANCHOR
 2-TYPE 10A
 ONE-WAY EVP DETECTOR
 15' MAST ARM & LUMINAIRE (250W HPS) WITH PEC
 2-R9-3A SIGNS (NO PED)
 1-3/C #20
 METAL JUNCTION BOX WITH TERMINAL BLOCK

2" NMC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 1-12/C #14

1" NMC RISER AND WEATHERHEAD ABOVE SPAN WIRES WITH:
 1-3/C #14

WP 7
 30' WOOD POLE
 1-DOWN GUY, GUARD, & ANCHOR
 1-MICROWAVE DETECTOR
 (MODEL TC26B-SIDE MOUNTED)
 1-4/C #18

WP 8
 45' WOOD POLE
 1-TYPE 10A
 ONE-WAY EVP DETECTOR
 2-R9-3A SIGNS (NO PED)
 1-3/C #20
 METAL JUNCTION BOX WITH TERMINAL BLOCK

2" NMC RISER AND WEATHERHEAD ABOVE JUNCTION BOX
 TO SPAN WIRES WITH:
 1-5/C #14

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 UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: *Bryant J. Ficek*
 PRINTED NAME: BRYANT J. FICEK
 DATE: 6/17/2008 LIC. NO. 42802

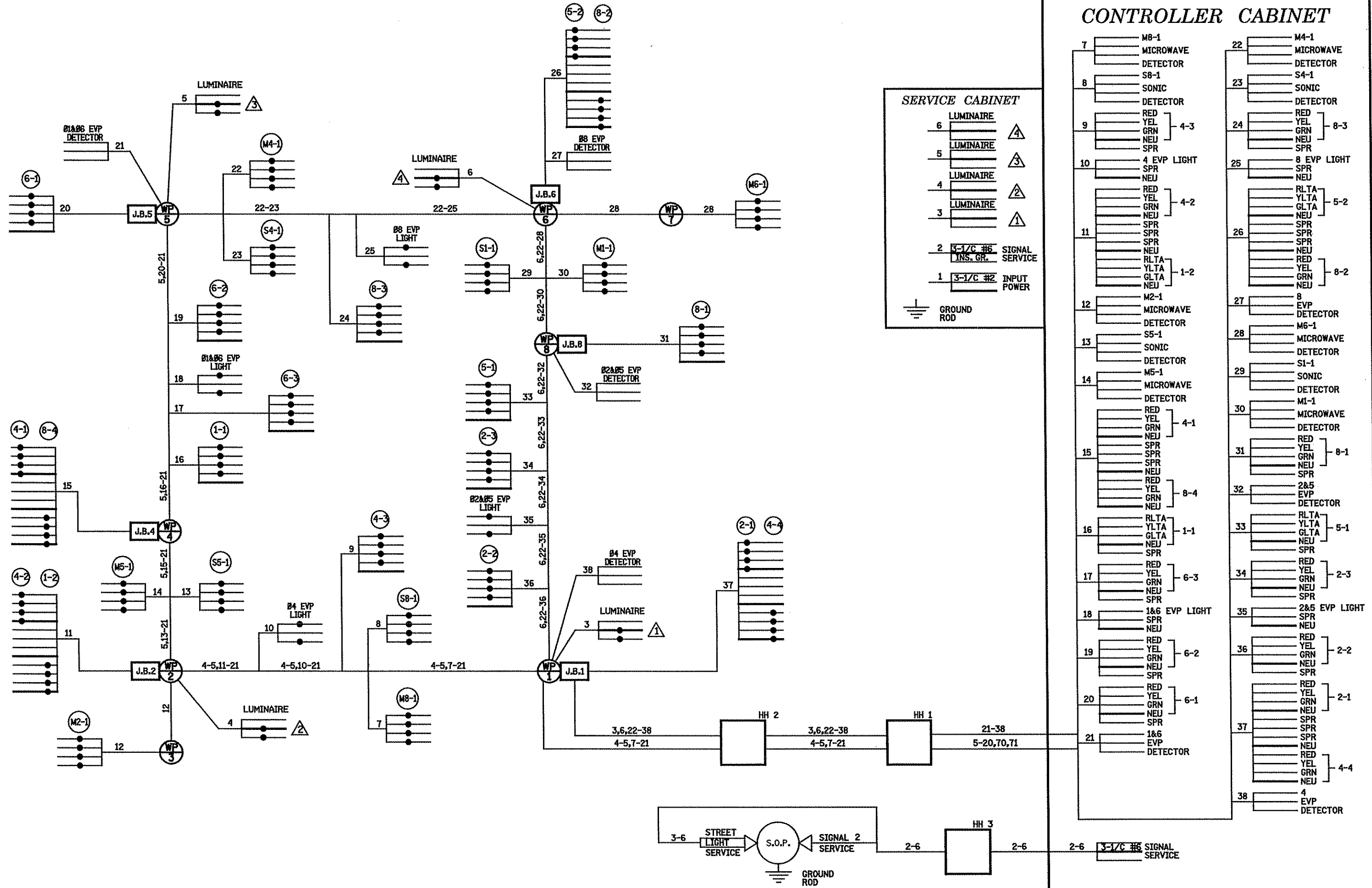
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 CSAH 57 RECONSTRUCTION

INTERSECTION LAYOUT
 TEMPORARY SIGNAL SYSTEM - STAGES 1-3

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 77 of 82 Sheets

DATE: 6/17/2008 TIME: 5:52:24 PM FILENAME: K:\p\work\2008\5721000\hw\sig\stages1-3\td.dgn



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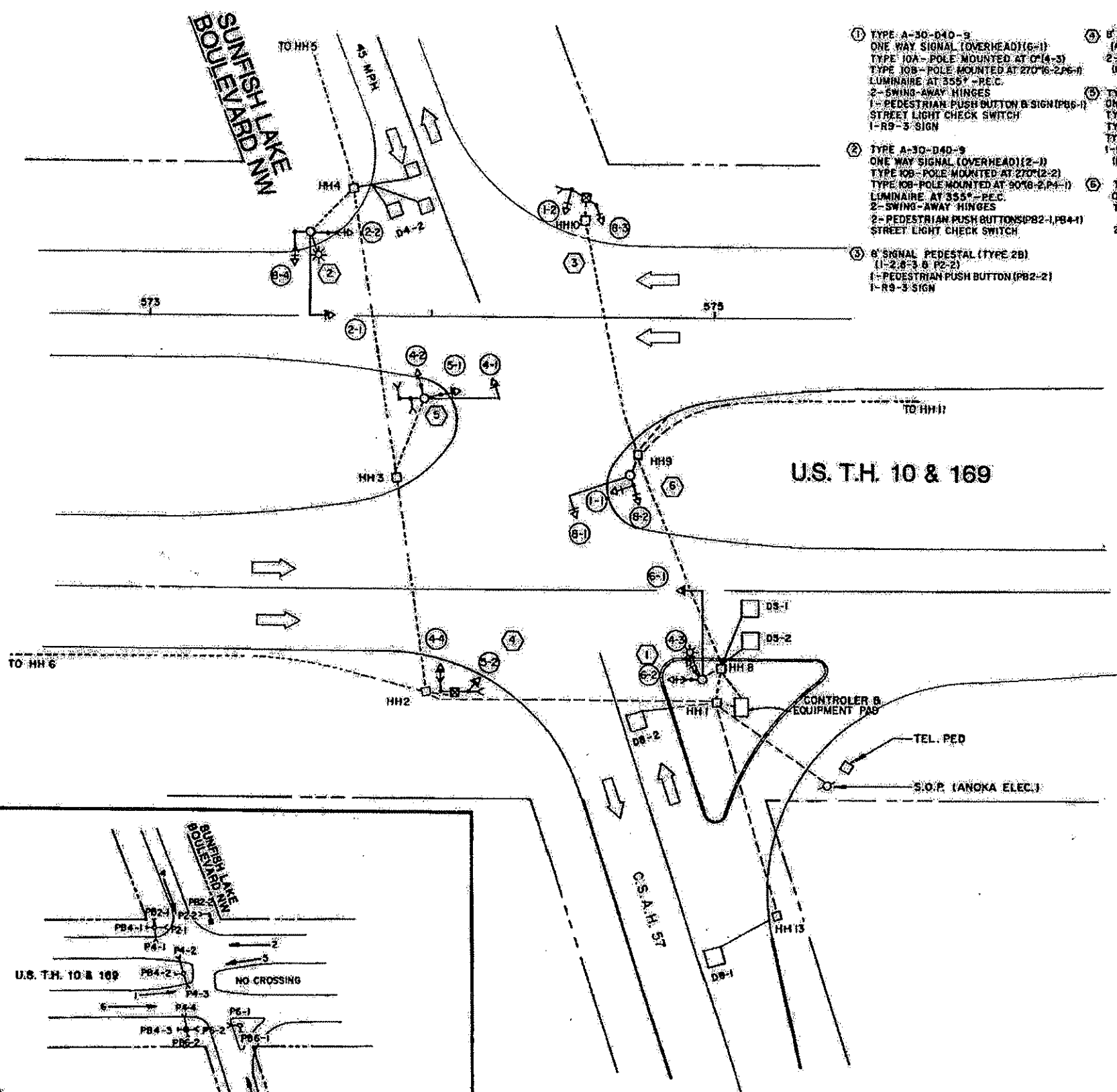
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CSAH 57 RECONSTRUCTION

WIRE DIAGRAM
TEMPORARY SIGNAL SYSTEM - STAGES 1-3

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. 78 of 82 Sheets

DATE: 6/17/2008 TIME: 5:52:39 PM
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- ① TYPE A-30-D40-9
 ONE WAY SIGNAL (OVERHEAD)(16-1)
 TYPE 10A - POLE MOUNTED AT 0°(4-3)
 TYPE 10B - POLE MOUNTED AT 270°(6-2)(6-1)
 LUMINAIRE AT 355° - REC.
 2 - SWING-AWAY HINGES
 1 - PEDESTRIAN PUSH BUTTON & SIGN (PB6-1)
 STREET LIGHT CHECK SWITCH
 1 - R9-3 SIGN
- ② TYPE A-30-D40-9
 ONE WAY SIGNAL (OVERHEAD)(12-1)
 TYPE 10B - POLE MOUNTED AT 270°(12-2)
 TYPE 10A - POLE MOUNTED AT 90°(8-2)(4-1)
 LUMINAIRE AT 355° - REC.
 2 - SWING-AWAY HINGES
 2 - PEDESTRIAN PUSH BUTTONS (PB2-1, PB4-1)
 STREET LIGHT CHECK SWITCH
- ③ 6' SIGNAL PEDESTAL (TYPE 2B)
 (1-2, 8-3, 8-12-2)
 1 - PEDESTRIAN PUSH BUTTON (PB2-2)
 1 - R9-3 SIGN
- ④ 6' PEDESTAL (TYPE 2C)
 (4-4, 5-2, P4-4 & P6-2)
 2 - PEDESTRIAN PUSH BUTTONS & SIGNS
 (PB4-3 & PB6-2)
- ⑤ TYPE A-25
 ONE WAY SIGNAL (OVERHEAD)(14-1)
 TYPE 10A - POLE MOUNTED AT 0°(5-1)
 TYPE 10B - POLE MOUNTED AT 270°(4-2)
 TYPE 10C - POLE MOUNTED AT 90°(4-2, 3)
 1 - PEDESTRIAN PUSH BUTTON & SIGN
 (PB4-2)
- ⑥ TYPE A-25
 ONE WAY SIGNAL (OVERHEAD)(6-1)
 TYPE 20A - POLE MOUNTED AT 270°
 (1-1) B 8-2
 2 - R9-3 SIGNS

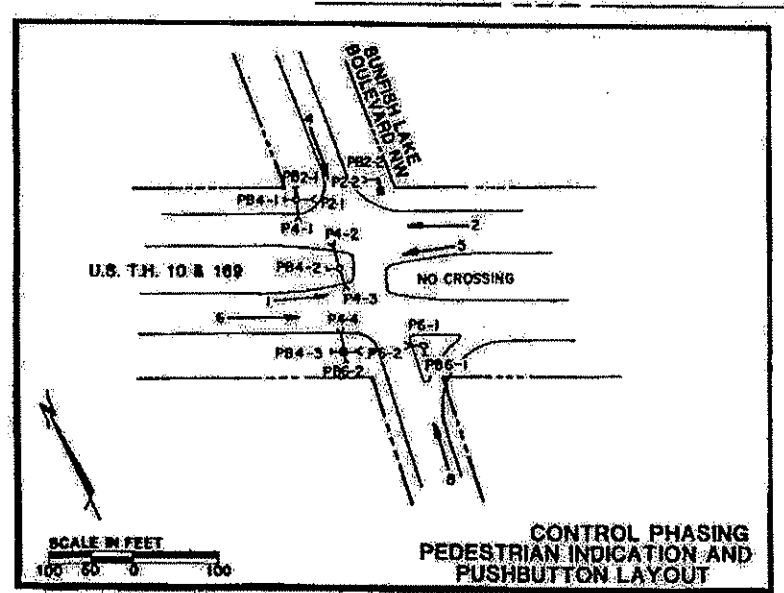
- NOTES
- 1 ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS
 - 2 PEDESTRIAN INDICATIONS SHALL BE 9" x 9"
 - 3 LUMINAIRES SHALL BE 250 WATT WPS

SIGNAL INDICATION CHART

FACE	PHASE	FLASH	TYPE AND SIZE IN INCHES				
			R	Y	G	Y	G
1-1	1	R	12	12	12		
1-2			12	12	12		
2-1	2	R	12	12	12		
2-2			12	12	12		
4-1	4	R	12	12	12		
4-2			12	12	12		
4-3			12	12	12		
4-4			12	12	12		
5-1	5	R	12	12	12		
5-2			12	12	12		
6-1	6	R	12	12	12		
6-2			12	12	12		
8-1	8	R	12	12	12		
8-2			12	12	12		
8-3			12	12	12		
8-4			12	12	12		

CONDUIT AND CABLE CHART

FROM H.H.	TO	CONDUIT		TYPE AND NO. OF CABLES							
		SIZE	R.S.C.	N.A.C.	270° #12	3/0 #12	270° #14	1/0 #10	1/0 #8	1/0 #6	1/0 #4
1	PAD	4"	X		4	4	1			2	2
1	PAD	1 1/2"	X								2
1	2	3"	X		2	2	5	2			1
1	2	3"	X		2	1					
1	SOP	3"	X						4	4	2
1	8	1 1/2"	X								2
2	4	3"	X		3	3					
2	3	3"	X		3	3	3				2
3	5	3"	X		1	3					
3	4	3"	X		2	1	2				2
4	5	3"	X		2	1					2
4	5	1 1/2"	X								1
2	6	1 1/2"	X				2				
6	7	1 1/2"	X				3				
8	PAD	4"	X		3	3	3				
8	11	3"	X		1	2					2
8	9	3"	X		2	1	3				
9	6	3"	X								
9	10	3"	X		1	1					
10	8	3"	X		1	1					
9	11	1 1/2"	X								2
11	12	1 1/2"	X								2
1	13	3"	X								1



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 PRINTED NAME: BRYANT J. FICK
 DATE: 6/17/2008 LIC. NO. 42802

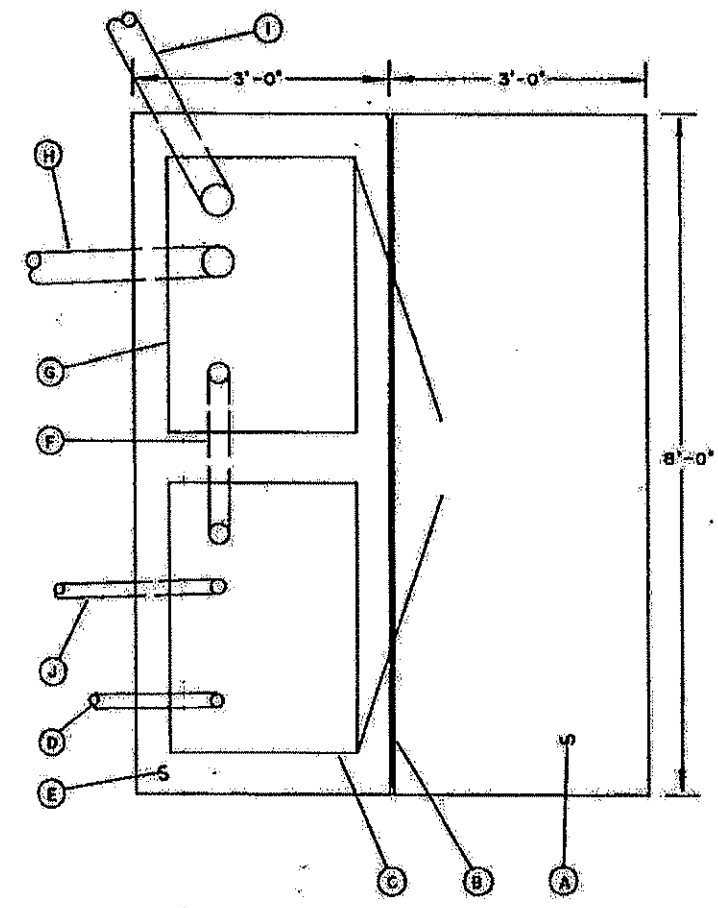
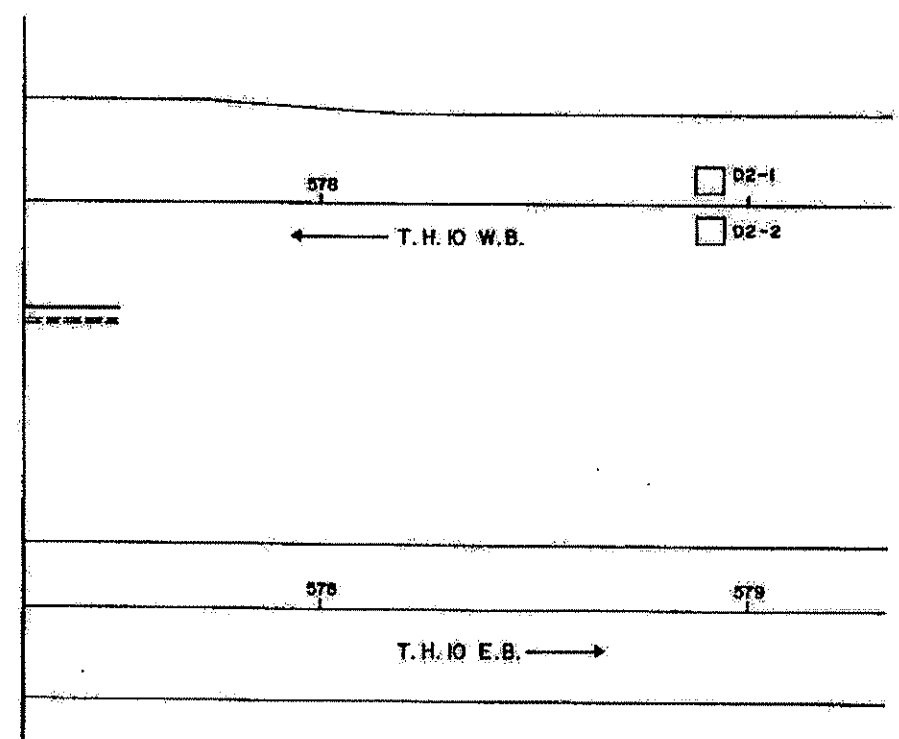
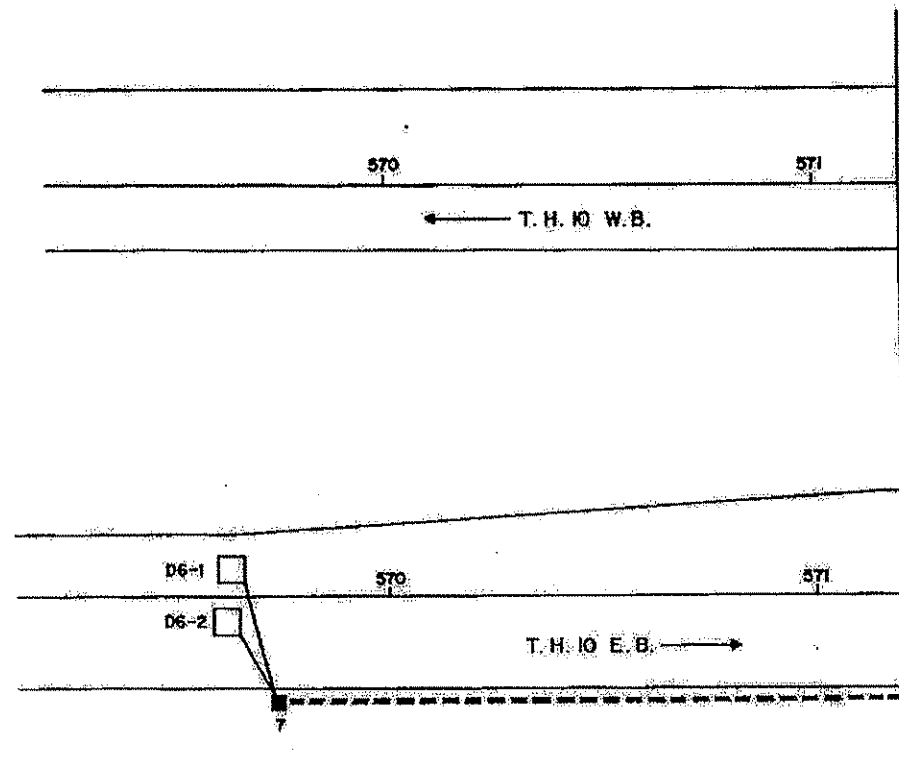
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SIGNAL PLANS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 80 of 82 Sheets

DATE: 6/17/2008 TIME: 5:52:43 PM
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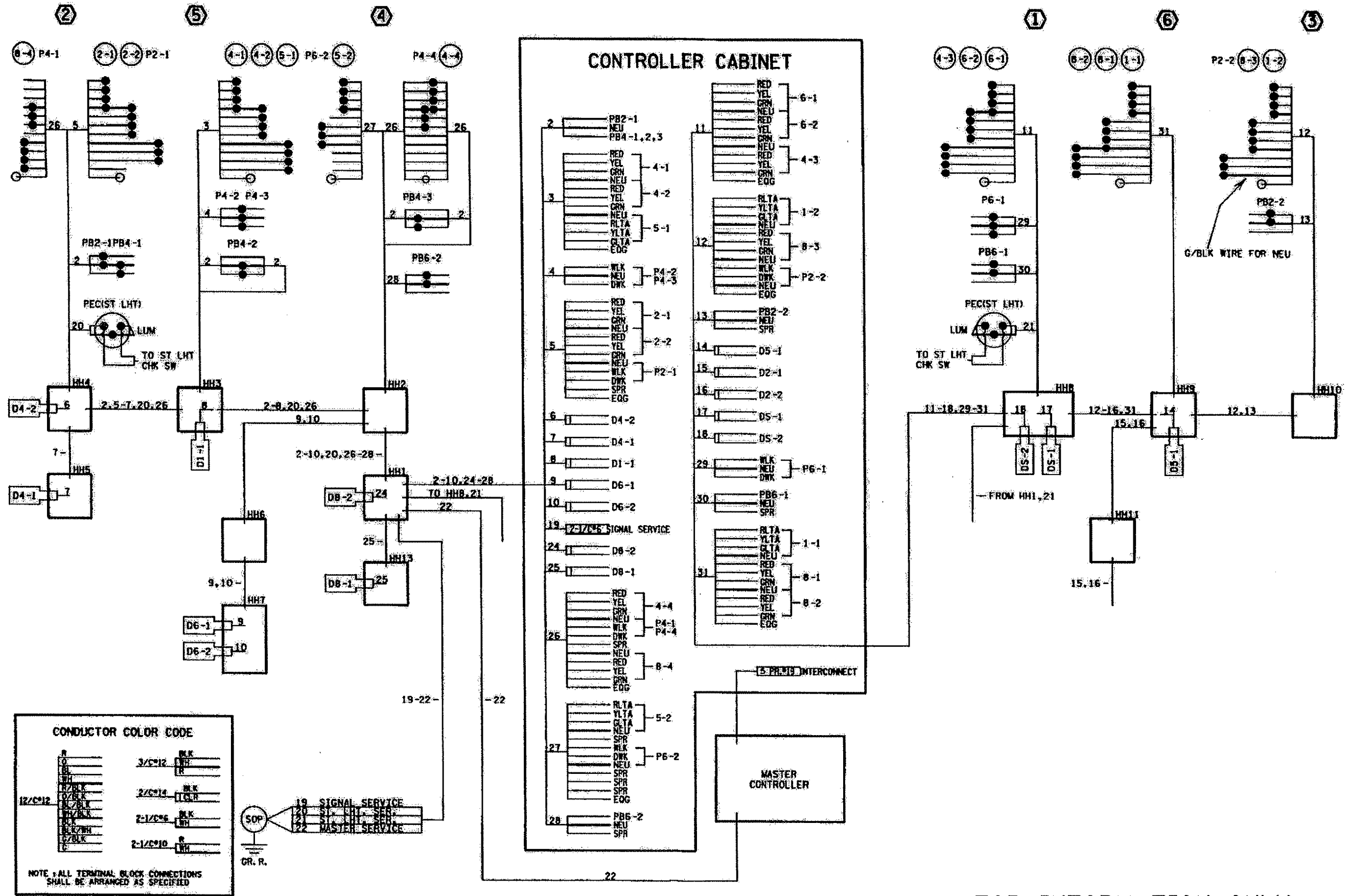


- (A) CONCRETE SIDEWALK DEPTH 4"
- (B) PREFORMED JOINT FILLER
- (C) MASTER CONTROLLER
- (D) 1" R.S.C. TDW
- (E) CONCRETE PAD DEPTH 8"
- (F) 2" R.S.C. BETWEEN CABINETS WITH 1-5 PR. #8, SEE SPECIAL PROVISIONS.
- (G) CONTROLLER CABINET
- (H) 4" R.S.C. TO H.H. 1 WITH 4-12/C #12, 3-3/C #12, 7-2/C #14, 2-1/C #6 AND 2-1/C #6 BR. GR.
- (I) 4" R.S.C. TO H.H. 2 WITH 3-12/C #12, 3-3/C #12 AND 5-2/C #14
- (J) 3" R.S.C. TO H.H. 1

EQUIPMENT PAD LAYOUT

FOR INFORMATION ONLY

DATE: 6/17/2008 TIME: 5:52:48 PM
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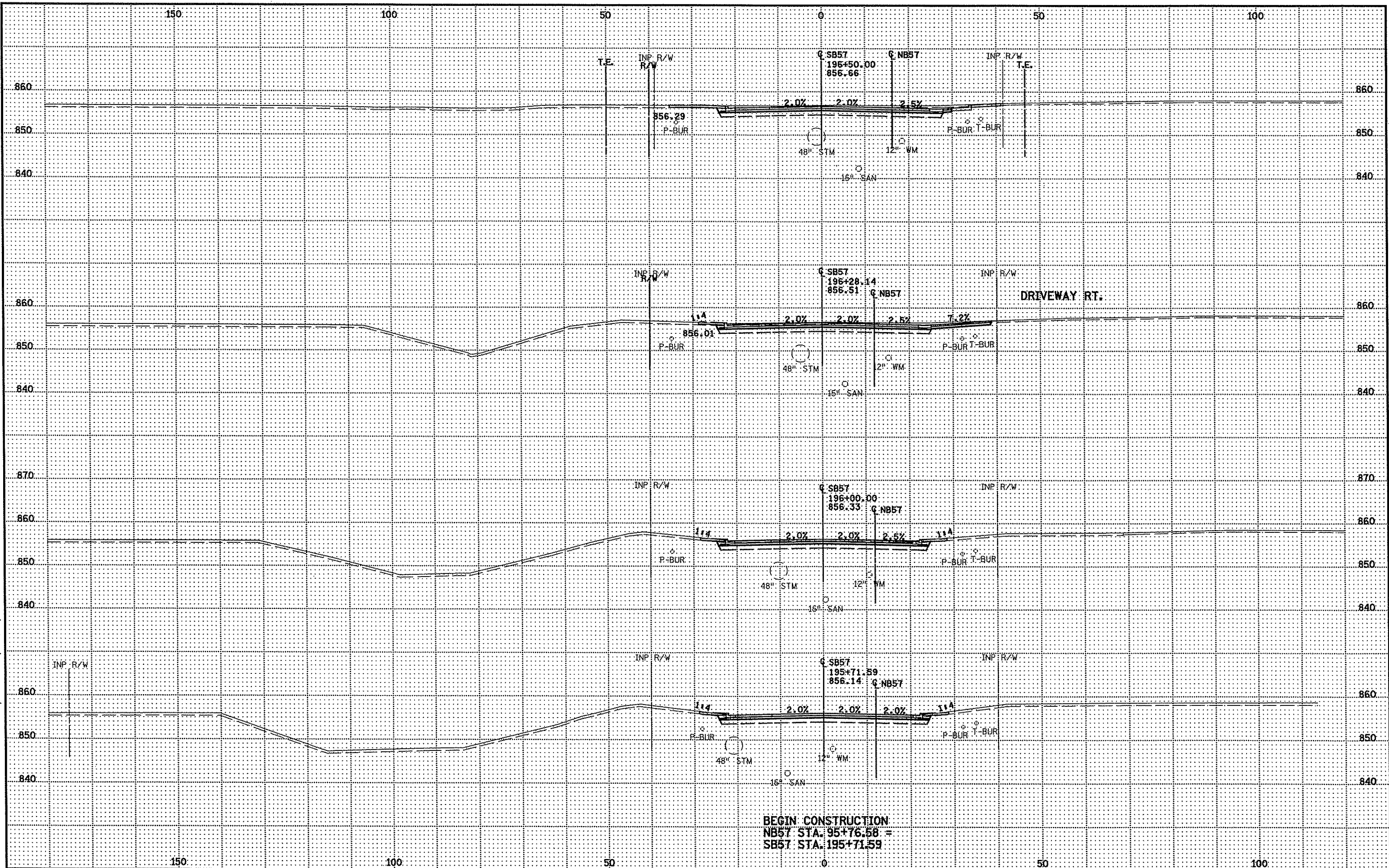
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SIGNAL PLANS

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. 82 of 82 Sheets

DATE: 6/17/2008 TIME: 5:35:05 PM
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BEGIN CONSTRUCTION
NB57 STA. 95+76.58 =
SB57 STA. 195+71.59

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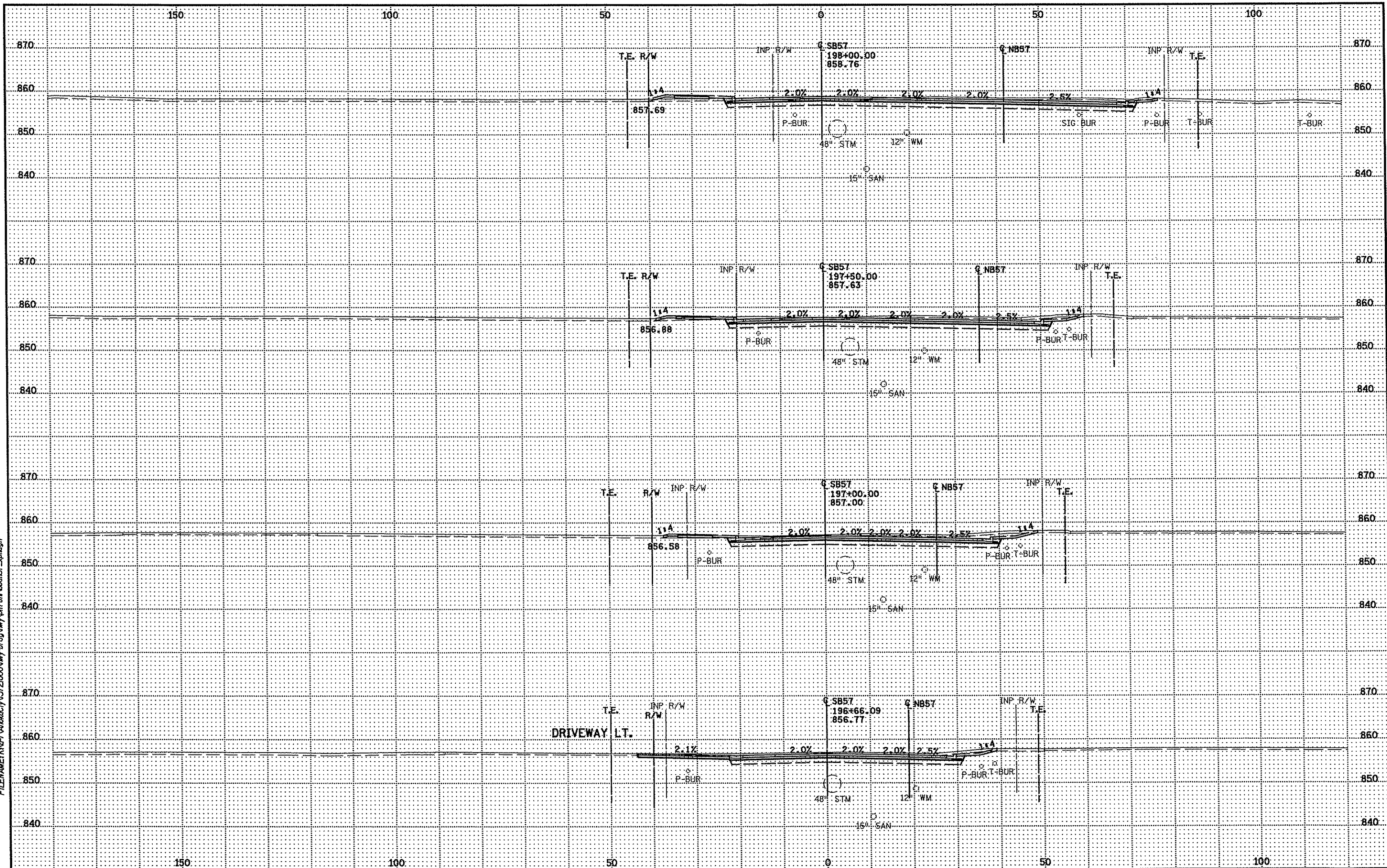
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CROSS SECTIONS
SB57 STA. 195+71.59 TO SB57 STA. 196+50.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X1 of X15 Sheets

DATE: 6/17/2008 TIME: 5:35:28 PM
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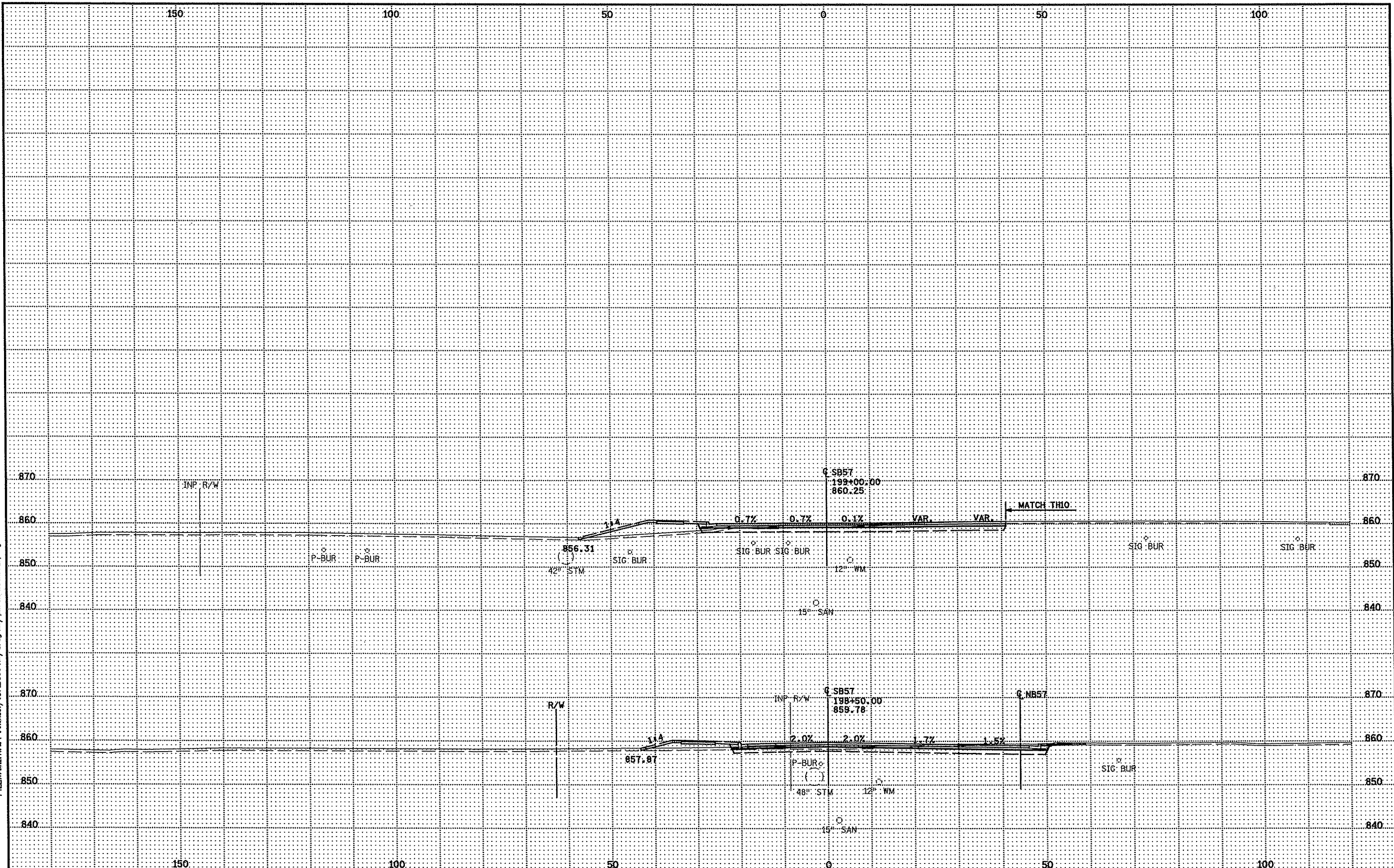
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CROSS SECTIONS
 SB57 STA. 196+66.09 TO SB57 STA. 198+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. X2 of X15 Sheets

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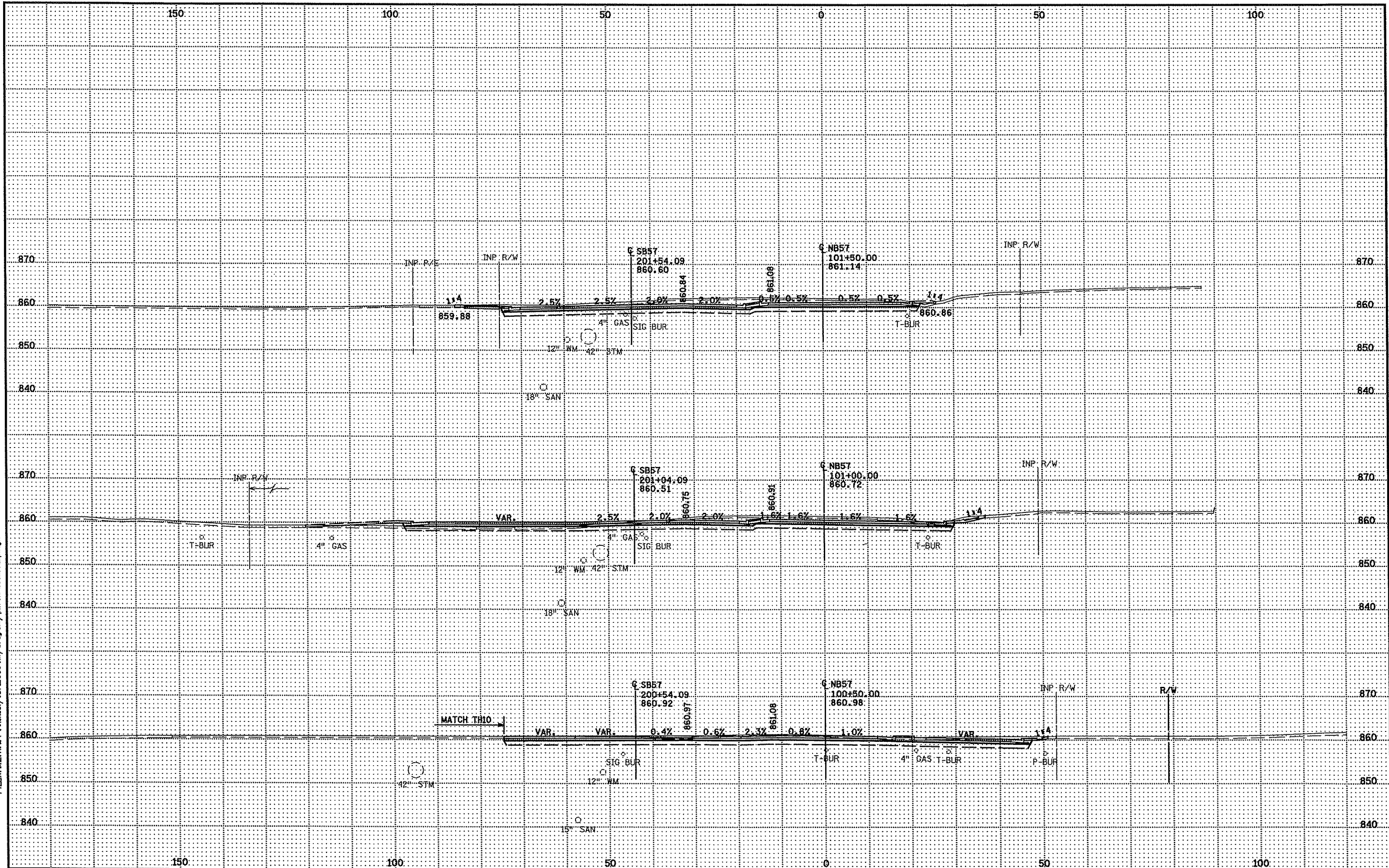
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CSAH 57 RECONSTRUCTION

CROSS SECTIONS
SB57 STA. 198+50.00 TO SB57 STA. 199+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X3 of X15 Sheets

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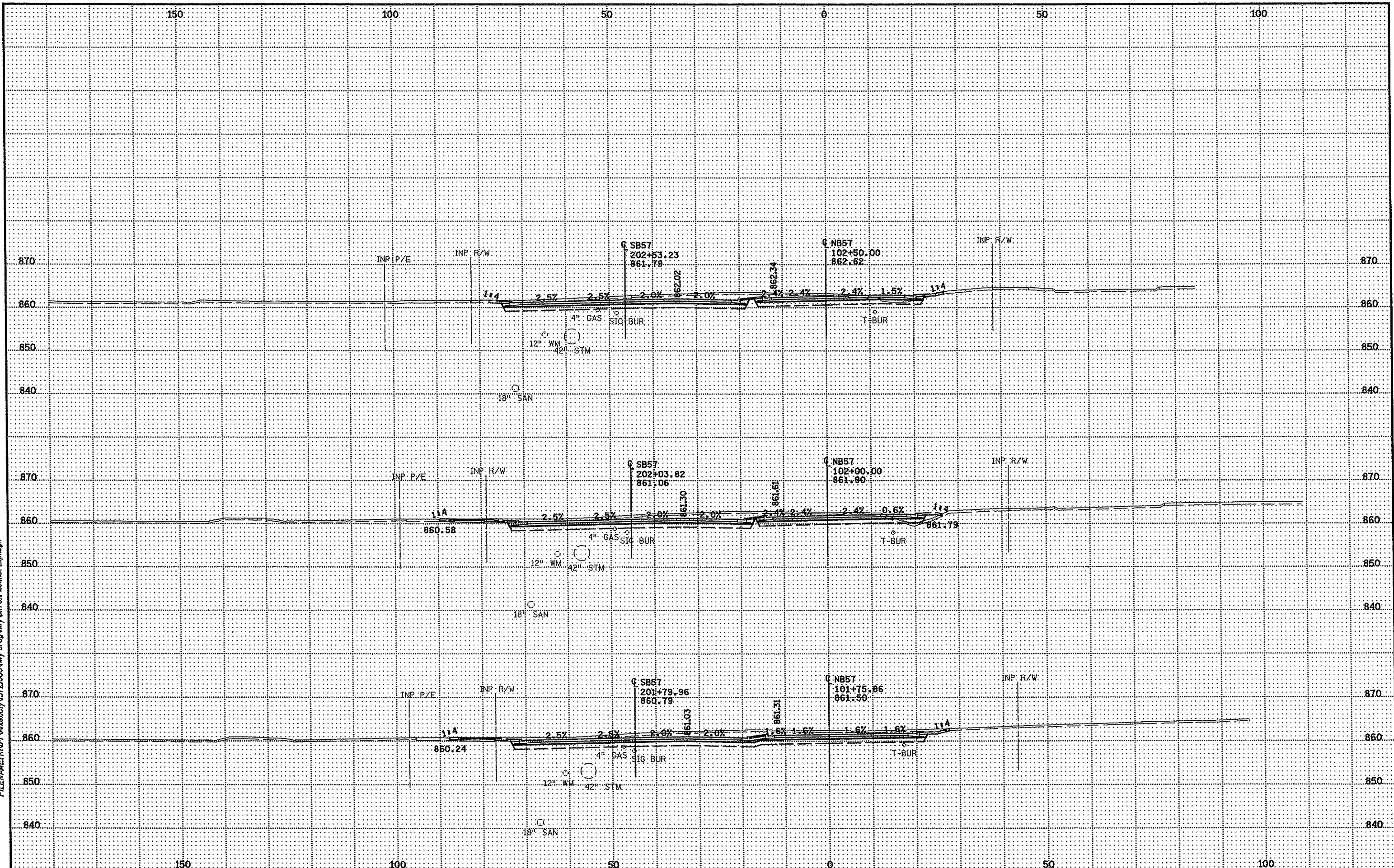
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 CSAH 57 RECONSTRUCTION

CROSS SECTIONS
 NB57 STA. 100+50.00 TO NB57 STA. 101+50.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. X4 of X15 Sheets

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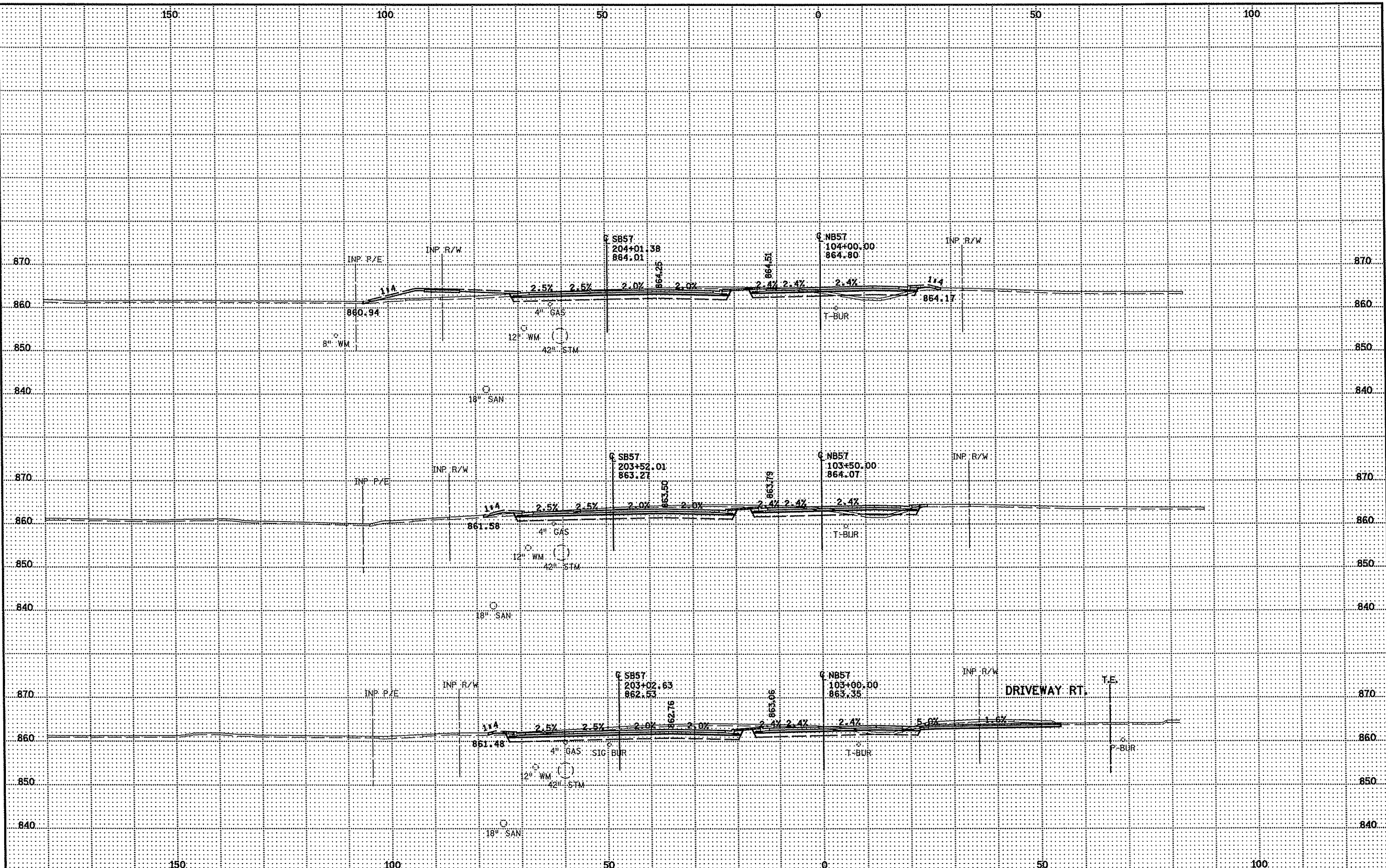
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 101+75.86 TO NB57 STA. 102+50.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X5 of X15 Sheets

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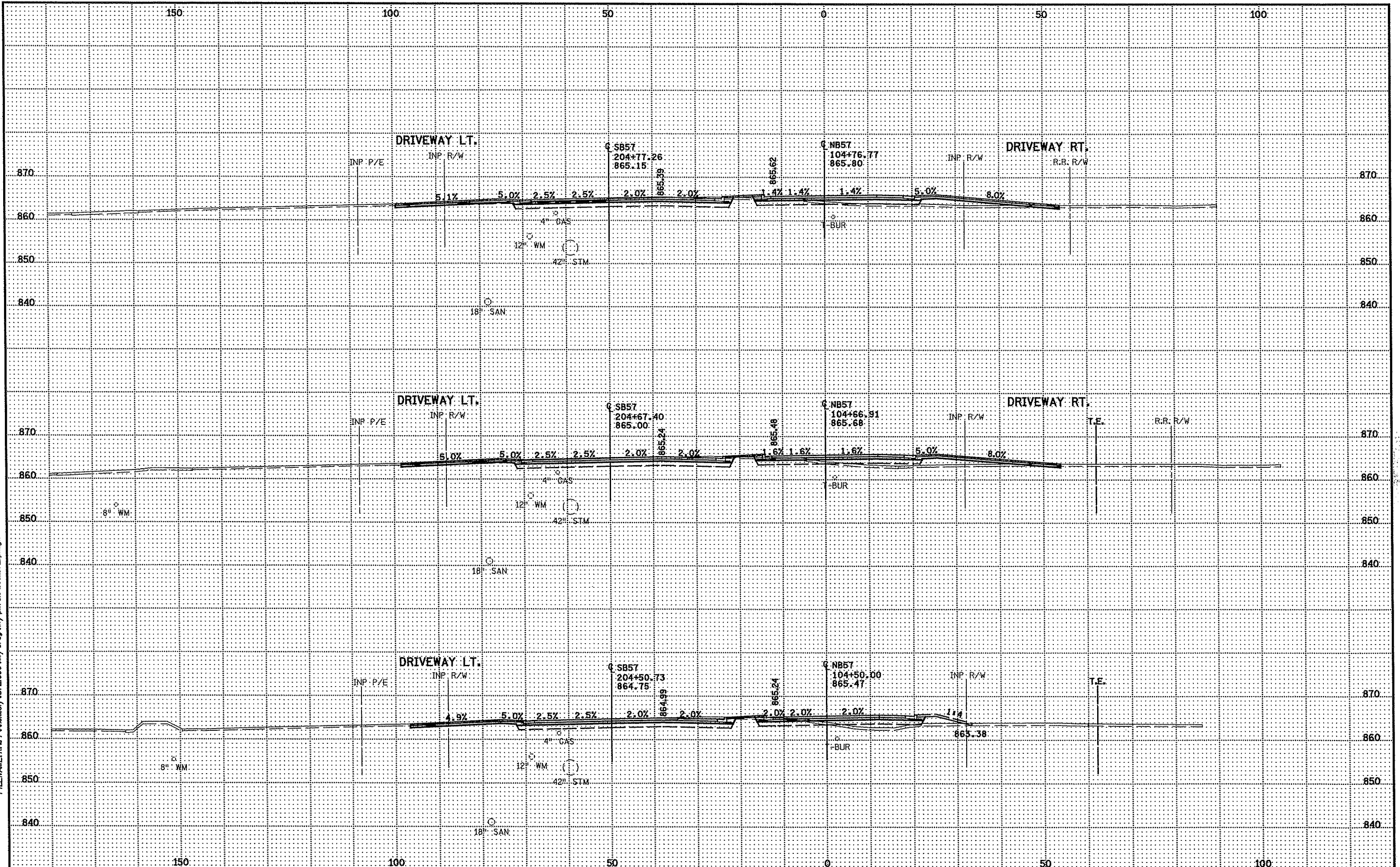
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 103+00.00 TO NB57 STA. 104+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X6 of X15 Sheets

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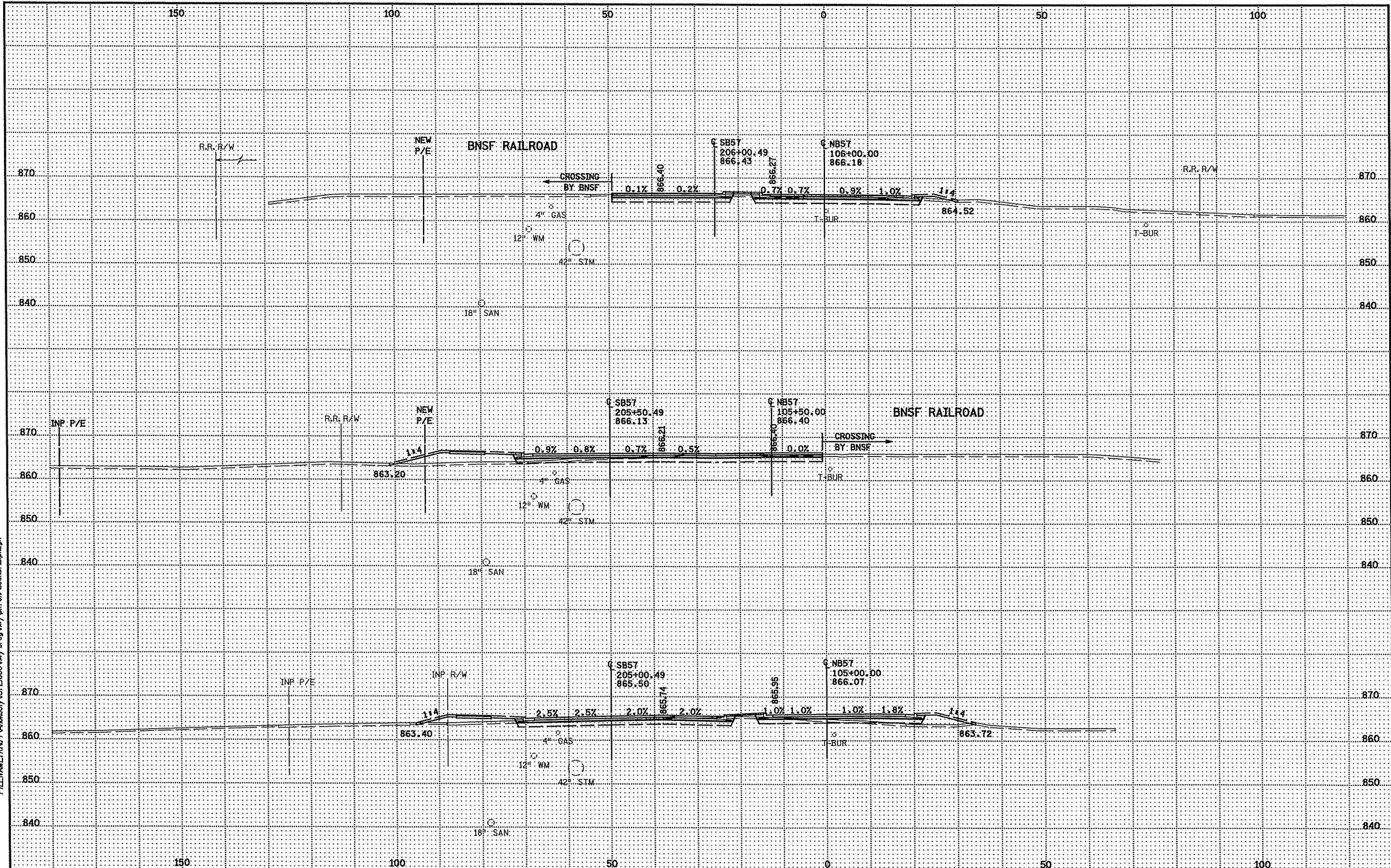
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 CSAH 57 RECONSTRUCTION

CROSS SECTIONS
 NB57 STA. 104+50.00 TO NB57 STA. 104+76.77

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. X7 of X15 Sheets

DATE: 6/17/2008 TIME: 5:35:48 PM
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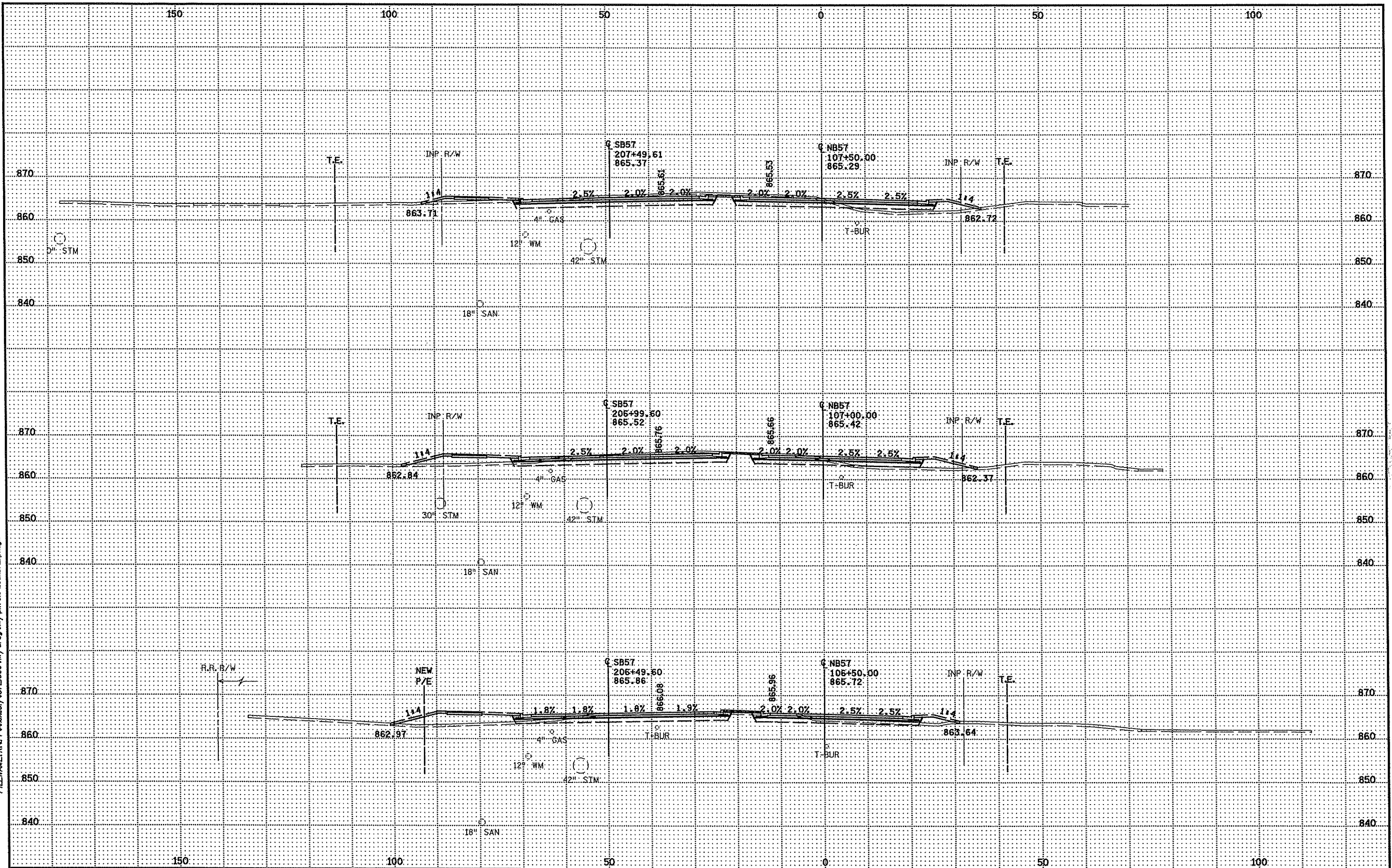
ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

CROSS SECTIONS
 NB57 STA. 105+00.00 TO NB57 STA. 106+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

Sheet No. X8 of X15 Sheets

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DRAWN BY: TJV
CHECKED BY: JMW

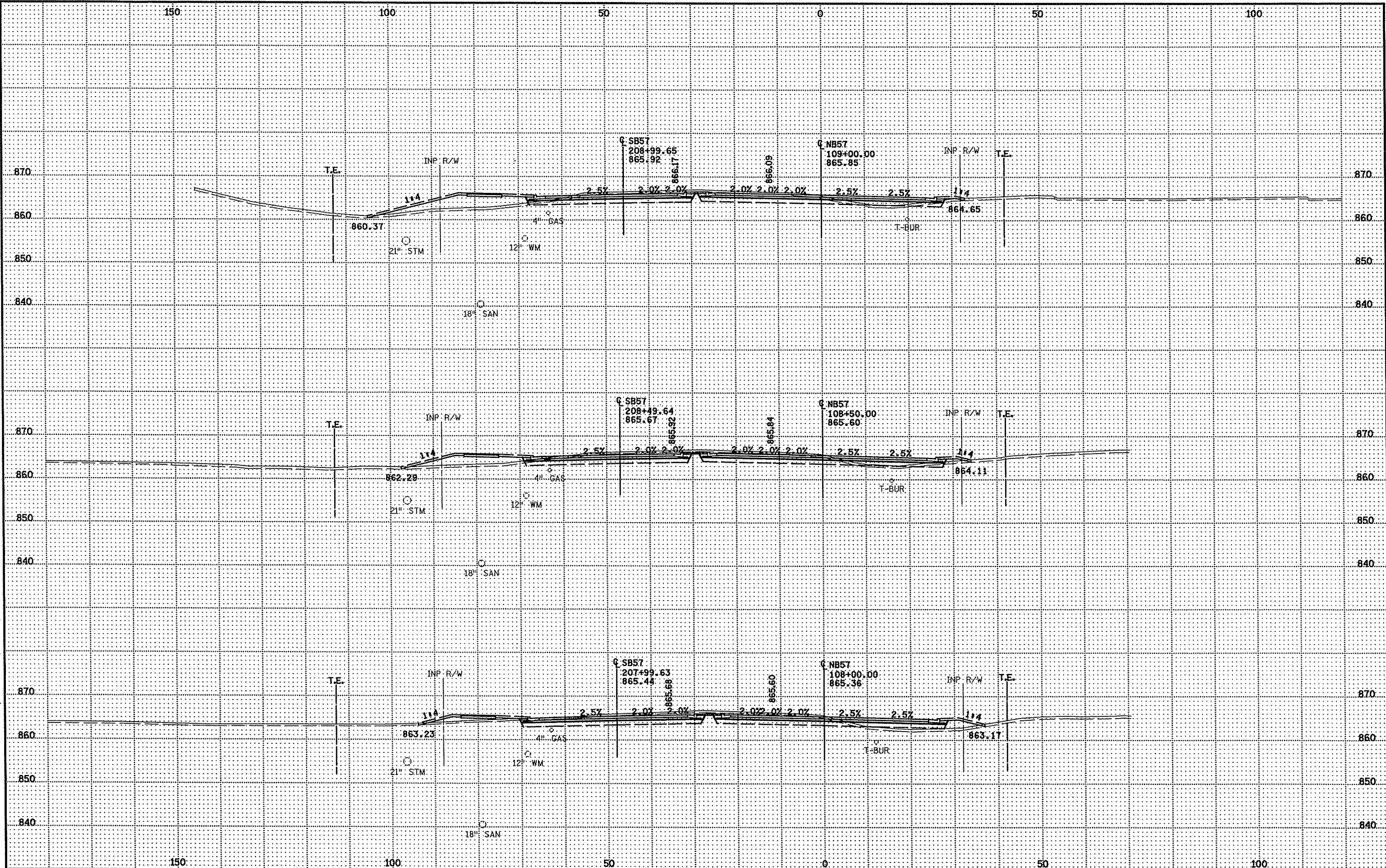
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 106+50.00 TO NB57 STA. 107+50.00

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Sheet No. X9 of X15 Sheets

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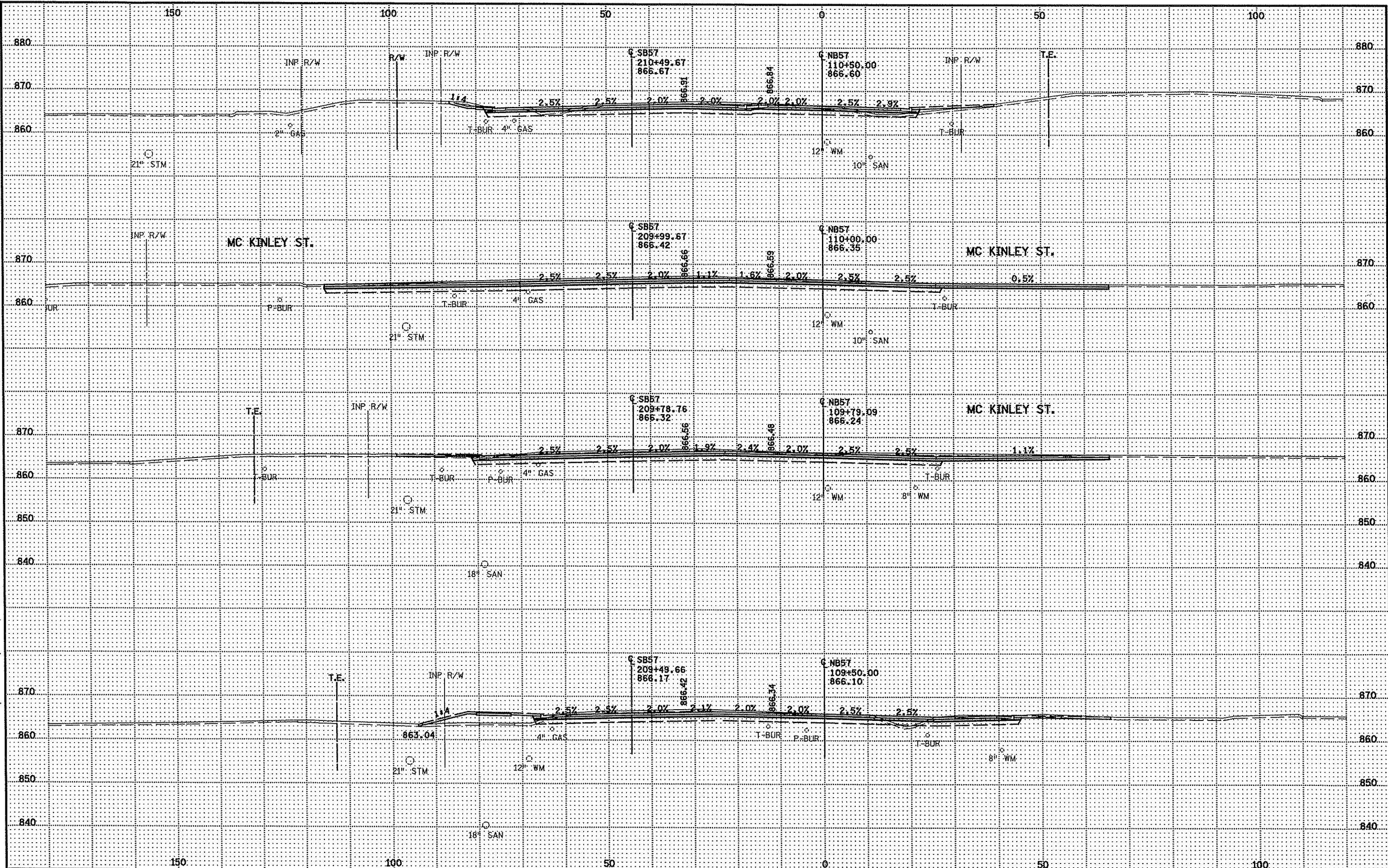
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 108+00.00 TO NB57 STA. 109+00.00

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Sheet No. X10 of X15 Sheets

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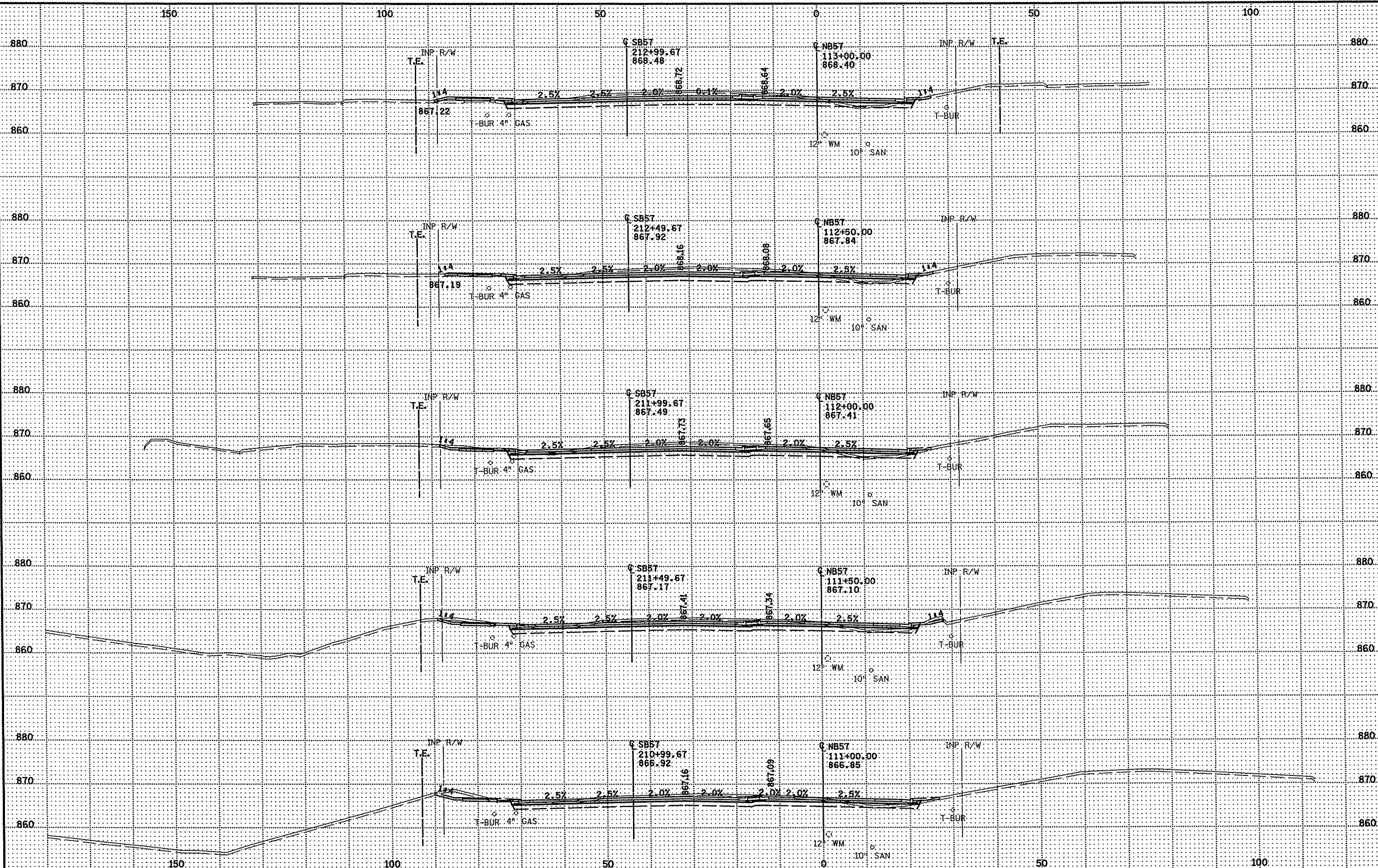
ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 109+50.00 TO NB57 STA. 110+50.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)

Sheet No. X11 of X15 Sheets

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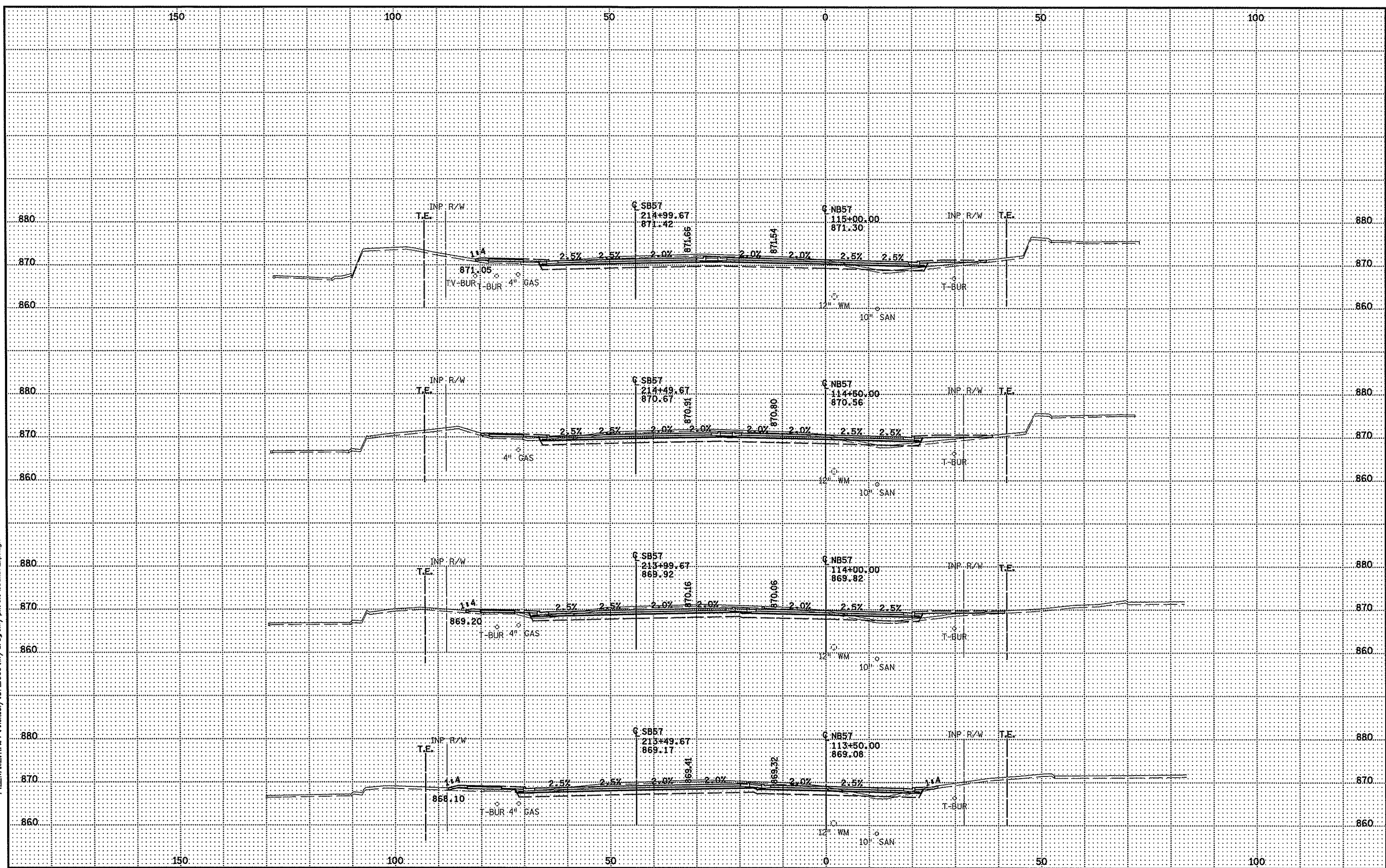
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 111+00.00 TO NB57 STA. 113+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X12 of X15 Sheets

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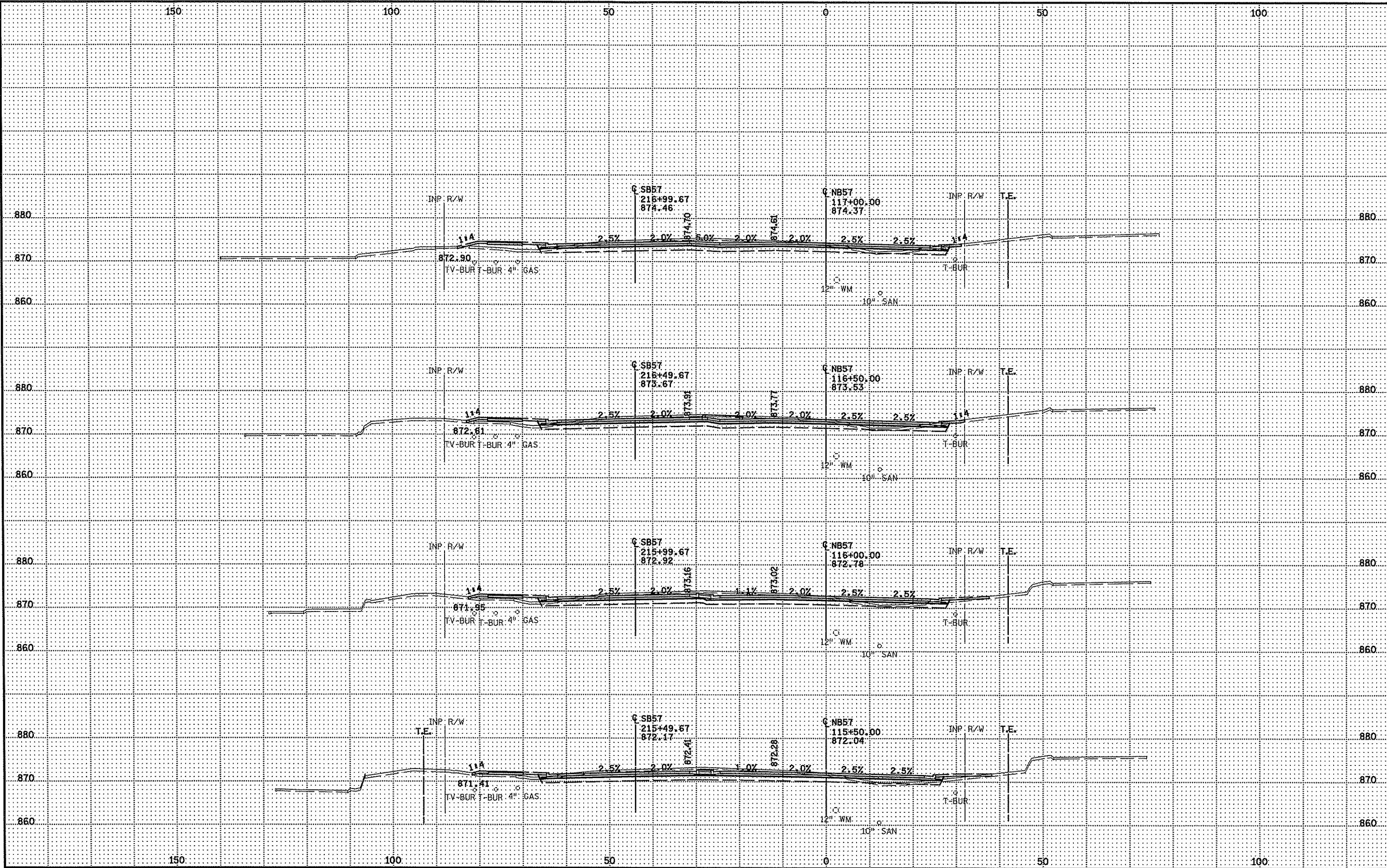


ANOKA COUNTY
 CSAH 57 RECONSTRUCTION

CROSS SECTIONS
 NB57 STA. 113+50.00 TO NB57 STA. 115+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
 Sheet No. X13 of X15 Sheets

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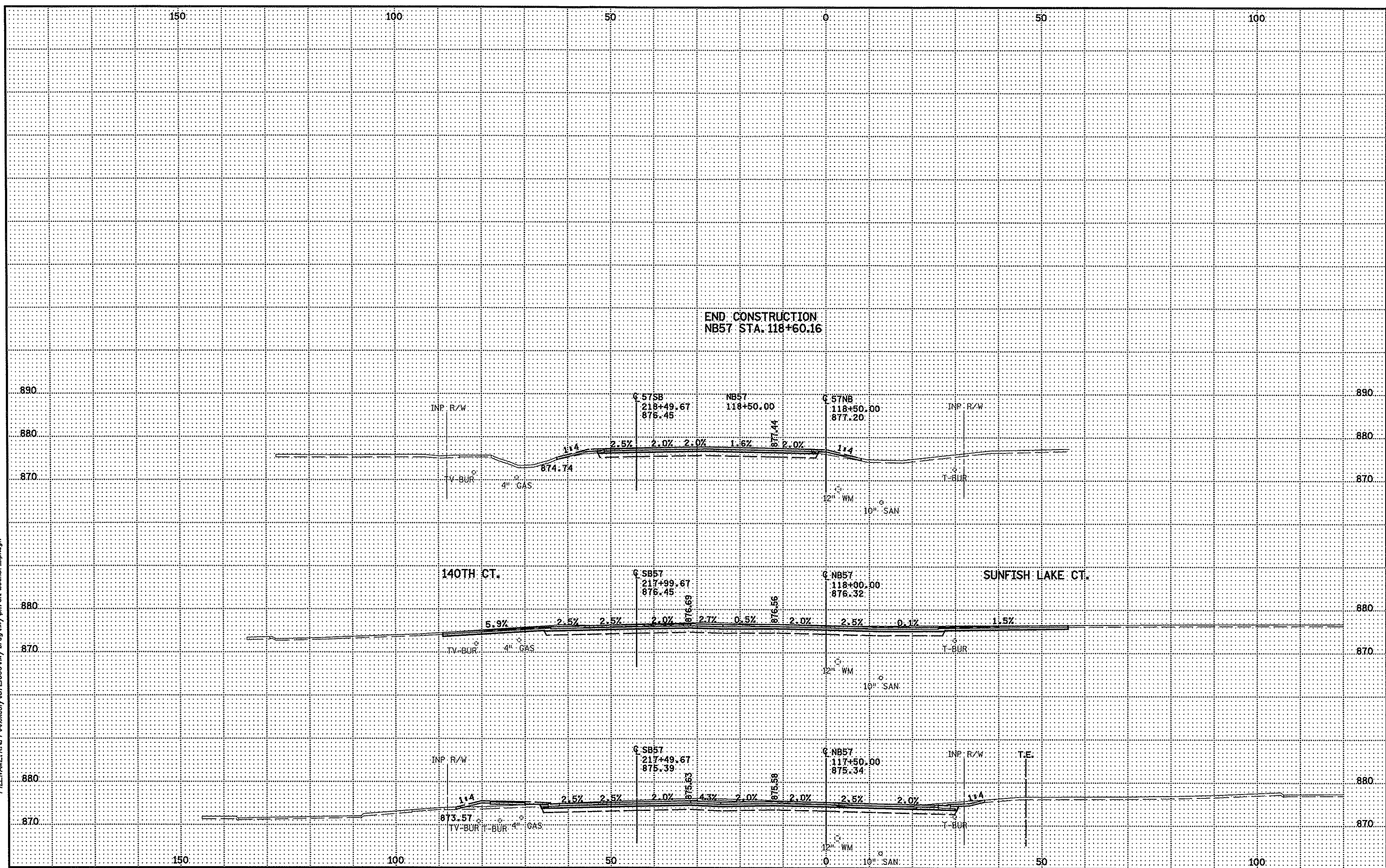
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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 115+50.00 TO NB57 STA. 117+00.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X14 of X15 Sheets

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DRAWN BY: TJV
CHECKED BY: JMW

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ANOKA COUNTY
CSAH 57 RECONSTRUCTION

CROSS SECTIONS
NB57 STA. 117+50.00 TO NB57 STA. 118+50.00

S.A.P. 02-657-01, S.P. 0202-85 (TH 10)
Sheet No. X15 of X15 Sheets