

PLAN SYMBOLS

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

LOWLAND
TIMBER
ORCHARD
BRUSH
NURSERY

CATTLE GUARD

OVERPASS (Highway Over)

UNDERPASS (Highway Under)

BRIDGE

BUILDING (One Story Frame)

F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO

RAILROAD CROSSING BELL

RAILROAD CROSSING GATE

MANHOLE

CATCH BASIN

FIRE HYDRANT

CAST IRON MONUMENT

IRON PIN

GRAVEL PIT

SAND PIT

BORROW PIT

ROCK QUARRY

UTILITY SYMBOLS

POWER POLE LINE

TELEPHONE OR TELEGRAPH

POLE LINE

JOINT TELEPHONE & POWER

ON POWER POLES

ON TELEPHONE POLES

ANCHOR

STEEL TOWER

STREET LIGHT

PEDESTAL (Cable Terminal)

GAS MAIN

WATERMAIN

TELEPHONE CABLE IN CONDUIT

ELECTRIC CABLE IN CONDUIT

TELEPHONE MANHOLE

ELECTRIC MANHOLE

BURIED TELEPHONE CABLE

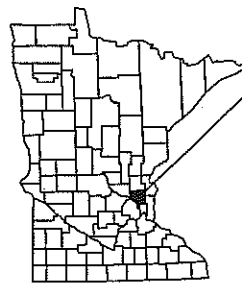
BURIED ELECTRIC CABLE

SEWER (Sanitary or Storm)

SEWER MANHOLE

SCALES

PLAN
0' 100'
PROFILE
HORIZONTAL
0' 100'
VERTICAL
0' 10'
X-SECTIONS
HORIZONTAL
0' 10'
VERTICAL
0' 10'
INDEX MAP
0' 2000'



PROJECT LOCATION

CITY OF EAST BETHEL
CITY OF OAK GROVE
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 29.30
TOWNSHIP 33 NORTH
RANGE 23 WEST

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

CONSTRUCTION PLAN FOR GRADING, AGG.BASE, CONCRETE & BITUMINOUS SURFACING, CURB AND GUTTER

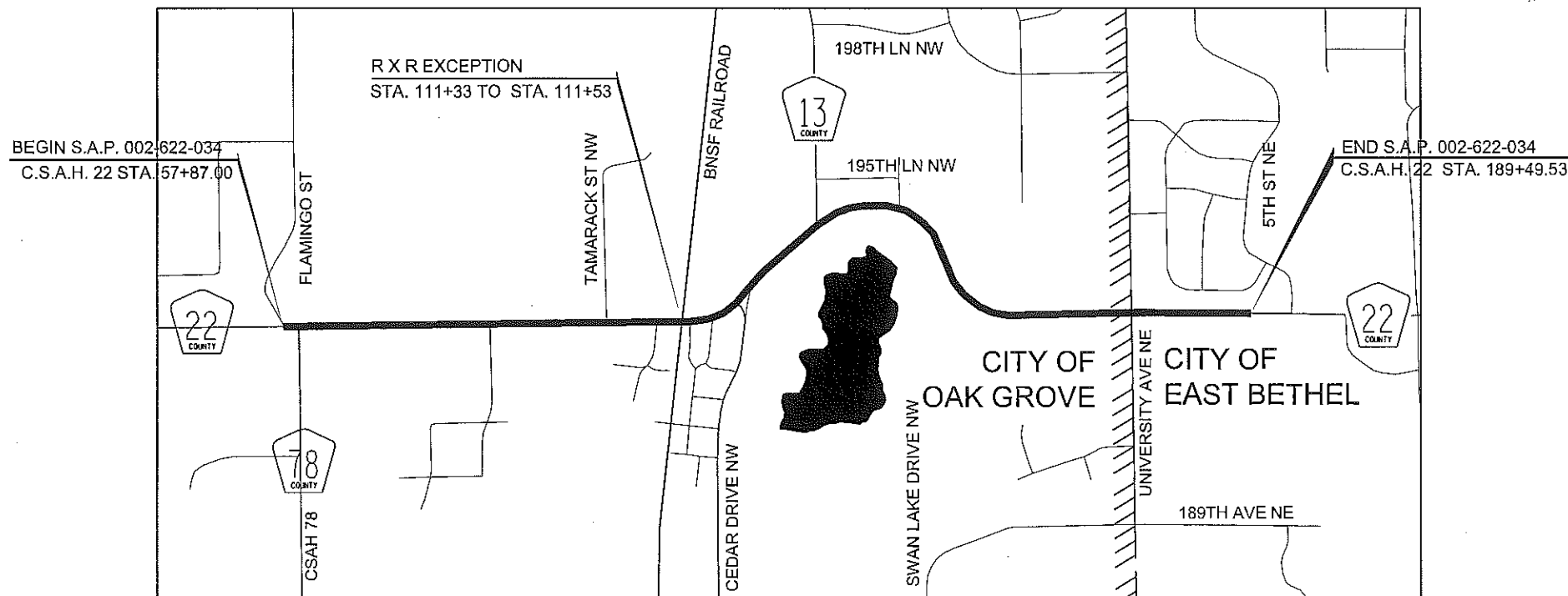
LOCATED ON C.S.A.H. 22 BETWEEN FLAMINGO ST (NORTH) AND 1365' E OF UNIVERSITY AVE

COUNTY PROJ. NO. S.A.P. 002-622-034

C.S.A.H. 22

GROSS LENGTH	13,162.53 FEET	2.492 MILES
BRIDGES-LENGTH	0.00 FEET	0.000 MILES
EXCEPTIONS-LENGTH	20.00 FEET	0.003 MILES
NET LENGTH	13,142.43 FEET	2.489 MILES

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY 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."



Functional Classification A MINOR COLLECTOR

No. of Traffic Lanes 2 No. of Parking Lanes 0

Design Speed 55 STA. 57+87 TO STA. 87+00

Design Speed 50 STA. 87+00 TO STA. 179+25

Design Speed 55 STA. 179+25 TO STA. 189+49

Based on Stopping Sight Distance N/A

Height of eye 3.5' Height of object 2.0'

Design Speed not achieved at:

STA. 113+16 TO STA. 119+47 MPH 50

STA. 123+50 TO STA. 125+24 MPH 50

STA. 133+69 TO STA. 139+32 MPH 50

STA. 141+28 TO STA. 151+16 MPH 50

STA. 154+28 TO STA. 164+34 MPH 50

DESIGN DESIGNATION

CESAL 35 6,226,000

R VALUE 30

ADT (2015) = 7,190

Proj. ADT (2035) = 11,460

Proj. HCADT (2035) = 987

Soil Factor NA

10 TON DESIGN

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/05/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

TITLE SHEET

Sheet 1 of 210 Sheets

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

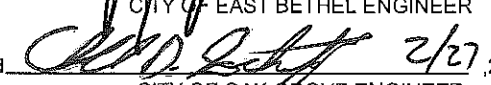
INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3	STATEMENT OF ESTIMATED QUANTITIES BASIS OF PLANNED QUANTITIES, STANDARD PLATES INDEX OF TABULATION CHART
4 - 8	TABULATIONS AND UTILITY CONTACTS
9	SOILS AND CONSTRUCTION NOTES
10 - 11	EARTHWORK SUMMARY
12	EARTHWORK BALANCE
13 - 17	ALIGNMENT TABULATION AND PLAN
18 - 21	MISC. DETAILS / STRIPING GROOVE DETAILS
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145 - 150	SUPERELEVATION PLAN
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163 - 164	SWPPP NARRATIVE
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171 - 209	CROSS SECTIONS CSAH 22
210	CROSS SECTIONS CSAH 13

THIS PLAN CONTAINS 210 SHEETS

Approved  2/27/15
ANOKA COUNTY ENGINEER

Approved  2/27/15
CITY OF EAST BETHEL ENGINEER

Approved  2/27/15
CITY OF OAK GROVE ENGINEER

REVIEWED FOR COMPLIANCE DISTRICT STATE AID ENGINEER

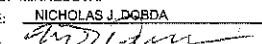
WITH STATE AID AND

FEDERAL AID RULES/POLICY

APPROVED FOR STATE AID FUNDING 3/2/15
STATE AID 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.

PRINT NAME: NICHOLAS J. DOBDA

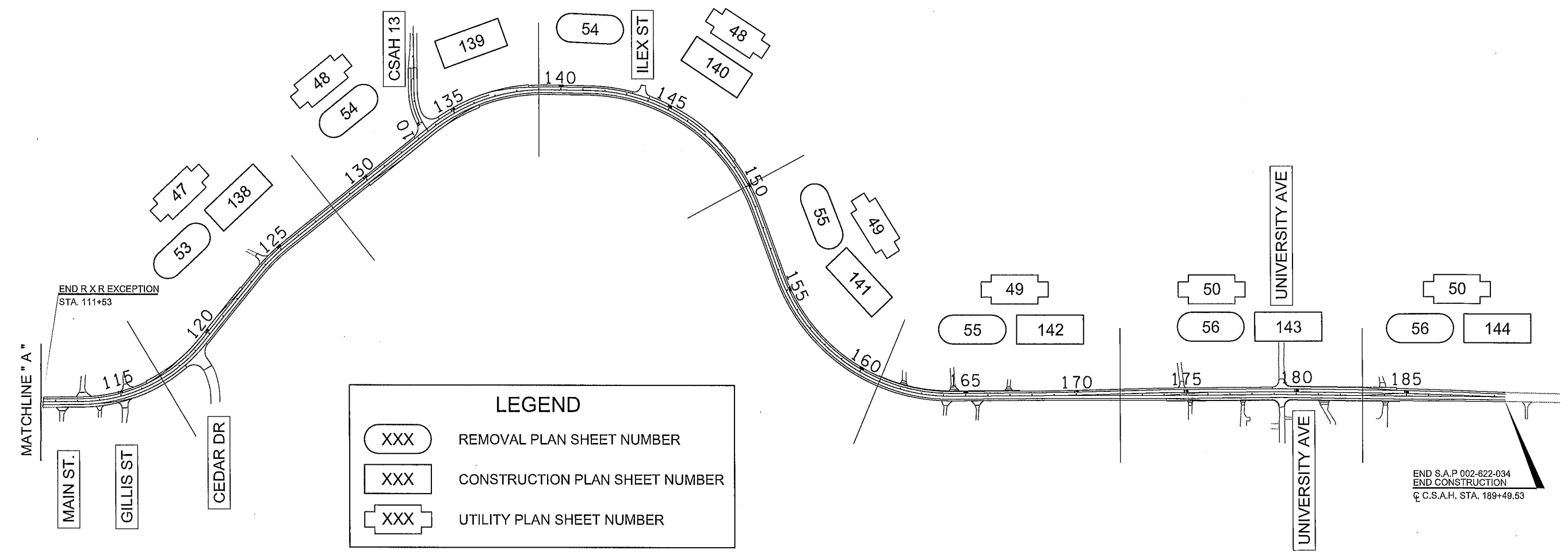
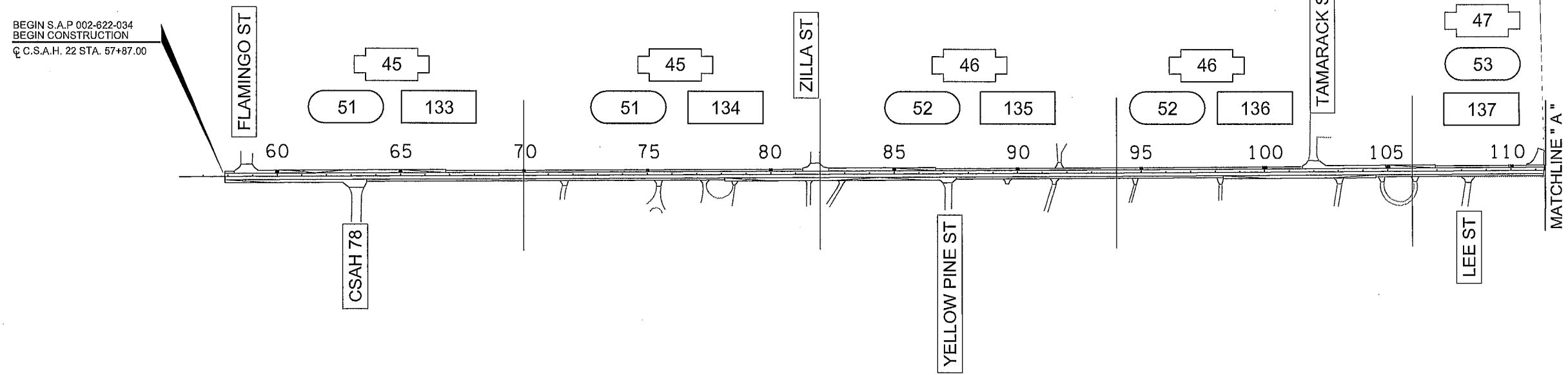
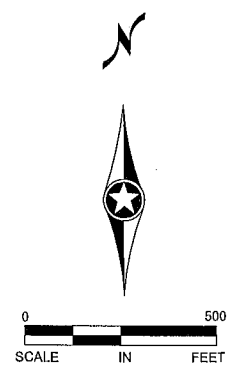
SIGNATURE: 

DATE: 2-27-15 LICENSE NO. 49046

NAME: P:\02-622-34\Plan\0262234_TITLE.dgn 02/27/2015 9:05:54 AM

BEGIN S.A.P 002-622-034
BEGIN CONSTRUCTION
C.C.S.A.H. 22 STA. 57+87.00

BEGIN R.X.R EXCEPTION
STA. 111+33



LEGEND

XXX REMOVAL PLAN SHEET NUMBER

XXX CONSTRUCTION PLAN SHEET NUMBER

XXX UTILITY PLAN SHEET NUMBER

NO	DATE	BY	CHKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_GL.dgn					
03/02/2015 9:01:08 AM					

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *Nicholas J. Dobda*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

 **ANOKA COUNTY**
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

GENERAL LAYOUT
STA 57+87.00 TO 189+49.53
Sheet 2 of 210 Sheets

TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	SAP 002-622-034	
					PARTICIPATING LOCAL FUNDS	NON-PARTICIPATING FUNDS
					QUANTITY	QUANTITY
[1]	2013.601	SURVEY EQUIPMENT	LUMP SUM	1	1	
	2021.501	MOBILIZATION	LUMP SUM	1	0.998	0.002
	2031.501	FIELD OFFICE TYPE D	EACH	1	1	
A	2101.501	CLEARING	ACRE	0.57	0.57	
A	2101.502	CLEARING	TREE	88	88	
A	2101.506	GRUBBING	ACRE	0.57	0.57	
A	2101.507	GRUBBING	TREE	70	70	
K [9]	2102.502	PAVEMENT MARKING REMOVAL	LIN FT	3215	3215	
B	2104.501	REMOVE PIPE CULVERTS	LIN FT	1069	1069	
B , [2]	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	1744	1744	
B , [2]	2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	688	688	
M [10]	2104.523	SALVAGE SIGN TYPE C	EACH	98		98
M [10]	2104.523	SALVAGE SIGN TYPE D	EACH	2		2
M [10]	2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	2		2
[10] , [13]	2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	1		1
EWB , D , [3]	2105.501	COMMON EXCAVATION	CU YD	4776	4776	
EWB	2105.507	SUBGRADE EXCAVATION	CU YD	2367	2367	
EWB , D , [3]	2105.523	COMMON BORROW (LV)	CU YD	4250	4250	
AGB(1-2)	2105.607	HAUL AND STOCKPILE EXCESS MATERIAL	CU YD	2113	2113	
EWB	2105.607	EXCAVATION SPECIAL (LV)	CU YD	874	874	
C	2112.603	SHOULDER PREPARATION	LIN FT	8306	8306	
D	2112.604	SUBGRADE PREPARATION	SQ YD	2343	2343	
	2130.501	WATER	M GAL	9	9	
D	2211.501	AGGREGATE BASE CLASS 5	TON	210	210	
AGB(1-3)	2211.502	AGGREGATE BASE (LV)CLASS 5	CU YD	812	812	
D	2211.503	AGGREGATE BASE CLASS 5 (CV)	CU YD	1090	1090	
B	2215.501	FULL DEPTH RECLAMATION	SQ YD	39956	39956	
D	2221.503	SHOULDERING BASE AGGREGATE (CV), CLASS 5	CU YD	460	460	
B , [11]	2232.501	MILL BITUMINOUS SURFACE (2.0") MAINLINE	SQ YD	30029	30029	
B	2232.501	MILL BITUMINOUS SURFACE (2.0") JOINTS	SQ YD	214	214	
E	2301.504	PLACE CONCRETE PAVEMENT 6"	SQ YD	30081	30081	
E	2301.504	PLACE CONCRETE PAVEMENT 8"	SQ YD	10178	10178	
E	2301.511	STRUCTURAL CONCRETE	CU YD	7281	7281	
E	2301.602	1.0" DOWEL BAR ASSEMBLY (EPOXY COATED)	EACH	5120	5120	
E	2302.608	SUPPLEMENTAL REINF BARS (EPOXY COATED NO. 4)	POUND	1025	1025	
F	2367.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1806	1806	
F	2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,B)	TON	526	526	
F	2360.501	TYPE SP 12.5 WEARING COURSE MIX (4,E)	TON	5760	5760	
C , F	2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (4,B)	TON	1313	1313	
E	2411.507	CONCRETE FLUME	EACH	5	5	
E	2501.511	15" CS PIPE CULVERT	LIN FT	692	692	
E	2501.511	15" RC PIPE CULVERT CLASS 5	LIN FT	104	104	
E	2501.515	15" CS PIPE APRON	EACH	24	24	
E	2501.567	15" RC SAFETY APRON & GRATE DES 3128	EACH	2	2	
H	2511.501	RANDOM RIPRAP CLASS II	CU YD	20	20	
E	2531.501	CONCRETE CURB & GUTTER DESIGN B424	LIN FT	2018	2018	
E , [5]	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	172	172	
F	2535.501	BITUMINOUS CURB (MODIFIED)	LIN FT	490	490	
G	2540.602	INSTALL MAILBOX SUPPORT	EACH	21	21	
G	2540.602	RELOCATE MAILBOX	EACH	21	21	
M , [10]	2550.602	RELOCATE SIGN	EACH	1	1	
	2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1	1	
K [9]	2563.601	TRAFFIC CONTROL (STAGE 1)	LUMP SUM	1	1	
K [9]	2563.601	TRAFFIC CONTROL (STAGE 2)	LUMP SUM	1	1	
K [9]	2563.601	TRAFFIC CONTROL (STAGE 3)	LUMP SUM	1	1	
K [9]	2563.601	TRAFFIC CONTROL (STAGE 4)	LUMP SUM	1	1	
K [9]	2563.601	TRAFFIC CONTROL (STAGE 5)	LUMP SUM	1	1	
K [9]	2563.601	TRAFFIC CONTROL (STAGE 6)	LUMP SUM	1	1	
J [8]	2563.601	DETOUR SIGNING	LUMP SUM	1	1	
K [9]	2563.602	RAISED PAVEMENT MARKER TEMPORARY	EACH	483	483	
K [9] [12]	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	14	14	
M [10]	2564.531	SIGN PANELS TYPE C	SQ FT	439.46	439.46	
M [10]	2564.537	INSTALL SIGN TYPE D	EACH	2	2	
M [10]	2564.537	INSTALL SIGN TYPE SPECIAL	EACH	2	2	
M [10]	2564.550	DELINEATOR TYPE X4-13	EACH	19	19	
M [10]	2564.552	END OF ROADWAY MARKER X4-2	EACH	8	8	
H	2573.502	SILT FENCE, TYPE MS	LIN FT	8492	8492	
H	2573.515	FILTER BERM TYPE 5	LIN FT	180	180	
H	2573.533	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	375	375	
	2573.535	STABILIZED CONSTRUCTION EXT	LUMP SUM	1	1	
	2573.550	EROSION CONTROL SUPERVISOR	LUMP SUM	1	1	
H , [4]	2573.580	CULVERT END CONTROLS	EACH	19	19	
H	2574.508	FERTILIZER TYPE 3	POUND	1405.3	1405.3	
D	2574.525	COMMON TOPSOIL BORROW	CU YD	1775	1775	
H	2575.501	SEEDING	ACRE	4.68	4.68	
H	2575.502	SEED MIXTURE 25-141	POUND	211.2	211.2	
H	2575.502	SEED MIXTURE 25-151	POUND	131.8	131.8	
H	2575.511	MULCH MATERIAL TYPE 3	TON	9.4	9.4	
H	2575.519	DISK ANCHORING	ACRE	4.7	4.7	
H	2575.523	EROSION CONTROL BLANKETS CATEGORY 0	SQ YD	4015	4015	
H	2575.571	RAPID STABILIZATION METHOD 3	MGAL	28	28	
[9]	2581.501	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT	5960	5960	
L [6] [7] [10]	2582.501	PAVT MSSG (RR XING) -PREFORMED THERMOPLASTIC	EACH	2	2	
K [9]	2582.502	4" SOLID LINE WHITE PAINT	LIN FT	7065	7065	
K [9]	2582.502	4" SOLID LINE YELLOW PAINT	LIN FT	8330	8330	
L [6] [7] [10]	2582.502	24" SOLID LINE WHITE-PREFORMED THERMOPLASTIC	LIN FT	25	25	
L [6] [7] [10]	2582.502	24" SOLID LINE YELLOW - PREFORMED THERMOPLASTIC	LIN FT	393	393	
L [6] [7] [10]	2582.502	4" SOLID LINE WHITE-EPOXY-GR IN	LIN FT	31915	31915	
L [6] [7] [10]	2582.502	4" BROKEN LINE WHITE-EPOXY-GR IN	LIN FT	200	200	
L [6] [7] [10]	2582.502	4" SOLID LINE YELLOW-EPOXY-GR IN	LIN FT	4150	4150	
L [6] [7] [10]	2582.502	4" BROKEN LINE YELLOW-EPOXY-GR IN	LIN FT	1180	1180	
L [6] [7] [10]	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY-GR IN	LIN FT	12690	12690	

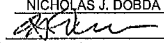
NOTES:
[1] SURVEY EQUIPMENT - SEE SPEC. FOR REQUIREMENTS. 2 - 3" ROBOTIC TOTAL STATIONS AND ALL CABLES, 2 - MULTITRACK TARGETS, 2 - TELESCOPIC RODS, 3 - TSC3 CONTROLLERS WITH ACCESS INTERNAL RADIOS. 3-TSC3 RANGE POLE BRACKETS, SPECIALIZED APPLICATION ROADS PERPETUAL LICENSES AND 2-WOOD FIBERGLASS TRIPODS.
[2] BITUMINOUS DRIVEWAYS
[3] SEE TAB D AND EARTHWORK SUMMARY PAGE'S 10 - 11 OF THESE PLANS FOR TABULATIONS. STOCK PILLED MATERIAL IS REQUIRED TO HAVE PERIMETER EROSION CONTROL (SILT FENCE OR SEDIMENT CONTROL LOGS) SURROUNDING BASE OF STOCKPILE. THE PERIMETER EROSION CONTROL SHALL BE INCIDENTAL TO ITEM HAUL / STOCKPILE EXCESS MATERIAL.
[4] INSTALLED AT HIGH INVERT.
[5] CONCRETE APRONS BEHIND CONCRETE CURB.
[6] EPOXY STRIPING ITEMS SHALL BE REGULAR EPOXY PAINT AND BEADS IN A GROOVE, NOT WET REFLECTIVE EPOXY.
[7] THE CONTRACTOR SHALL GRIND THE CONCRETE FORMING A GROOVE FOR STRIPING ITEMS. GROVES MUST BE CLEANED PRIOR TO STRIPING. CONCRETE GROVING DETAIL CAN BE FOUND ON PAGE 21 GRINDING AND CLEANING OF GROVES SHALL BE INCIDENTAL TO THE STRIPING ITEMS. NO FURTHER PAYMENT FOR THESE OPERATIONS WILL BE MADE.
[8] SEE PAGE 58 OF THESE PLANS FOR DETOUR TABULATION
[9] SEE PAGE 132 OF THESE PLANS FOR STAGE TABULATION
[10] SEE PAGES 151 AND #PST OF THESE PLANS FOR PERMANENT SIGNING AND STRIPING TABULATION
[11] VARIABLE MILL UP TO 2".
[12] PORTABLE CHANGEABLE MESSAGE SIGNS ARE BROKEN OUT SEPARATELY FROM TRAFFIC CONTROL LUMP SUM AND PAID FOR BY THE UNIT DAY.
[13] SEE PAGES 152 - 154 NOTE " 5 AND 6 " , SALVAGE SIGN TYPE C AND D " TO ANOKA COUNTY " - " TO THE CITY " AND TAB PAGE #PST

BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD / LIFT
2360.501	TYPE SP12.5 WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2360.502	TYPE SP12.5 NON-WEARING COURSE MIXTURE	115 LBS / SQ YD / IN
2575.502	SEED MIXTURE 25-141	59 LBS / ACRE
2575.502	SEED MIXTURE 25-151	120 LBS / ACRE
2575.511	MULCH MATERIAL TYPE 3	2 TONS / ACRE
2575.532	FERTILIZER TYPE 3 (10-20-20)	300 LBS / ACRE
2575.571	RAPID STABILIZATION METHOD 3	6MGAL / ACRE

THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.	
STANDARD PLATES	
PLATE NO.	DESCRIPTION
1070M	SUPPLEMENTAL PAVEMENT REINFORCEMENT
1103K	TYPICAL DOWEL BAR ASSEMBLY (2 SHEETS)
1150R	CONCRETE HEADER JOINTS (2 SHEETS)
1210G	CONCRETE PAVEMENT ADJACENT TO RAILWAY CROSSING
3000L	REINFORCED CONCRETE PIPE (5 SHEETS)
3006G	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3022C	PRECAST CONCRETE SAFETY APRON (3 SHEETS)
3040F	CORRUGATED METAL PIPE CULVERT (STANDARD 2-2/3" X 1/2" CORRUGATION)
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123J	METAL APRON FOR C.S. PIPE
3145G	CONCRETE PIPE TIES
7000E	INTEGRANT CURBS (DESIGN B, DESIGN V AND DESIGN D)
7100H	CONCRETE CURB AND GUTTER (DESIGN B and DESIGN V)
8000I	STANDARD BARRICADES
8150C	INSTALLATION OF CULVERT MARKERS
9102E	TURF ESTABLISHMENT AREAS (AT PIPE CULVERT ENDS)
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

INDEX OF TABULATION CHARTS		
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SC1	SOILS AND CONSTRUCTION NOTES	9
EW1	EARTHWORK & AGGREGATE TABULATION 57+87 - 65+00 (FLAMINGO ST)	10
EW2	EARTHWORK & AGGREGATE TABULATION 169+16 - 189+49 (UNIVERSITY AVE)	10
EWS	EARTHWORK SUMMARY (BOTH AREAS)	10 - 11
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AGB2	AGGREGATE SUMMARY 169+16 - 189+49 (UNIVERSITY AVE)	11
AGB3	AGGREGATE SUMMARY - CEDAR DR N	11
EWB	EARTHWORK BALANCE	12
A	CLEAR AND GRUB	4
B	REMOVALS	4
C	TEMPORARY WIDENING	5
D	GENERAL CONSTRUCTION SOILS	5
E	CONCRETE & CULVERTS	6
F	BITUMINOUS SUMMARY	7
G	MAILBOXES	7
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I	PRIVATE UTILITY OWNERS	8
J	DETOUR SIGNING TABULATION	58
K	TEMPORARY STAGING PAVEMENT MARKING TABULATION	132
L	PERMANENT PAVEMENT MARKING TABULATION	151
M	PERMANENT SIGNING TABULATION	157-158

1	7/9/2014	JF	NJD	-	ADDED QTY TO SIGN TYPE C FOR 45 MPH SPEED ADVISORYS
1	7/9/2014	JF	NJD	-	ADDED DESCRIPTION TO NOTE [1]
1	7/23/2014	JF	NJD	-	BITUMINOUS DESIGNATIONS CHANGED TO REFLECT (4,E) AND (4,B)
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_SEQ.dgn 03/02/2015 10:52:42 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: 
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/08/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STATEMENT OF ESTIMATED QUANTITIES
Sheet 3 of 210 Sheets

CLEARING & GRUBBING SPEC (2101)								A	
ALIGNMENT	STATION	TO	STATION	OFFSET		CLEARING	GRUBBING	CLEARING	GRUBBING
				LEFT	RIGHT	(TREE)	(TREE)	(ACRE)	(ACRE)
RAILROAD TRACKS									
PE22_1B	122+42			-53.0		5	1		
PE22_1B	136+00			-49.0		5	1		
PE22_1B	136+03			-41.0		5	1		
PE22_1B	136+12			-43.0		5	1		
PE22_1B	141+54				56	1	1		
PE22_1B	141+55				57	1	1		
PE22_1B	141+94				55	1	1		
PE22_1B	142+69				52	1	1		
PE22_1B	142+74				49	1	1		
PE22_1B	142+76				55	1	1		
PE22_1B	142+78				53	1	1		
PE22_1B	142+79				49	1	1		
PE22_1B	142+79				50	1	1		
PE22_1B	150+12	151+84		-60.0				0.11	0.11
PE22_1B	152+10			-58.0		1	1		
PE22_1B	152+19			-53.0		1	1		
PE22_1B	152+21			-58.0		1	1		
PE22_1B	152+39			-58.0		1	1		
PE22_1B	152+41			-59.0		1	1		
PE22_1B	152+53	153+44		-60.0				0.06	0.06
PE22_1B	161+31	TO 163+93			60			0.18	0.18
PE22_1B	161+45			-51.0		1	1		
PE22_1B	161+48			-48.0		1	1		
PE22_1B	161+82			-58.0		1	1		
PE22_1B	162+26			-57.0		1	1		
PE22_1B	162+53			-57.0		1	1		
PE22_1B	164+34	TO 164+79			60			0.05	0.05
PE22_1B	164+87			-52.0		1	1		
PE22_1B	165+76	TO 167+55			60			0.17	0.17
PE22_1B	174+88				35	1	1		
PE22_1B	175+52				32	1	1		
PE22_1B	176+06				32	1	1		
PE22_1B	176+21				46	1	1		
PE22_1B	176+47				42	1	1		
PE22_1B	176+47				52	1	1		
PE22_1B	177+01				47	1	1		
PE22_1B	177+13				47	1	1		
PE22_1B	180+31				40	1	1		
PE22_1B	180+34				43	1	1		
PE22_1B	180+37				42	1	1		
PE22_1B	181+89				43	1	1		
PE22_1B	182+08				42	1	1		
PE22_1B	182+28				38	1	1		
PE22_1B	182+57			-55.0		1	1		
PE22_1B	184+56				50	1	1		
PE22_1B	184+56				53	1	1		
PE22_1B	184+73				51	2	1		
PE22_1B	185+18				47	1	1		
PE22_1B	185+21				51	1	1		
PE22_1B	185+34				46	1	1		
PE22_1B	185+37				52	1	1		
PE22_1B	185+45				48	1	1		
PE22_1B	185+48				53	1	1		
PE22_1B	185+55				42	1	1		
PE22_1B	185+59				45	1	1		
PE22_1B	185+61				49	1	1		
PE22_1B	188+61				57	1	1		
PE22_1B	188+82				54	1	1		
PE22_1B	188+82				56	2	1		
PE22_1B	189+49				52	1	1		
PN13_1	10+60			-101.0		1	1		
PN13_1	10+66			-98.0		1	1		
PN13_1	10+66				39	1	1		
PN13_1	10+79				38	1	1		
PN13_1	10+83			-87.0		1	1		
PN13_1	10+89			-71.0		1	1		
PN13_1	11+00			-74.0		1	1		
PN13_1	11+51			-49.0		1	1		
PN13_1	11+68			-53.0		1	1		
PN13_1	11+74			-52.0		1	1		
PN13_1	11+75			-48.0		1	1		
PN13_1	11+85			-50.0		1	1		
PN13_1	11+87			-53.0		1	1		
PN13_1	12+46			-49.0		1	1		
PN13_1	12+48			-45.0		1	1		
PROJECT TOTAL						88	70	0.57	0.57
CLEARING & GRUBBING GENERAL NOTES: TREES WITHIN THE COUNTY R / W WILL BE DESIGNATED FOR REMOVAL BY THE ENGINEER. REMOVAL OF MISCELLANEOUS SHRUBS AND LANDSCAPING SHALL BE CONSIDERED INCIDENTAL									

REMOVALS, SAWING, MILLING AND RECLAIM									B
ALI.	LT / RT	STATION TO STATION	REMOVE (SPEC. 2104)	REMOVE (SPEC. 2104)	SAWING (SPEC. 2104)	MILLING (SPEC. 2232)	MILLING (SPEC. 2232)	RECLAIM (SPEC. 2215)	NOTES
			PIPE CULVERT	BIT. PAVEMENT	BIT. PAVEMENT	BIT. SURFACE MAINLINE (2")	BIT. SURFACE JOINTS (2")	BIT. PAVEMENT	
			(LIN FT)	(SQ YD)	(LIN FT)	(SQ YD)	(SQ YD)	(SQ YD)	
PE22_1B	LT / RT	57+87			16		7		[1]
PE22_1B	LT / RT	57+87 - 111+33						4079	[11]
PE22_1B	LT / RT	57+87 - 111+33						12863	[10]
PE22_1B	LT	58+75					21		[5]
PE22_1B	RT	63+21					27		[5]
PE22_1B	LT / RT	65+00 - 111+23				13355			[3]
PE22_1B	RT	71+65		56	20				[4]
PE22_1B	RT	75+25 - 75+65	40						[9]
PE22_1B	RT	76+81 - 78+71	190						[9]
PE22_1B	RT	77+31		48	12				[4]
PE22_1B	RT	81+35 - 81+75	40						[9]
PE22_1B	LT	81+79					16		[5]
PE22_1B	RT	87+15					17		[5]
PE22_1B	RT	89+57		48	13				[4]
PE22_1B	RT	91+32 - 91+72	40						[9]
PE22_1B	RT	91+50		43	13				[4]
PE22_1B	LT	91+60 - 91+90	40						[9]
PE22_1B	LT	91+71		53	15				[4]
PE22_1B	RT	94+58 - 94+98	40						[9]
PE22_1B	RT	98+00 - 98+42	42						[9]
PE22_1B	RT	98+24		46	16				[4]
PE22_1B	LT	102+00					20		[5]
PE22_1B	RT	102+81 - 103+31	50						[9]
PE22_1B	RT	103+07		63	16				[4]
PE22_1B	RT	104+77		48	14				[4]
PE22_1B	RT	106+11		47	13				[4]
PE22_1B	RT	108+02 - 108+62	60						[9]
PE22_1B	RT	108+27		90	24				[4]
PE22_1B	LT / RT	111+33			43		19		[1]
RAILROAD TRACKS									
PE22_1B	LT / RT	111+53			46		20		[1]
PE22_1B	LT / RT	111+53 - 189+49						536	[11]
PE22_1B	LT / RT	111+53 - 189+49						22880	[2]
PE22_1B	LT / RT	111+53 - 169+16				16674			[3]
PE22_1B	LT	113+20		114	34				[4]
PE22_1B	RT	114+00		49	14				[4]
PE22_1B	LT	115+05 115+55	50						[9]
PE22_1B	LT	115+30		87	23				[4]
PE22_1B	RT	119+00					20		[5]
PE22_1B	LT	124+10	50	145	24				[4]
PE22_1B	LT	161+79 - 162+39	60						[8]
PE22_1B	LT	162+05		71	20				[4]
PE22_1B	LT	164+07 - 164+67	60						[8]
PE22_1B	RT	164+10		74	21				[4]
PE22_1B	LT	164+35		86	24				[4]
PE22_1B	RT	165+50		81	22				[4]
PE22_1B	LT	166+67 - 167+17	50						[8]
PE22_1B	LT	167+00		56	14				[4]
PE22_1B	LT	174+60 - 175+10	50						[9]
PE22_1B	LT	174+80		47	17				[4]
PE22_1B	RT	175+20		50	16				[4]
PE22_1B	LT	176+65 - 177+15	50						[9]
PE22_1B	RT	177+50		50	13				[4]
PE22_1B	RT	179+40			24		11		[5]
PE22_1B	LT	179+40			24		11		[5]
PE22_1B	RT	181+25		105	39				[4]
PE22_1B	LT	183+90	40	120	22				[4]
PE22_1B	RT	184+10		67	20				[4]
PE22_1B	LT / RT	189+49			16		7		[1]
PN13_1	LT / RT	9+93 - 10+05	117						[7]
PN13_1	LT / RT	12+48			40		18		[6]
PROJECT TOTAL			1069	1744	688	30029	214	40357	
REMOVALS NOTES: [1] MATCH POINT AT BEGIN / END AND AT R/R TRACKS OF PROJECT CSAH 22 [2] FULL DEPTH RECLAIM AREA CSAH 22 EAST OF R/R TRACKS, CSAH 13, NORTH AND SOUTH UNIVERSITY AVE. [3] 2" MILLING MAINLINE FOR 6" CONCRETE OVERLAY. [4] DRIVEWAY REMOVALS [5] JOINT MILL AT MATCH POINT, CITY STREET. [6] MILL JOINT AT MATCH POINT END CSAH 13 [7] EXISTING CULVERT REMOVED. NEW CULVERT TO BE INSTALLED UNDER NEW ALIGNMENT OF CSAH 13. NEW PIPE TO HAVE SAME INVERT ELEVATIONS. [8] PIPE TO BE REMOVED. CONCRETE CURB INSTALLED ON 11' SHOULDER AND EXISTING DITCH TO BE FILLED IN ELIMINATING THE NEED FOR DRIVEWAY CULVERT. [9] EXISTING CMP CULVERT TO BE REMOVED. NEW 15" CS PIPE AND FLARED APRONS TO BE INSTALLED AT SAME INVERT ELEV. [10] FULL DEPTH RECLAIM AREA CSAH 22 WEST OF R/R TRACKS. [11] TEMPORARY WIDENING RECLAIM AREA.									

TEMPORARY WIDENING						C
ALI.	LT / RT	STATION TO STATION	WIDTH	SHOULDER PREP	TYPE SP 12.5 NON WEAR (4,B)	NOTES
			(FT)	(LIN FT)	(TON)	
PE221C	RT	63+74 - 84+30	5	2056	164	[1] [2]
PE221C	LT	66+40 - 81+26	5	1486	119	[1] [2]
PE221C	LT	86+68 - 101+40	5	1472	118	[1] [2]
PE221C	RT	87+46 - 108+38	5	2092	167	[1] [2]
PE221C	LT	106+02 - 108+38	5	236	19	[1] [2]
RAILROAD TRACKS						
PE22_1B	LT	164+34 - 169+16	5	482	38	[1] [2]
PE22_1B	RT	164+34 - 169+16	5	482	38	[1] [2]
PROJECT TOTAL				8,306	663	
TEMPORARY WIDENING NOTES:						
[1] REMOVAL QUANTITY FOR TEMPORARY WIDENING BITUMINOUS INCLUDED IN SHOULDER RECLAMATION						
[2] TEMP WIDENING, 2.5" OF NON WEAR 4,B.						

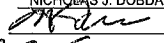
GENERAL CONSTRUCTION SOILS															D
ALIGNMENT	LT/RT	STA.	TO STA.	LENGTH (LIN FT)	WIDTH (FT)	DEPTH (FT)	CU FT	COMMON EXCAVATION	SUBGRADE PREPERATION	GRANULAR BORROW	BASE CLASS 5 [3][4][5][10]	COMMON TOPSOIL BORROW	DRWAY BASE CLASS 5	SHOULDER CLASS 5	
								2105.501 CU YD (CV)	2112.604 SQ YD	2105.521 CU YD (LV)	2211.503 CU YD (CV)	2574.525 CU YD (CV)	2211.501 TON	2221.503 CU YD (CV)	
PE22_1B	LT	57+87	- 111+33	5346	1	0.5	2673							99	[1]
PE22_1B	RT	57+87	- 111+33	5346	1	0.5	2673							99	[1]
PE22_1B	LT	57+87	- 111+33	5346	8	0.0 - 0.33	7057					261			[7]
PE22_1B	RT	57+87	- 111+33	5346	8	0.0 - 0.33	7057					261			[7]
PE22_1B	RT	63+63	- 78+13	1450	8	0.17	1972				73				[10]
PE22_1B	LT	66+84	- 81+29	1445	8	0.17	1965				73				[10]
PE22_1B	RT	71+65											7		[2]
PE22_1B	RT	75+00											7		[2]
PE22_1B	RT	77+31											7		[2]
PE22_1B	RT	78+51											7		[2]
PE22_1B	RT	81+50											7		[2]
PE22_1B	RT	82+90											7		[2]
PE22_1B	RT	87+51	- 98+32	1081	8	0.17	1470				54				[10]
PE22_1B	RT	89+57											7		[2]
PE22_1B	LT	91+10	- 101+64	1044	8	0.17	1420				53				[10]
PE22_1B	RT	91+50											7		[2]
PE22_1B	LT	91+71											7		[2]
PE22_1B	RT	94+80											7		[2]
PE22_1B	RT	98+24											7		[2]
PE22_1B	RT	103+07											7		[2]
PE22_1B	RT	104+52	- 111+33	681	8	0.17	926				34				[10]
PE22_1B	RT	104+77											7		[2]
PE22_1B	RT	106+11											7		[2]
PE22_1B	LT	108+93	- 111+33	440	8	0.17	598				22				[10]
PE22_1B	LT	111+00											7		[2]
RAILROAD TRACKS															
PE22_1B	LT	111+53	- 116+30	477	8	0.17	649				24				[10]
22 & 13	LT-RT	111+53	- 189+49									300			[8]
PE22_1B	RT	111+53	- 174+11	6258	1	0.5	3129							116	[1]
PE22_1B	LT	111+53	- 160+87	4934	1	0.5	2467							91	[1]
PE22_1B	LT	111+53	- 189+49	7796	8	0.0 - 0.33	10291					381			[7]
PE22_1B	RT	111+53	- 189+49	7796	8	0.0 - 0.33	10291					381			[7]
PE22_1B	LT	113+20											7		[2]
PE22_1B	RT	114+00											7		[2]
PE22_1B	LT	115+30											7		[2]
PE22_1B	RT	119+54	- 129+95	1041	8	0.17	1416				52				[10]
PE22_1B	LT	122+50	- 132+86	1036	8	0.17	1409				52				[10]
PE22_1B	LT	124+10											7		[2]
PE22_1B	RT	129+95	- 136+15	620	4			551	827	92	46	53			[3] [6]
PE22_1B	LT	133+75	- 138+55	480	4			658	640	71	36	48			[4] [6]
PE22_1B	RT	136+15	- 174+11	3796	8	0.17	5163				191				[10]
PE22_1B	LT	138+55	- 143+23	468	8	0.17	636				24				[10]
PE22_1B	LT	148+74	- 160+87	1213	8	0.17	1650				61				[10]
PE22_1B	LT	160+87	- 167+44	657	6			608	876	146	73	34			[5] [6]
PE22_1B	LT	162+05											7		[2]
PE22_1B	RT	164+10											7		[2]
PE22_1B	LT	164+35											7		[2]
PE22_1B	RT	165+50											7		[2]
PE22_1B	LT	167+00											7		[2]
PE22_1B	LT	167+44	- 178+92	1148	8	0.17	1561				58				[10]
PE22_1B	LT	167+44	- 179+25	1181	1	0.5	590.5							22	[1]
PE22_1B	LT	174+80											7		[2]
PE22_1B	RT	175+20											7		[2]
PE22_1B	RT	177+50											7		[2]
PE22_1B	RT	181+25											7		[2]
PE22_1B	LT	182+74	- 189+49	675	1	0.5	337.5							13	[1]
PE22_1B	LT	183+90											7		[2]
PE22_1B	RT	184+10											7		[2]
PE22_1B	LT	184+54	- 189+49	495	8	0.17	673				25				[10]
PE22_1B	RT	184+69	- 189+49	480	8	0.17	653				24				[10]
PE22_1B	RT	184+69	- 189+49	480	1	0.5	240							9	[1]
PN13_1B	RT	9+50	- 12+49	299	8	0.17	407				15				[10]
PN13_1B	LT-RT	9+50	- 12+50	600	1	0.5	300	200			100	55		11	[9]
TOTAL								2017	2343	309	1090	1775	210	460	

GENERAL NOTE: QUANTITIES FOR EARTHWORK IN FULL DEPTH CONCRETE CONSTRUCTION AREA'S 57+87 - 65+00 & STA. 169+16 - 189+49 CAN BE FOUND ON PAGES 10 - 11

AGGREGATE NOTES:

- [1] 1' GRAVEL SHOULDER
[2] ADDED TO BITUMINOUS AND GRAVEL DRIVEWAYS AFTER BITUMINOUS REMOVAL AND PRIOR TO PAVING TO ADJUST TO NEW ROAD SURFACE AS DIRECTED BY THE ENGINEER. (MISC. DETAILS SHEET 18)
[3] WIDENING FOR EB BYPASS @ CSAH 13 , 6" (SEE MISC. DETAILS SHEET 20)
[4] WIDENING FOR WB RTL @ CSAH 13 , 6" (SEE MISC. DETAILS SHEET 20)
[5] WIDENING FOR NEW CONCRETE CURB SHOULDER WB , 6" (SEE MISC. DETAILS SHEET 20)
[6] TOPSOIL TO BE PUSHED OUT TO CONSTRUCTION LIMITS AND REUSED TO DRESS NEW INSLOPE. ENTIRE LANE OF EXISTING SHOULDER , RTL IS TO BE SUBCUT AND SUBGRADE PREPED. - (SEE MISC. DETAILS SHEET 20)
[7] COMMON TOPSOIL BORROW TO BE ADDED TO TIE IN NEW SHOULDER P.I. WITH EXISTING INSLOPE. (SEE MISC. DETAILS SHEET 20)
[8] COMMON TOPSOIL BORROW TO BE ADDED TO TREE GRUBBING AREAS ONCE AREAS HAVE BEEN CLEARED OF DEBRIS AND LEVELED OUT. (RAPID STABILIZATION APPLIED TO SURFACE) AREA BASED ON 2 CU YDS PER TREE REMOVED BY THE EACH AND 160 CU YDS TOTAL FOR TREE REMOVAL AREA BY THE ACRE.
[9] RE-ALIGNMENT CSAH 13.
[10] 2" BASE CLASS 5 ADDED TO SHOULDERS AFTER RECLAIMING SO NEW BITUMINOUS SHOULDERS WILL MATCH NEW CONCRETE.

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_SEQ.dgn					
03/02/2015 10:52:40 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: 
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/08/15



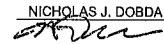
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

TABULATIONS

CONCRETE & CULVERTS																					E
STATION		LT / RT	WIDTH	LENGTH	SQ FT	CONC. DEPTH (FT)	CU FT	15" RC PIPE APRON & SFTY GRT.	15" RC PIPE CULVERT CLASS 6	15" CS PIPE APRON	15" CS PIPE CULVERT	CONCRETE FLUME	CONCRETE CURB AND GUTTER B424	CONCRETE 6" DRWAY PAVEMENT	CONCRETE PAVEMENT 6"	STRUCTURAL CONCRETE 6"	CONCRETE PAVEMENT 8"	STRUCTURAL CONCRETE 8"	1" DOWEL BAR ASSEMBLY EPOXY COATED	SUPPLEMENTAL REINF BARS EPOXY COATED (NO. 4)	NOTES
BEGIN	END		LIN FT	LIN FT				EACH	LIN FT	EACH	LIN FT	EACH	LIN FT	SQ YD	SQ YD	CU YDS	SQ YD	CU YDS	EACH	POUND	
67+87	65+00	LT / RT	26	713	18538	0.67	12420										2060	458	1046		[2]
62+16	62+61	LT / RT	26	45																750	[10]
64+34	64+62	LT / RT	26	18																275	[10]
65+00	111+33	LT / RT	26	4500	120483	0.50	60242								13387	2231					[1]
75+25	75+65	RT								2	40										[7]
76+81	78+71	RT								2	190										[7]
81+35	81+75	RT								2	40										[7]
91+32	91+72	RT								2	40										[7]
91+50	91+90	LT								2	40										[7]
94+58	94+98	RT								2	40										[7]
98+00	98+42	RT								2	42										[7]
102+81	103+31	RT								2	50										[7]
108+02	108+62	RT								2	60										[7]
RAILROAD TRACKS																					
111+63	169+16	LT / RT	26	5636	150066	0.50	75033								16674	2779					[1]
115+05	115+55	LT								2	50										[7]
132+96	134+16	LT						2	104												[6]
160+87		LT										1									[8]
160+87	167+44	LT											657								[4]
169+16	189+49	LT / RT	26' - 39'	2033	73062	0.67	48952										8118	1813	4074		[2]
162+05		LT												24							[3]
164+35		LT												31							[3]
167+00		LT												24							[3]
167+44		LT										1									[8]
174+11		RT										1									[8]
174+11	179+20	RT											509								[5]
174+60	175+10	LT								2	50										[7]
175+20		RT												18							[3]
176+65	177+15	LT								2	50										[7]
177+50		RT												18							[3]
179+44	182+74	LT											330								[5]
179+47	184+69	RT											622								[4]
181+25		RT												36							[3]
182+74		LT										1									[8]
184+10		RT												21							[3]
184+69		RT										1									[8]
PROJECT TOTAL								2	104	24	692	5	2018	172	30061	5010	10178	2271	5120	1025	
CONCRETE NOTES: [1] MAINLINE 6" CONCRETE OVERLAY, 26' WIDTH. SEE STANDARD PLATE 1210G FOR CONCRETE PAVEMENT ADJACENT TO R X R CROSSING DETAILS. [2] MAINLINE FULL DEPTH CONCRETE CONSTRUCTION (8") [3] CONCRETE APRONS FOR BITUMINOUS DRIVEWAYS LOCATED BEHIND NEW CONCRETE CURB LOCATIONS. [4] NEW CONCRETE CURB LOCATION, 11' PAVED SHOULDER TO FACE OF CURB. [5] NEW CONCRETE CURB LOCATION, RIGHT TURN LANES CSAH 22 AT UNIVERSITY AVE EB AND WB. [6] INSTALL NEW 15" RC CULVERT - CULVERT IS TO BE TIED. 120' END OF APRON TO END OF APRON WITH INVERT ELEV. OF - WEST END 897.67 , EAST END 896.44 , PIPE FLOWS FROM WEST TO EAST. APRON ENDS TO BE BLANKETED. [7] INSTALL NEW 15" CS CULVERT AND 2 FLARED APRONS, LOCATION & LENGTH IS FROM END OF APRON TO END OF APRON. PIPE TO BE INSTALLED AT SAME ELEV. AS OLD PIPE. APRON ENDS TO BE BLANKETED. [8] 3' X 12' CONCRETE FLUME MAY BE MODIFIED IN SHAPE AT THE DISCRETION OF THE ENGINEER, MAINTAINING 36' TOTAL SQ FT. [9] FULL DEPTH CONSTRUCTION, BEGIN PROJECT - 65+00. [10] SUPPLEMENTAL PAVEMENT REINFORCEMENT SHALL BE PLACED OVER EXSTING CULVERTS IN THE FULL DEPTH (8") CONCRETE AREAS. REFER TO STANDARD PLATE 1070M.																					

1	7/23/2014	JF	NJD	-	BITUMINOUS DESIGNATIONS CHANGED TO REFLECT (4,E) AND (4,B)
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_SEQ.dgn					
03/02/2015 10:52:41 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: 
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

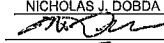
TABULATIONS

BITUMINOUS SUMMARY													F
ALI.	EB/WB	STATION	TO	STATION	LENGTH	WIDTH	AREA	BITUMINOUS					NOTES
								MAINLINE SP 12.5 WEAR (4,E)	MAINLINE SP 12.5 NON-WEAR (4,B)	DRWAY/ ST SP 12.5 WEAR (4,B)	2357 BIT. TACK COAT	BITUMINOUS CURB	
					FT	FT	SQ YDS	TON	TON	TON	GALLON	LIN FT	
PE22_1B	EB	57+87	-	63+63	576	12	768	177			38		[1]
PE22_1B	EB	63+21	-				203			35	10		[2]
PE22_1B	EB	63+63	-	78+13	1450	8	1289	222			64		[5]
PE22_1B	EB	71+65	-				56			10			[4]
PE22_1B	EB	76+80	-	78+50								220	[12]
PE22_1B	EB	77+31	-				48			8			[4]
PE22_1B	EB	78+13	-	87+51	938	12	1251	288			63		[1]
PE22_1B	EB	78+51	-				32			6			[4]
PE22_1B	EB	87+15	-				63			11	3		[2]
PE22_1B	EB	87+51	-	98+32	1081	8	961	166			48		[5]
PE22_1B	EB	89+57	-				48			8			[4]
PE22_1B	EB	91+50	-				47			8			[4]
PE22_1B	EB	98+24	-				56			10			[4]
PE22_1B	EB	98+32	-	104+52	620	12	827	190			41		[1]
PE22_1B	EB	103+07	-				70			12			[4]
PE22_1B	EB	104+52	-	111+33	681	8	605	104			30		[5]
PE22_1B	EB	104+77	-				49			8			[4]
PE22_1B	EB	104+88	-	106+05								140	[12]
PE22_1B	EB	106+11	-				47			8			[4]
PE22_1B	EB	108+27	-				109			19	5		[2]
PE22_1B	EB	111+23	-	111+33	10	13	15	3	2		2		[13]
RAILROAD TRACKS													
PE22_1B	EB	111+43	-	111+53	10	13	15	3	2		2		[13]
PE22_1B	EB	112+30	-				75			13	4		[2]
PE22_1B	EB	111+53	-	119+57	804	12	1072	247			54		[1]
PE22_1B	EB	113+96	-				48			8			[4]
PE22_1B	EB	114+05	-	114+95								130	[12]
PE22_1B	EB	115+02	-				118			20	6		[2]
PE22_1B	EB	118+90	-				608			105	30		[2]
PE22_1B	EB	119+54	-	129+95	1041	8	925	160			46		[5]
PE22_1B	EB	129+95	-	136+15	620	12	827	190	95		83		[6]
PE22_1B	EB	136+15	-	174+11	3796	8	3374	582			169		[5]
PE22_1B	EB	164+10	-				74			13			[4]
PE22_1B	EB	165+51	-				81			14			[4]
PE22_1B	EB	174+11	-	178+91	480	10	533	123	61		53		[7]
PE22_1B	EB	175+19	-				22			4			[4]
PE22_1B	EB	177+57	-				21			4			[4]
PE22_1B	EB	178+91	-	179+77			218	50	25		22		[8]
PE22_1B	EB	179+77	-	184+69	492	9	492	113	57		49		[9]
PE22_1B	EB	181+27	-				41			7			[4]
PE22_1B	EB	184+05	-				21			4			[4]
PE22_1B	EB	184+69	-	189+49	480	8	427	74			21		[5]
RAILROAD TRACKS													
PE22_1B	WB	57+87	-	66+84	897	12	1196	275			60		[1]
PE22_1B	WB	58+75	-				171			29	9		[2]
PE22_1B	WB	66+84	-	81+29	1445	8	1284	222			64		[5]
PE22_1B	WB	81+29	-	91+10	981	12	1113	256			56		[1]
PE22_1B	WB	81+79	-				130			22	7		[2]
PE22_1B	WB	91+10	-	101+54	1044	8	928	160			46		[5]
PE22_1B	WB	91+71	-				57			10			[4]
PE22_1B	WB	101+54	-	106+93	539	12	719	165			36		[1]
PE22_1B	WB	102+00	-				152			26	8		[2]
PE22_1B	WB	106+93	-	111+33	440	8	391	67			20		[5]
PE22_1B	WB	111+23	-	111+33	10	13	15	3			2		[13]
RAILROAD TRACKS													
PE22_1B	WB	111+43	-	111+53	10	13	15	3			2		[13]
PE22_1B	WB	111+53	-	116+30	477	8	424	73			21		[5]
PE22_1B	WB	113+30	-				114			20			[4]
PE22_1B	WB	115+33	-				87			15			[4]
PE22_1B	WB	116+30	-	122+50	620	12	827	190			41		[6]
PE22_1B	WB	122+50	-	132+86	1036	8	921	159			46		[5]
PE22_1B	WB	124+08	-				85			15			[4]
PE22_1B	WB	134+26	-	138+55	429	12	672	132	66		57		[3]
PE22_1B	WB	138+55	-	143+23	468	8	416	72			21		[5]
PE22_1B	WB	143+23	-	148+74	551	12	728	167			36		[1]
PE22_1B	WB	143+62	-				142			24	7		[2]
PE22_1B	WB	148+74	-	160+87	1213	8	1078	186			54		[5]
PE22_1B	WB	160+87	-	167+44	657	9	657	151	76		66		[9]
PE22_1B	WB	162+09	-				23			4			[4]
PE22_1B	WB	164+47	-				30			5			[4]
PE22_1B	WB	166+94	-				20			3			[4]
PE22_1B	WB	167+44	-	178+92	1148	8	1020	176			51		[5]
PE22_1B	WB	174+81	-				47			8			[4]
PE22_1B	WB	178+92	-	179+74			214	49	25		21		[10]
PE22_1B	WB	179+74	-	182+74	300	10	333	77	38		33		[7]
PE22_1B	WB	182+74	-	184+54	180	12	240	55	28		24		[3]
PE22_1B	WB	183+89	-				57			10			[4]
PE22_1B	WB	184+54	-	189+49	495	8	440	76			22		[5]
PN13_1B	NB	9+50	-	12+49			1533	353	176		153		[11]
PROJECT TOTAL								5760	650	526	1806	490	

BITUMINOUS SUMMARY NOTES:
 [1] 4" RTL / BYPASS
 [2] 3" STREET OVERLAY
 [3] 6" RIGHT TURN LANE (12')
 [4] 3" DRIVEWAY
 [5] 3" SHOULDER (8')
 [6] 6" BYPASS LANE (12')
 [7] 6" RIGHT TURN LANE WITH B424 CURB (10' BITUMINOUS)
 [8] 6" UNIVERSITY AVE. (SOUTH LEG)
 [9] 6" SHOULDER WITH B424 CURB (9' BITUMINOUS)
 [10] 6" UNIVERSITY AVE. (NORTH LEG)
 [11] 6" CSAH 13.
 [12] BITUMINOUS CURB AREA.
 [13] 6" BITUMINOUS TRANSITION FROM CONCRETE TO RAIL (6" TOTAL, 3-LIFTS)

MAILBOXES					G
ADDRESS	STATION	BOX LOCATED LT / RT OF CENTERLINE	RELOCATE MAILBOX	INSTALL MAILBOX SUPPORT	NOTES
#1352	77+31	LT	1	1	[1] [2]
#1160	89+67	RT	1	1	[1] [2]
#1129	91+71	LT	1	1	[1] [2]
#1131	91+71	LT	2	2	[1] [2]
#1120	94+90	RT	1	1	[1] [2]
#1006	103+07	RT	1	1	[1] [2]
#936	106+11	RT	1	1	[1] [2]
RAILROAD TRACKS					
# 19400	124+00	LT	1	1	[1] [2]
# 275	164+00	LT	1	1	[1] [2]
# 221	164+00	LT	1	1	[1] [2]
# 159	167+20	LT	1	1	[1] [2]
# 85	175+20	LT	1	1	[1] [2]
# 32	175+20	LT	1	1	[1] [2]
# 16	178+00	LT	1	1	[1] [2]
# 6	178+00	LT	1	1	[1] [2]
# 8	181+00	RT	1	1	[1] [2]
# 26	181+60	RT	1	1	[1] [2]
# 29	183+00	LT	1	1	[1] [2]
# 38	183+00	LT	1	1	[1] [2]
# 40	183+00	LT	1	1	[1] [2]
TOTAL			21	21	
MAILBOX NOTES: [1] BOXES TO BE RELOCATED OUTSIDE OF CLOSED AREA FOR MAIL SERVICE. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH POSTAL SERVICE FOR APPROVED LOCATION AND NOTIFYING HOME OWNERS PRIOR TO RELOCATING. [2] ITEM "INSTALL MAIL BOX SUPPORT" INCLUDES POST, BOX AND ALL HARDWARE TIME AND MATERIALS FOR COMPLETE INSTALLATION OF NEW MAILBOX					

1	7/23/2014	JF	NJD	-	BITUMINOUS DESIGNATIONS CHANGED TO REFLECT (4,E) AND (4,B)
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_SEQ.dgn 03/02/2015 10:52:43 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
 OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
 THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: 
 DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

TABULATIONS

TURF ESTABLISHMENT AND EROSION CONTROL																H
LOCATION		SILT FENCE TYPE MS	EROSION CONTROL BLANKETS CAT. 0	RANDOM RIPRAP CLASS II	FILTER BERM TYPE 5	SEDIMENT CONTROL LOG TYPE WOOD FIBER	CULVERT END CONTROLS	SEEDING	SEED MIXTURE 25-141 GEN. R-SIDE	SEED MIXTURE 25-151 RES. TURF	MULCH MATERIAL TYPE 3	DISK ANCHORING	FERTILIZER TYPE 3 (10-20-20)	RAPID STABILIZATION METHOD 3	NOTES	
STATION TO	STATION	LT/RT	LIN FT	SQ YD	CU YD	LIN FT	LIN FT	EACH	ACRE	POUND	POUND	TON	ACRE	POUND	MGAL	
57+87	68+00	LT	781						0.2	11.0	0.0	0.4	0.19	56.1	1.1	
57+87	68+00	RT	767						0.2	11.5	0.0	0.4	0.20	58.6	1.2	[1]
68+00	82+00	LT	401			75			0.2	9.5	0.0	0.3	0.16	48.2	1.0	[4]
68+00	82+00	RT	402	54		75		3	0.3	10.0	12.8	0.6	0.28	82.9	1.7	[1] [2] [4]
82+00	94+00	LT		36				2	0.1	5.1	5.9	0.3	0.14	40.9	0.8	[1] [2]
82+00	94+00	RT		18				1	0.1	4.0	8.1	0.3	0.13	40.3	0.8	[1] [2]
94+00	106+00	LT		18				1	0.1	5.2	3.4	0.2	0.12	34.8	0.7	[1] [2]
94+00	106+00	RT		54				3	0.2	0.0	26.5	0.4	0.22	66.2	1.3	[1] [2]
106+00	117+00	LT	99	18				1	0.1	3.9	9.3	0.3	0.14	42.9	0.9	[3]
106+00	117+00	RT		36				1	0.1	4.5	8.6	0.3	0.15	44.2	0.9	[1] [2] [3] [8]
117+00	128+00	LT	573	36				1	0.3	14.4	0.0	0.5	0.25	75.4	1.5	[1] [2] [3] [8]
117+00	128+00	RT							0.2	5.8	7.0	0.3	0.16	47.1	0.9	[3]
128+00	139+00	LT	910	2305				2	0.5	29.5	0.0	1.0	0.50	150.3	3.0	[1] [2] [3] [7] [8]
128+00	139+00	RT	841	646					0.2	13.1	0.0	0.4	0.22	66.4	1.3	[3]
139+00	150+00	LT	613	466					0.2	11.2	0.0	0.4	0.19	56.8	1.1	[3]
139+00	150+00	RT							0.2	11.4	0.0	0.4	0.19	57.8	1.2	[3]
150+00	161+00	LT	100	18	4	45	75.0	1	0.2	10.8	0.0	0.4	0.18	54.7	1.1	[1] [2] [3] [4] [5] [6] [8]
150+00	161+00	RT	307						0.2	11.8	0.0	0.4	0.20	60.0	1.2	[3]
161+00	172+00	LT	284		4				0.2	4.9	18.2	0.5	0.23	70.4	1.4	[3] [4]
161+00	172+00	RT	284						0.2	9.0	0.0	0.3	0.15	45.8	0.9	[3]
172+00	183+00	LT	815	292				2	0.4	18.2	5.7	0.7	0.36	106.5	2.1	[1] [2] [3] [8]
172+00	183+00	RT	200		4	45			0.1	1.4	15.0	0.3	0.15	44.7	0.9	[3] [5] [6]
183+00	189+49	LT	634	18	4	45	75.0	1	0.1	1.5	9.0	0.2	0.10	30.1	0.6	[1] [2] [3] [4] [5] [6] [8]
183+00	189+49	RT	481		4	45	75.0		0.1	3.5	2.5	0.2	0.08	24.3	0.5	[3] [4] [5] [6]
PROJECT TOTAL			8492	4015	20	180	375	19	4.68	211.2	131.8	9.4	4.68	1405.3	28	
TURF ESTABLISHMENT NOTES: [1] CULVERT END PROTECTION TO BE INSTALLED AT THE HIGH INVERT OF CULVERT SHOWN ON PLAN AND PROFILE. [2] 7-9 SQ YDS OF EROSION CONTROL BLANKET CAT 0, SEED AND FERTILIZER TO BE PLACED AT ALL NEW APRON ENDS. SEE MNDOT STANDARD PLATE 9102E FOR DETAILS. [3] RAPID STABILIZATION METHOD 3 AND COMMON TOPSOIL BORROW TO BE APPLIED TO TREE REMOVAL AREAS AND AS NEED AT THE DISCRETION OF THE ENGINEER. [4] FOR SEDIMENT CONTROL LOG SEE MNDOT STANDARD PLAN SHEET 5-297.405, PAGE 2 OF 7 FOR DETAILS. [5] GEOTEXTILE FABRIC LINER REQUIRED, THIS IS TO BE PLACED UNDER ROCK. PAYMENT FOR LINER SHALL BE INCIDENTAL TO FILTER BERM ITEM. SEE STANDARD PLAN 5-297.405, PAGE 2 OF 7 FOR DETAILS. [6] GEOTEXTILE FABRIC LINER REQUIRED, THIS IS TO BE PLACED UNDER ROCK. PAYMENT FOR LINER SHALL BE INCIDENTAL TO RANDOM RIPRAP CLASS II ITEM. SEE STANDARD PLATE 3134B FOR DETAILS. [7] INCLUDES CSAH 13 AREAS.																

UTILITY OWNERS		I
CONNEXUS ENERGY 14601 RAMSEY BLVD RAMSEY, MN CONTACT MAT RAUSCHENDORFER TEL: 763-323-4259	COMCAST COMM 2611 FAIRVIEW AVE NO. ROSEVILLE, MN CONTACT DOUG ZAHN TEL 651-755-2602	
CENTURYLINK 425 MONROE ANOKA, MN 55303 CONTACT CHRIS BENNER TEL. 763-712-5006 E-MAIL CHRISBENNER@MMI.NET	CENTERPOINT ENERGY 700 WEST LINDEN AVE P.O. BOX 1165 MINNAPOLIS, MN 55440-1165 CONTACT STEVE GUHANICK TEL 612-321-5421	

1. ALL TOPSOIL STRIPPING WILL BE CONSIDERED TO BE COMMON EXCAVATION.
2. TOPSOIL SHALL BE DEFINED AS EXISTING SOILS WHICH MEET MN/DOT SPECIFICATION 3877 THAT WOULD BE SUITABLE FOR REUSE.
3. AGGREGATE SHOULDERING MATERIAL FOR THIS PROJECT SHALL BE CLASS 5 GRADATION IN ACCORDANCE WITH MN/DOT 2221 AND 3138.
4. SLOPE DRESSING ON THE PROJECT IS DEFINED AS THE TOPSOIL OR OTHER SOIL PLACED DURING PRIOR CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF. THESE SOILS MAY NOT MEET THE MINIMUM ORGANIC CONTENT AND OTHER REQUIREMENTS FOR TOPSOIL BORROW
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 SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE THE RIGHT-OF-WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
6. 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 1:2 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
7. 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 1:2 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
8. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON THE EXISTING PAVEMENT. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.03 TO 0.05 GALLONS/SQ. YD. BETWEEN BITUMINOUS LAYERS AND 0.07 TO 0.10 GALLONS/SQ. YD. ON CONCRETE OR MILLED BITUMINOUS SURFACES PRIOR TO BEING OVERLAID. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY) OR MC AND RC LIQUID ASPHALTS. THE ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPECIFICATION 2357.
9. PROVIDE A SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT.
10. STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 4 INCHES.
11. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS. THE CONSTRUCTION LIMITS DO NOT INCLUDE AREAS REQUIRED FOR SLOPE ROUNDING.
12. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
13. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BECOME PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
14. UNSUITABLE SOILS NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MN/DOT SPECIFICATIONS.
15. AGGREGATE BASE MATERIAL SHALL BE 100% CRUSHED AND MEET THE REQUIREMENTS OF MN/DOT SPEC. 3138, CLASS 5.
16. COMPACTION OF ALL AGGREGATE BASE MATERIAL SHOULD BE IN ACCORDANCE WITH MN/DOT "QUALITY COMPACTION METHOD"
17. EMBANKMENT CONSTRUCTION SHALL BE PERFORMED AS REQUIRED BY MN/DOT SPECIFICATION 2105
18. COMPACTION OF ALL PERMANENT BITUMINOUS MIXTURES SHALL BE THE "MAXIMUM DENSITY METHOD"
19. THE MILLED MATERIAL SHALL BE PROCESSED TO PROVIDE A NOMINAL 1 INCH MAXIMUM SIZE. A TOLERANCE OF THE PERCENT IN MATERIAL RETAINED ON A ONE INCH SIEVE WILL BE PERMITTED, PROVIDED ALL MATERIAL PASSES A 1 1/2 INCH SIEVE. CRUSHING OF OVERSIZED MATERIAL SHALL BE INCIDENTAL.
20. CONTRACTOR SHALL BLADE THE EXISTING AGGREGATE MATERIAL ONTO THE SHOULDER PRIOR TO PLACING THE NEW CLASS 5 AGGREGATE ON THE SHOULDER. BLADING AND COMPACTION OF THE EXISTING AGGREGATE MATERIAL ONTO THE SHOULDER SHALL BE INCIDENTAL.

EARTHWORK SUMMARY CEDAR ST (NORTH)						EW1
STATION	EXCAVATION			EMBANKMENT		
	COMMON	SUBGRADE	RECLAIM	TOPSOIL	GRANULAR	SUBGRADE
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
10+00.00	0	26	0	0	0	0
10+50.00	237	34	0	39	62	97
11+00.00	112	44	0	22	18	81
11+50.00	69	44	0	8	0	81
12+00.00	58	44	0	2	0	81
12+45.00	50	44	0	2	0	73
AREA TOTAL	526	235	0	72	80	413

AGGREGATE SUMMARY CEDAR ST (NORTH)			EW1
STATION	AGGREGATE SUBBASE	AGG SHLD	
	CU YD	CU YD	
169+50.00	0	0	
170+00.00	54	2	
170+50.00	47	2	
171+00.00	45	2	
171+50.00	43	2	
172+00.00	39	2	
AREA TOTAL	229	11	

EARTHWORK SUMMARY STA. 57+87 - 65+00 FULL DEPTH CONCRETE CONSTRUCTION AREA						EW1
STATION	EXCAVATION			EMBANKMENT		
	COMMON	SUBGRADE	RECLAIM	TOPSOIL	GRANULAR	SUBGRADE
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
58+00.00	0	0	27	0	0	0
58+50.00	11	46	39	8	3	92
59+00.00	10	75	43	6	6	92
59+50.00	8	22	29	8	7	96
60+00.00	12	39	29	13	14	99
60+50.00	12	34	29	14	14	99
61+00.00	22	49	28	9	5	99
61+50.00	38	54	28	4	0	100
62+00.00	40	54	28	4	0	100
62+50.00	42	54	29	4	0	100
63+00.00	39	52	30	3	0	99
63+50.00	31	52	30	3	0	99
64+00.00	33	49	27	3	0	96
64+50.00	33	45	25	5	2	92
65+00.00	15	0	26	3	2	46
AREA TOTAL	345	624	448	88	53	1,310

AGGREGATE SUMMARY STA. 57+87- STA. 65+00 FULL DEPTH CONCRETE CONSTRUCTION AREA			EW1
STATION	AGGREGATE SUBBASE	AGG SHLD	
	CU YD	CU YD	
	CU YD	CU YD	
169+50.00	0	0	
170+00.00	41	2	
170+50.00	41	2	
171+00.00	40	2	
171+50.00	39	2	
172+00.00	39	2	
172+50.00	39	2	
173+00.00	39	2	
173+50.00	39	2	
174+00.00	38	2	
174+50.00	37	2	
174+81.39	37	2	
175+00.00	39	2	
175+50.00	41	2	
176+00.00	21	1	
AREA TOTAL	529	30	

EARTHWORK SUMMARY STA. 169+16 - 189+49 FULL DEPTH CONCRETE CONSTRUCTION AREA						EW2
STATION	EXCAVATION			EMBANKMENT		
	COMMON	SUBGRADE	RECLAIM	TOPSOIL	GRANULAR	SUBGRADE
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
169+50.00	0	0	0	0	0	0
170+00.00	10	41	39	3	0	47
170+50.00	22	35	39	6	0	90
171+00.00	22	39	39	9	5	89
171+50.00	24	45	39	10	10	95
172+00.00	28	47	40	10	11	102
172+50.00	27	43	40	11	13	100
173+00.00	27	47	40	12	16	99
173+50.00	30	56	40	11	19	105
174+00.00	32	55	40	11	20	112
174+50.00	34	58	42	10	15	113
174+81.39	29	59	39	3	4	71
175+00.00	16	56	45	2	0	42
175+50.00	36	55	43	8	6	113
176+00.00	43	57	43	10	11	113
176+50.00	40	59	44	9	7	113
177+00.00	41	60	44	5	1	113
177+50.00	45	61	44	3	2	113
178+00.00	53	61	44	4	2	113
178+50.00	68	61	45	4	0	113
179+00.00	53	50	52	3	0	103
179+50.00	29	50	52	2	0	93
180+00.00	57	62	47	11	15	104
180+50.00	95	62	46	23	46	114
181+00.00	88	62	46	21	55	114
181+50.00	73	62	46	17	52	114
182+00.00	82	62	46	17	33	114
182+50.00	97	60	46	16	5	113
183+00.00	92	62	46	13	2	113
183+50.00	68	62	45	12	7	115
184+00.00	65	62	44	6	8	115
184+50.00	109	60	40	10	6	115
185+00.00	92	58	41	13	3	113
185+50.00	40	54	40	5	0	106
186+00.00	41	57	40	4	1	103
186+50.00	40	55	40	4	0	105
187+00.00	35	50	40	5	0	98
187+50.00	28	48	40	5	0	92
188+50.00	52	51	40	7	1	185
189+00.00	26	49	40	3	0	93
AREA TOTAL	1,888	2,132	1,665	338	377	4,081

AGGREGATE SUMMARY STA. 169+16 - STA. 189+49 FULL DEPTH CONCRETE CONSTRUCTION AREA			EW2
STATION	AGGREGATE SUBBASE	AGG SHLD	
	CU YD	CU YD	
	CU YD	CU YD	
169+50.00	0	0	
170+00.00	25	1	
170+50.00	50	2	
171+00.00	51	2	
171+50.00	52	2	
172+00.00	53	2	
172+50.00	54	2	
173+00.00	54	2	
173+50.00	55	2	
174+00.00	56	2	
174+50.00	53	2	
174+81.39	30	0	
175+00.00	18	0	
175+50.00	50	1	
176+00.00	50	1	
176+50.00	50	1	
177+00.00	49	1	
177+50.00	48	1	
178+00.00	48	1	
178+50.00	47	1	
179+00.00	41	1	
179+50.00	35	1	
180+00.00	39	1	
180+50.00	42	0	
181+00.00	42	0	
181+50.00	42	0	
182+00.00	42	0	
182+50.00	43	1	
183+00.00	44	1	
183+50.00	44	1	
184+00.00	43	1	
184+50.00	43	1	
185+00.00	50	2	
185+50.00	54	2	
186+00.00	51	2	
186+50.00	51	2	
187+00.00	50	2	
187+50.00	48	2	
188+50.00	94	4	
189+00.00	46	2	
AREA TOTAL	1,839	55	

EARTHWORK SUMMARY RECONSTRUCT AREAS						EWS
STATION	EXCAVATION			EMBANKMENT		
	COMMON	SUBGRADE	RECLAIM	TOPSOIL	GRANULAR	GRANULAR [X]
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
57+87 - 65+00	345	624 [Z]	448	88	53	1,310
169+16 - 189+49	1,888	2,132 [Y]	1,665	338	377	4,081
CEDAR DR N	526	235 [Y]	0	72	80	413
AREA TOTAL	2,759	2,991	2,113	497	510	5,804

AGGREGATE SUMMARY RECONSTRUCT AREAS			AGS
STATION		AGGREGATE BASE	AGG SHLD
		CU YD	CU YD
57+87 - 65+00		529	30
169+16 - 189+49		1,839	55
CEDAR DR N		229	11
AREA TOTAL		2,368	85

NOTES

[X] TO BE USED AS SUBGRADE BACKFILL.

[Y] PAID FOR AS SUBGRADE EXCAVATION. SUBGRADE TO REMAIN ON SITE

[Z] PAID FOR AS EXCAVATION SPECIAL 1 - SUBGRADE TO BE REMOVED FROM SITE

AGGREGATE BALANCE

STA. 57+87 - STA. 65+00

FULL DEPTH CONCRETE CONSTRUCTION AREA

AGB1

AGGREGATE BORROW (CY)

NEEDED
BASE

529

(CV)

+

NEEDED
SHOULDER

30

(CV)

-

AVAILABLE
RECLAIM

448

(CV)

X

1.4

=

AREA TOTAL

166

AGGREGATE

529

(CV)

+

30

(CV)

-

448

(CV)

X

1.4

=

166

PAY ITEM (1)

2105.607

PAVEMENT
RECLAIM

2,113

PAY ITEM

2211.602

AGGREGATE
BORROW (LV)

812

GENERAL NOTE: ADD CONCRETE OVERLAY AREA AND CONCRETE FULL DEPTH CONSTRUCTION AREA FOR SEQ PROJECT TOALS.

(1) THIS ITEM PAID FOR UNDER ITEM 2105.607 HAUL & STOCKPILE EXCESS MATERIAL. RECLAIM MATERIAL SHALL BE STRIPPED OFF AND STOCKPILED FOR USE AS AGGREGATE WITHIN PROJECT LIMITS.

AGGREGATE BALANCE

STA. 169+16 - STA. 189+49

FULL DEPTH CONCRETE CONSTRUCTION AREA

AGB2

AGGREGATE BORROW (CY)

NEEDED
BASE

1,839

(CV)

+

NEEDED
SHOULDER

55

(CV)

-

AVAILABLE
RECLAIM

1,665

(CV)

X

1.4

=

AREA TOTAL

320

AGGREGATE

1,839

(CV)

+

55

(CV)

-

1,665

(CV)

X

1.4

=

320

GENERAL NOTE: ADD CONCRETE OVERLAY AREA AND CONCRETE FULL DEPTH CONSTRUCTION AREA FOR SEQ PROJECT TOALS.

(1) THIS ITEM PAID FOR UNDER ITEM 2105.607 HAUL & STOCKPILE EXCESS MATERIAL. RECLAIM MATERIAL SHALL BE STRIPPED OFF AND STOCKPILED FOR USE AS AGGREGATE WITHIN PROJECT LIMITS.

AGGREGATE BALANCE

CEDAR DR N

AGB3

AGGREGATE BORROW (CY)

NEEDED
BASE

229

(CV)

+

NEEDED
SHOULDER

11

(CV)

-

AVAILABLE
RECLAIM

0

(CV)

X

1.4

=

AREA TOTAL

336

AGGREGATE

229

(CV)

+

11

(CV)

-

0

(CV)

X

1.4

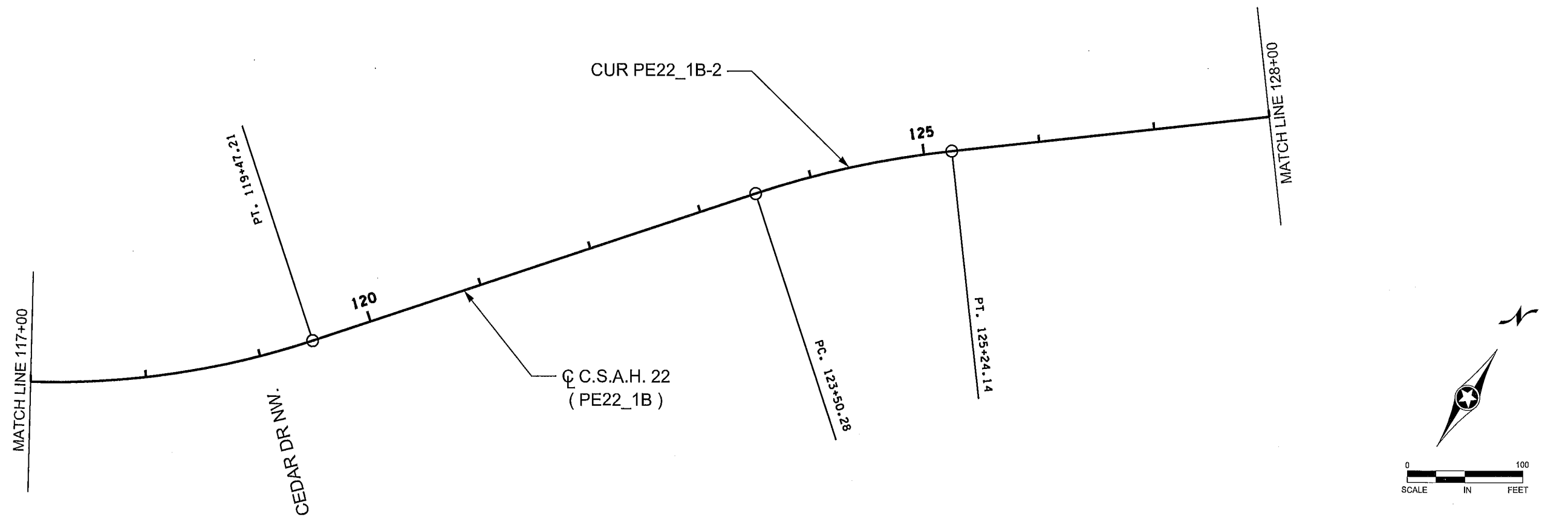
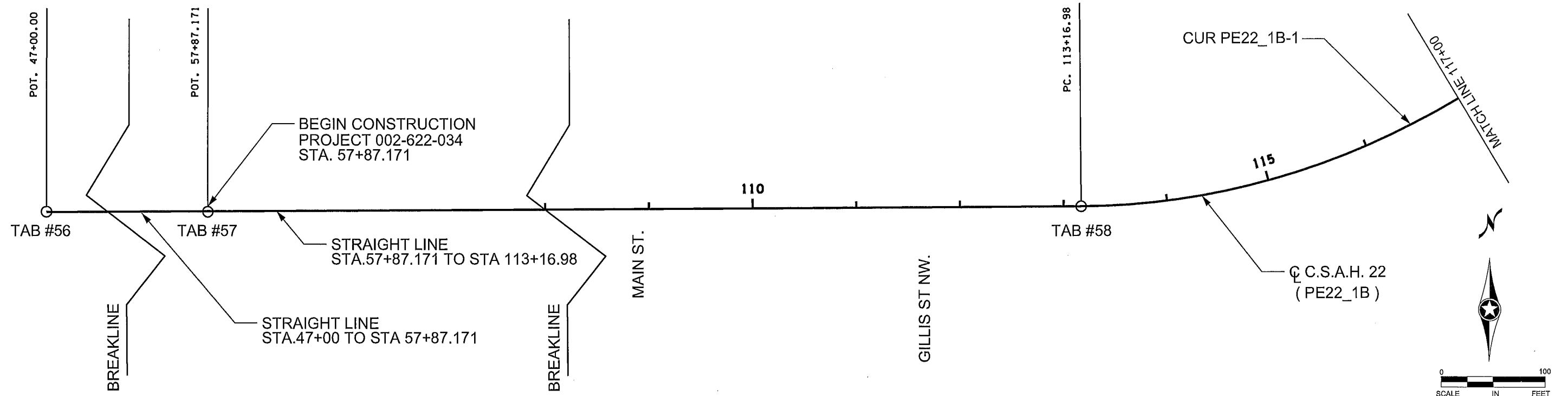
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GENERAL NOTE: ADD CONCRETE OVERLAY AREA AND CONCRETE FULL DEPTH CONSTRUCTION AREA FOR SEQ PROJECT TOALS.

(1) THIS ITEM PAID FOR UNDER ITEM 2105.607 HAUL & STOCKPILE EXCESS MATERIAL. RECLAIM MATERIAL SHALL BE STRIPPED OFF AND STOCKPILED FOR USE AS AGGREGATE WITHIN PROJECT LIMITS.

EARTHWORK BALANCE FULL DEPTH CONCRETE CONSTRUCTION AREAS													EWB		
AVAILABLE EXCAVATION (CY)															
COMMON (EV) (2)	PAY ITEM 2105.501 AREA TOTAL	2,759	=	2,759	COMMON	[	GRANULAR	2,067	(EV) /	1.2	=	1,723	(CV)	GRANULAR (1)	
				TOPSOIL			692	(EV)		692	(EV)	TOPSOIL			
SUBGRADE (EV) (3) EXCAVATION	PAY ITEM 2105.507 AREA TOTAL	2,367	=	2,367	SUBGRADE EXCAVATION		SUBGRADE EXCAVATION	2,132	(EV) /	1.2	=	1,777	(CV)	GRANULAR	
EXCAVATION SPECIAL 1 (LV) (7)	PAY ITEM 2105.601 AREA TOTAL	874	=	1.4	X		SUBGRADE EXCAVATION	624	(EV)						
NEEDED EMBANKMENT (CY)															
							TOPSOIL	497	(EV)						
							GRANULAR	510	(CV)						
							SUBGRADE	5,804	(CV)						
EXCESS (CY)															
							AVAILABLE	NEEDED							
TOPSOIL							692	(EV)	-	497	(EV)	=	195	(EV)(4)	
GRANULAR (1)							1,723	(CV)	-	510	(EV)	=	1213	(CV)(5)	
BORROW (CY)															
							NEEDED	AVAILABLE	EXCESS						
GRANULAR (8)							5,804	(EV)	-	1,777	(EV)	-	1,213	(EV)	= 2,815 X 1.4 = 3,941 (LV)(6)
GENERAL NOTE: ADD CONCRETE OVERLAY AREA AND CONCRETE FULL DEPTH CONSTRUCTION AREA FOR SEQ PROJECT TOALS.															
(1) IT IS ASSUMED COMMON EXCAVATION (EXCLUDING TOPSOIL) WILL MEET THE REQUIREMENTS FOR MNDOT 3149.2B1.															
(2) TOTAL COMMON EXCAVATION FOR PROJECT (INCLUDING TOPSOIL)															
(3) TOTAL SUBGRADE FOR THIS PROJECT (PAID FOR AS ITEM 2105.507 SUBGRADE EXCAVATION). IT IS ASSUMED ALL INPLACE SUBGRADE BETWEEN STATIONS 169+16 - 189+49 AND ALONG CEDAR DRIVE WILL MEET THE REQUIREMENTS FOR MNDOT 3149.2B1															
(4) EXCESS TOPSOIL TO BE DESTRIIBUTED WITHIN PROJECT LIMITS AT ENGINEER'S DISCRETION.															
(5) EXCESS GRANULAR MATERIAL TO BE USED AS GRANULAR FILL WHERE NECESSARY.															
(6) GRANULAR BORROW MUST MEET REQUIREMENTS FOR MNDOT 3149.2B1															
(7) TOTAL SUBGRADE EXCAVATION SPECIAL FOR THIS PROJECT (PAID FOR AS ITEM 2105.601 EXCAVATION SPECIAL 1). IT IS ASSUMED ALL INPLACE SUBGRADE BETWEEN STATIONS 57+87 - 65+00 WILL NOT MEET THE REQUIREMENTS FOR MNDOT 3149.2B1 AND MUST THEREFORE BE REMOVED AND DISPOSED OFF SITE BY CONTRACTOR.															



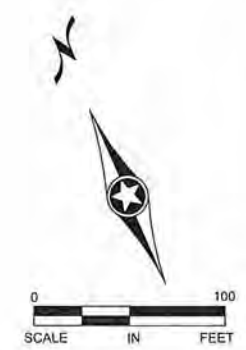
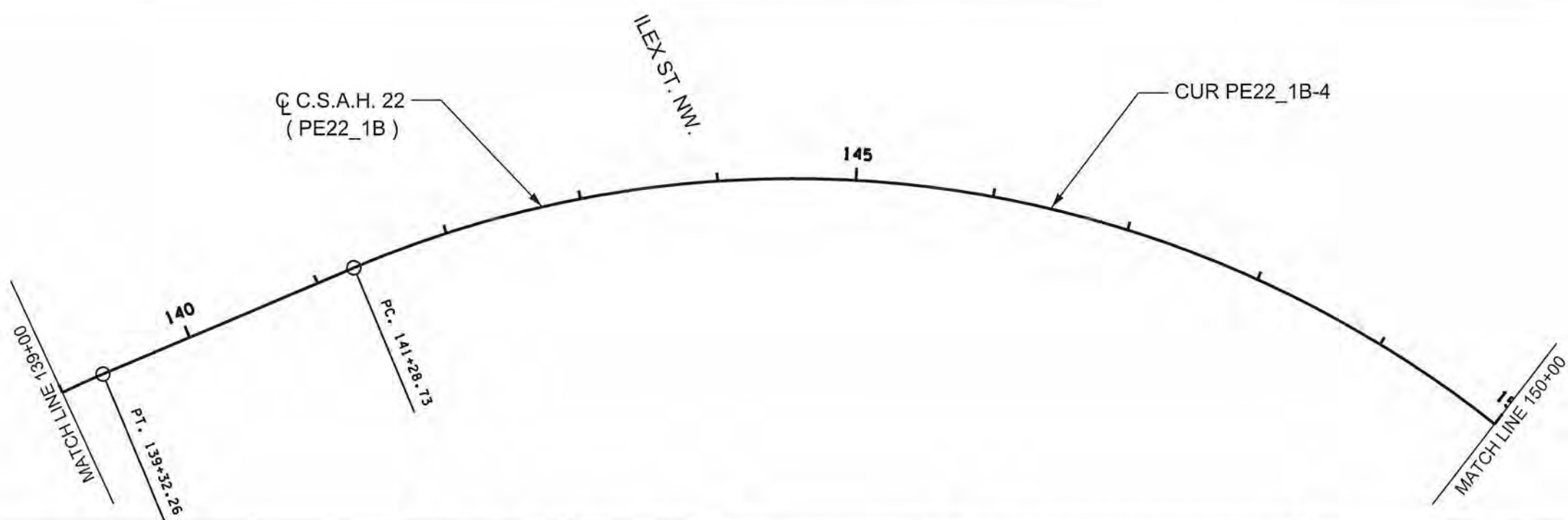
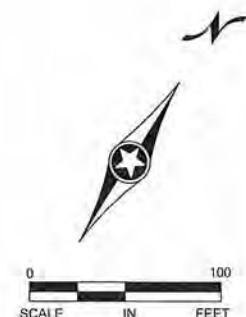
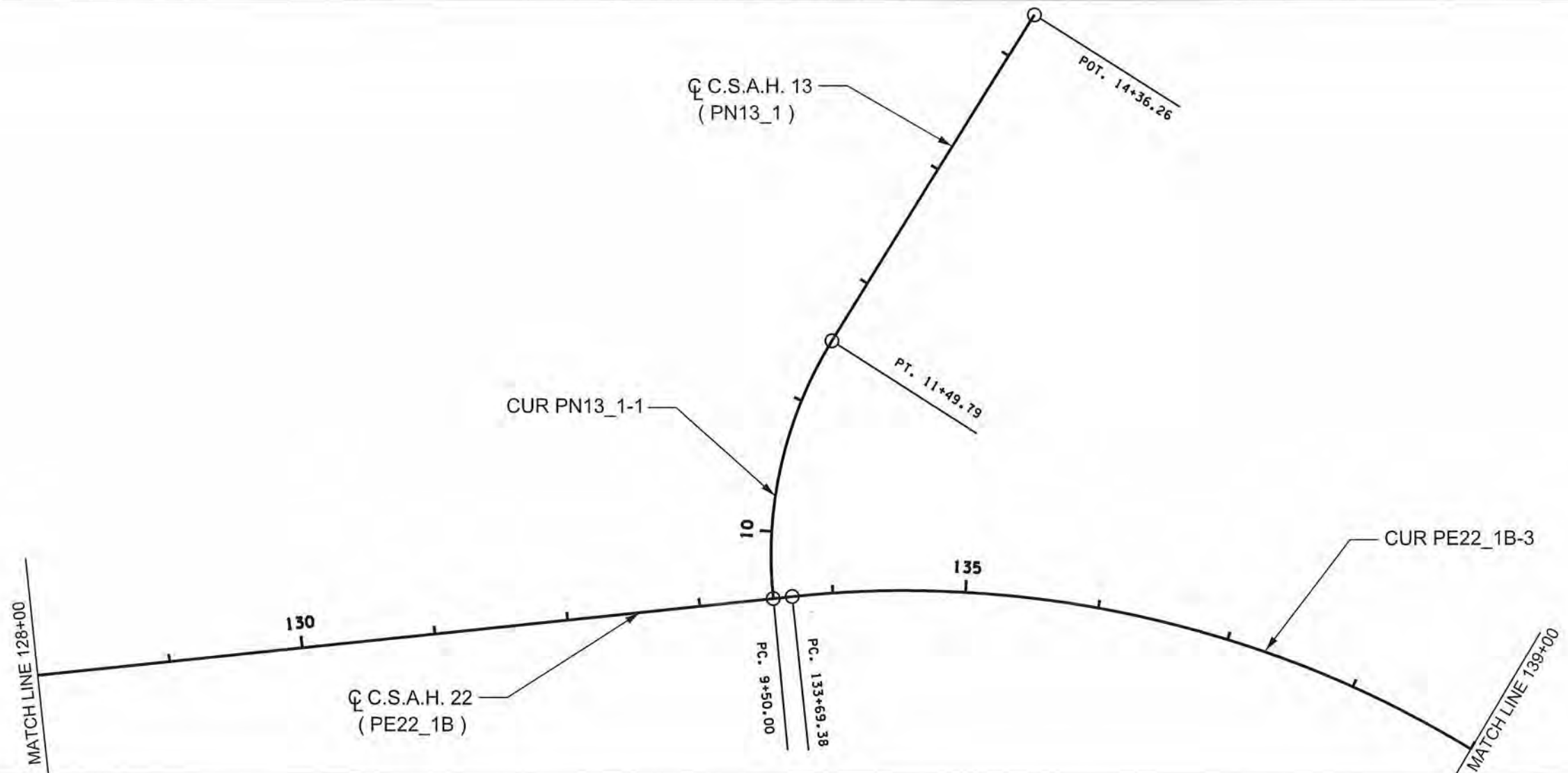
1 OF 5

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NO	DATE	BY	CKD	APPR	REVISION																						

NAME: P:\02-622-34\Plan\0262234_ALI1.dgn

03/02/2015

9:00:56 AM



2 OF 5

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: [Signature]

DATE: 3-9-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

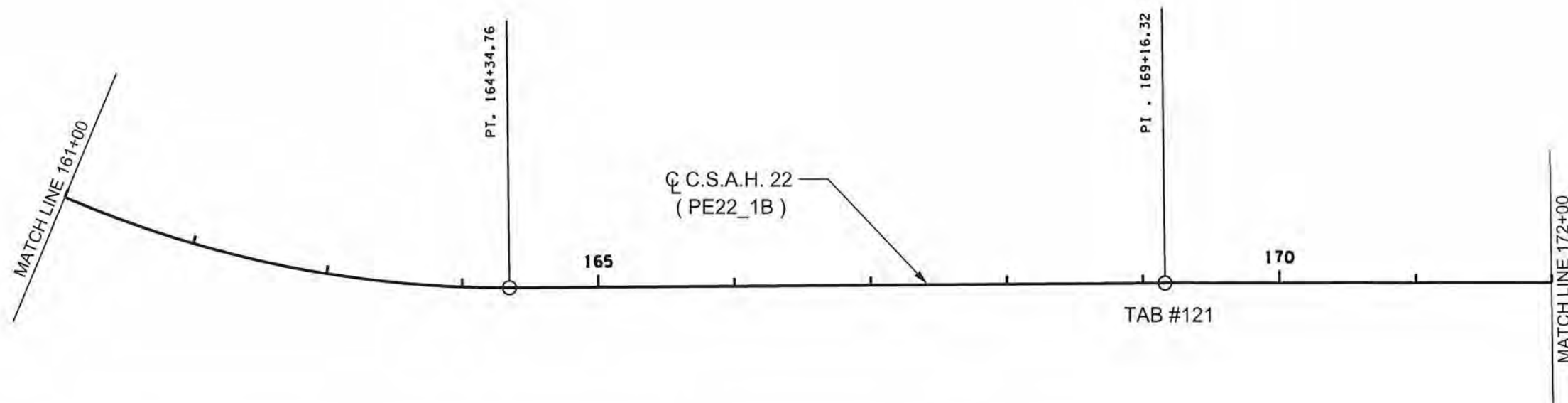
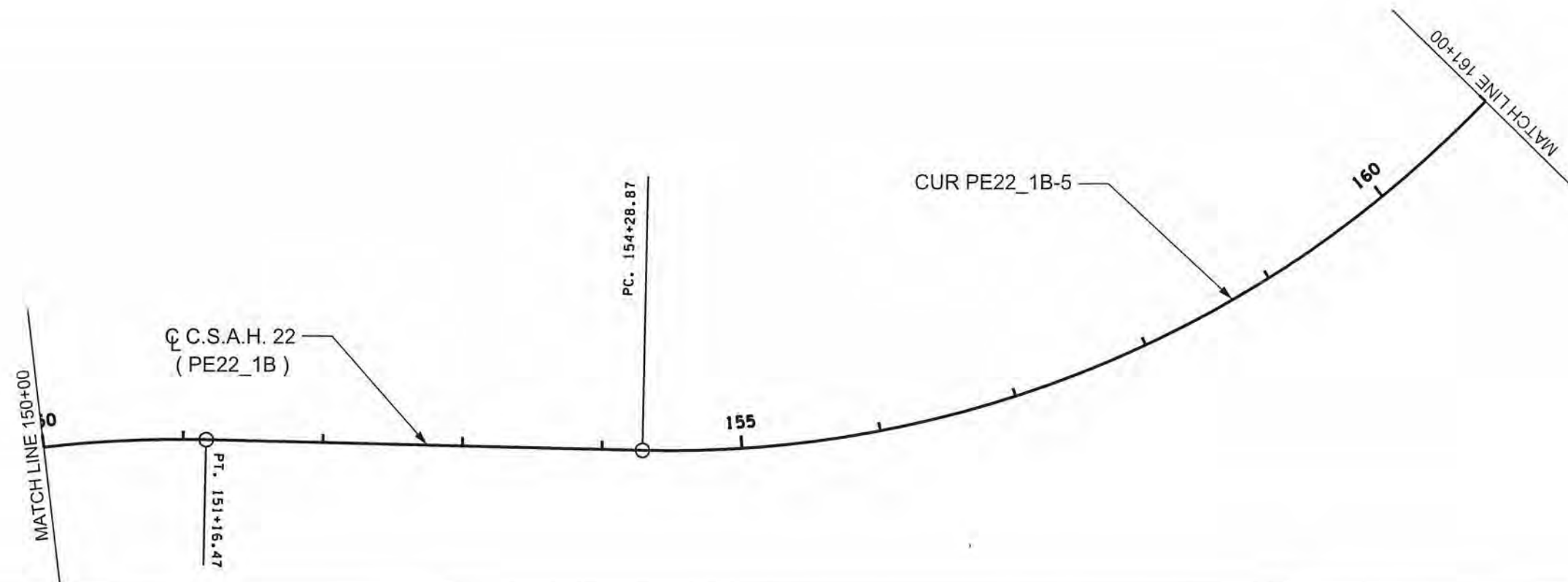
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

ALIGNMENT
STA 128+00 TO 150+00
Sheet 14 of 210 Sheets



3 OF 5

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Plan\0262234_ALI3.dgn 03/02/2015 9:00:59 AM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: *N. Dobda*
 DATE: 3-2-15 LICENSE NO. 49046

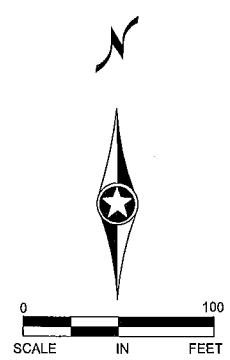
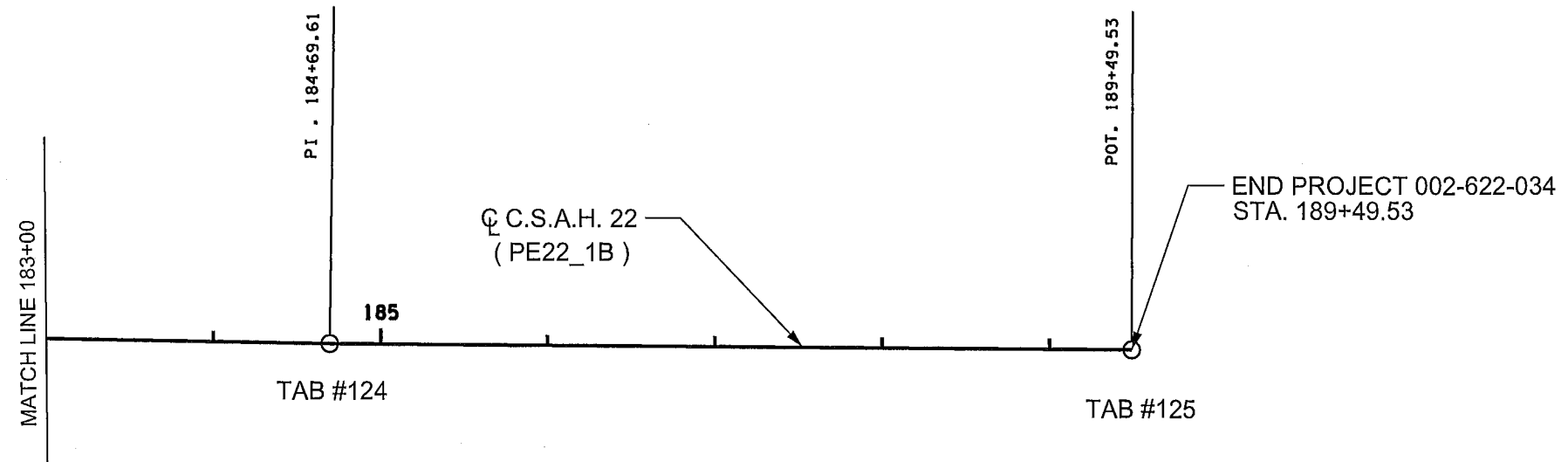
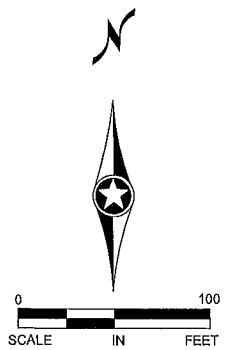
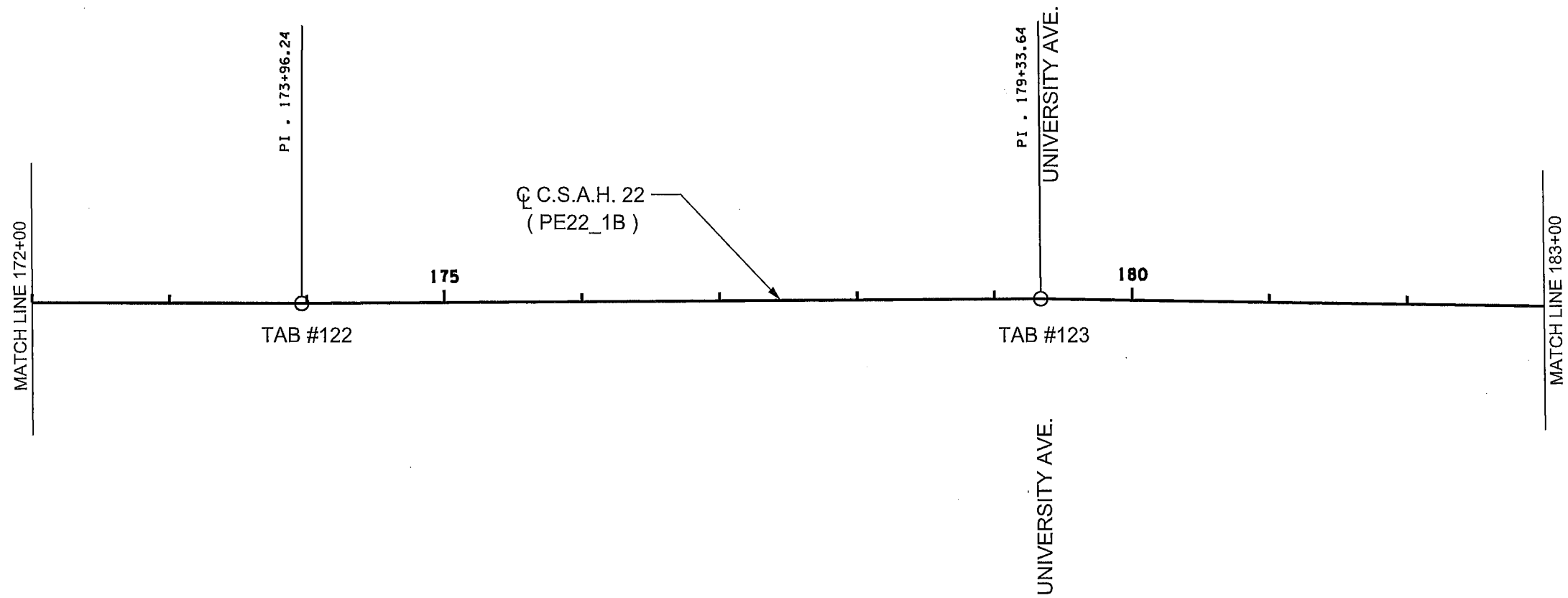
DRAWN BY JCF DATE 01/09/15
 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

ALIGNMENT
 STA 150+00 TO 172+00
 Sheet 15 of 210 Sheets



4 OF 5

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NO	DATE	BY	CKD	APPR	REVISION																						
NAME: P:\02-622-34\Plan\0262234_AL14.dgn						03/02/2015 9:01:00 AM																					

ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N		
C C.S.A.H. 22 <PE22_1B>											
56	POT	C C.S.A.H. 22	47+00.000						488,184.1763	203,720.2298	
57	POT		57+87.171						489,271.3338	203,725.5456	
58	PC		113+16.981						494,801.0570	203,756.5433	N 89° 40' 30.48" E
PE22_1B-1	PI		116+54.140	50° 25' 06.66" LT	7° 59' 59.89"	716.200'	337.160'	630.234'	495,138.2110	203,758.4549	PI
	CC								494,796.9961	204,472.7317	
	PT		119+47.214						495,351.5638	204,019.5241	N 39° 15' 23.82" E
	PC		123+50.276						495,606.6189	204,331.6225	N 39° 15' 23.82" E
PE22_1B-2	PI		124+37.535	12° 10' 09.13" RT	6° 59' 57.57"	818.590'	87.260'	173.862'	495,661.8363	204,399.1892	PI
	CC								496,240.4692	203,813.6230	
	PT		125+24.138						495,730.0559	204,453.5979	N 51° 25' 32.95" E
	PC		133+69.376						496,390.8637	204,980.6265	N 51° 25' 32.95" E
PE22_1B-3	PI		136+62.463	39° 24' 07.99" RT	7° 00' 00.03"	818.510'	293.087'	562.888'	496,619.9995	205,163.3742	PI
	CC								496,901.2271	204,340.7141	
	PT		139+32.264						496,913.0558	205,159.1386	S 89° 10' 19.06" E
	PC		141+28.732						497,109.5040	205,156.2994	S 89° 10' 19.06" E
PE22_1B-4	PI		146+92.770	69° 08' 29.88" RT	7° 00' 00.03"	818.510'	564.037'	987.736'	497,673.4822	205,148.1482	PI
	CC								497,097.6753	204,337.8748	
	PT		151+16.469						497,866.6748	204,618.2288	S 20° 01' 49.18" E
	PC		154+28.866						497,973.6763	204,324.7283	S 20° 01' 49.18" E
PE22_1B-5	PI		160+06.394	70° 24' 44.64" LT	7° 00' 00.03"	818.510'	577.528'	1,005.890'	498,171.4897	203,782.1342	PI
	CC								498,742.6758	204,605.0823	
	PT		164+34.756						498,749.0004	203,786.5967	N 89° 33' 26.18" E
121	POT		169+16.323						499,230.5530	203,790.3178	
122	POT		173+96.239						499,710.4687	203,789.7515	
123	POT		179+33.637						500,247.8514	203,793.9039	
124	POT		184+69.608						500,783.7586	203,785.6973	
125	POT		189+49.525						501,263.6666	203,782.6232	

ALIGNMENT TABULATION											
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N		
⌒ C.S.A.H. 13 <PN13_1>											
	PC	⌒ C.S.A.H. 13	9+50.000						496,379.6963	204,971.7199	N 38° 34' 27.05" W
PN13_1-1	PI		10+53.760	38° 09' 26.74" RT	19° 05' 54.94"	300.000'	103.760'	199.792'	496,314.9994	205,052.8392	PI
	CC								496,614.2368	205,158.7781	
	PT		11+49.792						496,314.2447	205,156.5960	N 0° 25' 00.31" W
115	POT		14+36.264						496,312.1610	205,443.0610	

PAVED STREET APPROACHES

C/L ROADWAY

SHLDR / RTL / BYPASS

DISTANCE DETERMINED BY ENGINEER

OVERLAY
PAID AS TYPE SP 12.5 WEARING COURSE

MATCH EXISTING RADIUS

4' MILL JOINT

VAR.

NOTE: CSAH 13 AND UNIVERSITY AVE
ARE FULL DEPTH CONSTRUCTION

GRAVEL / FIELD ENT.

C/L ROADWAY

SHLDR / RTL / BYPASS

BEGIN RADIUS

END RADIUS

MATCH EXISTING RADIUS

VAR.

7 TON CL 5 PER GRVL. ENT.
PAID FOR AS ITEM NO. 2211.501
AGGREGATE BASE CL 5 (TON)

PAVED DRIVEWAYS

C/L ROADWAY

SHLDR / RTL / BYPASS

DISTANCE DETERMINED BY ENGINEER

PAID AS TYPE SP 12.5 WEARING COURSE

7 TON CL 5 PER GRVL. ENT.
PAID FOR AS ITEM NO. 2211.501
AGGREGATE BASE CL 5 (TON)
AGGREGATE ADDED AS DIRECTED
BY THE ENGINEER

MATCH EXISTING RADIUS

BITUMINOUS SAWCUT

VAR.

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_MDET_1.dgn					03/02/2015 9:01:10 AM

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LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA.

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: 

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



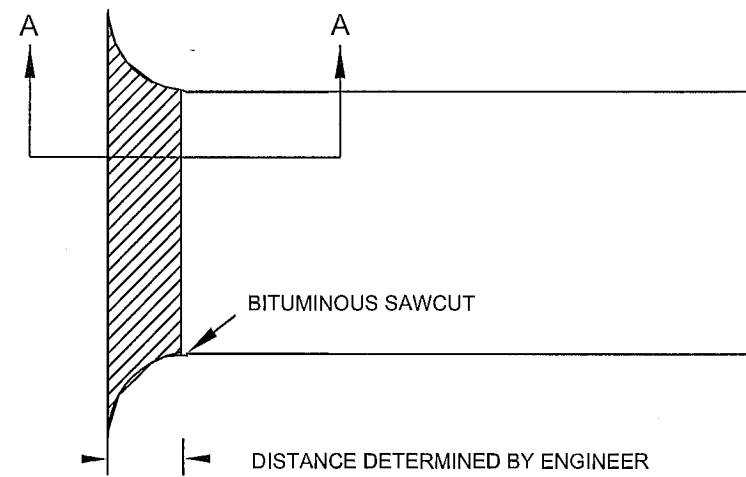
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CITY PROJECT NO.
COUNTY PROJECT NO.

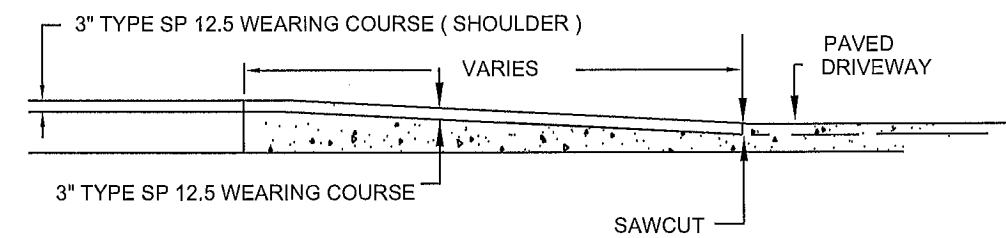
MISC. DETAILS

Sheet 18 of 210 Sheets

JOINT DETAILS

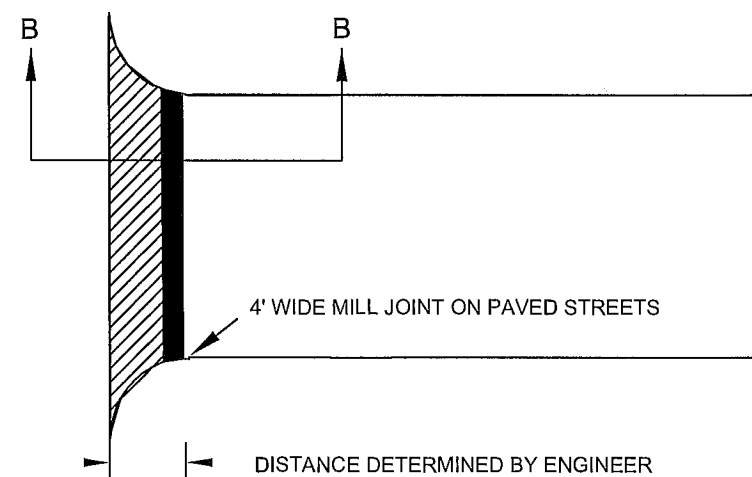


DRIVEWAY JOINT DETAILS A - A

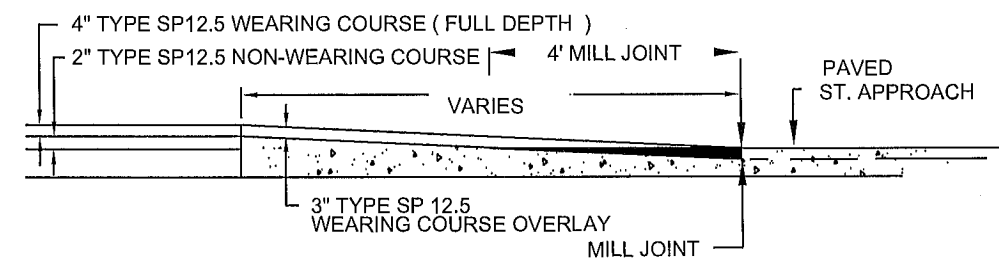


PAVED STREETS

JOINT DETAILS



STREET APPROACH JOINT DETAILS B - B



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_MDET_1.dgn					03/02/2015 9:01:10 AM

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MISC. DETAILS

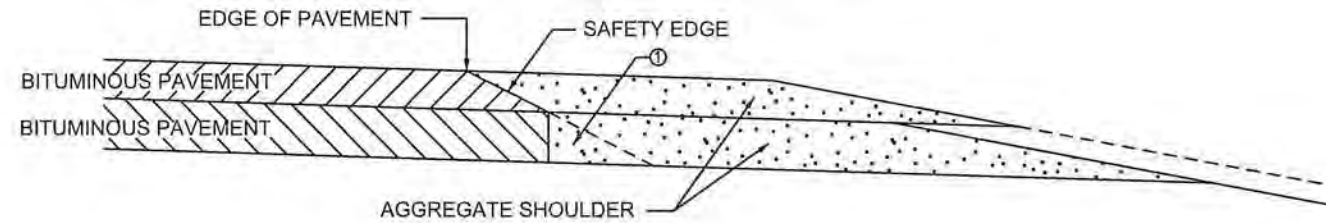
Sheet 19 of 210 Sheets

SAFETY EDGE

BITUMINOUS PAVEMENT

SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

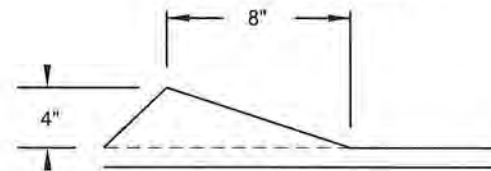
① OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5". SEE SPECIAL PROVISIONS.



BITUMINOUS CURB

(PLACED DURING THE PAVING OF MAIN LINE WEAR COURSE)

LEB STA 76+80 - 78+50
LEB STA 105+00 - 106+00
LEB STA 114+00 - 115+00

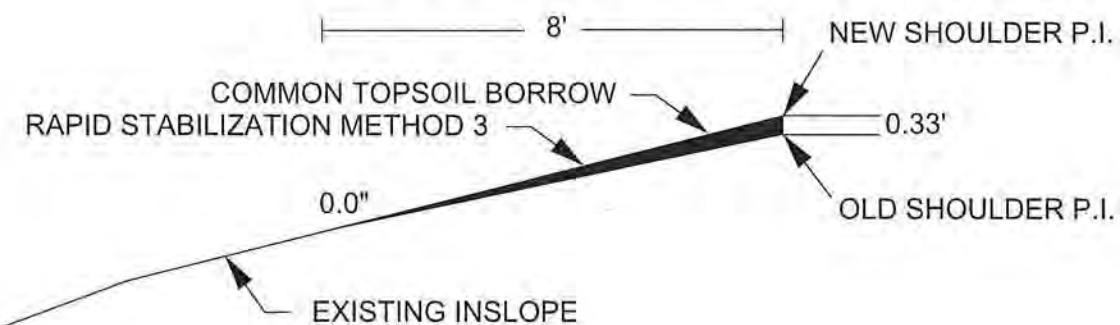


EXISTING BITUMINOUS CURB (LIP) TO BE RECLAIMED WITH SHOULDER

PROPOSED BITUMINOUS CURB (LIP) TO BE PAID UNDER ITEM NO. 2535.501

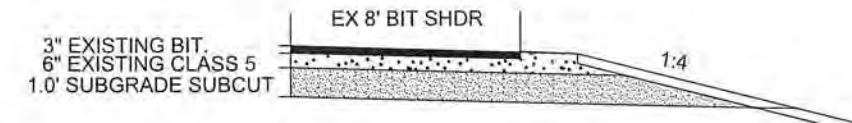
COMMON TOPSOIL BORROW

TIE INTO EXISTING INSLOPE



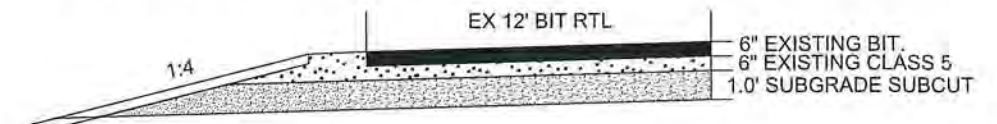
WIDENING AREA

4' WIDENING, BYPASS AREA WB @ CSAH 13 STA. 129+95 - STA. 136+15
COMMON EXC. END AREA 24 SQ FT X 620' = 14880 CU FT = 551 CU YDS



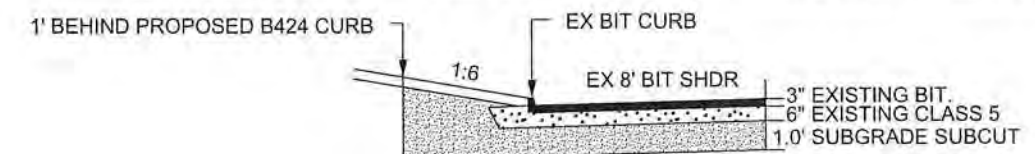
WIDENING AREA

4' WIDENING, RTL WB @ CSAH 13 STA. 133+75 - STA. 138+55
COMMON EXC. END AREA 37 SQ FT X 480' = 17760 CU FT = 658 CU YDS

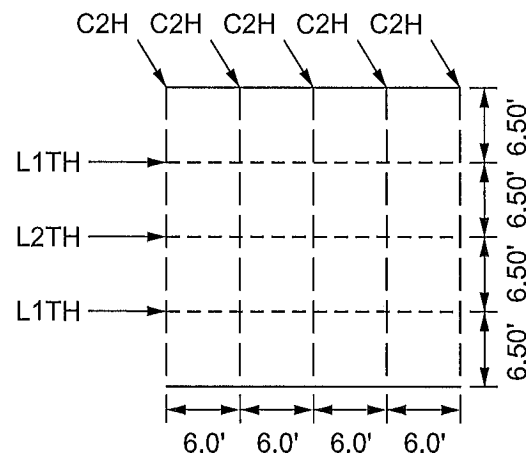


WIDENING AREA

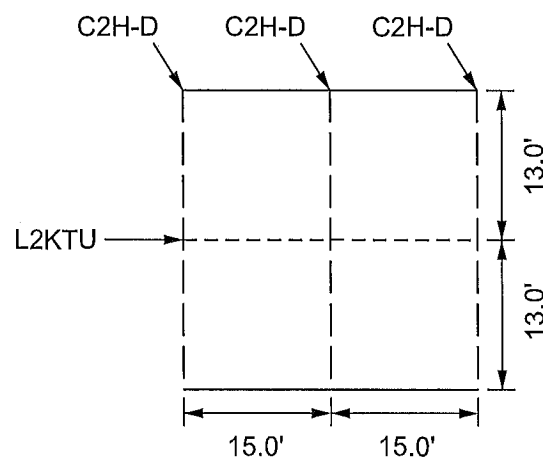
6' WIDENING, CONCRETE CURB ON SHDR AREA WB STA. 160+87 - STA. 167+44
COMMON EXC. END AREA 25 SQ FT X 657' = 16425 CU FT = 608 CU YDS



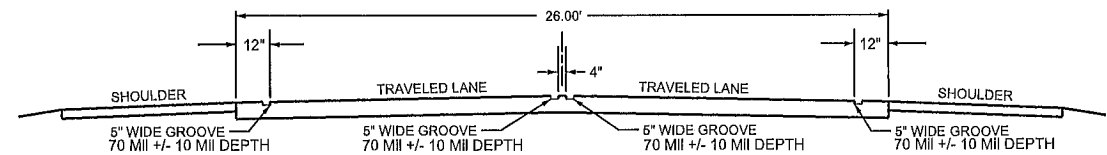
TYPICAL OVERLAY SAWING DETAIL



TYPICAL RECONSTRUCT SAWING DETAIL



GROUND-IN GROOVE / PAINT STRIPING DETAIL



- GROOVED PAINT AREA SHALL BE GROUND INTO THE PAVEMENT SURFACE. FORMED GROOVES DURING THE CONCRETE PAVING PROCESS WILL NOT BE ALLOWED.

The epoxy pavement markings are to be grooved into the pavement surfaces. GRINDER-TYPE CUTTING HEADS CANNOT BE USED.

Grooving operations are incidental.

Grooving Equipment

The grooving shall be performed by a self-propelled machine equipped with gang stacked diamond cutting blades mounted on a floating head with controls capable of providing uniform depth and alignment.

The cutting heads shall consist of stacked 3 mm to 9 mm [1/8 inch to 3/8 inch] wide diamond tipped cutting blades. The spacers between each blade must be such that the raise in the bottom of the finished groove between the blades is less than 25% of the groove depth. The resulting bottom of the groove shall have a fine corduroy finish. If a coarse tooth pattern is present, increase the number of blades and/or decrease the thickness of the spacers on the cutting head.

The equipment shall be capable of grooving the total width of the groove in one pass or be capable of grooving uniform depths with multiple passes. The maximum number of passes is detailed below. If multiple passes are used, the ridge between passes shall be mechanically removed prior to groove cleaning and pavement marking application.

The equipment shall be capable of grooving double lines simultaneously or parallel lines to a uniform depth with two passes.

The equipment shall be self-vacuuming and leave the cut groove ready for pavement marking installation. Dry cut grooving without a vacuum will only be allowed if markings run perpendicular to the roadway, such as Stop Bars. Use the equipment and method approved by the pavement marking manufacturer.

Dry or wet groove the pavement while the roadway is open or closed to traffic. Clean the groove completely prior to pavement marking application, using an air compressor with at least 185 CFM air flow and 120 PSI air pressure. The compressor must be equipped with a moisture and oil trap, and cannot have more than 50 feet of 3/4 inch ID hose between the compressor and the air nozzle. The air nozzle must have an inside diameter of 1/2 inch or greater.

Grooves

The grooving shall be performed within the following tolerances. Failure to meet these tolerances will result in the suspension of work until the Contractor can demonstrate that these tolerances can be met to the satisfaction of the Engineer. The pavement marking system shall be applied so that it is centered within the groove.

GROOVE WIDTH AND MAXIMUM NUMBER OF PASSES		
MARKING WIDTH	GROOVE WIDTH	MAX NUMBER OF PASSES
100 mm [4 inches]	130 mm $\pm$ 3 mm [5" $\pm$ 1/8"]	1
150 mm [6 inches]	180 mm $\pm$ 3 mm [7" $\pm$ 1/8"]	1
200 mm [8 inches]	230 mm $\pm$ 3 mm [9" $\pm$ 1/8"]	1
300 mm [12 inches]	330 mm $\pm$ 3 mm [13" $\pm$ 1/8"]	2
600 mm [24 inches]	635 mm $\pm$ 3 mm [25" $\pm$ 1/8"]	3

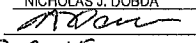
Provide a groove depth of 70 mil $\pm$ 10 mil.

Since pavements are irregular, the depth of groove across the width may vary. To compensate for this, the depth of the groove shall be measured from the bottom of the groove to a straight edge extended over the groove from the pavement surface opposite the pavement joint.

FULL DEPTH GROOVE LENGTHS	
Full Depth Groove Length (Broken Line)	3 m $\pm$ 75 mm [10 feet $\pm$ 3 inches]
Tapers At End of Each Line	150 mm $\pm$ 230 mm [6 inches to 9 inches]
Space Between Double lines	100 mm $\pm$ 6 mm [4 inches $\pm$ 1/4 inch]

- THE CONTRACTOR SHALL ELIMINATE CONCRETE EDGELINE GROOVES AT INTERSECTIONS AS DIRECTED BY THE ENGINEER IN THE FIELD.
- CENTERLINE GROOVES WILL BE SEPARATED, ONE ON EACH SIDE OF CENTERLINE.

NO	DATE	BY	CKD	APPR	REVISION
1	03/02/2015				
NAME: P:\02-622-34\Plan\0262234_MDET_1.dgn					

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PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: 
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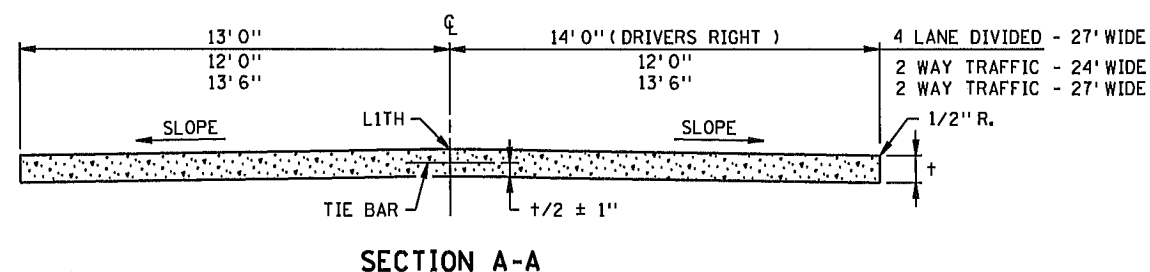
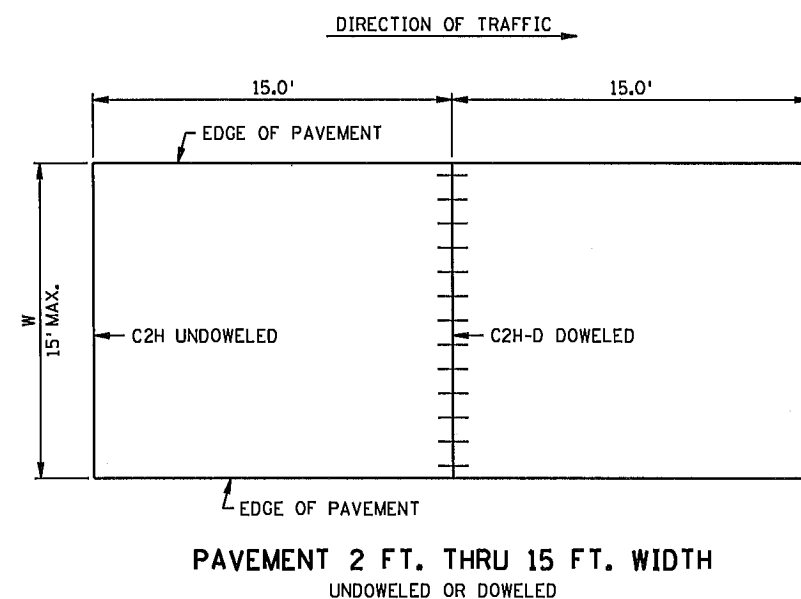
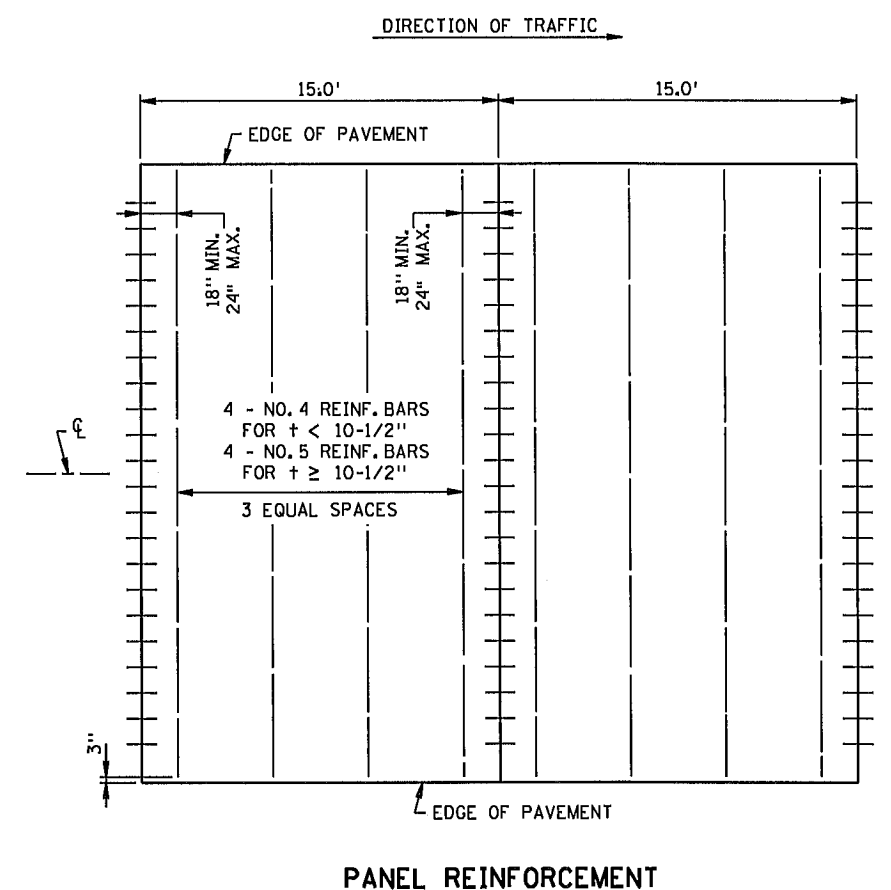
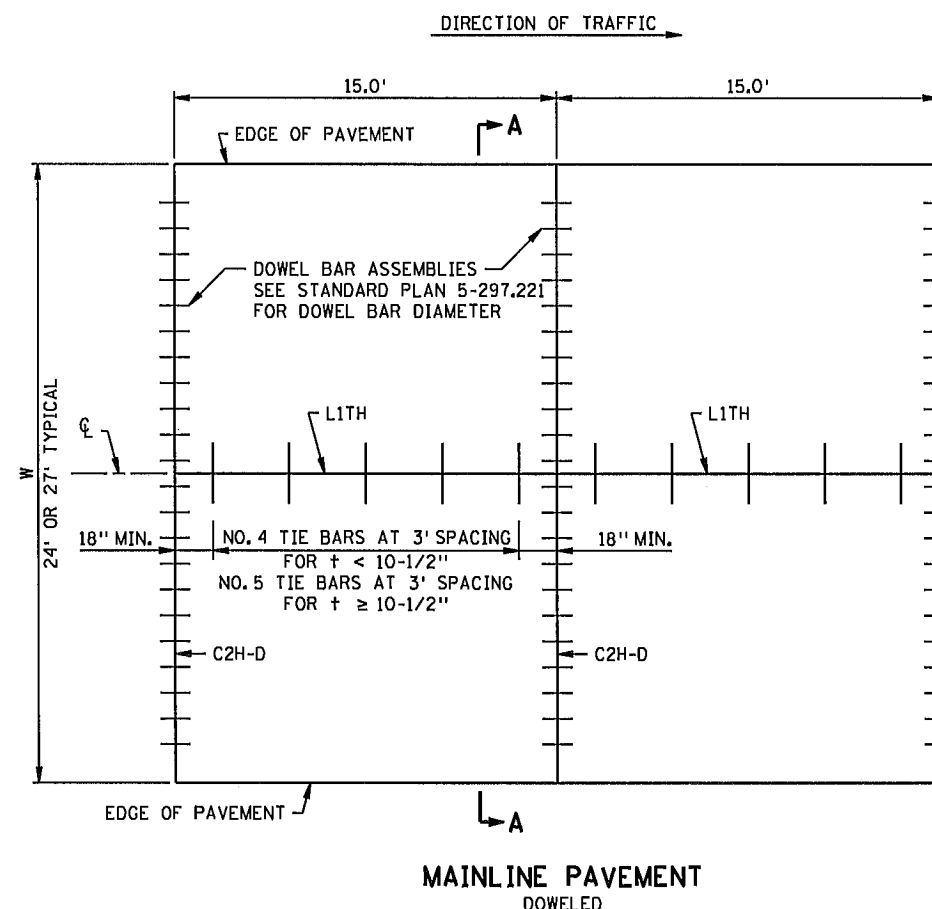
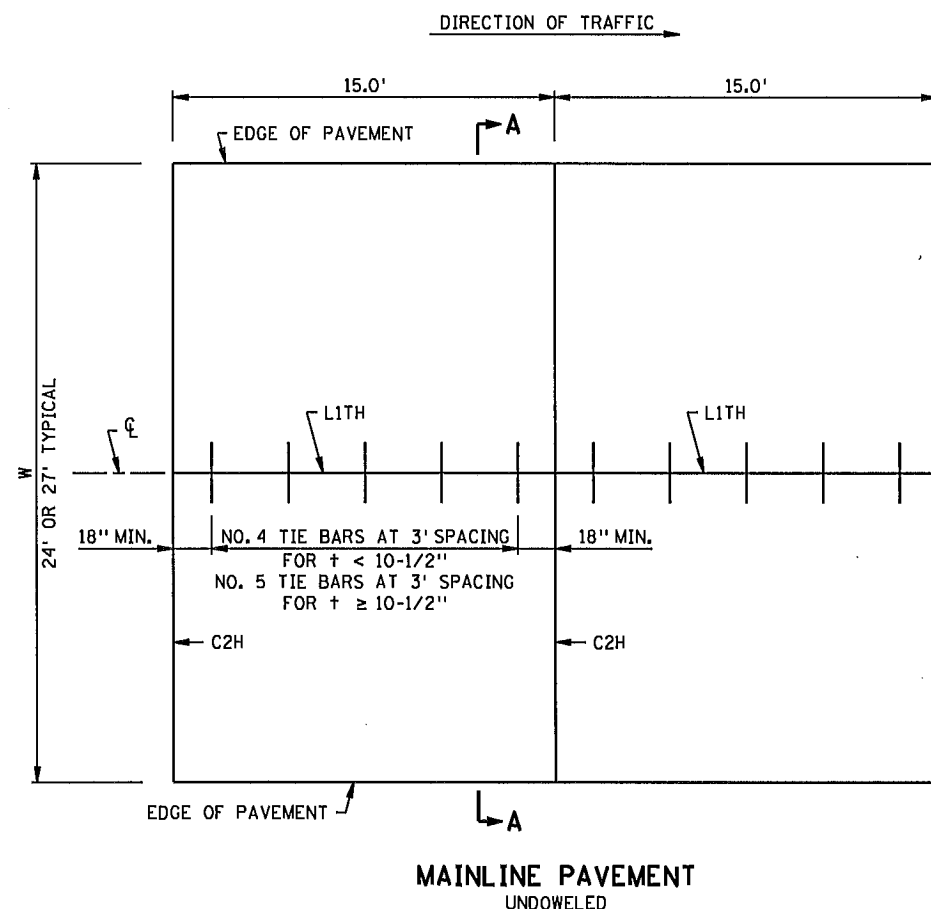
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DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/09/15



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MISC. DETAILS /
STRIPING GROVE DETAILS
Sheet 21 of 210 Sheets



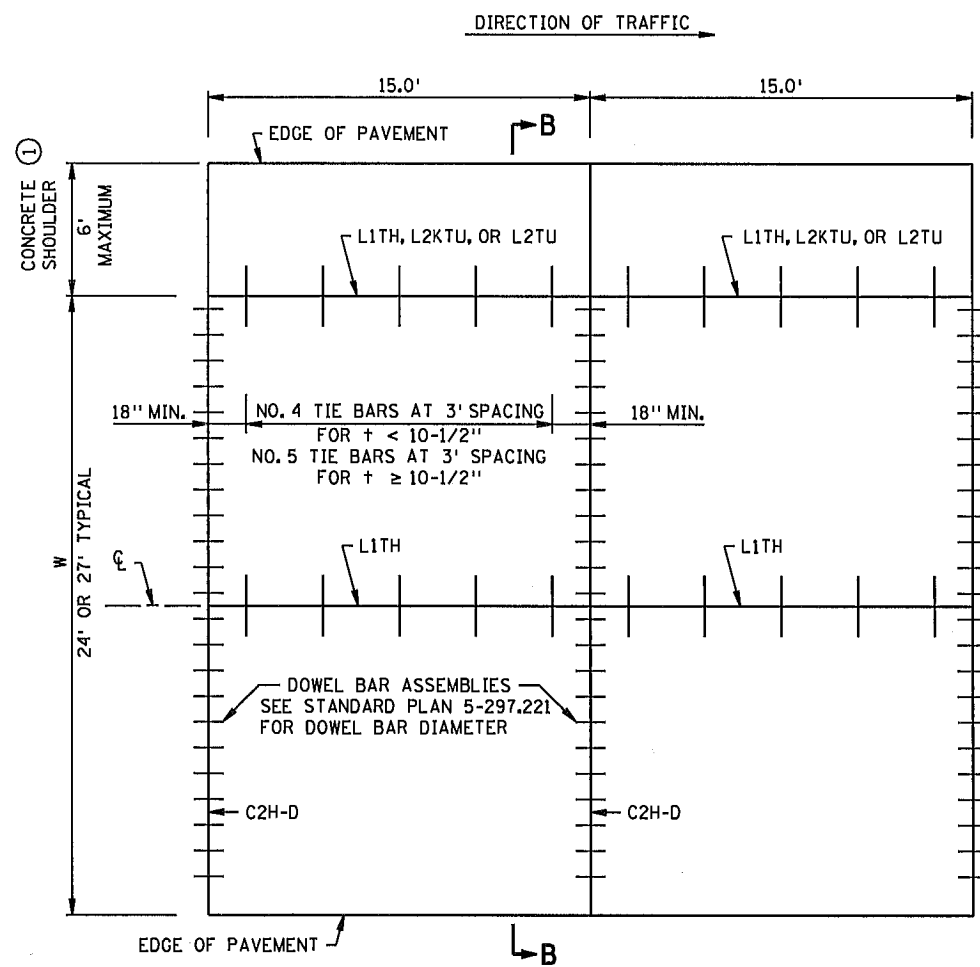
GENERAL NOTES:

- SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, t .
- DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.
- ALL REINFORCING BARS SHALL BE EPOXY COATED AND COMPLY WITH SPEC 3301.
- FOR SUPPLEMENTAL PAVEMENT REINFORCEMENT, SEE STANDARD PLATE 1070.
- PANEL REINFORCEMENT: PLACE IN PANELS WHERE PAVEMENT WIDTH EXCEEDS 15.0' WITHOUT A LONGITUDINAL JOINT. PLACEMENT DEPTH SHALL BE PLANNED $t/2 \pm 1"$. IT IS PREFERRED TO ADD A LONGITUDINAL JOINT RATHER THAN PAVE GREATER THAN 15' IN WIDTH.

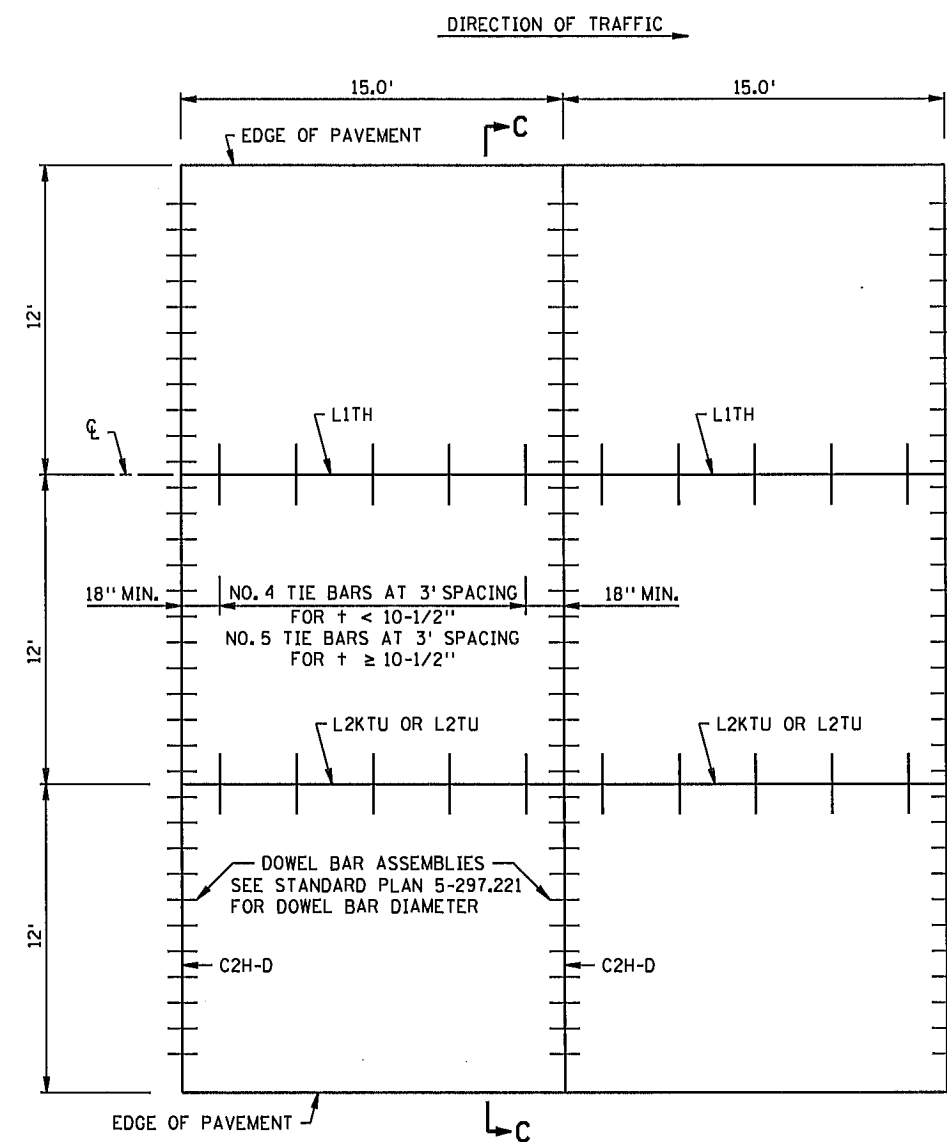
REVISION:
APPROVED: 8-6-2014
DIRECTOR, OFFICE OF MATERIALS AND ROAD RESEARCH

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

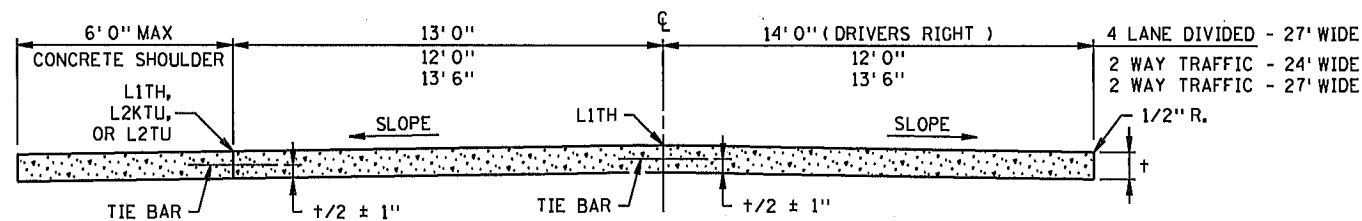
CONCRETE MAINLINE PAVEMENT
15.0 FT. PANEL LENGTH
RURAL
STANDARD PLAN 5-297.217
SAP 002-622-034
SHEET NO. 220 OF 210 SHEETS



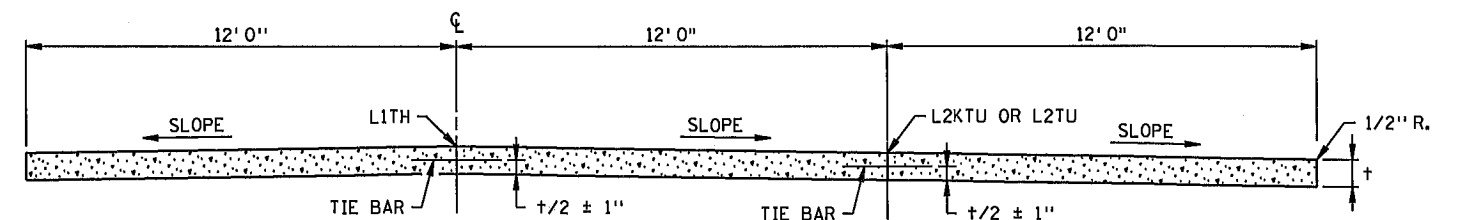
MAINLINE PAVEMENT WITH
INSIDE CONCRETE SHOULDER
DOWELED



MAINLINE PAVEMENT URBAN
DOWELED



SECTION B-B



SECTION C-C

GENERAL NOTES:

SEE TYPICAL SECTIONS AND PLAN SHEETS FOR CROSS SLOPES AND PAVEMENT THICKNESS, t .

DOWEL BAR ASSEMBLIES, WHEN REQUIRED, SHALL BE SIMILAR TO THOSE SHOWN ON STANDARD PLATE 1103.

ALL REINFORCING BARS SHALL BE EPOXY COATED AND COMPLY WITH SPEC. 3301.

FOR SUPPLEMENTAL PAVEMENT REINFORCEMENT, SEE STANDARD PLATE 1070.

① CONTACT THE CONCRETE ENGINEER TO DISCUSS WHETHER TIE BARS AND SAWED JOINTS ARE NEEDED BASED ON CONCRETE SHOULDER WIDTH AND DEPTH.

REVISION:

APPROVED: 8-6-2014

DIRECTOR, OFFICE OF MATERIALS AND ROAD RESEARCH



STATE DESIGN ENGINEER

REVISED:

APPROVED:

8-6-2014

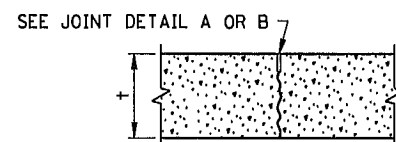
CONCRETE MAINLINE PAVEMENT
15.0 FT. PANEL LENGTH
URBAN OR CONCRETE SHOULDERS

STANDARD PLAN 5-297.217

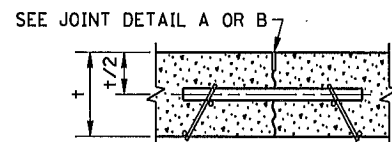
SAP 002-622-034

2 OF 2

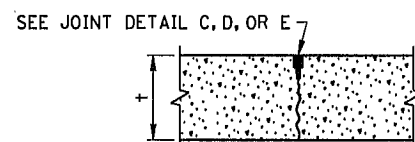
SHEET NO. 23 OF 210 SHEETS



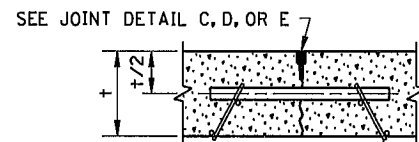
C1U & C2H



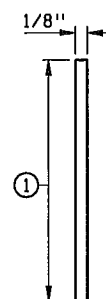
C1U-D & C2H-D



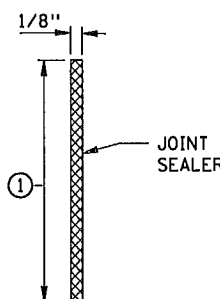
C3P, C4S, C5H



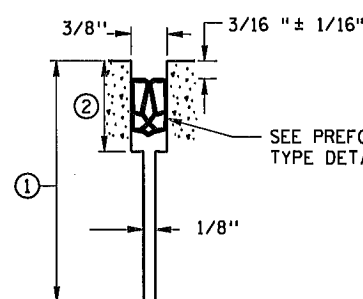
C3P-D, C4S-D, C5H-D



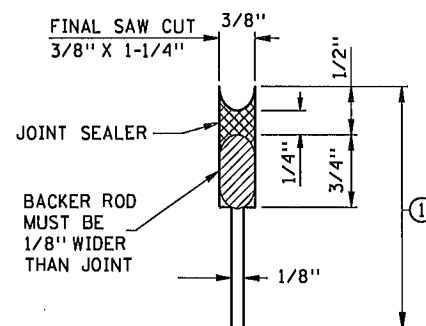
JOINT DETAIL A
SAWED & UNSEALED



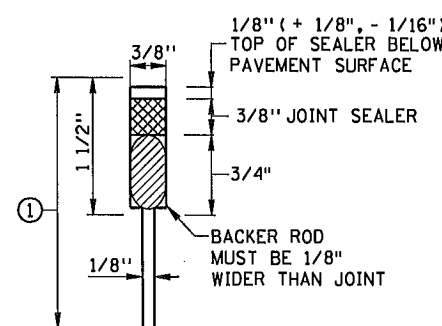
JOINT DETAIL B^③
SAWED & SEALED



JOINT DETAIL C^③
SAWED AND SEALED



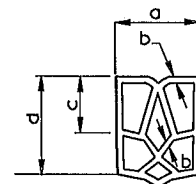
JOINT DETAIL D^{③④}
SAWED AND SEALED



JOINT DETAIL E^{③⑤}
SAWED AND SEALED

REQUIRED DIMENSIONS

JOINT TYPE	TRANSVERSE
NOMINAL SEALER SIZE	1 1/16"
USE IN ALL 3/8" JOINTS	
a	0.69" + 0.13" - 0.05"
b	0.08" ± 0.02"
c	0.25" MIN.
d	0.63" MIN.



TYPICAL SHAPE FOR
SATISFACTORY INSTALLATION
IN JOINT (5 CELL MIN.)

PREFORMED ELASTOMERIC TYPE DETAIL

CONTRACTION JOINT REFERENCE, DETAIL & SEALER SPEC. TABLE

JOINT REFERENCE	JOINT	JOINT	JOINT
WITHOUT DOWELS	WITH DOWELS	DETAIL	SEALER SPEC.
C1U	C1U-D	A	UNSEALED
C2H	C2H-D	B	3725
C3P	C3P-D	C	3721
C4S	C4S-D	D	3722
C5H	C5H-D	E	3725

LEGEND
C = CONTRACTION JOINT
NO. = JOINT REFERENCE
U = UNSEALED
H = HOT POURED
P = PREFORMED
S = SILICONE
-D = DOWEL BARS

EXAMPLE
C2H-D

DOWEL BAR DIAMETER TABLE

PAVEMENT THICKNESS †	DOWEL BAR DIAMETER
LESS THAN 6"	NONE
6" - 6 1/2"	1" OR NONE
7" - 7 1/2"	1"
8" - 10"	1 1/4"
10 1/2" AND GREATER	1 1/2"

NOTES:

SEE STANDARD PLATE 1103 FOR DOWEL BAR ASSEMBLY.
SEE STANDARD PLATE 1150 FOR CONSTRUCTION OF HEADER JOINTS.
JOINT WIDTH TOLERANCE IS + 1/16" TO - 1/32"
FURNISH AND INSTALL ALL JOINT SEALER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
SEE STANDARD PLANS 5-297.217 AND 5-297.219, FOR CONCRETE MAINLINE/RAMP PAVEMENT.
SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

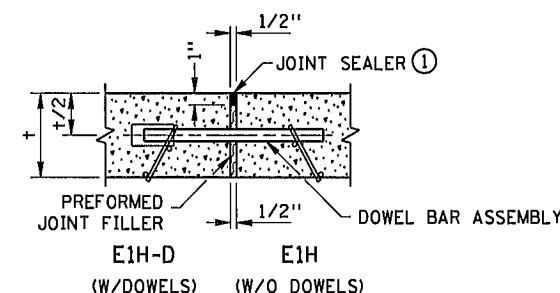
- JOINT DEPTH SHALL BE:
FOR CONCRETE OVERLAYS - 1/3 THE PAVEMENT THICKNESS
FOR CONCRETE PAVEMENT - 1/4 THE PAVEMENT THICKNESS
- SEE CONTRACTION JOINT SEALER DETAIL.
WHEN USING PREFORMED JOINT SEALER, THE DEPTH SHALL BE 1/4" MORE THAN THE PREFORMED SEALER, WHEN COMPRESSED, TO FIT THE JOINT DESIGN WIDTH. "a" DIMENSION SHALL APPLY AT ANY POINT THROUGHOUT "c" DEPTH. SHARP INTERNAL CORNERS WILL NOT BE PERMITTED. ALL CORNERS SHALL BE PROVIDED WITH SUITABLE FILLET.
- WHEN SEALING, THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING.
- PRIOR TO SEALING THE JOINT, A 1/2" DIA. CLOSED CELL BACKER ROD SHALL BE PLACED SUCH THAT THE TOP OF THE BACKER ROD IS 1/2" BELOW THE SURFACE OF THE PAVEMENT. NON SELF-LEVELING SILICONE SHALL BE TOOLED INTO THE JOINT MAINTAINING A SEAL AND BEAD THICKNESS OF 1/4".
- PRIOR TO SEALING THE JOINT, A 1/2" DIA. CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F. SHALL BE PLACED 1/2" BELOW THE TOP OF PAVEMENT.

EXPANSION JOINT REFERENCE, DETAIL & SEALER SPEC. TABLE

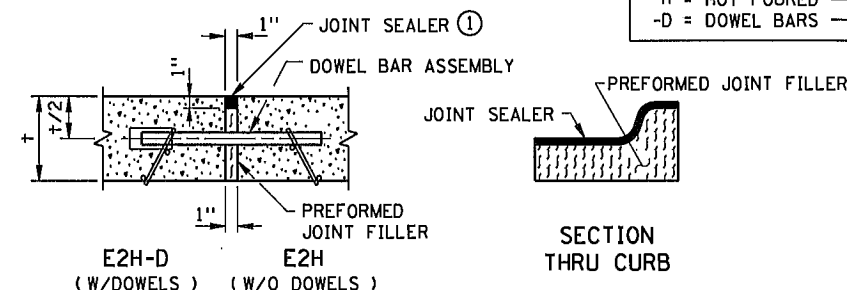
JOINT REFERENCE	JOINT	JOINT	JOINT
WITHOUT DOWELS	WITH DOWELS	DETAIL	SEALER SPEC.
E1H	E1H-D	A	3725
E2H	E2H-D	B	3725
E4H		C	3725
	E4H-D	D	3725
E8H		STANDARD PLAN 5-297.229	3725

LEGEND
E = EXPANSION JOINT
NO. = JOINT REFERENCE
H = HOT POURED
-D = DOWEL BARS

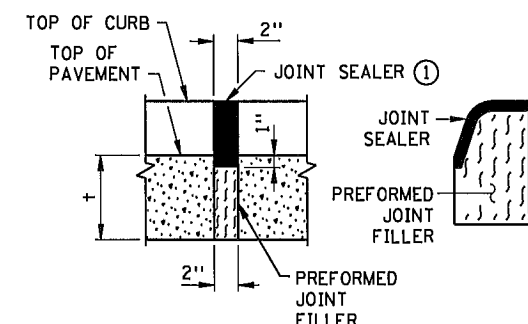
EXAMPLE
E4H-D



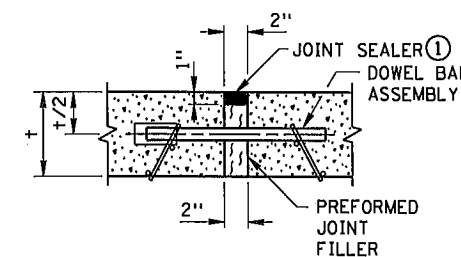
JOINT DETAIL A



JOINT DETAIL B

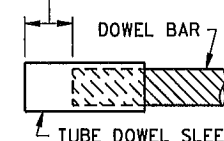


JOINT DETAIL C



JOINT DETAIL D

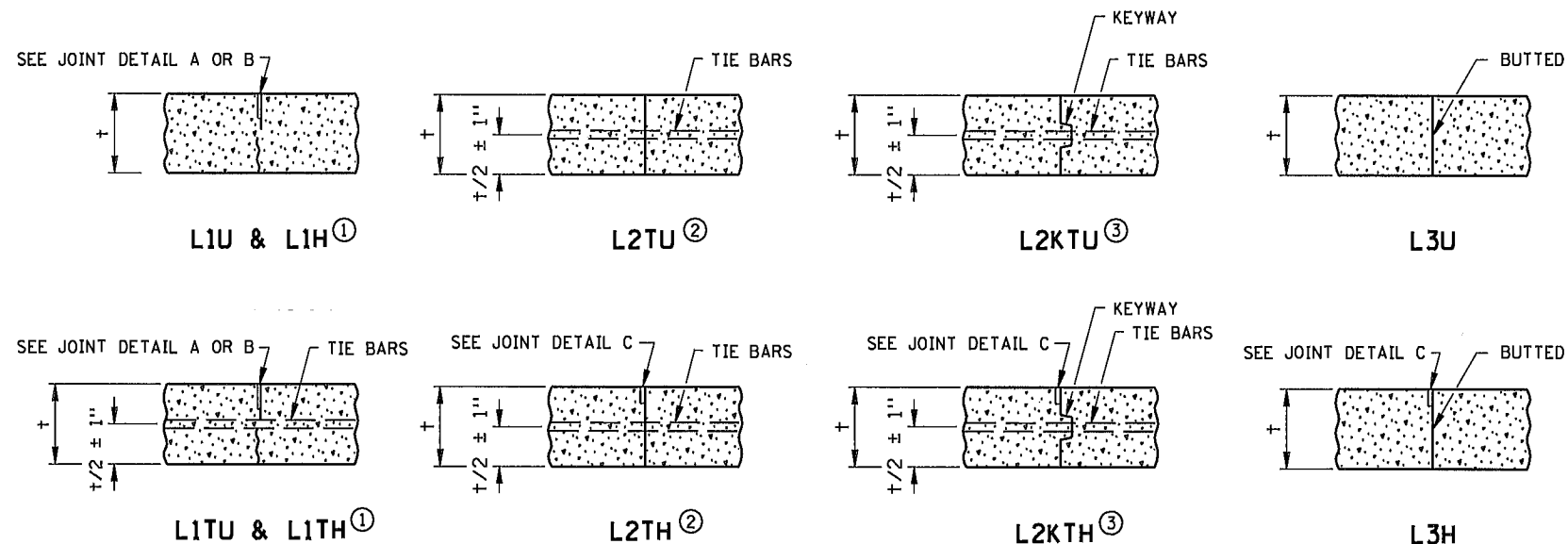
SPACE FROM END OF DOWEL BAR
TO END OF SLEEVE TO BE EQUAL
TO EXPANSION JOINT WIDTH (1" MIN.)



DOWEL BAR
SLEEVE DETAIL

NOTES:

- PREFORMED JOINT FILLER MATERIAL, SPEC. 3702.
FOR DOWEL BAR ASSEMBLY, SEE STANDARD PLATE 1103.
- JOINT SEALER SPEC. 3725. THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING. TOP OF SEALER, FLUSH TO 1/8" BELOW TOP OF PAVEMENT SURFACE. MAKE TOP OF SEALER FOR CURB SECTION D JOINTS FLUSH WITH SURFACE ±1/8".



PAVEMENT THICKNESS	TIEBAR SIZE	LENGTH
< 10-1/2"	NO. 4	30"
≥ 10-1/2"	NO. 5	36"
ALL THICKNESS WHEN TYING TO CURB AND GUTTER	NO. 4	30"

THE TIE BAR SPACING FOR ALL L2T AND L2KT JOINTS SHALL BE 3'-0" CENTER TO CENTER AND BENT 60° AS SHOWN, EXCEPT WHEN NOTED OTHERWISE IN THE PLANS.

TIE BARS IN THE L2T AND L2KT JOINTS SHALL BE THE SAME SIZE AND LENGTH AS USED FOR THE L1T JOINTS, WHEN TYING PAVEMENT TO PAVEMENT. TIE BARS IN THE L2KT JOINTS SHALL BE NO. 4 X 2' - 6", WHEN TYING CURB & GUTTER TO PAVEMENT.

ALL TIE BARS SHALL BE EPOXY COATED AND COMPLY WITH SPEC. 3301.

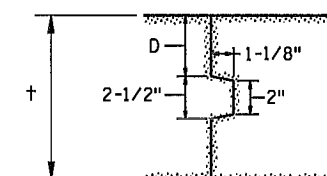
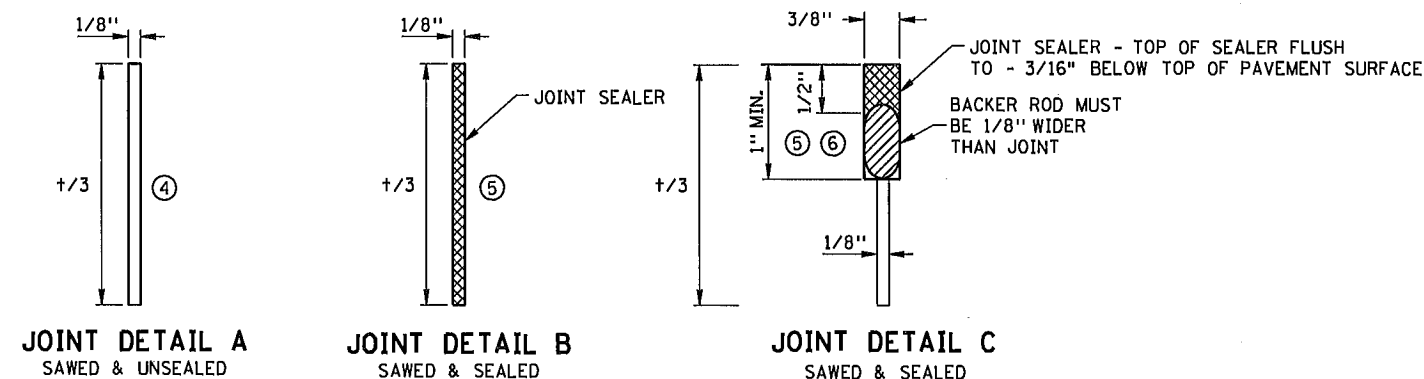
LONGITUDINAL JOINT REFERENCE, DETAIL & SEALER SPECIFICATION TABLE

JOINT REFERENCE			JOINT DETAIL	JOINT SEALER SPEC	JOINT WIDTH
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS			
L1U	L1TU		A	UNSEALED	1/8"
L1H	L1TH		B	3725	1/8"
	L2TU	L2KTU	NONE	UNSEALED	
	L2TH	L2KTH	C	3725	3/8"
L3U			NONE	UNSEALED	
L3H			C	3725	3/8"

LEGEND

L = LONGITUDINAL JOINT
 NO. = JOINT REFERENCE
 1 = PAVED CONSTRUCTION JOINT
 2 = TIED/KEYED CONSTRUCTION JOINT
 3 = BUTTED CONSTRUCTION JOINT
 K = KEYWAY
 T = TIE BARS
 U = UNSEALED
 H = HOT POURED

EXAMPLE

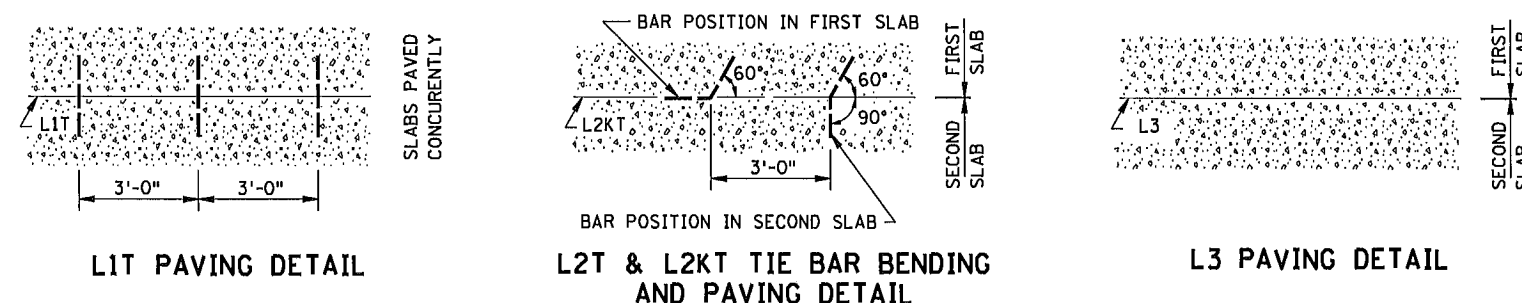


PAVEMENT KEYWAY DETAIL

KEYWAY DIMENSION TABLE

t PAVEMENT THICKNESS	D (TOLERANCE ± 1/4")
< 7"	NO KEYWAY
7" TO 7-1/2"	3"
8" TO 10"	4"
≥ 10-1/2"	5"

KEYWAY (1-1/8" x 2" x 2-1/2") MAY BE FORMED WITH MOLD OR METAL FORM. OTHER APPROVED KEYWAY SHAPES GIVING EQUIVALENT CONSTRUCTION FEATURES MAY BE USED WITH APPROVAL OF THE ENGINEER.



NOTES:

NORMALLY, TIED PAVEMENT WIDTHS SHALL NOT EXCEED FOUR LANES, EXCEPT BRIDGE APPROACH PANELS AND PAVEMENT TAPERS.

JOINT WIDTH TOLERANCE IS + 1/16 IN. TO - 1/32 IN.

FURNISH AND INSTALL ALL JOINT SEALER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

TIED/KEYED AND BUTTED CONSTRUCTION JOINTS SHALL BE UNSEALED EXCEPT AS OTHERWISE NOTED IN THE PLAN OR REQUIRED BY THE ENGINEER.

SEE STANDARD PLANS 5-297.217 AND 5-297.219 FOR CONCRETE MAINLINE AND RAMP PAVEMENT.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATIONS TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

WHEN CURB AND GUTTER IS PLACED ADJACENT TO CONCRETE MAINLINE, THE TIEBARS SHALL BE PLACED A MINIMUM OF 2" ABOVE THE CURB AND GUTTER GRADE.

- SEE THE LONGITUDINAL JOINT REFERENCE, DETAIL & SEALER SPECIFICATION TABLE TO DETERMINE JOINT DETAIL.
- CONCRETE PAVEMENTS LESS THAN 7" SHALL USE L2TU AND L2TH JOINTS UNLESS OTHERWISE ALLOWED BY THE ENGINEER.
- CONCRETE PAVEMENTS GREATER THAN OR EQUAL TO 7" SHALL USE L2KTU AND L2KTH JOINTS UNLESS OTHERWISE ALLOWED BY THE ENGINEER.
- THE JOINT FACES SHALL BE CLEANED WITH WATER DURING THE SAW CUTTING OPERATION OR BY WATER BLASTING AFTER SAWING.
- THE JOINT FACES SHALL BE CLEANED AND DRIED BY SANDBLASTING AND AIR BLASTING.
- PRIOR TO SEALING THE JOINT, A 1/2" DIAMETER CLOSED CELL BACKER ROD CAPABLE OF WITHSTANDING SEALANT TEMPERATURES OF 400 DEGREES F. SHALL BE PLACED 1/2" BELOW THE TOP OF THE PAVEMENT.

REVISION:
 APPROVED: 8-6-2014
 DIRECTOR, OFFICE OF MATERIALS AND ROAD RESEARCH

REVISOR:
 APPROVED: 8-6-2014
 STATE DESIGN ENGINEER

PAVEMENT JOINTS LONGITUDINAL (DESIGN L)

STANDARD PLAN 5-297.221 2 OF 2
 SAP 002-622-034 SHEET NO. 25 OF 210 SHEETS

Minnesota Department of Transportation
Best Management Practices (BMP) for
Concrete Washout
May 2009, v5

The NPDES permit requires that concrete washout be managed on all construction projects. This document is Mn/DOT's interpretation of MPCA's guidance on concrete washout dated February 2009, and describes recommended best management practices for concrete washout. As improvements in technology occur for managing liquid and solid concrete washout materials, the department will amend this guidance document.

Mn/DOT Guidance: The NPDES construction permit requires concrete washout management (Part IV.F.4) on every project that uses concrete and concrete products, with SWPPP amendments (Part III.A.5 & Part III.A.7) as necessary to prevent the discharge of concrete liquids and uncured solids from making contact with soils unless in defined containment Best Management Practices (Part V.C & MS4 Permit).

- **Accidental Discharge.** If concrete washout makes accidental contact with soils or discharges to waters of the state, state law requires notifying (Minn R 7045.0468 Subp 6) the State duty Officer and immediately stop further discharge, remove discharge materials and restore the site to the pre-disturbance condition.
- **Designated Area.** The NPDES permit requires that designated concrete washout areas be posted with a sign or spray painted in a conspicuous manner, and inspected as often as necessary to function without discharge. Unless shown, the concrete washout location must be amended in the SWPPP.
- **Special Location Restriction.** Washout BMP must be sited more than 200 feet from a DNR public or permit listed Special Water unless robust, redundant best practice protection measures are installed and amended into the SWPPP.
- The Department reserves the right to indicate in the plans and final details where or where not concrete washout may occur.

The following options are recommended as best management practices for handling concrete truck, pump, mixer, chute, hand tools, concrete testing equipment and wheel barrow washout:

Option A: Lined Trap
Option B: Berm Trap
Option C: Dumpster
Option D: Chute Washout Systems
Option E: Concrete Truck & Pumper
Option F: Small Volume Systems

Spill Response Program: The contractor must have on hand the following items capable of capturing, containing or treating accidental discharge of concrete materials on ground and surface waters:

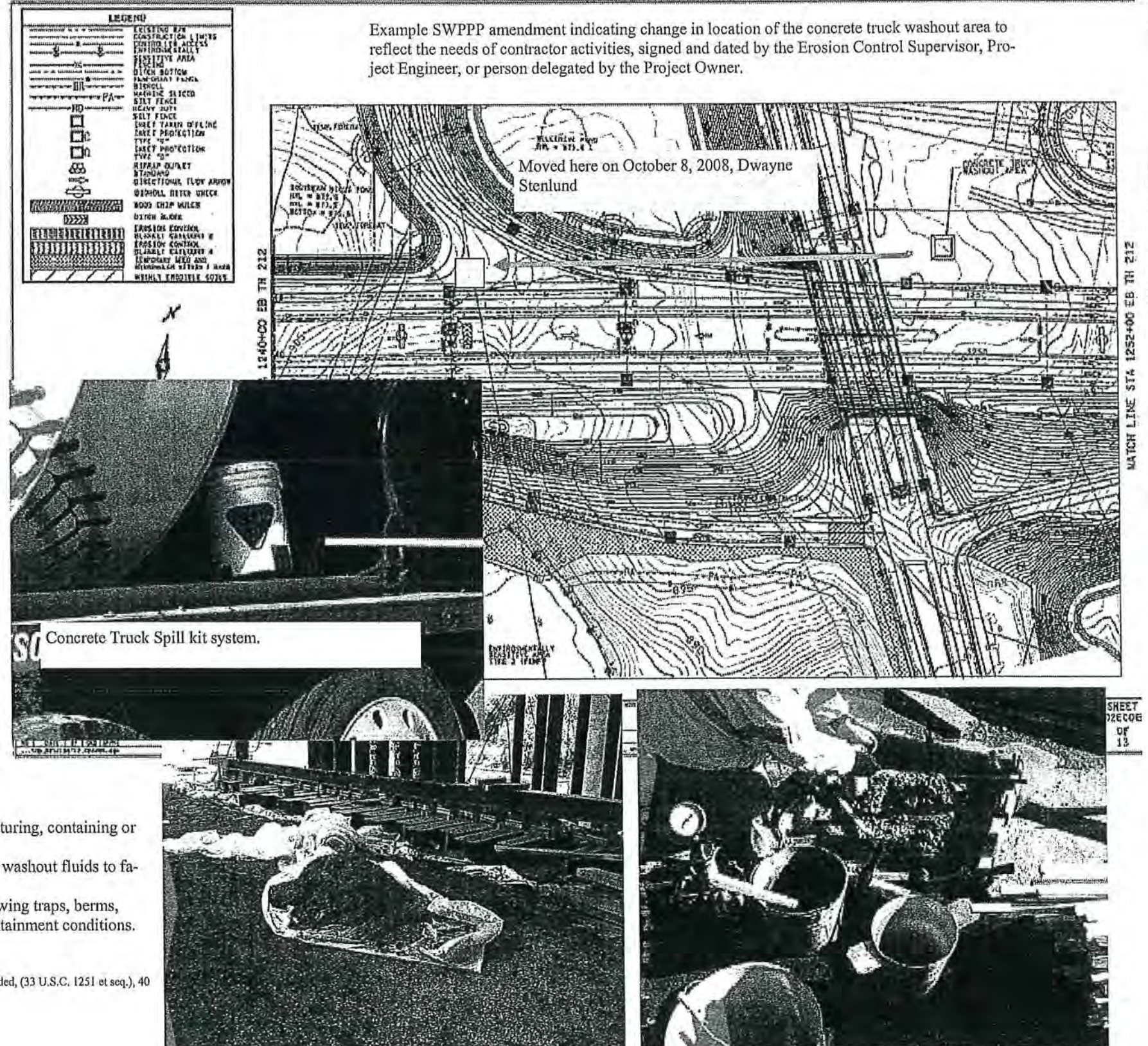
1. dry washed sand or wood slash mulch that can be used to temporarily solidify liquid concrete washout fluids to facilitate emergency pickup, and
2. Citric acid, dry ice or CO2 compressed gas cylinder (CO2 Sparging) to pH neutralize overflowing traps, berms, dumpsters or other emergency cementitious discharge due to weather or under-capacity trap containment conditions.

1. Prevent nuisance conditions as defined in Minn. R. 7050.0210, subp. 2
2. Compliance to the NPDES Construction and Minnesota State Disposal System (SDS) Permit of the Federal Clean Water Act, as amended, (33 U.S.C. 1251 et seq.), 40 CFR 122, 123, and 124, as amended, et seq.; Minn. Stat. chs. 115 and 116, as amended, Minn. R. chs. 7001 and 7090
3. Protection of ground and surface waters as defined in Minn. Stat. § 115.01, subd. 22
4. Beneficial reuse as defined in Minn. R. 7035.2860, subp. 4, item 1

Photos shown throughout this guidance document does not constitute endorsement of any manufacturer by the Department.

Prepared by Dwayne Stenlund, CPESC #2052, Office of Environmental Services, 612-810-9409

CONCRETE WASHOUT BMP'S



Excess and slump test solids placed on plastic until hardened. Contractor may consider installing wire or rebar hook for later pickup removal to crusher or recycling stockpile.

Discharge prevention pallet lined with disposable plastic for testing of concrete and washout of tools by Inspectors. Pallet may be made to accommodate skidsteer forks for quick pickup and discharge to defined washout trap areas until liquid evaporates and solids harden.

[illegible]

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PRINT NAME: NICHOLAS J. DOBOA

SIGNATURE: *N. J. Dobo*

DATE: 3-3-15 LICENSE NO. 49046

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DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

CONCRETE WASHOUT DETAILS

Sheet 26 of 210 Sheets

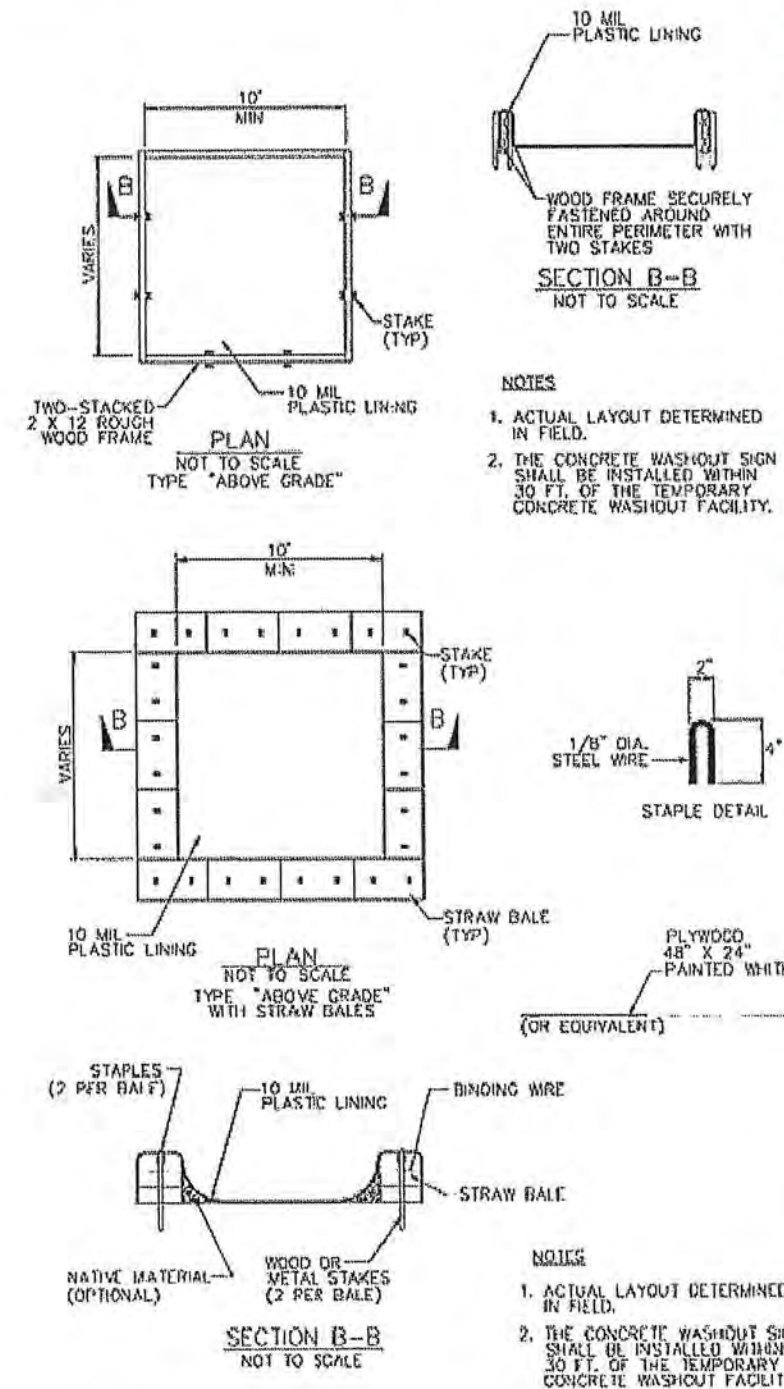
Sheet 27 of 210 Sheets

CONCRETE WASHOUT BMP'S

Minnesota Department of Transportation
BMP for Concrete Washout
May 2009, v5

Option B: Berm Trap System.

A Berm Trap System may consist of raised walls constructed from wood or wood slash (3882 Type 5 Mulch Material), straw bales, Compost Filter Logs, sand bags, soil, lined concrete barriers, or any suitable strength materials to contain concrete washout liquids and solids until evaporation, curing, or extraction and final removal. No material can be left in place once operations are completed for that area.



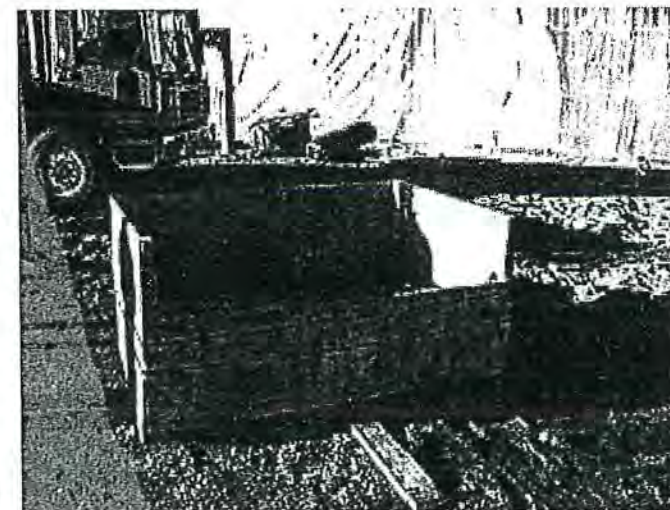
High cohesive, low infiltration soil berm



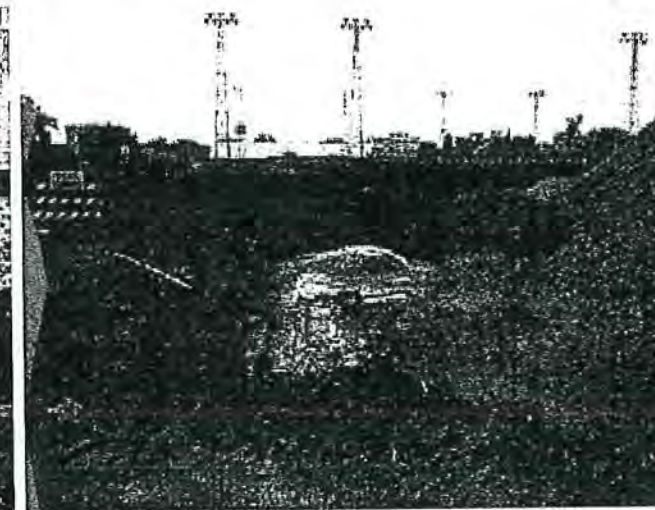
Concrete washout tote



Superduty washout berm



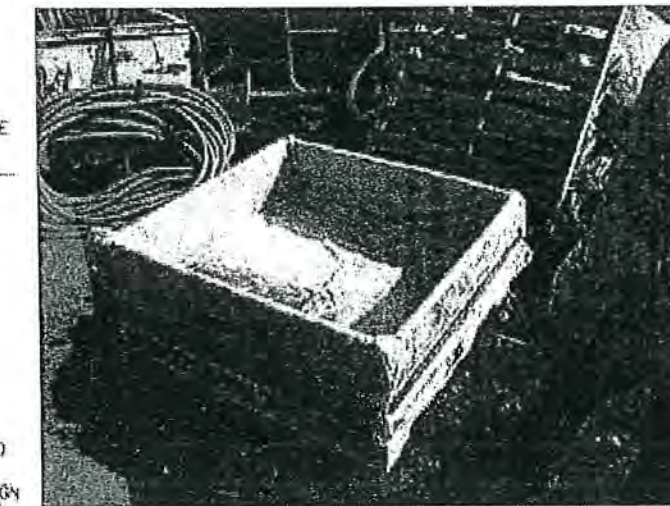
Sealed or plastic lined wood washout box



Slash mulch filter ring on low infiltration soils



Mixing sand berm with plastic liner



2x10 plastic and geotextile box, with 2x4 cleats for front loader



Granular berm and plastic liner

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ANOKA COUNTY
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CONCRETE WASHOUT
DETAILS

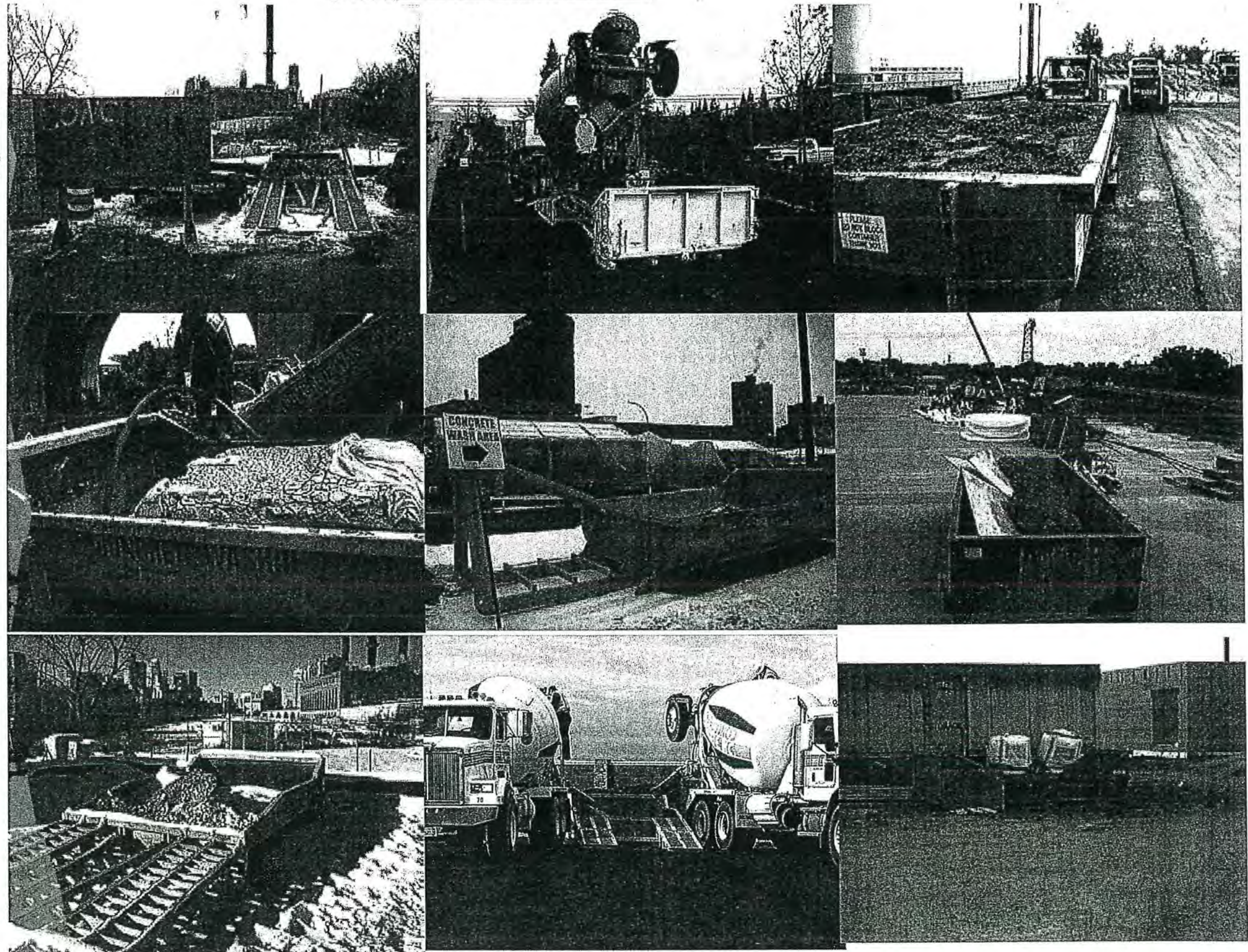
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CONCRETE WASHOUT BMP'S

Minnesota Department of Transportation
BMP for Concrete Washout
May 2009, v5

Option C: Dumpster System.

A dumpster washout system is any commercial or retrofitted leak-proof dumpster capable of holding liquid and solid concrete washout materials until final treatment and disposal. There are commercial companies available to manage and treat all liquid wastes and recycle all solids. Prevent comingling of other solid wastes with concrete washout materials.



Various concrete liquid and solid dumpster systems sized to store all materials until liquid evaporates or vacuum removed and treated by commercial operators.

[illegible]

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ANOKA COUNTY
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COUNTY PROJECT NO.

CONCRETE WASHOUT DETAILS

Sheet 29 of 210 Sheets

CONCRETE WASHOUT BMP'S

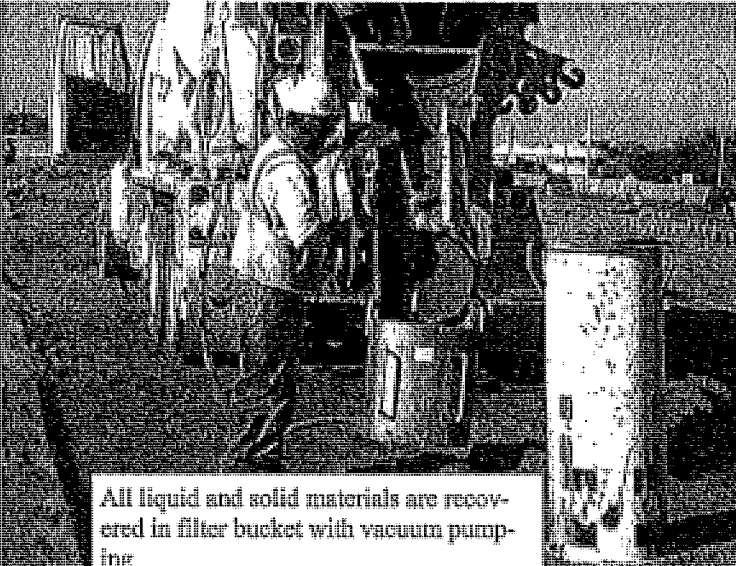
Minnesota Department of Transportation
BMP for Concrete Washout
May 2009, v5

Option D: Chute Washout System

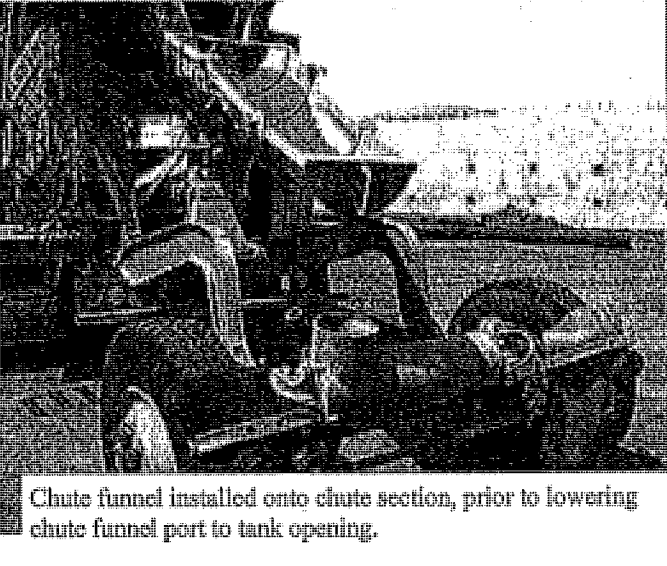
Two commercial types known include (1) a portable truck mounted pump recovery system, and (2) portable truck mounted pull behind wash tank. A locally manufactured system includes a portable truck mounted plastic trough and reinforced insulated wash box with sealed transport lid.

All devices appear capable of containing all concrete liquids and solids, or possess the ability to separate the liquids from the aggregate.

At the request of the ready mix operator, the clean washed aggregate may be left in suitable grade areas as determined by the Project Engineer or may be reused as concrete aggregate once processed to comply with Mn/DOT Specifications. At this time, all similar chute washout systems appear equal in ultimate performance goal of leaving no trace of concrete washout residues. Due to the nature of the liquid waste recovery system, there are no restrictions on where the operator may washout the chutes, tools, test equipment, and any portion of the truck that directly drains into to the filter apparatus. A washout sign is not required for chute washout systems. Mn/DOT concrete inspectors are allowed to deposit tool wash water into the filter bucket system at the discretion of the concrete producer. The contractor is advised not to wash-off truck parts and equipment that does not flow back into the chute system unless performed in designated equipment wash-off areas indicated in the SWPPP or SWPPP amendments.



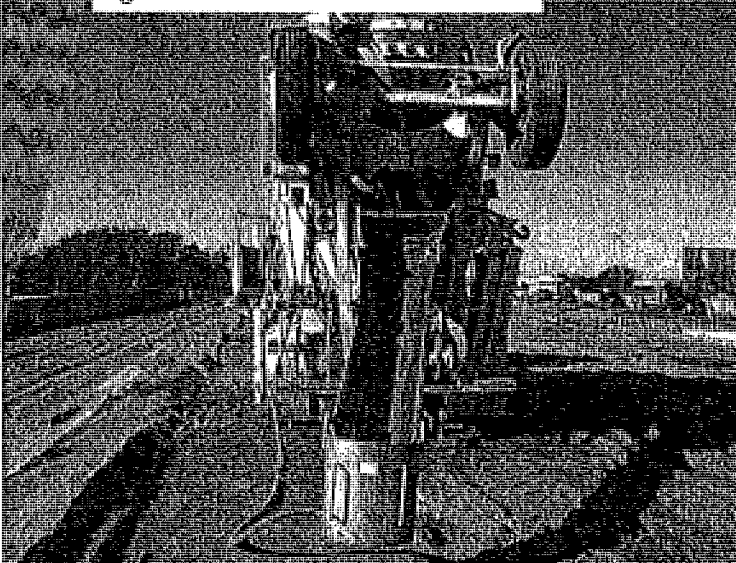
All liquid and solid materials are recovered in filter bucket with vacuum pumping



Chute funnel installed onto chute section, prior to lowering chute funnel port to tank opening.



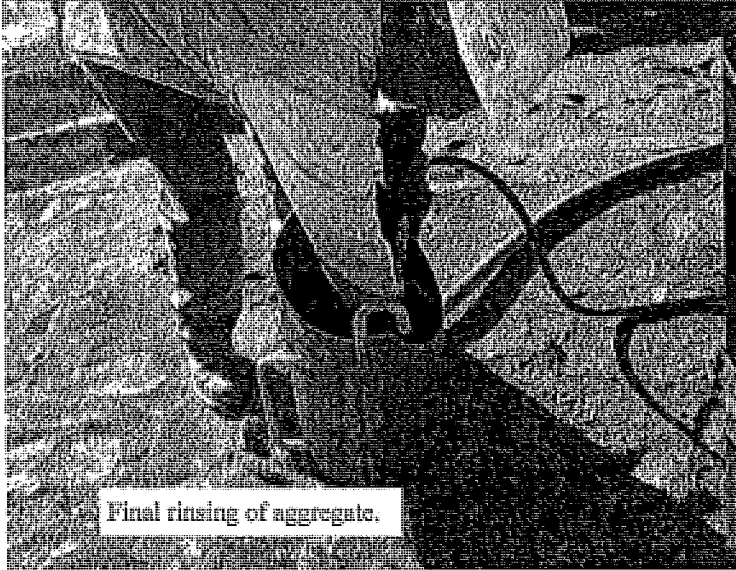
Chute Washout System, mounted on metal carriage



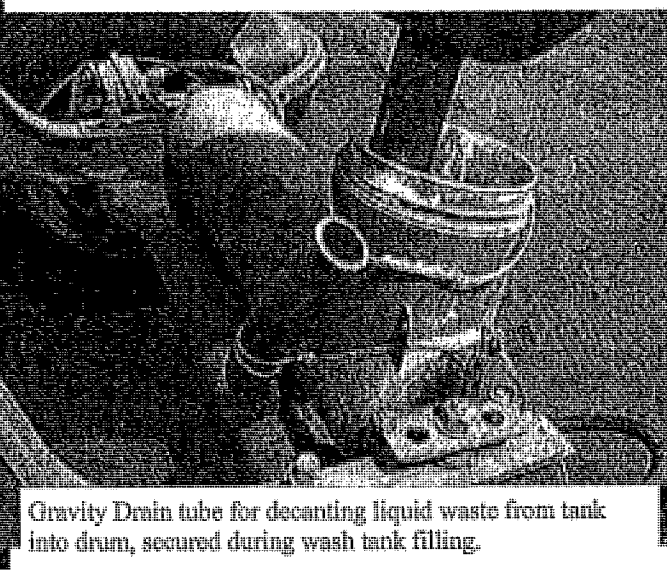
Wash tank with slotted filter bucket installed in tank port.



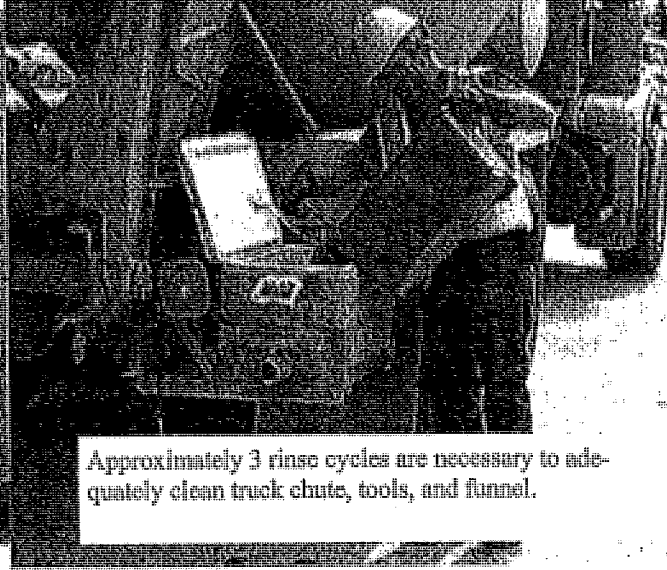
Plastic wash trough mounted w rebar hooks to chute, capable of containing rinse wash water and



Final rinsing of aggregate.



Gravity Drain tube for decanting liquid waste from tank into drum, secured during wash tank filling.



Approximately 3 rinse cycles are necessary to adequately clean truck chute, tools, and funnel.

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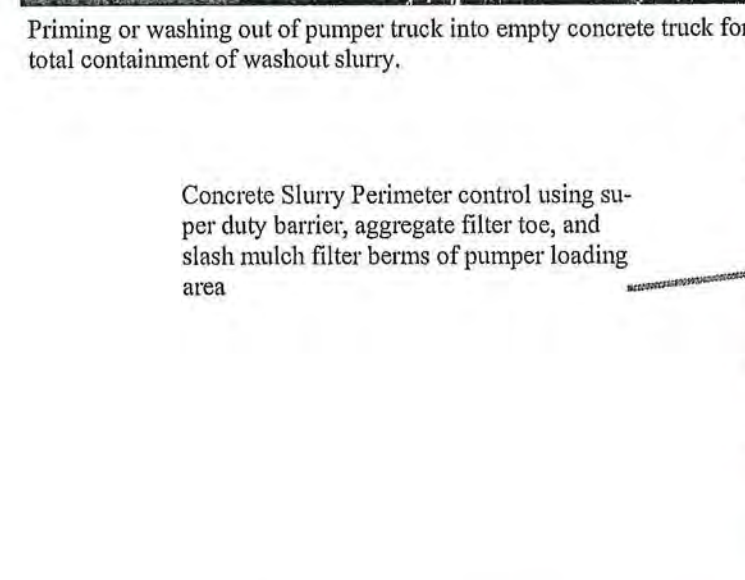
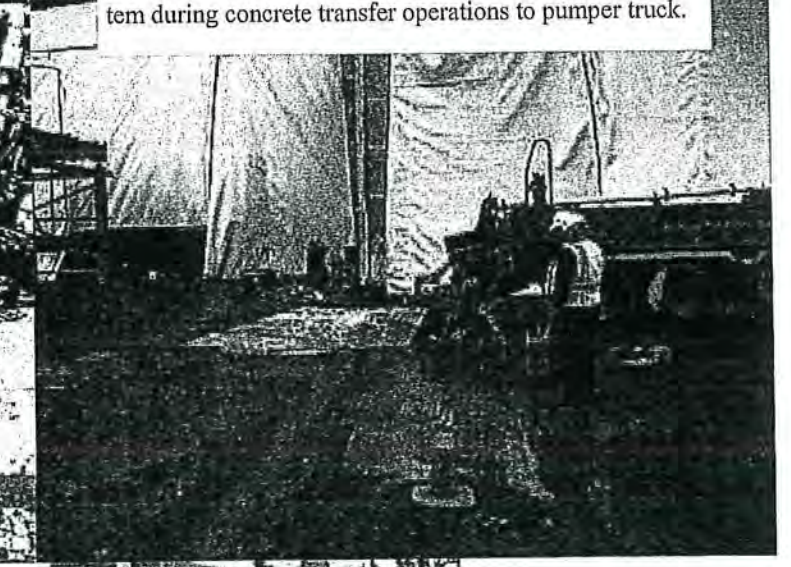
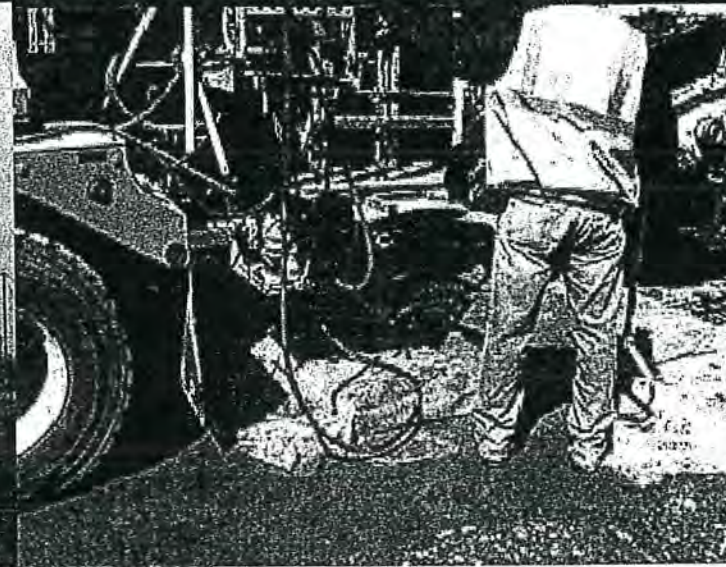
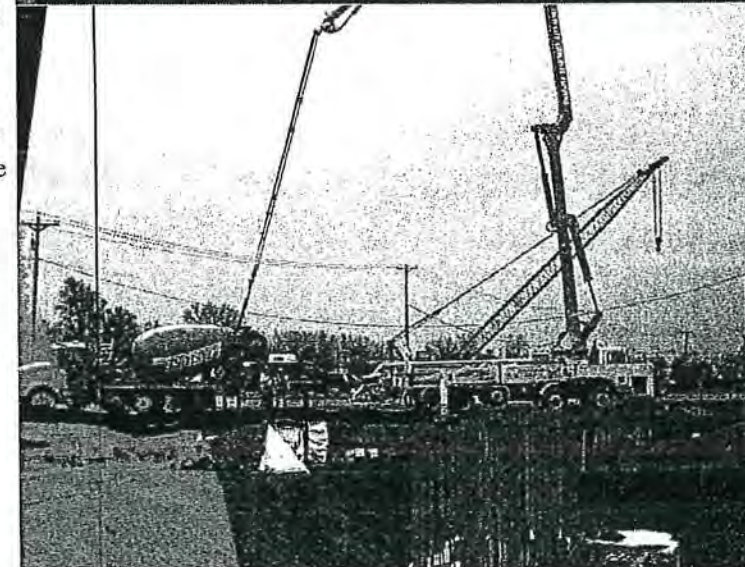
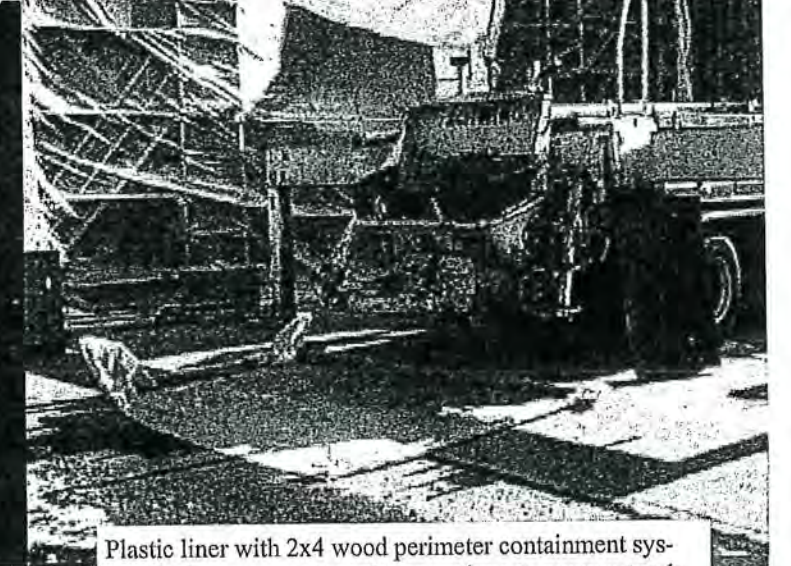
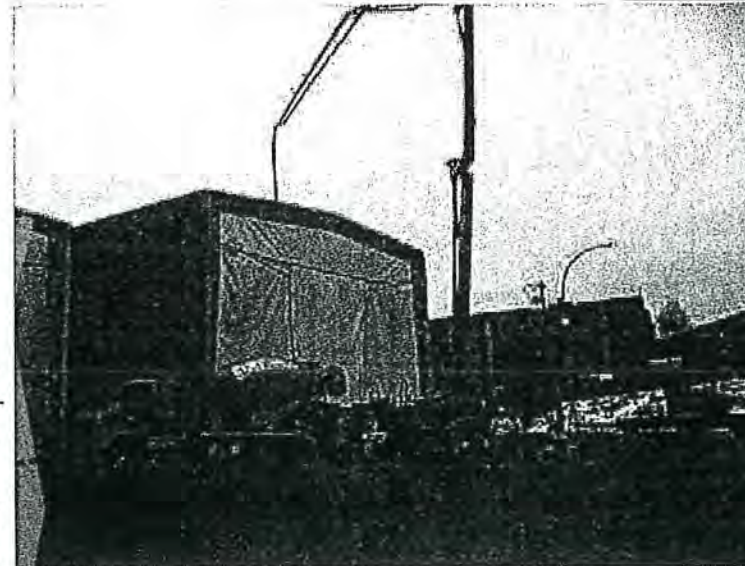
CONCRETE WASHOUT
DETAILS

Minnesota Department of Transportation
BMP for Concrete Washout
May 2009, v5

Option E: Concrete Truck & Pumper

Certain operations involving pumper trucks that require priming and end flush cleaning will require special consideration of washout management. Empty concrete truck tank discharge is the process of total containment during high volume preparation and final cleaning of boom pipes and hoses. Final hopper and pump motor cleaning can use Options A through C, front loader bucket, or other Project Engineer accepted plan, and as amended in the SWPPP. Depending on concrete pumper location (ie. well head protection area, sand soils, etc.), concrete perimeter control using super duty barrier and liner, sand, sand bags and plastic or plywood liners may be required to prevent discharge to ground and surface waters during pump hopper loading. If liquid or solid material spills to the soil surface, remove at a frequency to prevent loss to ground or surface waters of the state, and clean by removal of contaminated soil areas to trap areas amended to the SWPPP.

CONCRETE WASHOUT BMP'S



Priming or washing out of pumper truck into empty concrete truck for total containment of washout slurry.

Concrete Slurry Perimeter control using super duty barrier, aggregate filter toe, and slash mulch filter berms of pumper loading area

Final remnant of pumper hopper washout into designated and signed washout trap.

[illegible]

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ANOKA COUNTY
HIGHWAY DEPT.

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COUNTY PROJECT NO.

CONCRETE WASHOUT DETAILS

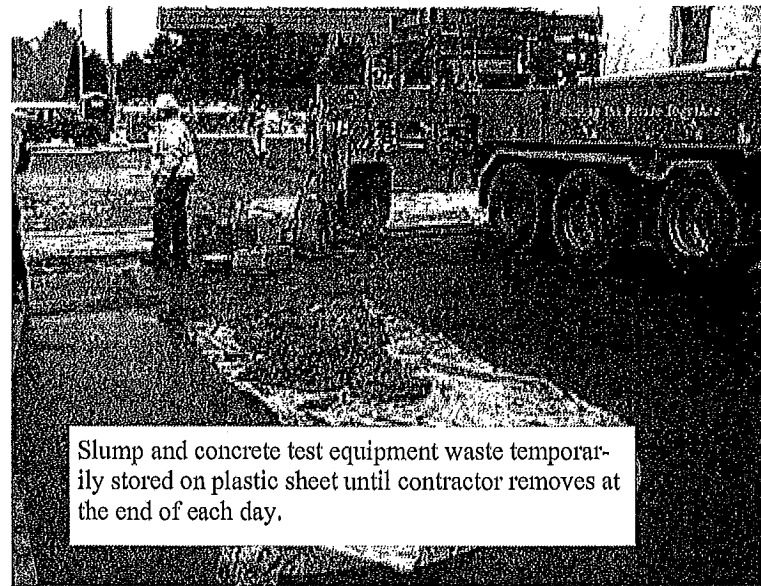
Sheet 31 of 210 Sheets

CONCRETE WASHOUT BMP'S

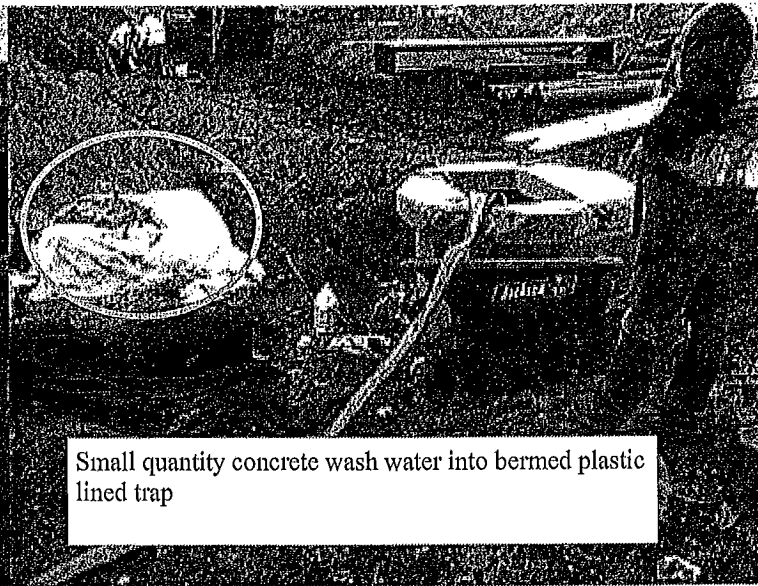
**Minnesota Department of Transportation
BMP for Concrete Washout
May 2009, v5**

Option F: Small Volume

Concrete shaping, forming, and inspection operations involving concrete test equipment, tools, and other small items including trowels, forms, wheelbarrows, boots, and gloves that require washout and/or cleaning will require special consideration of washout management. All items must be cleaned or washed in a manner consistent with the requirements described in this guidance document such that liquids and solids from the cleaning operations do not enter ground or surface waters of the state. This can be accomplished by washing items by any method described in this guidance document, or other Project Engineer accepted plan, and as amended in the SWPPP. Less than 0.5 gallons of liquid wash waste may be disposed on the grade. If wash liquid or solid material spills to the soil surface, remove at a frequency to prevent loss to ground or surface waters of the state, and clean by removal of contaminated soil areas to concrete washout trap areas and as amended to the SWPPP.



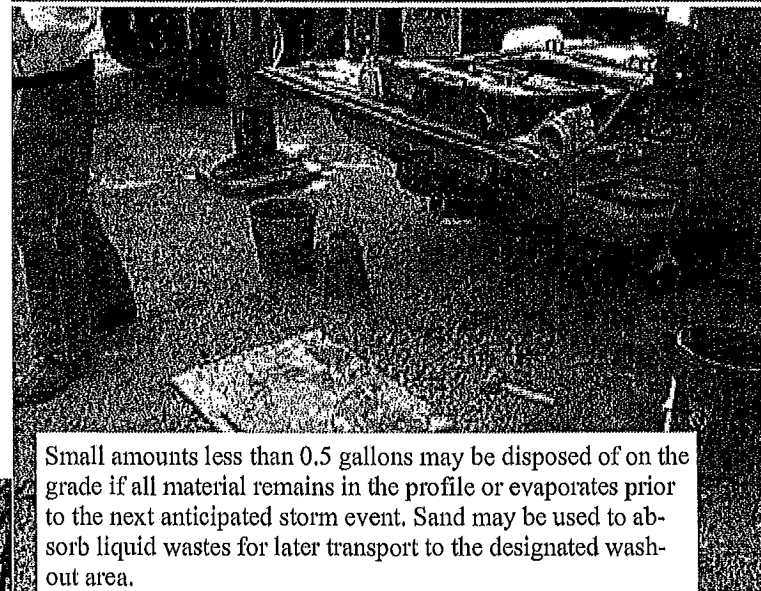
Slump and concrete test equipment waste temporarily stored on plastic sheet until contractor removes at the end of each day.



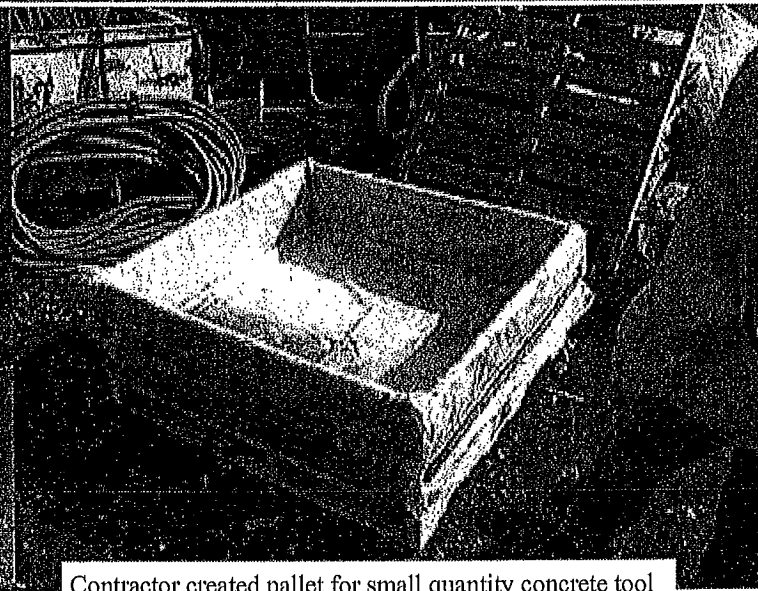
Small quantity concrete wash water into bermed plastic lined trap



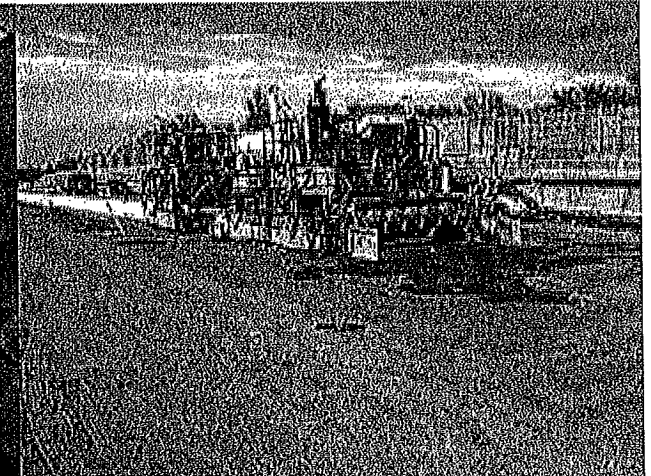
Traditional designated washout areas can be used for rinse water until evaporation.



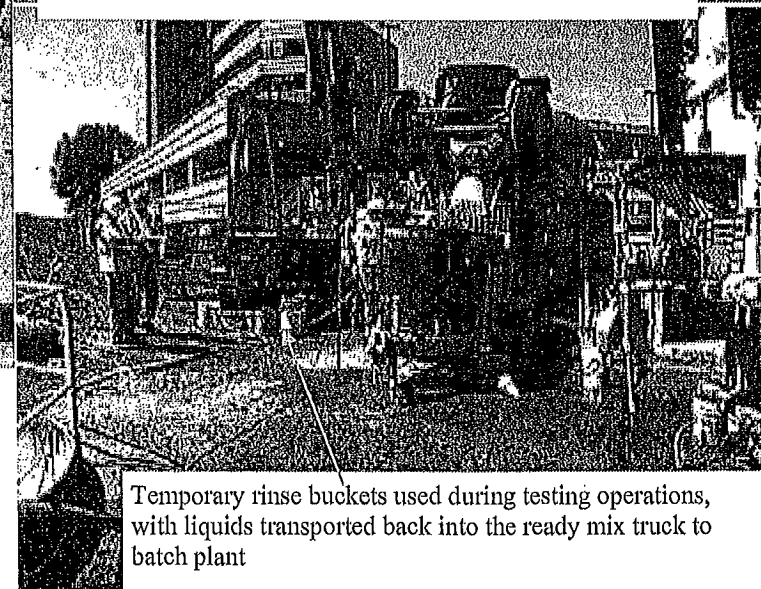
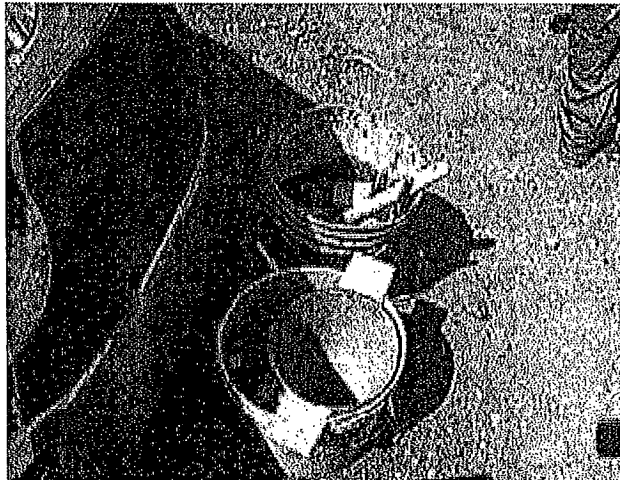
Small amounts less than 0.5 gallons may be disposed of on the grade if all material remains in the profile or evaporates prior to the next anticipated storm event. Sand may be used to absorb liquid wastes for later transport to the designated wash-out area.



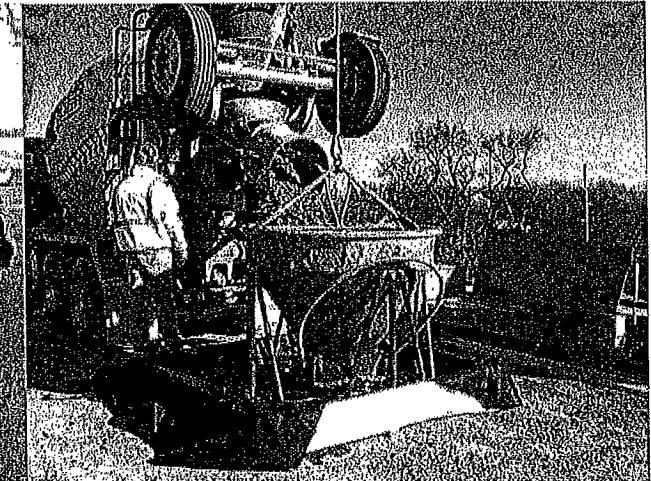
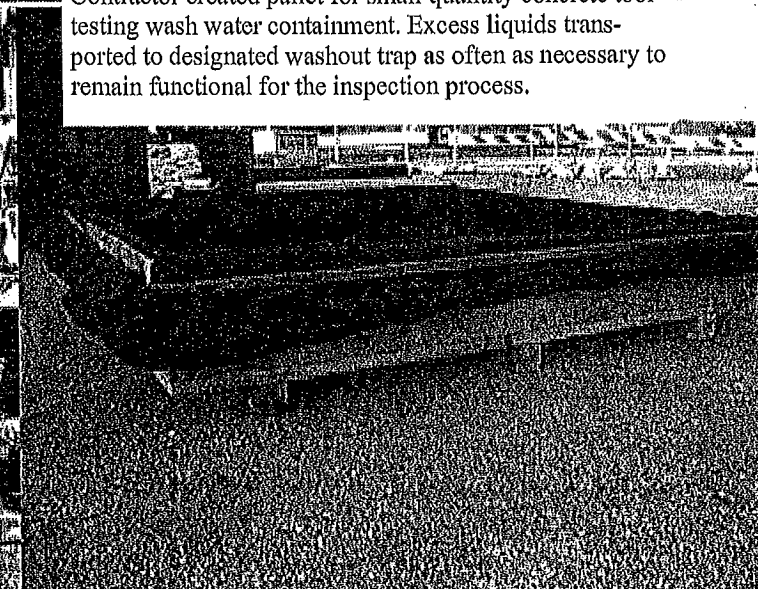
Contractor created pallet for small quantity concrete tool testing wash water containment. Excess liquids transported to designated washout trap as often as necessary to remain functional for the inspection process.



Small quantity wash water placed on grade where equipment washoff has been designated in the SWPPP, in areas to receive permanent pavements.



Temporary rinse buckets used during testing operations, with liquids transported back into the ready mix truck to batch plant



Concrete bucket washout and solids management placed in contractor developed containment box, maintained each day of ready mix operations. 7

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DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

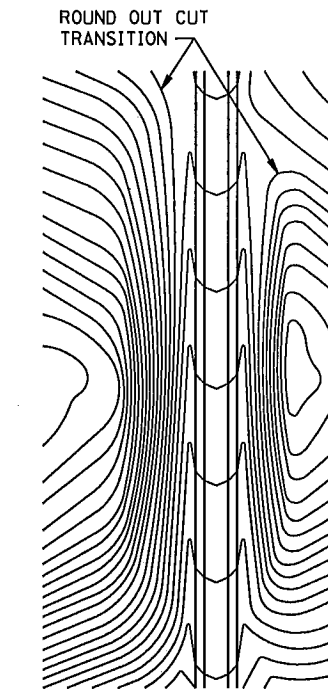


ANOKA COUNTY
HIGHWAY DEPT.

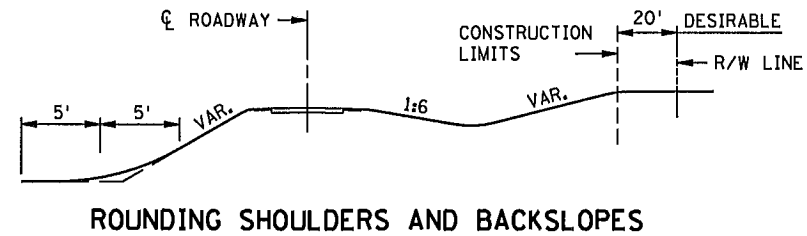
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

CONCRETE WASHOUT DETAILS

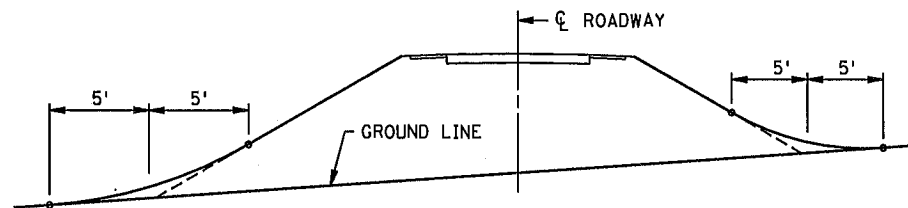
Sheet 32 of 210 Sheets



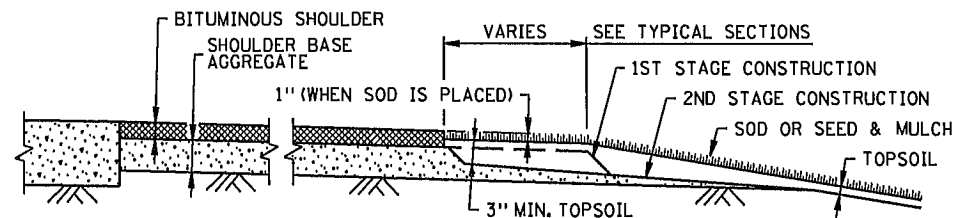
CONTOURING ROAD CUTS



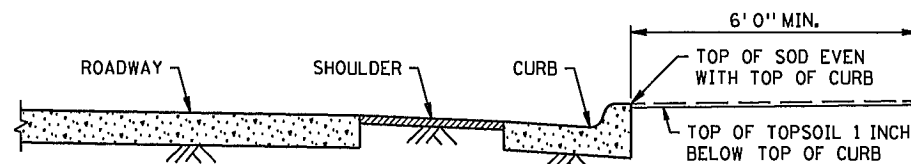
ROUNDING SHOULDERS AND BACKSLOPES



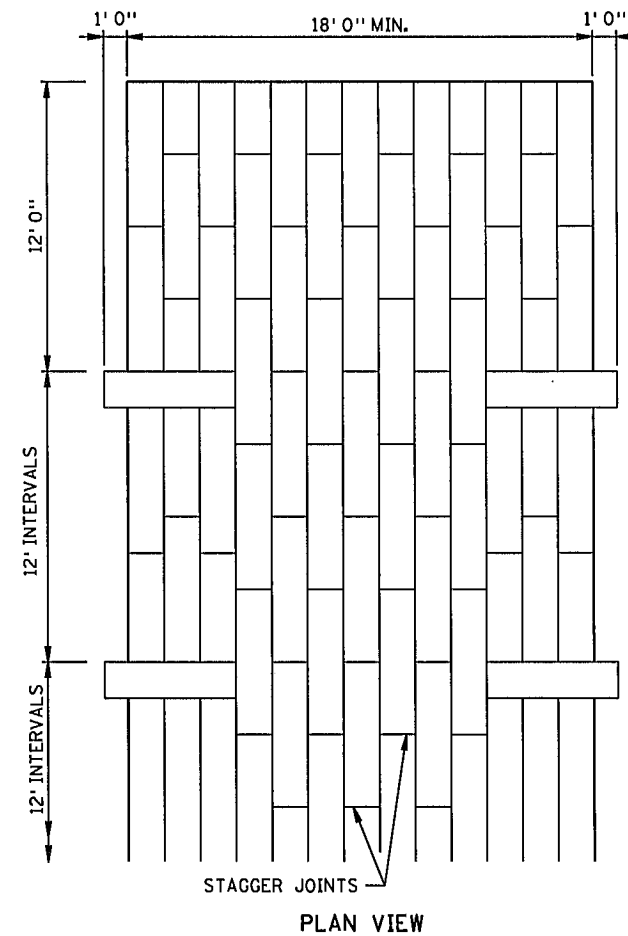
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



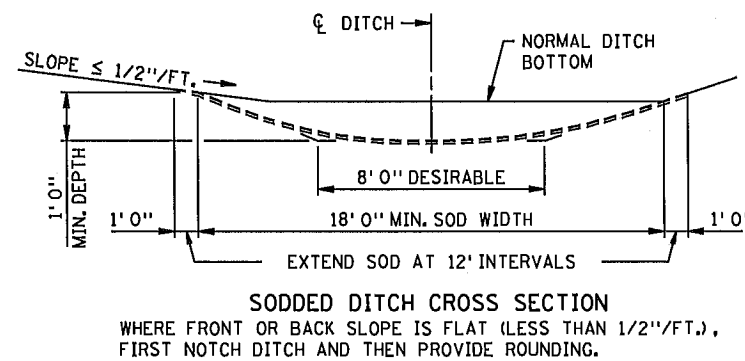
SHAPING AND TOPSOILING INSLOPES



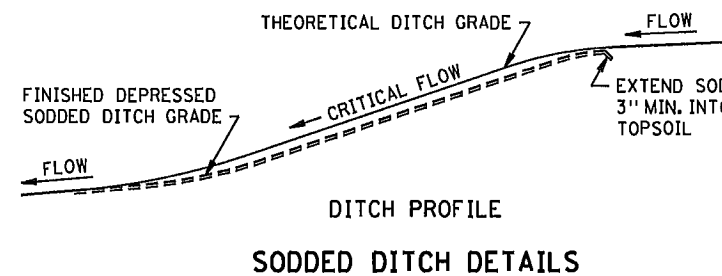
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



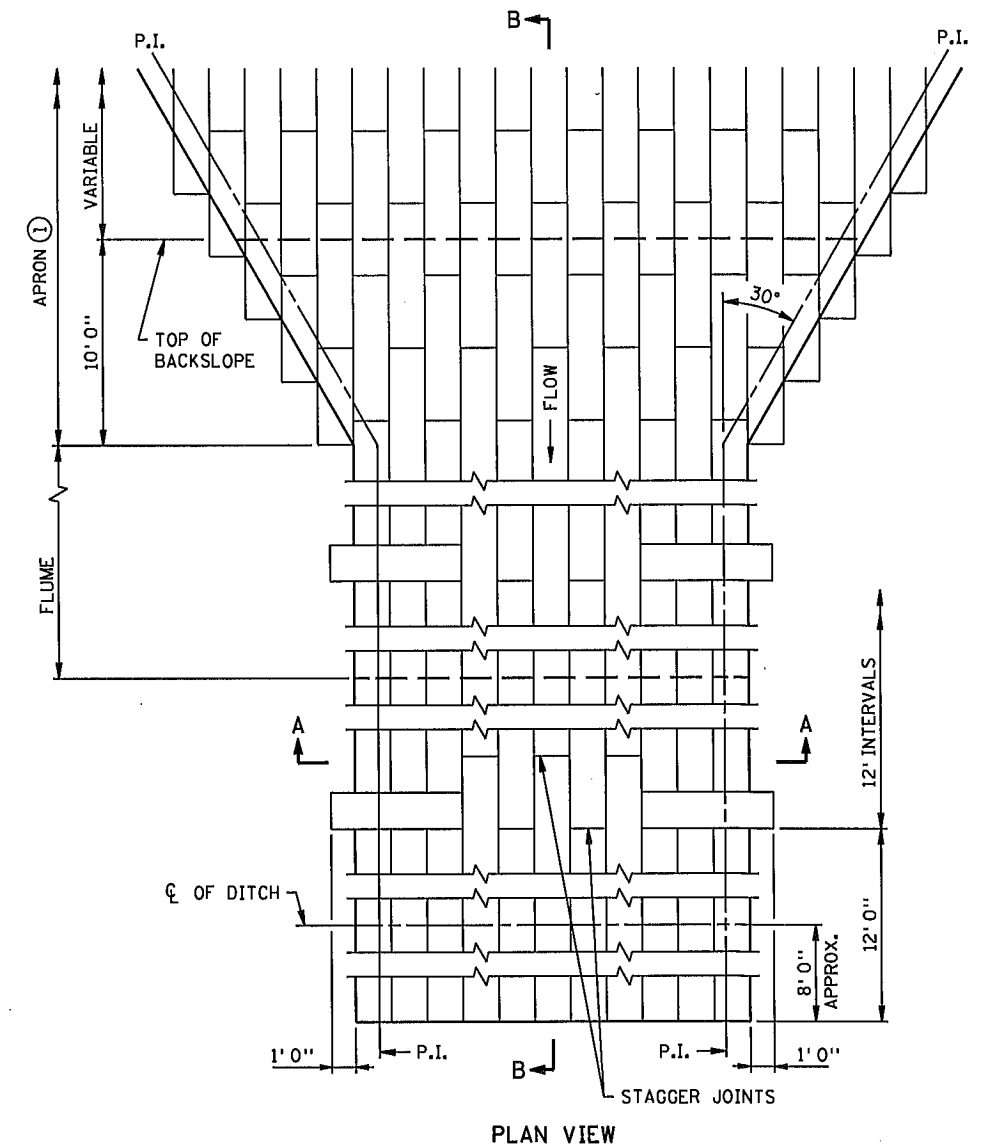
PLAN VIEW



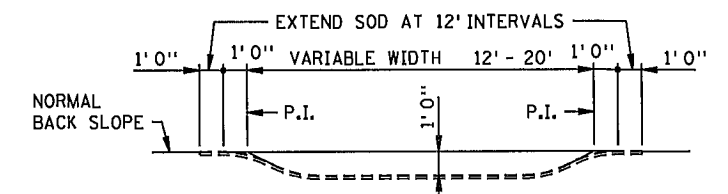
SODDED DITCH CROSS SECTION
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



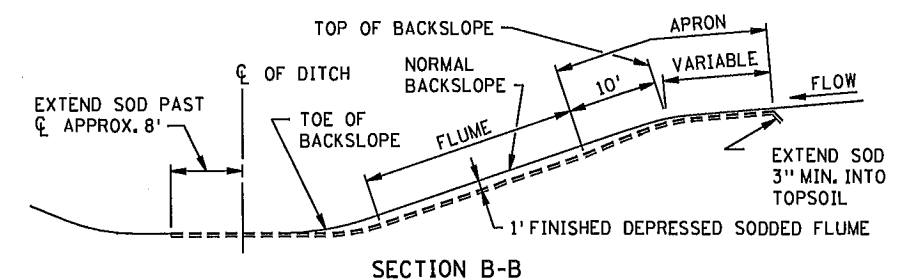
DITCH PROFILE
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B
SODDED FLUME DETAILS

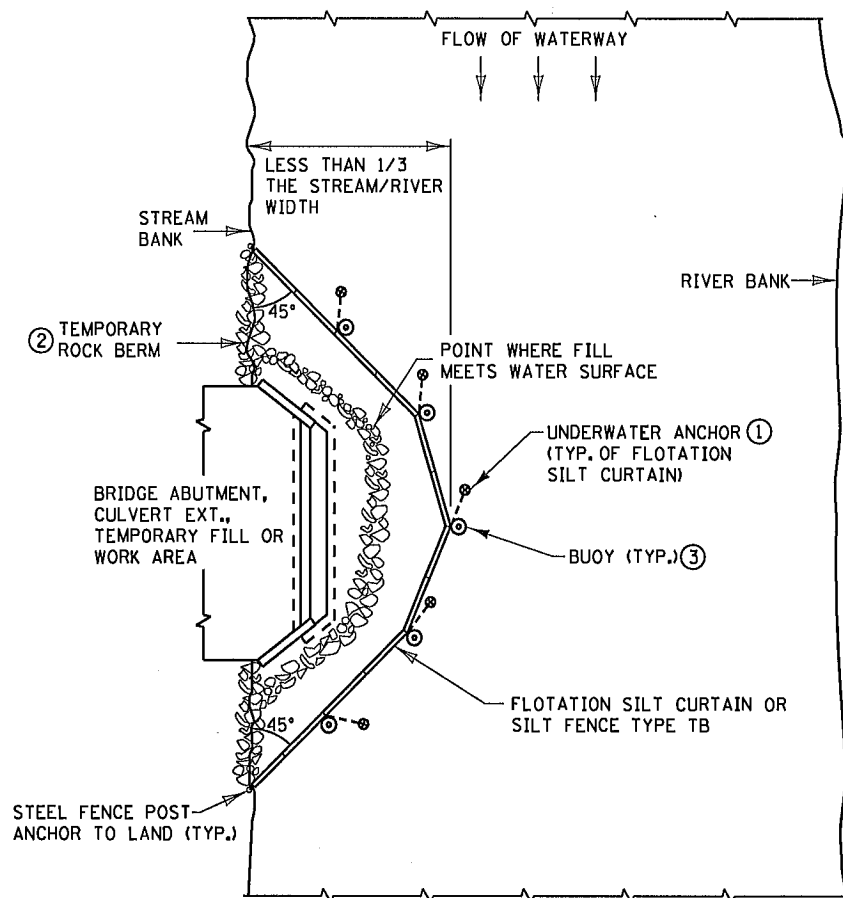
NOTES:

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

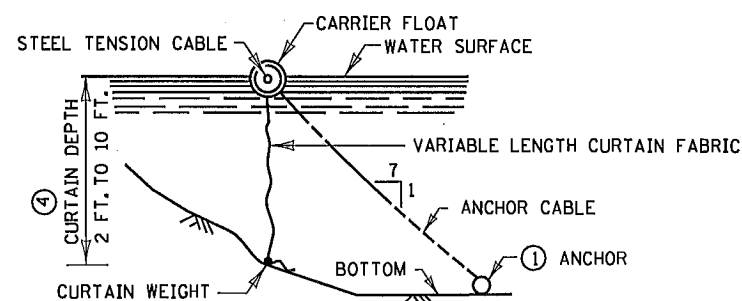
REVISION:
APPROVED: 8-6-2014
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

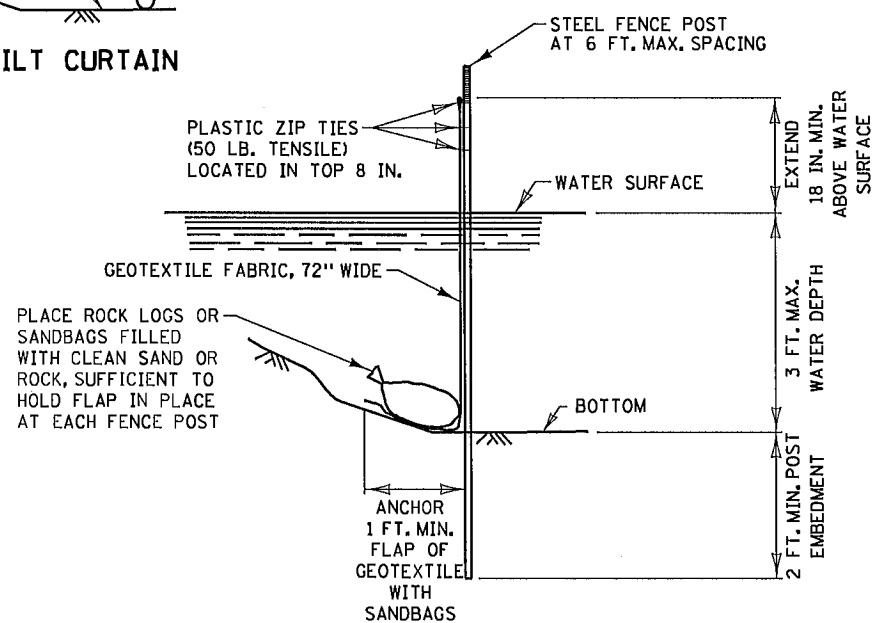
PERMANENT EROSION CONTROL
ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD PLAN 5-297.404
STATE AID PROJECT NO. 002-622-034
1 OF 1
SHEET 33 OF 210



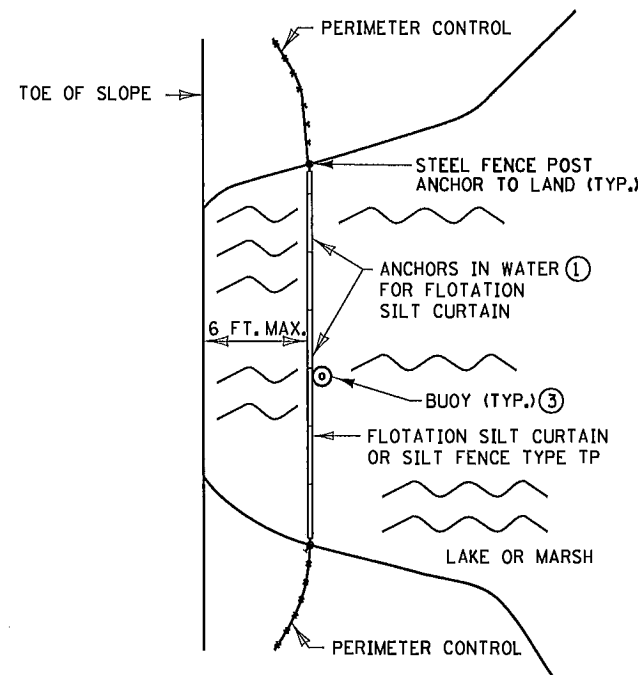
PLAN VIEW FOR STREAM ⑤



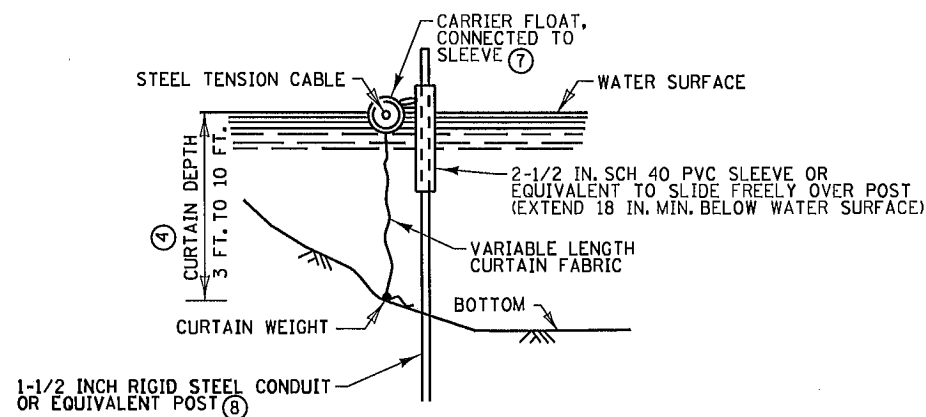
FLOTATION SILT CURTAIN



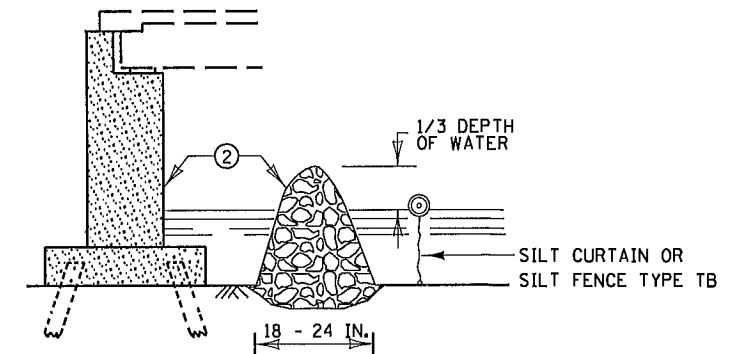
SILT FENCE TYPE TB ⑥



PLAN VIEW FOR LAKE OR MARSH ⑤



ALTERNATE FLOTATION SILT CURTAIN

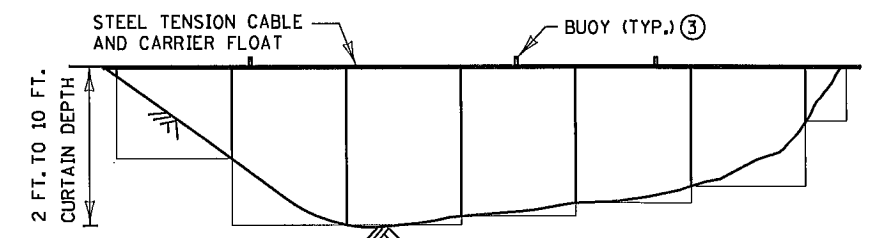


TEMPORARY ROCK BERM FOR SEDIMENT CONTROL

INSTALLATION GUIDELINES
SILT FENCE TYPE TB
MINIMUM WATER DEPTH: 1 FT.
MAXIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.

INSTALLATION GUIDELINES ④
FLOTATION SILT CURTAIN
TYPE: STILL WATER
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER DEPTH: 10 FT.
MAXIMUM WATER VELOCITY: 2 FT./SEC.
MAXIMUM WAVE HEIGHT: 1 FT

INSTALLATION GUIDELINES ④
FLOTATION SILT CURTAIN
TYPE: MOVING WATER
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER DEPTH: 10 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.
MAXIMUM WAVE HEIGHT: 2 FT.



FRONT VIEW FOR FLOTATION SILT CURTAIN

NOTES:

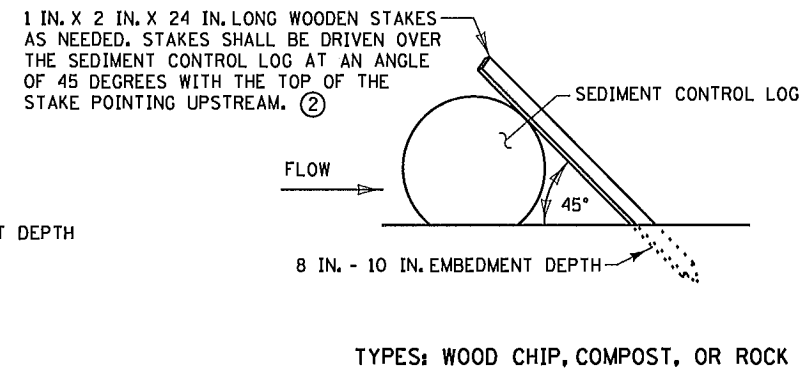
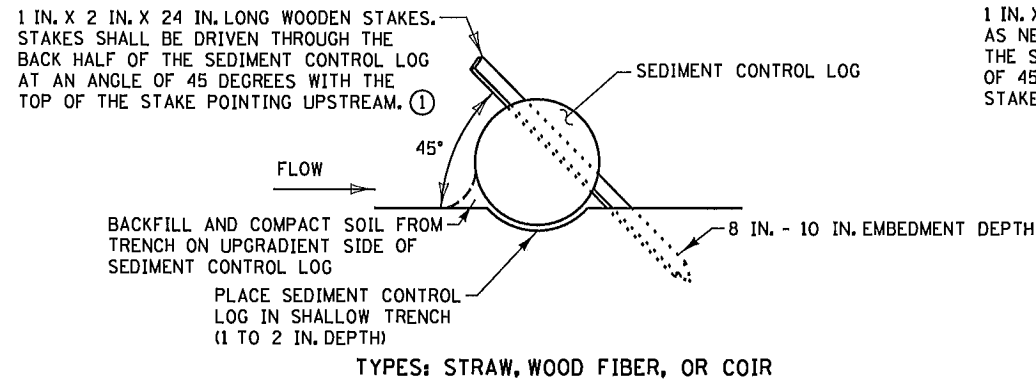
SEE SPECS. 2573, 3886, 3887 & 3893.

- ① FOR ANCHOR SPACING AND WEIGHT REQUIREMENTS, SEE SPEC. 2573.
- ② IN AREAS WHERE THE PLAN CALLS FOR RIPRAP AT A BRIDGE, CULVERT, OR SLOPE, A TEMPORARY ROCK BERM CONSTRUCTED FROM THE RIPRAP CAN BE USED TO PROVIDE ADDITIONAL PROTECTION. WHEN THE WORK IS COMPLETE THE RIPRAP CAN THEN BE MOVED TO THE PERMANENT LOCATION INDICATED IN THE PLANS. THE TEMPORARY ROCK BERM IS INCIDENTAL.
- ③ ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.
- ④ MINIMUM WATER DEPTH APPLIES TO THE DEEPEST POINT ALONG THE FLOTATION SILT CURTAIN OR SILT FENCE TYPE TB FOR DETERMINING APPLICABILITY OF FLOTATION SILT CURTAIN OR SILT FENCE TYPE TB.
- ⑤ SILT CURTAIN SHOULD BE REMOVED WHEN THE AREA CONTRIBUTING DIRECT RUNOFF HAS BEEN TEMPORARILY OR PERMANENTLY STABILIZED. SILT CURTAIN SHOULD ALSO BE REMOVED BEFORE WINTER IF ICE UP OR ICE FLOW IS ANTICIPATED.
- ⑥ EMBED POST INTO BOTTOM A MINIMUM OF 40% OF THE WATER DEPTH (INCLUDING WAVE HEIGHT), BUT IN NO CASE SHALL EMBEDMENT BE LESS THAN 2 FEET.
- ⑦ ANCHOR FLOAT MUST BE CONNECTED SECURELY TO SLEEVE WITH A MINIMUM TENSILE STRENGTH OF 100 LBS. CONNECTION METHOD MUST ALLOW FOR SLEEVE TO MOVE FREELY ON POST.
- ⑧ PROVIDE SUFFICIENT NUMBER OF POST ANCHORS TO MAINTAIN SILT CURTAIN POSITION.

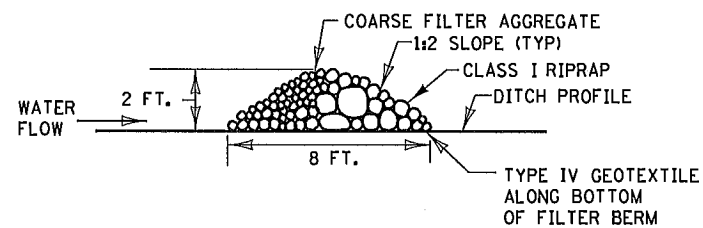
REVISION:
APPROVED: 8-6-2014
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

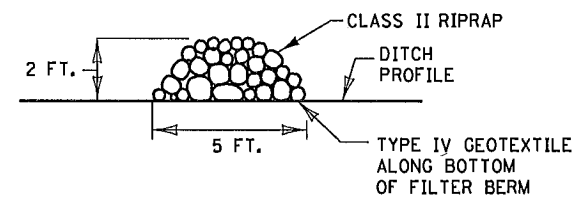
TEMPORARY SEDIMENT CONTROL
SILT CURTAIN OR SILT FENCE TYPE TB
STANDARD PLAN 5-297.405
STATE AID PROJECT NO. 002-622-034
1 OF 1
SHEET 34 OF 210



SEDIMENT CONTROL LOGS

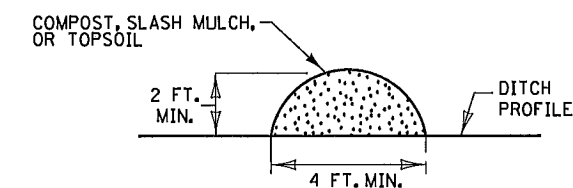


TYPE 3 (ROCK WEEPER)

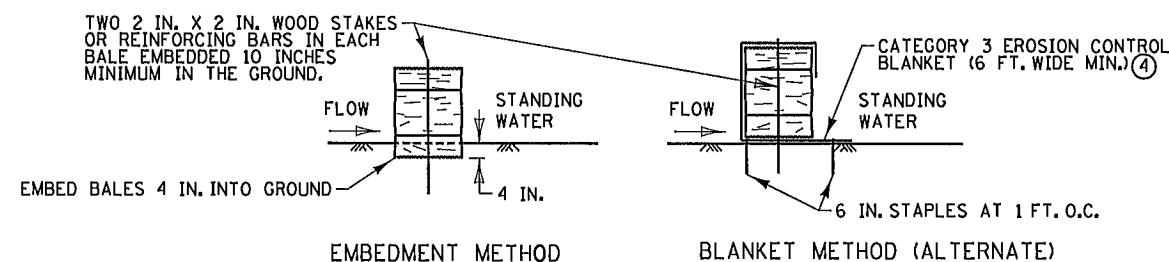


TYPE 5 (ROCK)

FILTER BERMS



TYPE 1 (COMPOST), TYPE 2 (SLASH MULCH), OR TYPE 4 (TOPSOIL)

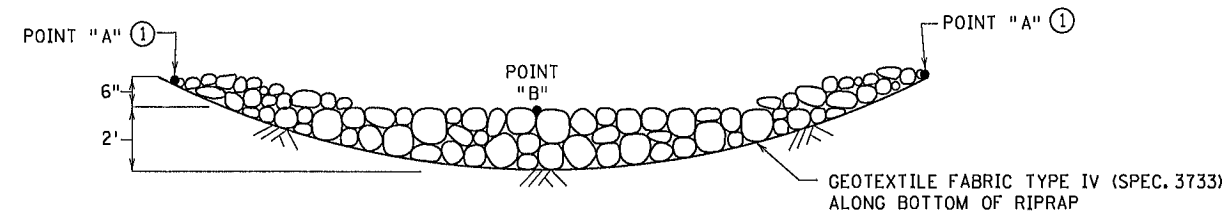


BALE BARRIERS ③

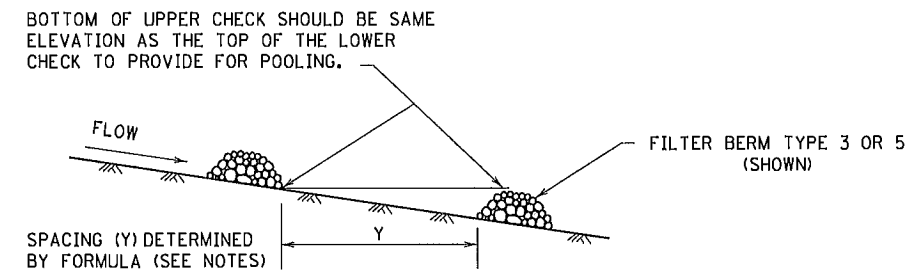
NOTES:

SEE SPECS. 2573, 3149, 3874, 3882, 3886, & 3897.

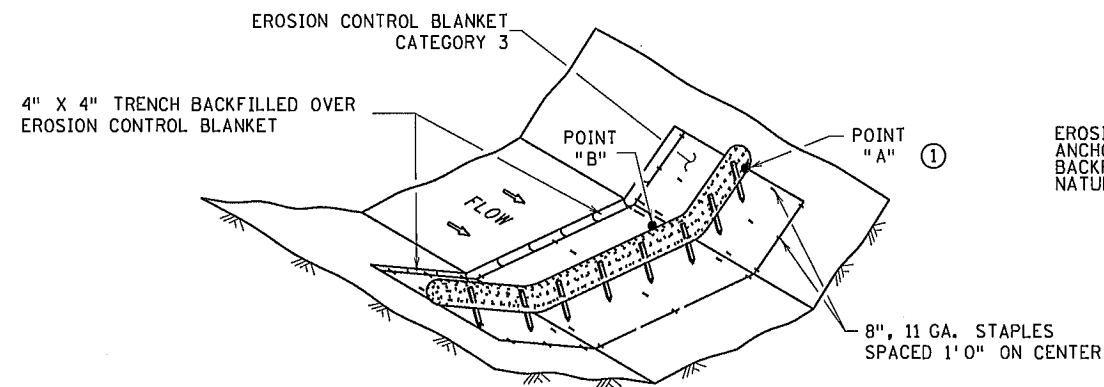
- ① SPACE BETWEEN STAKES SHALL BE A MAXIMUM OF 1 FOOT FOR DITCH CHECKS OR 2 FEET FOR OTHER APPLICATIONS.
- ② PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS. STAKES SHALL BE INCIDENTAL.
- ③ TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS WHERE STANDING WATER OCCURS (6 INCH MAX. DEPTH). BALES SHALL CONSIST OF TYPE 1 MULCH OF APPROXIMATELY 14 IN. X 18 IN. X 36 IN. LONG. BALES SHALL BE PLACED ON EDGE AND BUTTED TIGHT TO ADJACENT BALES.
- ④ INSTEAD OF TRENCHING, PLACE BALE ON THE BLANKET AND WRAP BLANKET AROUND THE BALE. PLACE STAKE THROUGH BALE AND BLANKET.



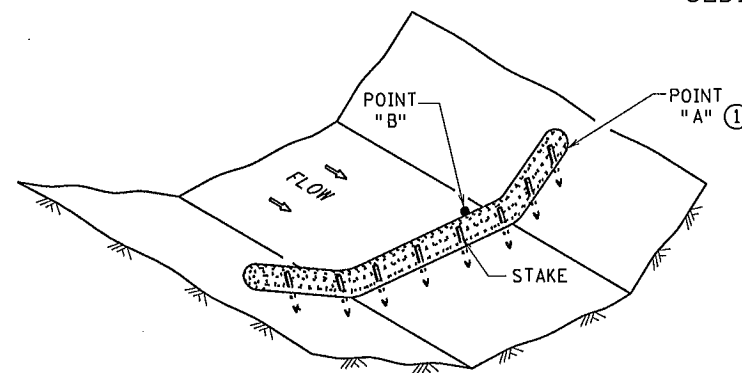
ROCK DITCH CHECKS
FILTER BERMS TYPE 3 (ROCK WEEPER) OR FILTER TYPE 5 (ROCK) ②③
(FOR USE ON ROUGH GRADED AREAS)



DITCH CHECK SPACING
(FOR ALL FILTER BERM TYPES)



SEDIMENT CONTROL LOG TYPE BLANKET SYSTEM ④



SEDIMENT CONTROL LOG TYPE WOOD FIBER, OR TYPE COMPOST ⑤
(FOR USE ON ROUGH GRADED AREAS)

NOTES:

SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.

FOR DITCH CHECKS, PLACE SEDIMENT CONTROL LOG PERPENDICULAR TO FLOW AND IN A CRESCENT SHAPE WITH THE ENDS FACING UPSTREAM.

APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

$$\text{APPROXIMATE SPACING OF DITCH CHECKS (FT.)} = Y = \frac{\text{DITCH CHECK HEIGHT (FT.)}}{\% \text{ CHANNEL SLOPE}} \times 100$$

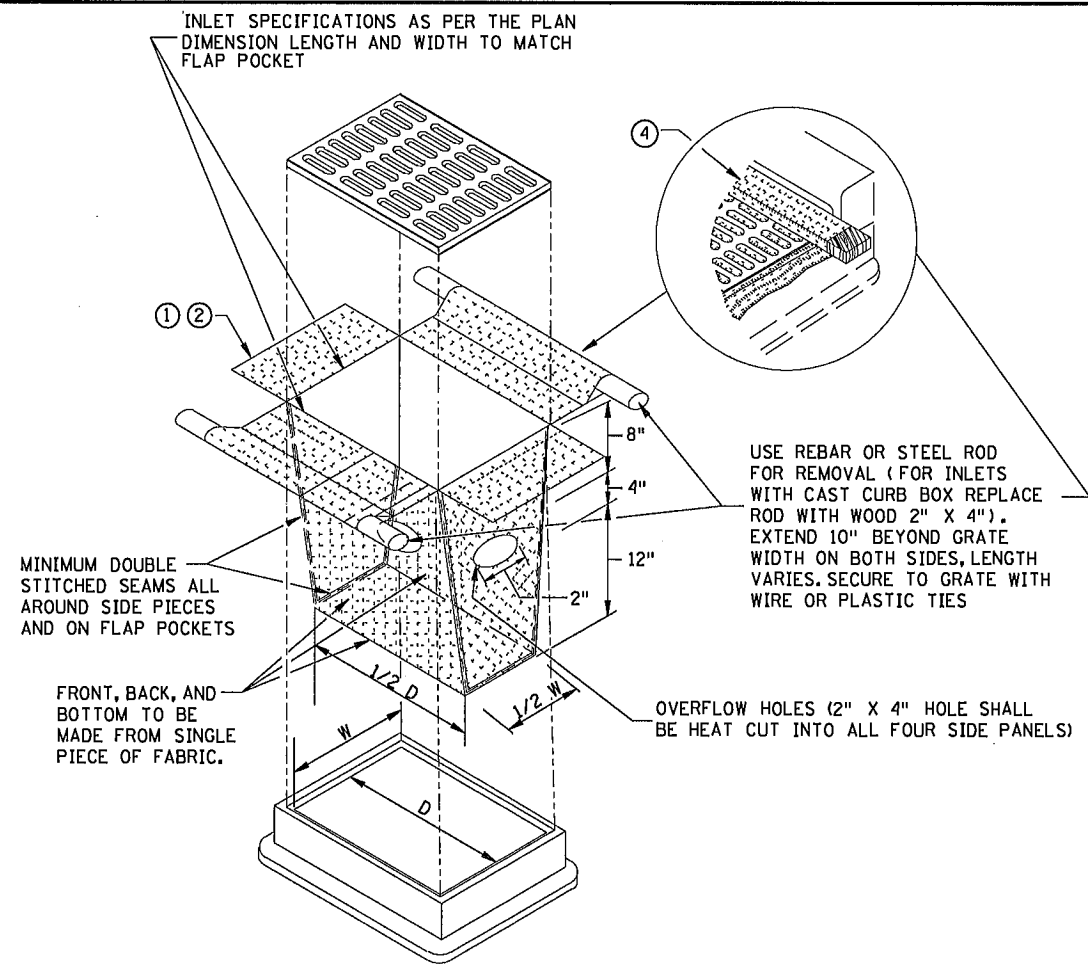
① POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

② PERMANENT ROCK DITCH CHECKS PLACED WITHIN THE CLEAR ZONE ARE TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

③ DITCH GRADE 3% - 5%, MAX. FLOW VELOCITY 12 FT./SEC..

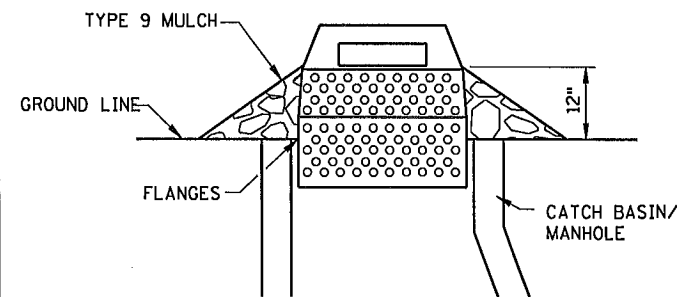
④ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 4.5 FT./SEC..

⑤ DITCH GRADE 1.5% - 3%, MAX. FLOW VELOCITY 1.5 FT./SEC..



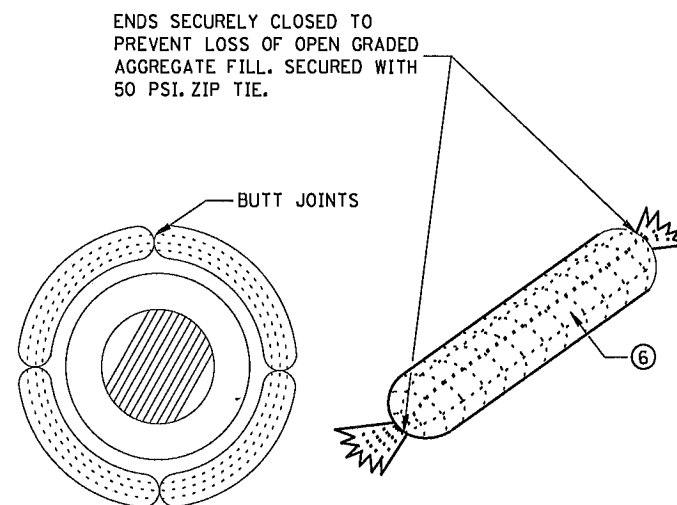
FILTER BAG INSERT ③

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

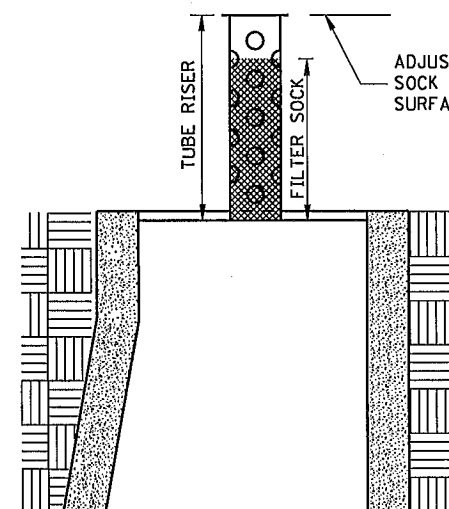
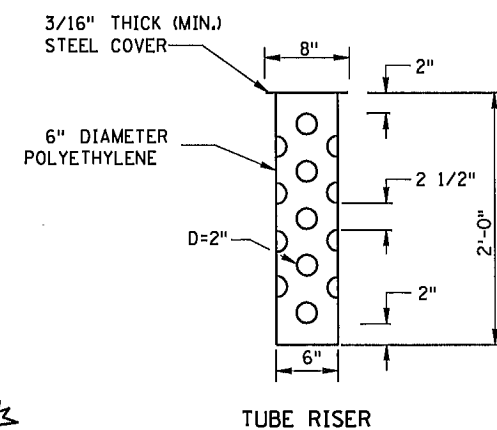


SEDIMENT CONTROL INLET HAT

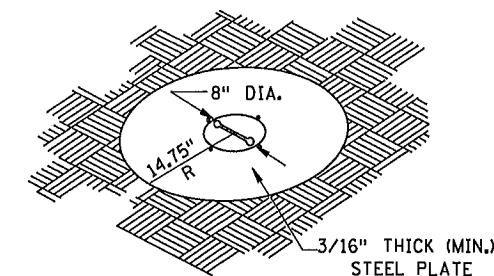
NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.



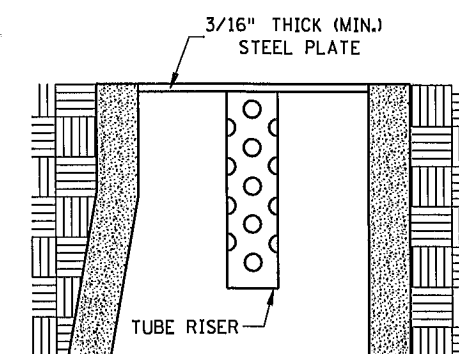
ROCK LOG/COMPOST LOG



**SECTION
(UP POSITION)**

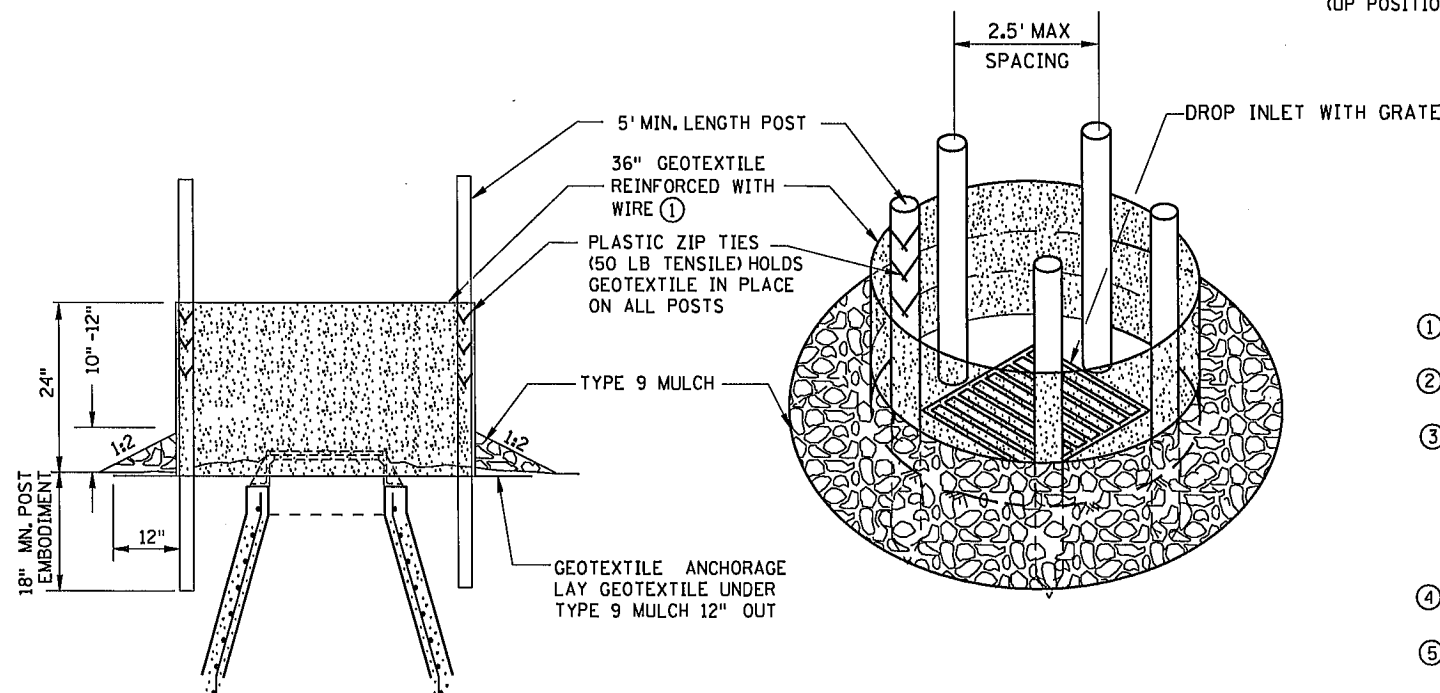


PERSPECTIVE VIEW



**SECTION
(DOWN POSITION)**

POP-UP HEAD



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

NOTES:

SEE SPECS. 2573, 3137, & 3886.

DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEED TRAFFIC FLOW.

- ① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
- ② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ③ INSTALLATION NOTES:
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED 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.

REVISION:

APPROVED: 8-6-2014

CHIEF ENVIRONMENTAL OFFICER



STATE DESIGN ENGINEER

REVISED:

APPROVED:

8-6-2014

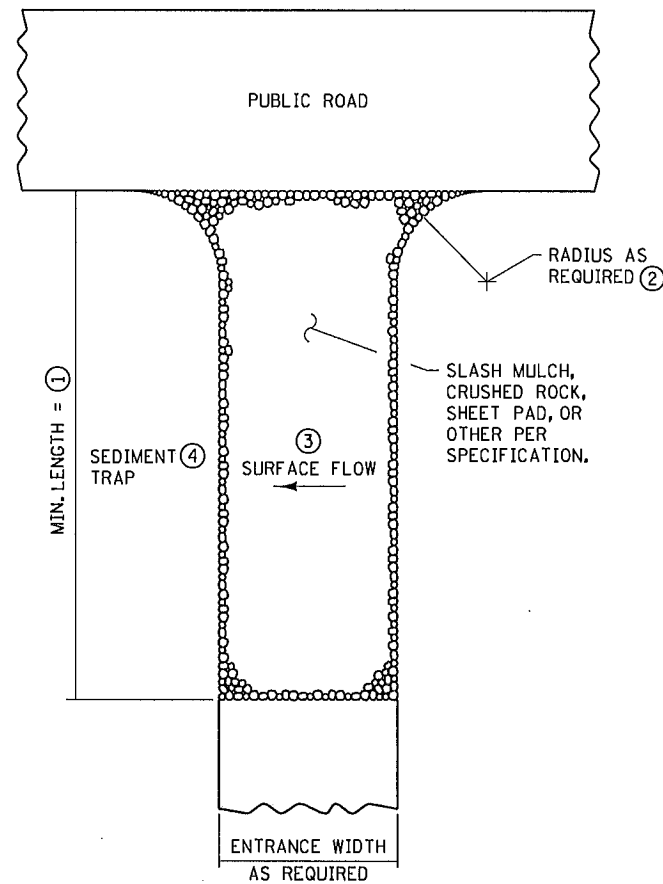
TEMPORARY SEDIMENT CONTROL
STORM DRAIN INLET PROTECTION

STANDARD PLAN 5-297.405

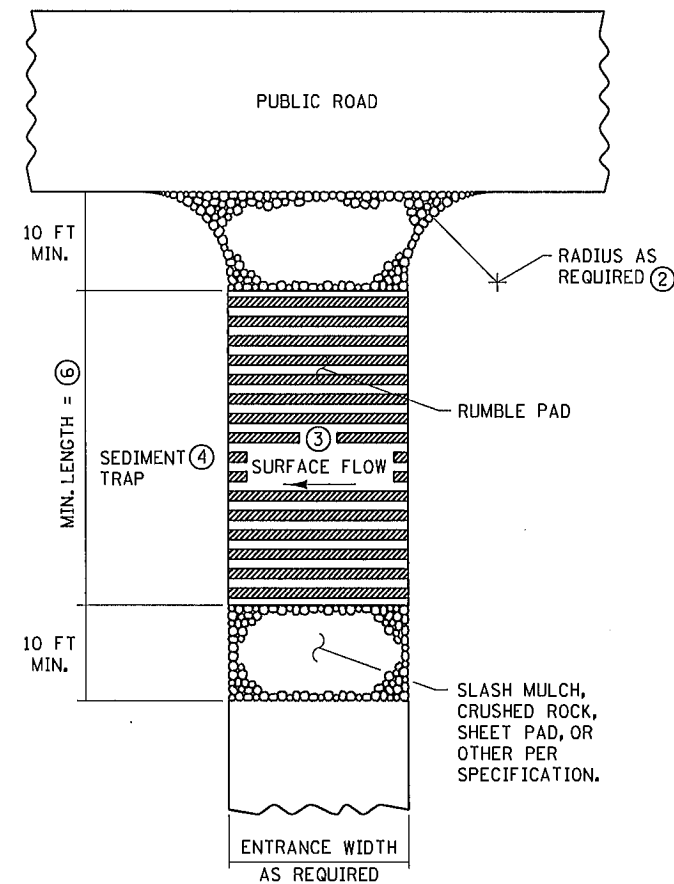
STATE AID PROJECT NO. 002-622-034

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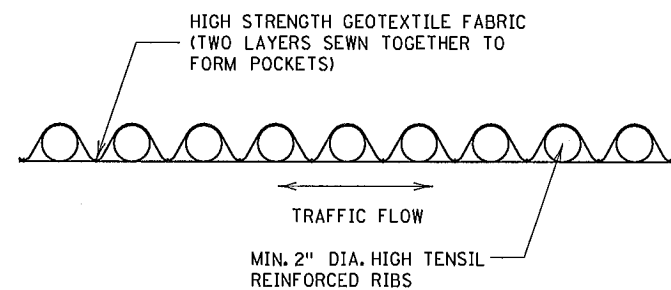
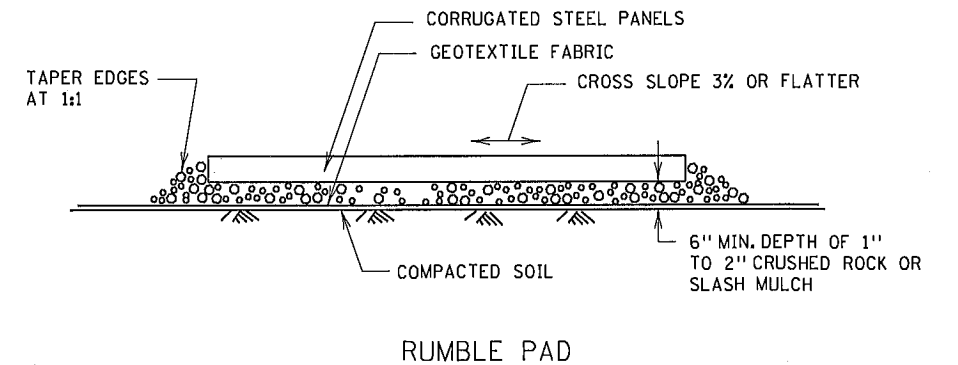
SHEET
37 OF 210



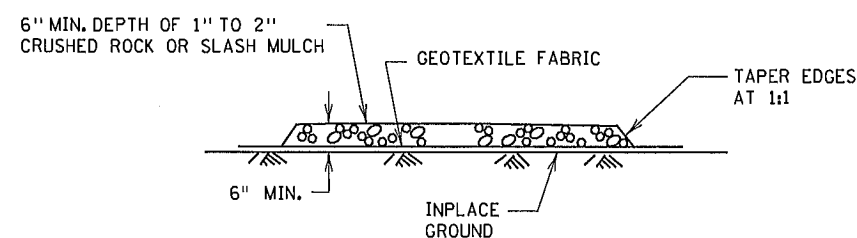
SLASH MULCH, CRUSHED ROCK, OR SHEET
PAD CONSTRUCTION EXIT ⑤⑦



RUMBLE PAD
CONSTRUCTION EXIT ⑤⑦



SHEET PAD



SLASH MULCH OR CRUSHED ROCK

NOTES:

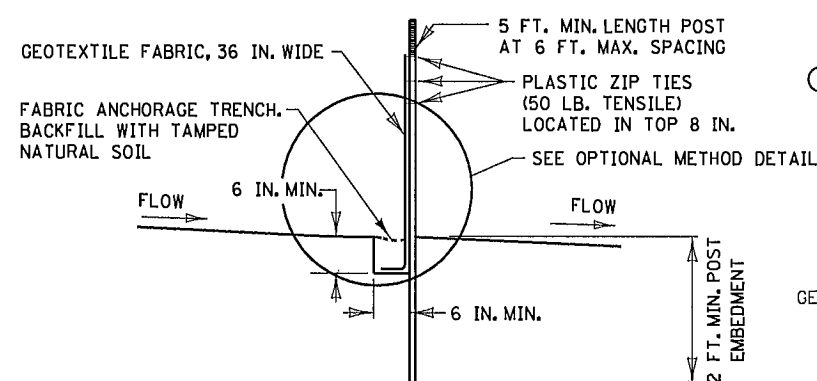
SEE SPECS. 2573 & 3882.

- ① MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.
- ② PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.
- ③ IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.
- ④ IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.
- ⑤ IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.
- ⑥ MINIMUM LENGTH OF RUMBLE PAD SHALL BE 20 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.
- ⑦ MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.

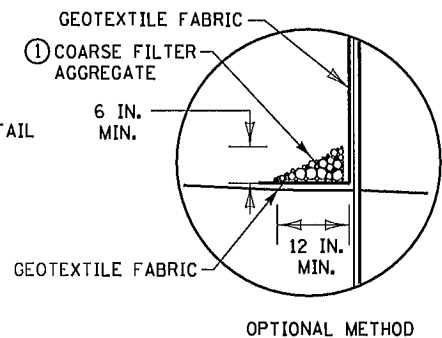
REVISION:
APPROVED: 8-6-2014
[Signature]
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA
DEPARTMENT OF TRANSPORTATION
REVISED:
[Signature]
STATE DESIGN ENGINEER
APPROVED:
8-6-2014

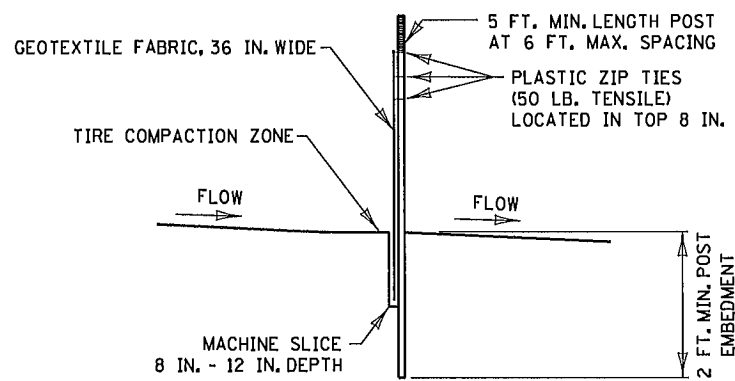
TEMPORARY SEDIMENT CONTROL CONSTRUCTION EXITS	
STANDARD PLAN 5-297.405	5 OF 7
STATE AID PROJECT NO. 002-622-034	SHEET 38 OF 210



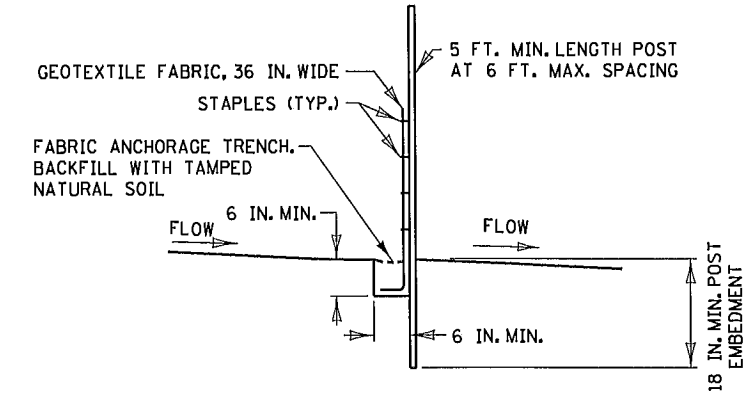
**SILT FENCE TYPE HI ②
(HAND INSTALLED)**



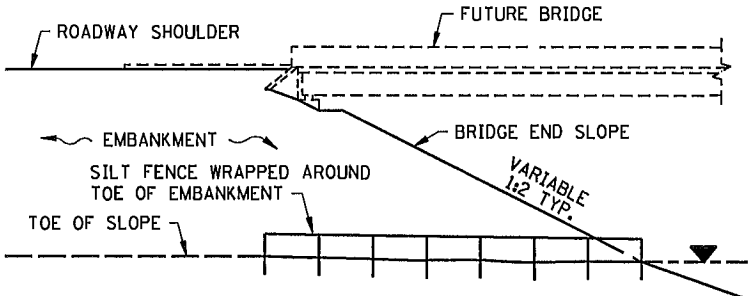
OPTIONAL METHOD



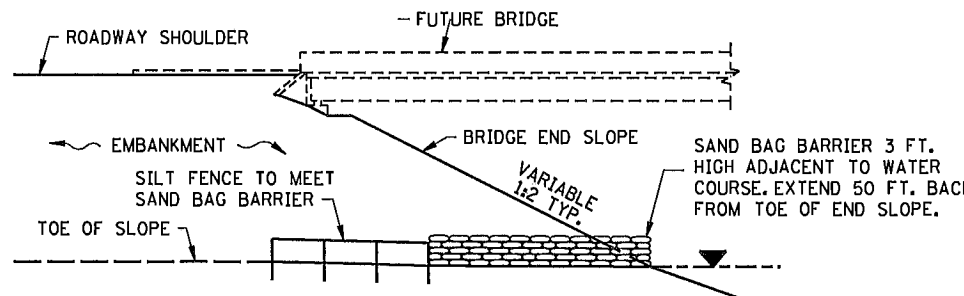
**SILT FENCE TYPE MS ②
(MACHINE SLICED)**



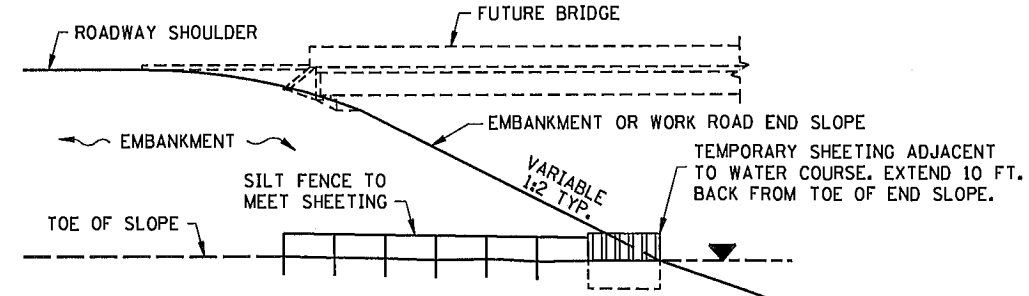
**SILT FENCE TYPE PA ③
(PREASSEMBLED)**



SILT FENCE ONLY ④

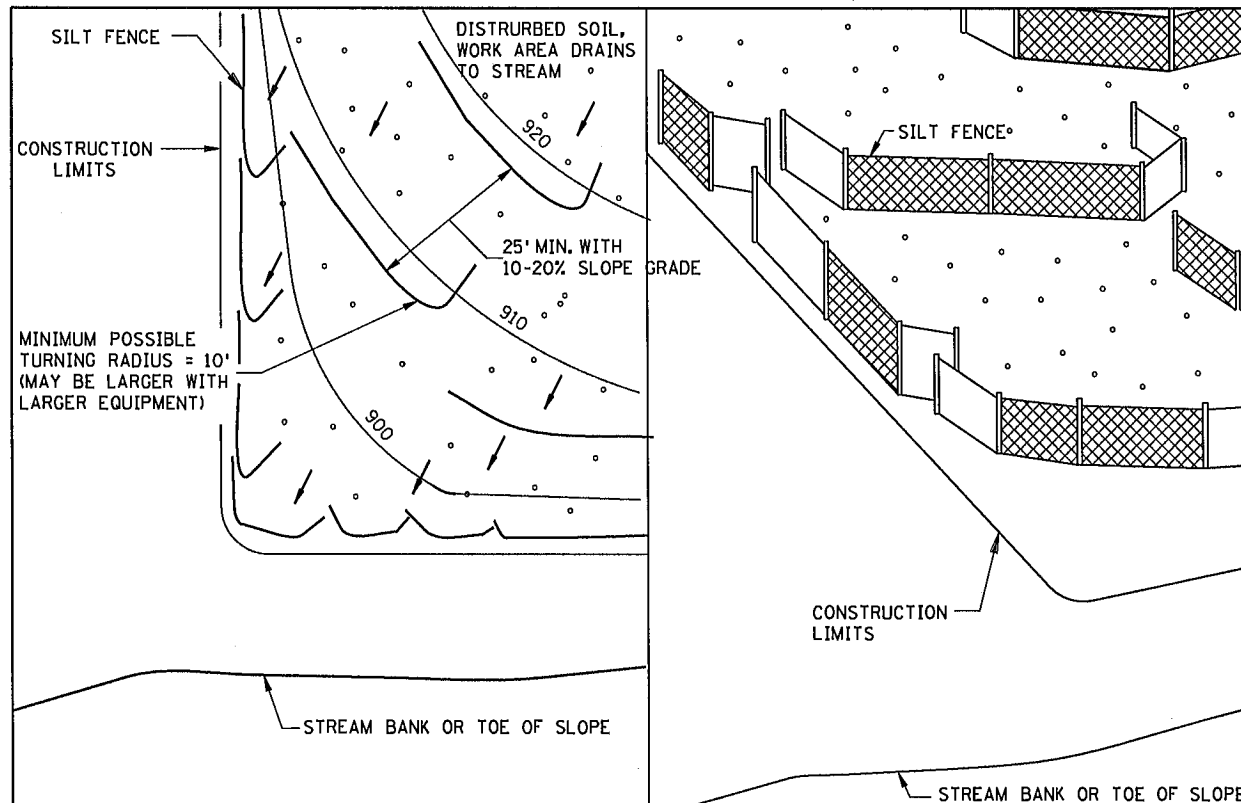


SILT FENCE WITH SAND BAGS ⑤



SILT FENCE WITH SHEETING ⑥

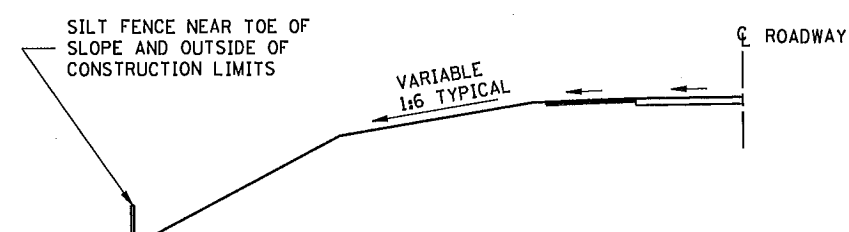
INSTALLATION AT BRIDGE EMBANKMENT ADJACENT TO WATER



PLAN VIEW

PERSPECTIVE VIEW

J-HOOK INSTALLATION



LOCATION AT TOE OF ROADWAY EMBANKMENT

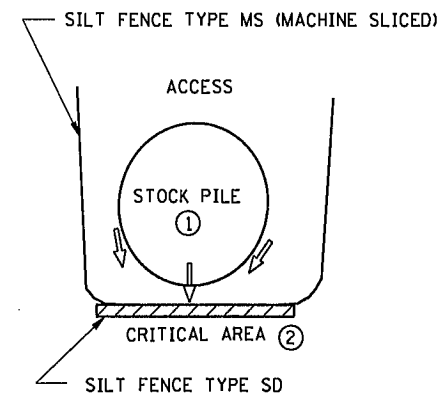
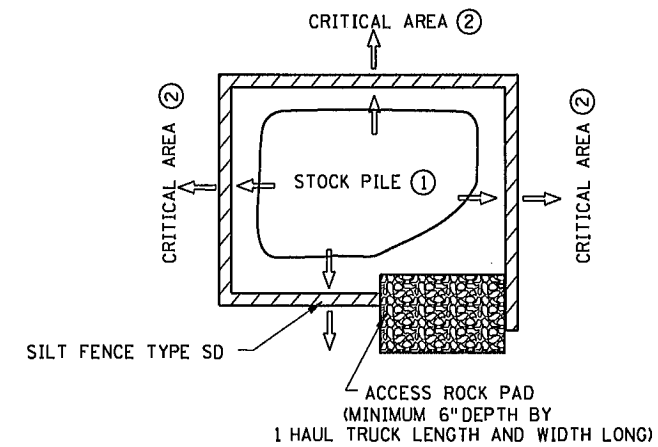
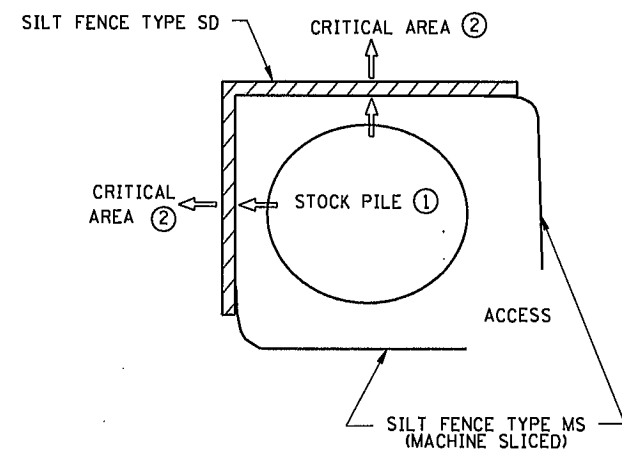
NOTES:

- SEE SPECS. 2573, 3149 & 3886.
- ① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.
- ② TO PROTECT AREAS FROM SHEET FLOW, MAXIMUM CONTRIBUTING AREA: 1 ACRE.
- ③ TO PROTECT AREAS FROM SHEET FLOW, MAXIMUM CONTRIBUTING AREA: 0.25 ACRE.
- ④ WATER COURSE FLOW VELOCITY: STANDING. CONTRIBUTING SLOPE AREA: 1/2 ACRE.
- ⑤ WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC. CONTRIBUTING SLOPE AREA: 1 ACRE.
- ⑥ WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC. CONTRIBUTING SLOPE AREA: 3 ACRES.

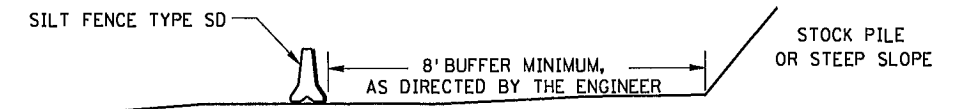
REVISION:
APPROVED: 8-6-2014
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISOR:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

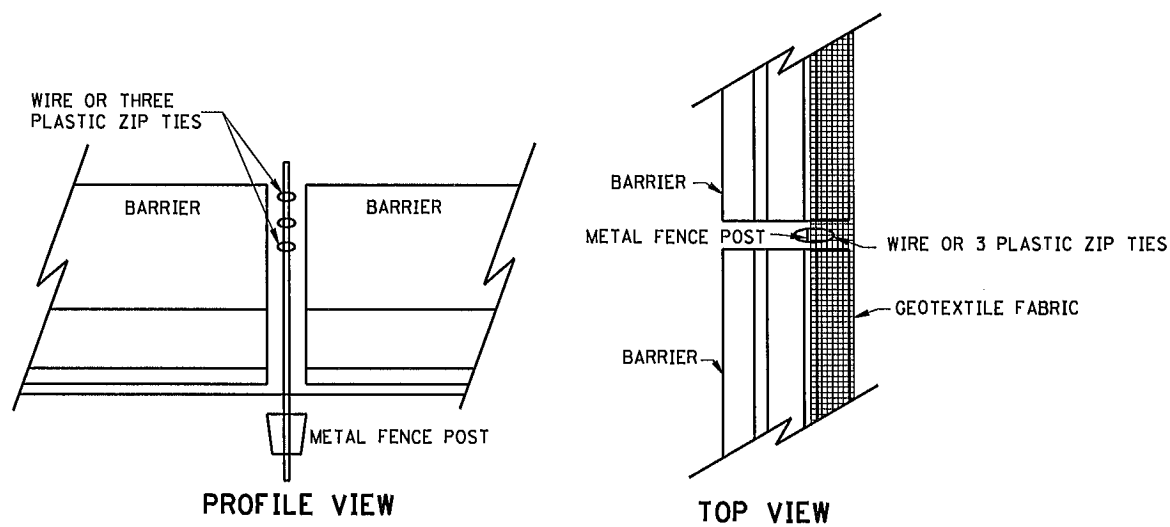
TEMPORARY SEDIMENT CONTROL
SILT FENCE
STANDARD PLAN 5-297.405
STATE AID PROJECT NO. 002-622-034
6 OF 7
SHEET 39 OF 210



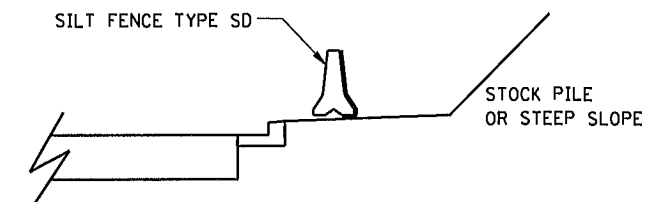
STOCK PILE CONTAINMENT



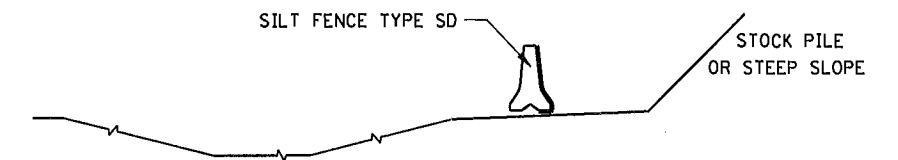
STOCKPILE SEDIMENT CONTROL



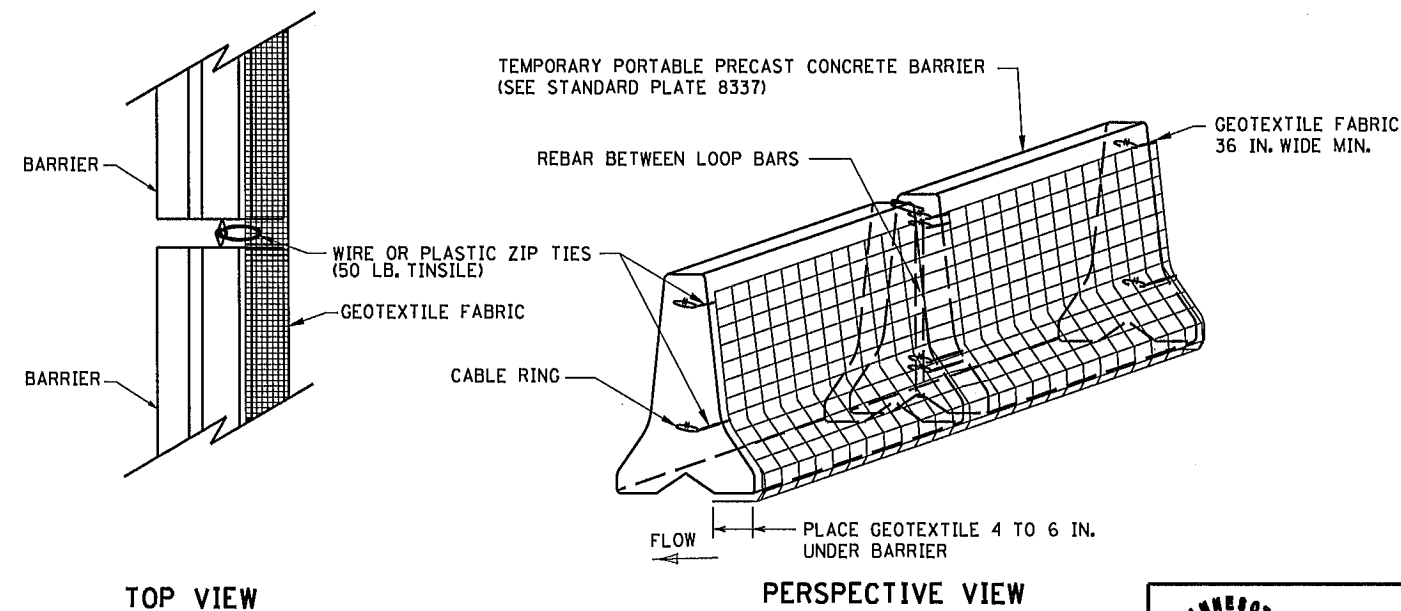
SILT FENCE TYPE SD (SUPER DUTY) BARRIER WITHOUT LOOP BARS



CURB AND GUTTER PROTECTION SYSTEM



DITCH PROTECTION SYSTEM



SILT FENCE TYPE SD (SUPER DUTY) BARRIER WITH LOOP BARS

NOTES:

SEE SPECS. 2533, 2573 & 3886.

SILT FENCE TYPE SD USED TO PROTECT CRITICAL AREAS FROM SHEET FLOW, AND AREAS WHERE OTHER SILT FENCES CANNOT BE PLACED. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

PLACE SILT FENCE TYPE SD ALONG A CONSTANT ELEVATION.

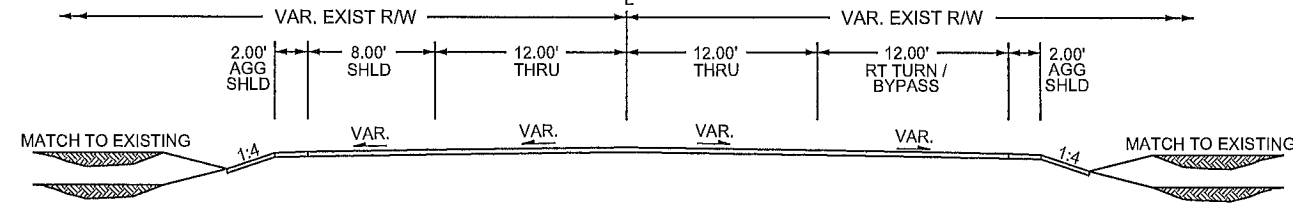
SILT FENCE TYPE SD CAN UTILIZE EITHER A CONCRETE, OR WATER FILLED, TEMPORARY MEDIAN BARRIER.

① PLACING STOCK PILES NEXT TO AN ENVIRONMENTALLY SENSITIVE AREA IS NOT RECOMMENDED. WHEN THERE ARE NO FEASIBLE ALTERNATIVES, PLACE SILT FENCE SD AS SHOWN OR AS DIRECTED BY THE ENGINEER.

② CRITICAL AREAS INCLUDE WETLANDS, JUDICIAL DITCHES, STREAMS, WATER BODIES, AND OTHER AREAS REQUIRING PROTECTION.

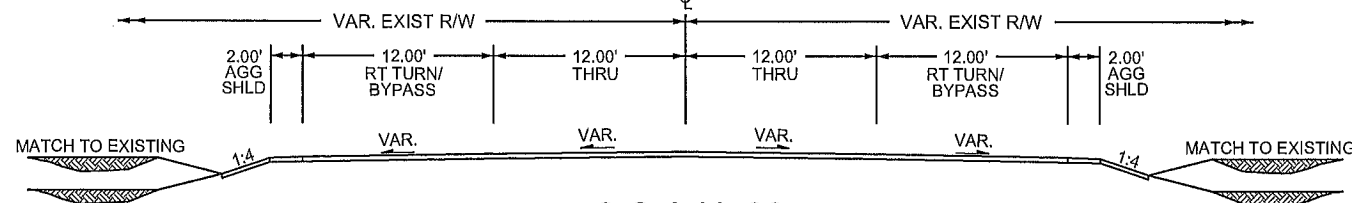
C.S.A.H. 22

STA. 78+13 - 81+29
STA. 98+32 - 101+54
STA. 112+00 - 116+00



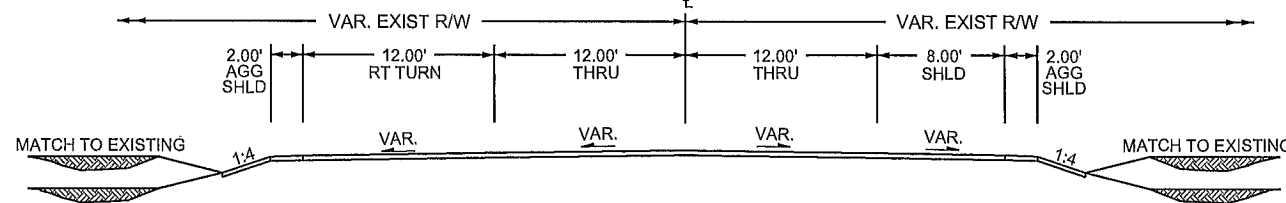
C.S.A.H. 22

STA. 57+87 - 63+63
STA. 81+29 - 87+51
STA. 101+54 - 104+52
STA. 116+00 - 118+25



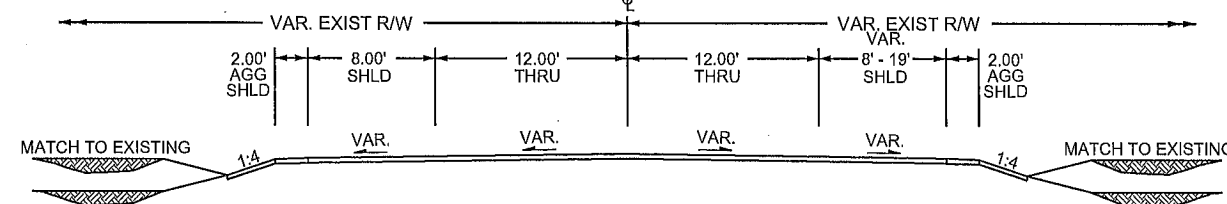
C.S.A.H. 22

STA. 63+63 - 66+84
STA. 104+52 - 106+93
STA. 118+25 - 122+55
STA. 134+00 - 137+50
STA. 143+00 - 161+33



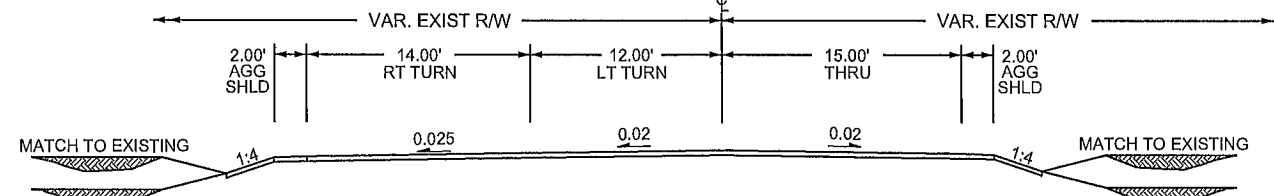
C.S.A.H. 22

STA. 122+55 - 130+00



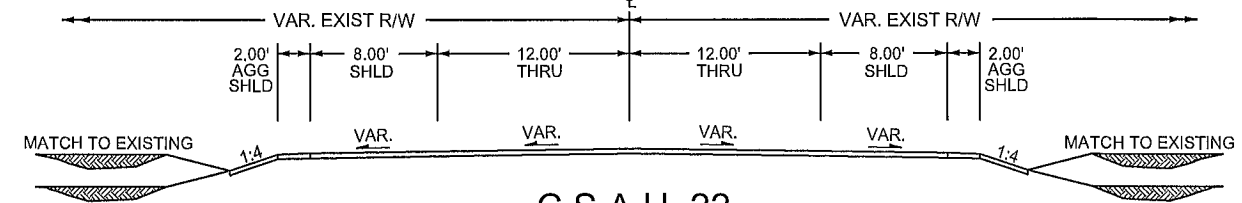
C.S.A.H. 13

STA. 10+00 - 12+49



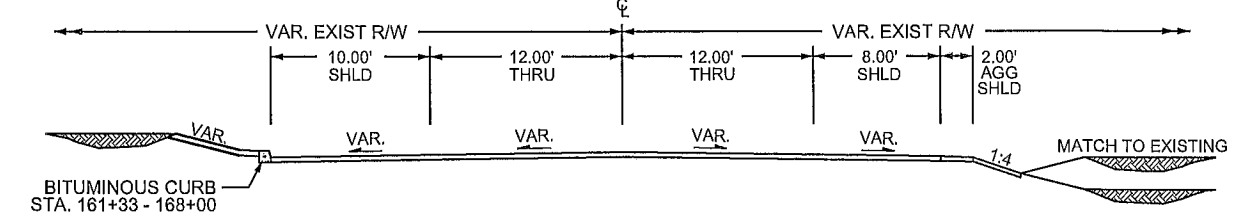
C.S.A.H. 22

STA. 66+84 - 78+13
STA. 87+51 - 98+32
STA. 106+93 - 111+33
STA. 130+00 - 134+00
STA. 137+50 - 143+00
STA. 168+00 - 174+36
STA. 184+35 - 189+50



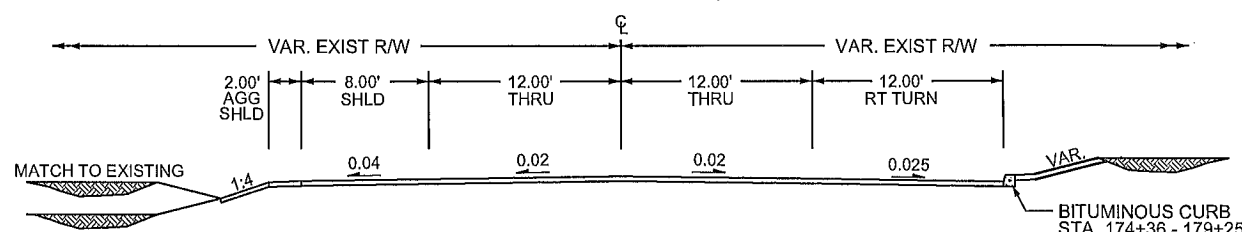
C.S.A.H. 22

STA. 161+33 - 168+00



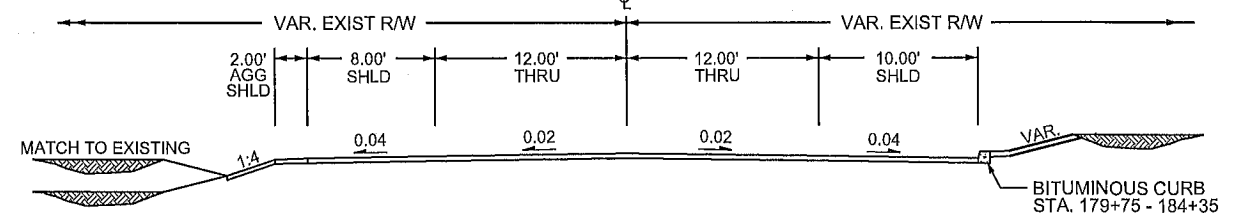
C.S.A.H. 22

STA. 174+36 - 179+75

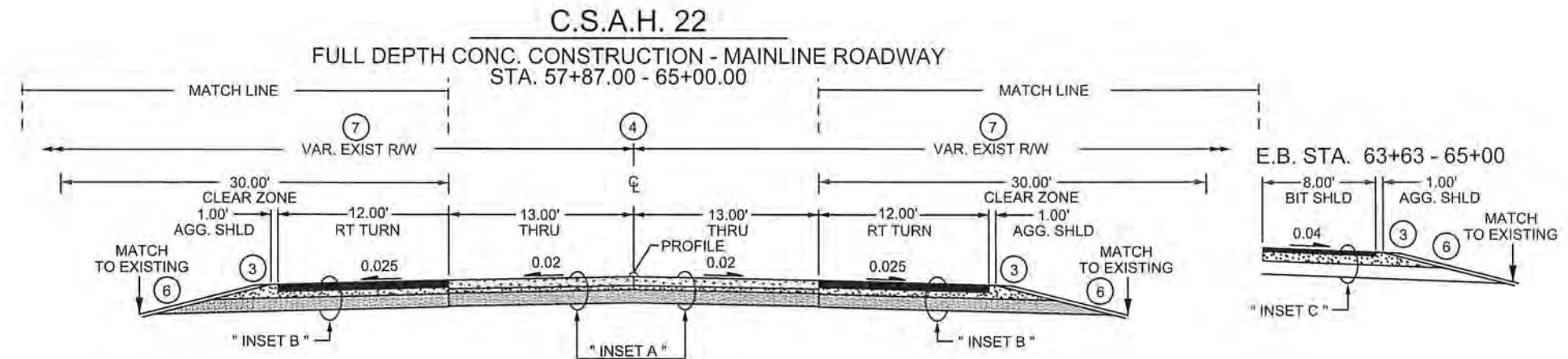


C.S.A.H. 22

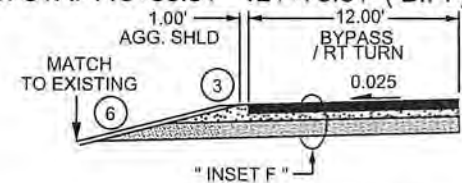
STA. 179+75 - 184+35



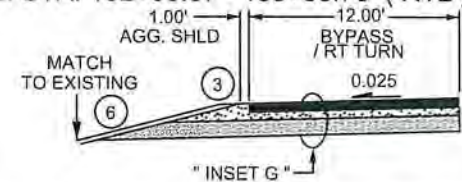
NOTE: EXISTING CROSS SLOPE TRANSITIONS FOR SUPERS THROUGHOUT MAJORITY OF PLAN
STA. 112+00 - 168+00
EXISTING R/W CHANGES FREQUENTLY THROUGHOUT PLAN, SEE CROSS SECTIONS FOR
LOCATIONS.



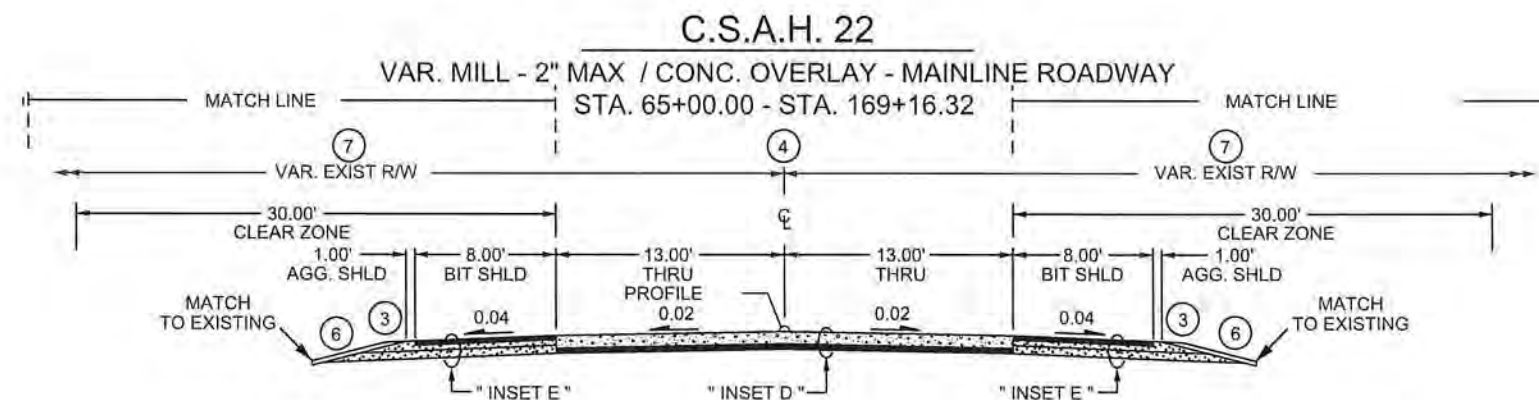
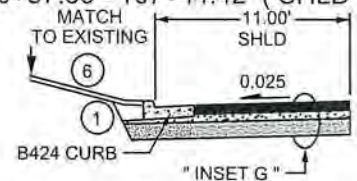
W.B. STA. 115+88.51 - 121+75.81 (B.P.)



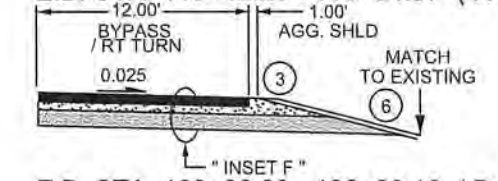
W.B. STA. 132+86.87 - 139+06.76 (RTL)



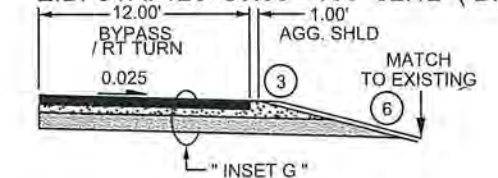
W.B. STA. 160+87.35 - 167+44.42 (SHLD)



E.B. STA. 113+42.26 - 119+54.97 (RTL)



E.B. STA. 128+39.38 - 136+02.12 (B.P.)



GENERAL NOTES:

- ALL CROSS SLOPES ARE EXPRESSED IN FT / FT
- UNLESS OTHERWISE SPECIFIED, THE GRADING GRADE CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.
- CONCRETE LANE WIDTH DIMENSIONS ARE MEASURED FROM JOINT TO JOINT
- BITUMINOUS AND AGGREGATE DIMENSIONS ARE MEASURED ACROSS SURFACE WIDTH

SPECIFIC NOTES:

- ① SUITABLE GRADING MATERIAL
- ② DITCH WIDTH VARIES (2.0' MINIMUM) 4.0" SLOPE DRESSING MINIMUM
- ③ AGGREGATE SHOULDERING, CLASS 5 MNDOT SPEC. 2221
- ④ PROPOSED CENTERLINE IS IN THE SAME LOCATION AS THE EXISTING CENTERLINE.
- ⑤ PROPOSED CENTERLINE "IS NOT" IN THE SAME LOCATION AS THE EXISTING CENTERLINE.
- ⑥ MAINTAIN 1 : 4 SLOPE WITHIN CLEAR ZONE AND A 1 : 3 SLOPE MINIMUM OUTSIDE CLEAR ZONE UNLESS OTHERWISE INDICATED IN PLAN
- ⑦ SEE CONSTRUCTION PLAN AND CROSS SECTIONS FOR EXACT RIGHT OF WAY LOCATION.

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *[Signature]*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/08/15



ANOKA COUNTY
HIGHWAY DEPT.

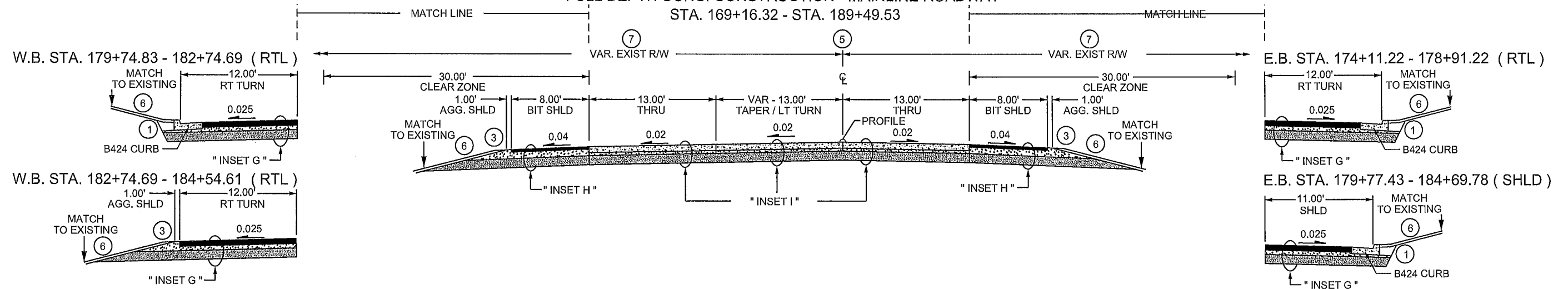
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

PROPOSED
TYPICAL SECTIONS

Sheet 42 of 210 Sheets

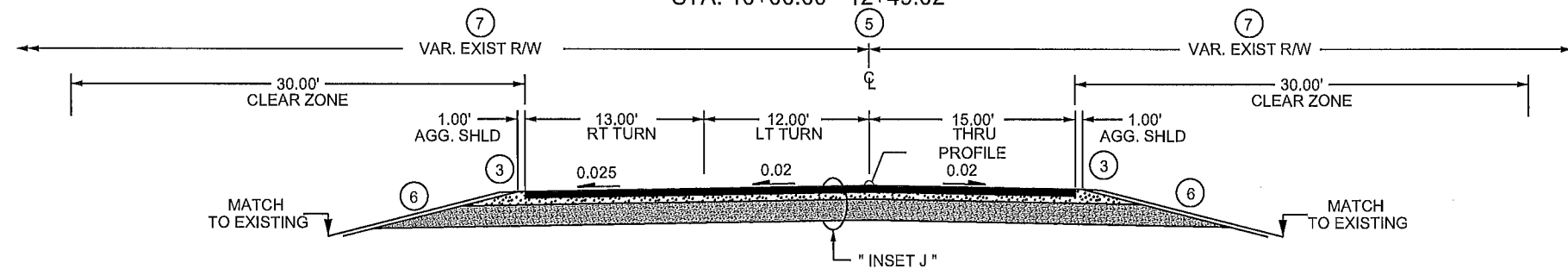
C.S.A.H. 22

FULL DEPTH CONC. CONSTRUCTION - MAINLINE ROADWAY STA. 169+16.32 - STA. 189+49.53



C.S.A.H. 13

BITUMINOUS - MAINLINE ROADWAY STA. 10+00.00 - 12+49.02



GENERAL NOTES:

- ALL CROSS SLOPES ARE EXPRESSED IN FT / FT
- UNLESS OTHERWISE SPECIFIED, THE GRADING GRADE CROSS SLOPES SHALL BE THE SAME AS THE FINISHED SURFACE OF THE MAINLINE.
- CONCRETE LANE WIDTH DIMENSIONS ARE MEASURED FROM JOINT TO JOINT
- BITUMINOUS AND AGGREGATE DIMENSIONS ARE MEASURED ACROSS SURFACE WIDTH

SPECIFIC NOTES:

- SUITABLE GRADING MATERIAL
- DITCH WIDTH VARIES (2.0' MINIMUM) 4.0" SLOPE DRESSING MINIMUM
- AGGREGATE SHOULDERING, CLASS 5 MNDOT SPEC. 2221
- PROPOSED CENTERLINE IS IN THE SAME LOCATION AS THE EXISTING CENTERLINE.
- PROPOSED CENTERLINE "IS NOT" IN THE SAME LOCATION AS THE EXISTING CENTERLINE.
- MAINTAIN 1 : 4 SLOPE WITHIN CLEAR ZONE AND A 1 : 3 SLOPE MINIMUM OUTSIDE CLEAR ZONE UNLESS OTHERWISE INDICATED IN PLAN
- SEE CONSTRUCTION PLAN AND CROSS SECTIONS FOR EXACT RIGHT OF WAY LOCATION.

NO	DATE	BY	CKD	APPR	REVISION
1	03/02/2015	NJD			
2	03/02/2015	NJD			
3	03/02/2015	NJD			
4	03/02/2015	NJD			
5	03/02/2015	NJD			
6	03/02/2015	NJD			
7	03/02/2015	NJD			
8	03/02/2015	NJD			
9	03/02/2015	NJD			
10	03/02/2015	NJD			

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *Nicholas J. Dobda*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY: JCF DATE: 01/09/15

DESIGN BY: NJD DATE: 01/23/15

CHECKED BY: GMP DATE: 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

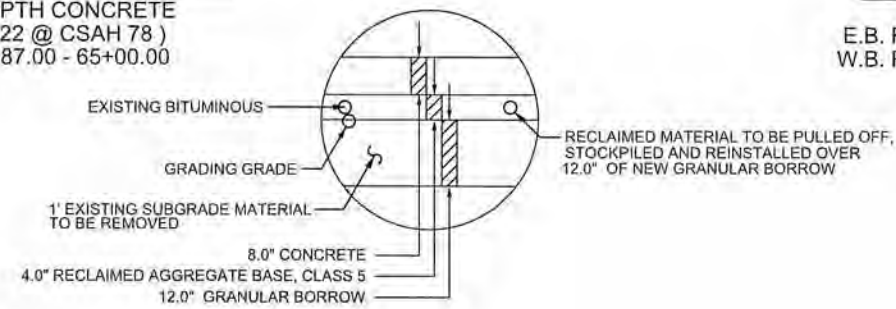
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

PROPOSED
TYPICAL SECTIONS

Sheet 43 of 210 Sheets

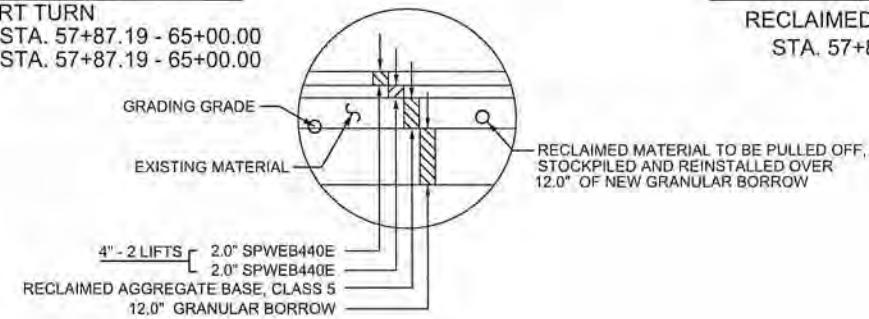
"INSET A"

FULL DEPTH CONCRETE
(CSAH 22 @ CSAH 78)
STA. 57+87.00 - 65+00.00



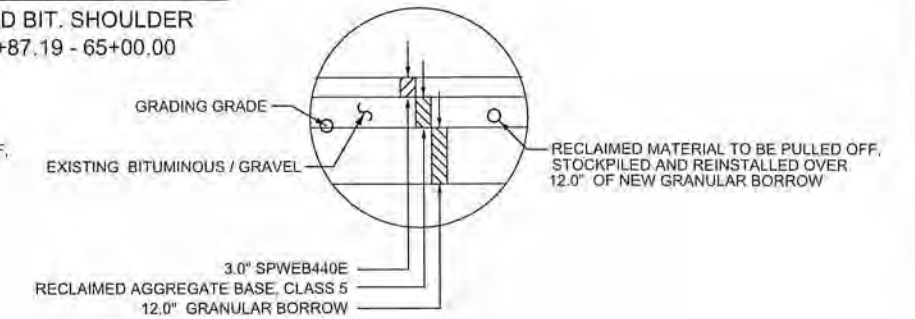
"INSET B"

RT TURN
E.B. RT TURN STA. 57+87.19 - 65+00.00
W.B. RT TURN STA. 57+87.19 - 65+00.00



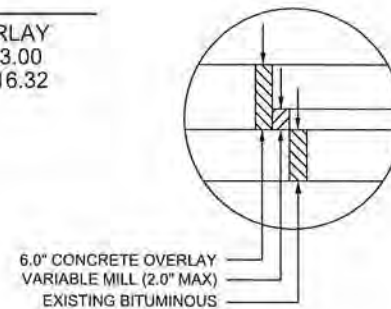
"INSET C"

RECLAIMED BIT. SHOULDER
STA. 57+87.19 - 65+00.00



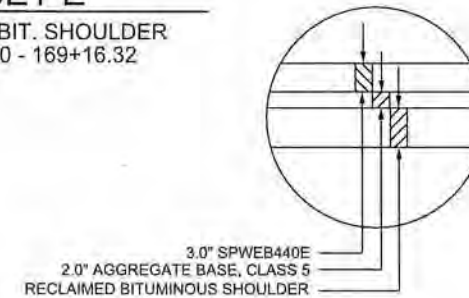
"INSET D"

MILLED / CONC. OVERLAY
STA. 65+00.00 - 111+33.00
STA. 111+53.00 - 169+16.32



"INSET E"

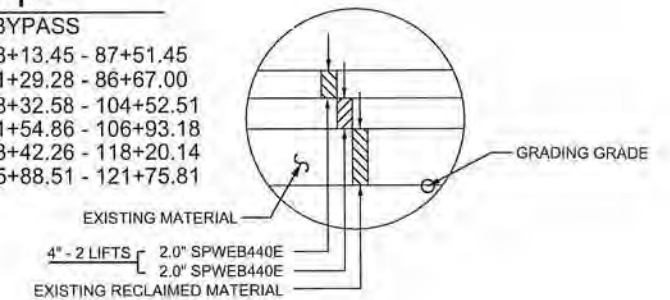
RECLAIMED BIT. SHOULDER
STA. 65+00.00 - 169+16.32



"INSET F"

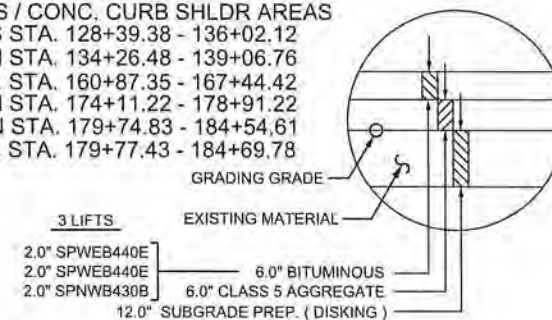
RT TURN / BYPASS

E.B. BYPASS STA. 78+13.45 - 87+51.45
W.B. RT TURN STA. 81+29.28 - 86+67.00
E.B. BYPASS STA. 98+32.58 - 104+52.51
W.B. RT TURN STA. 101+54.86 - 106+93.18
E.B. RT TURN STA. 113+42.26 - 118+20.14
W.B. BYPASS STA. 115+88.51 - 121+75.81



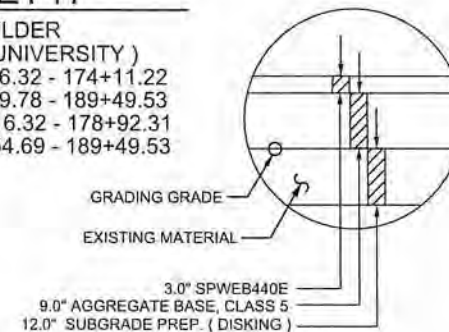
"INSET G"

RT TURN / BYPASS / CONC. CURB SHLDR AREAS
E.B. BYPASS STA. 128+39.38 - 136+02.12
W.B. RT TURN STA. 134+26.48 - 139+06.76
SHOULDER W.B. STA. 160+87.35 - 167+44.42
E.B. RT TURN STA. 174+11.22 - 178+91.22
W.B. RT TURN STA. 179+74.83 - 184+54.61
SHOULDER E.B. STA. 179+77.43 - 184+69.78



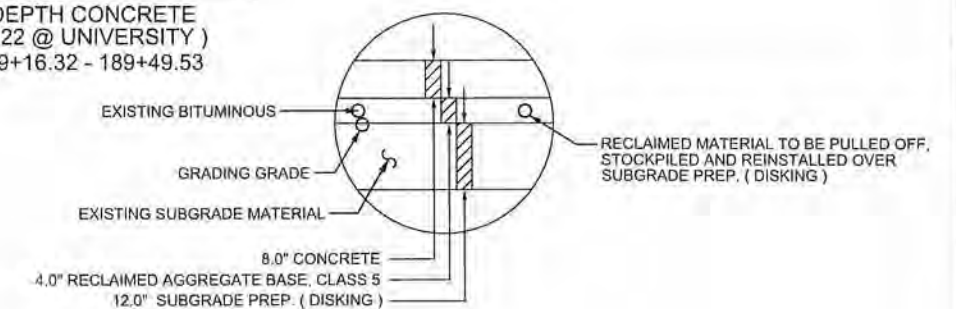
"INSET H"

SHOULDER
(CSAH 22 @ UNIVERSITY)
E.B. STA. 169+16.32 - 174+11.22
E.B. STA. 184+69.78 - 189+49.53
W.B. STA. 169+16.32 - 178+92.31
W.B. STA. 184+54.69 - 189+49.53



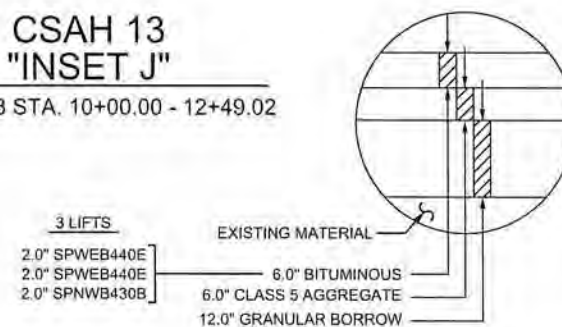
"INSET I"

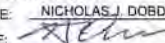
FULL DEPTH CONCRETE
(CSAH 22 @ UNIVERSITY)
STA. 169+16.32 - 189+49.53



CSAH 13 "INSET J"

CSAH 13 STA. 10+00.00 - 12+49.02



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: 
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY: JCF DATE: 01/09/15
DESIGN BY: NJD DATE: 01/23/15
CHECKED BY: GMP DATE: 02/06/15



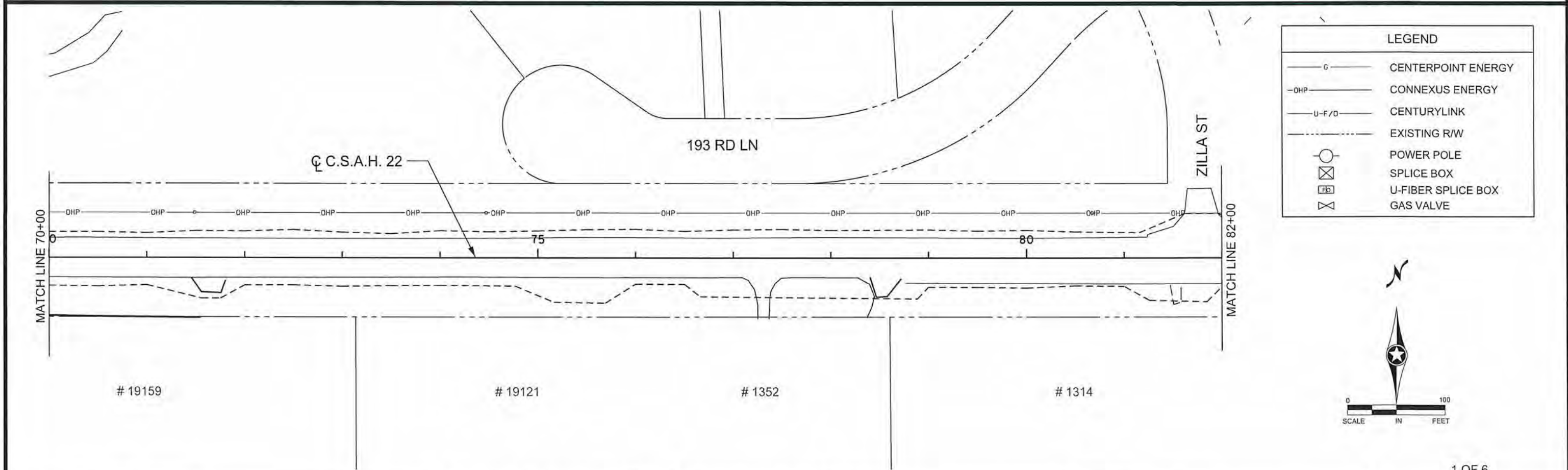
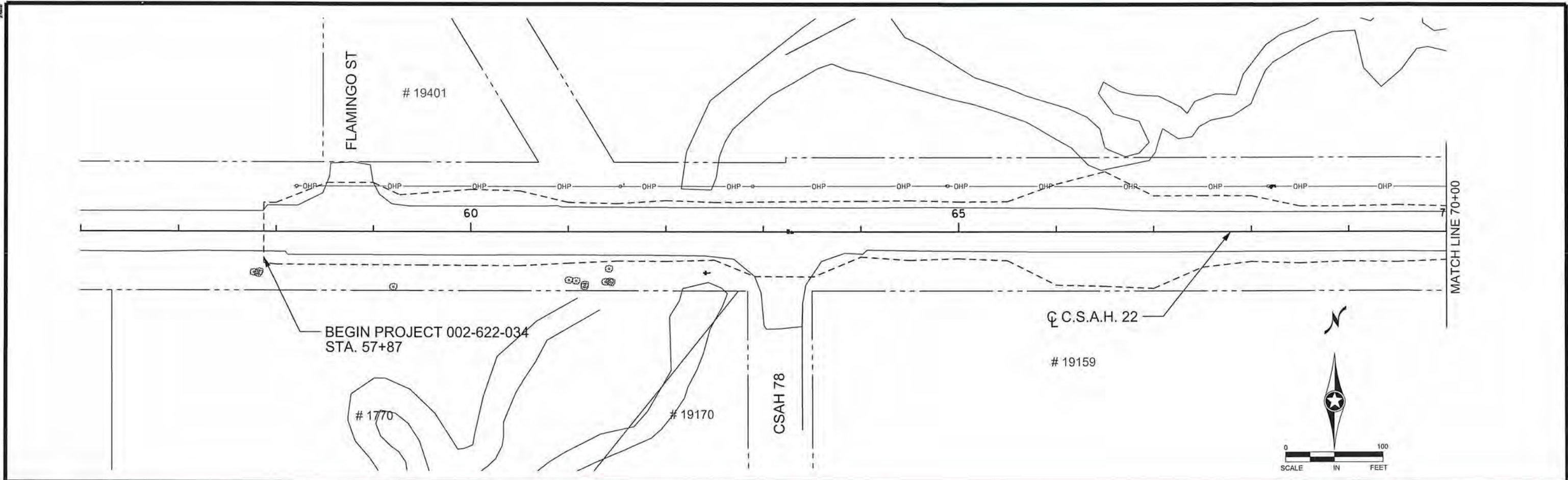
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

PROPOSED
TYPICAL SECTIONS

Sheet 44 of 210 Sheets

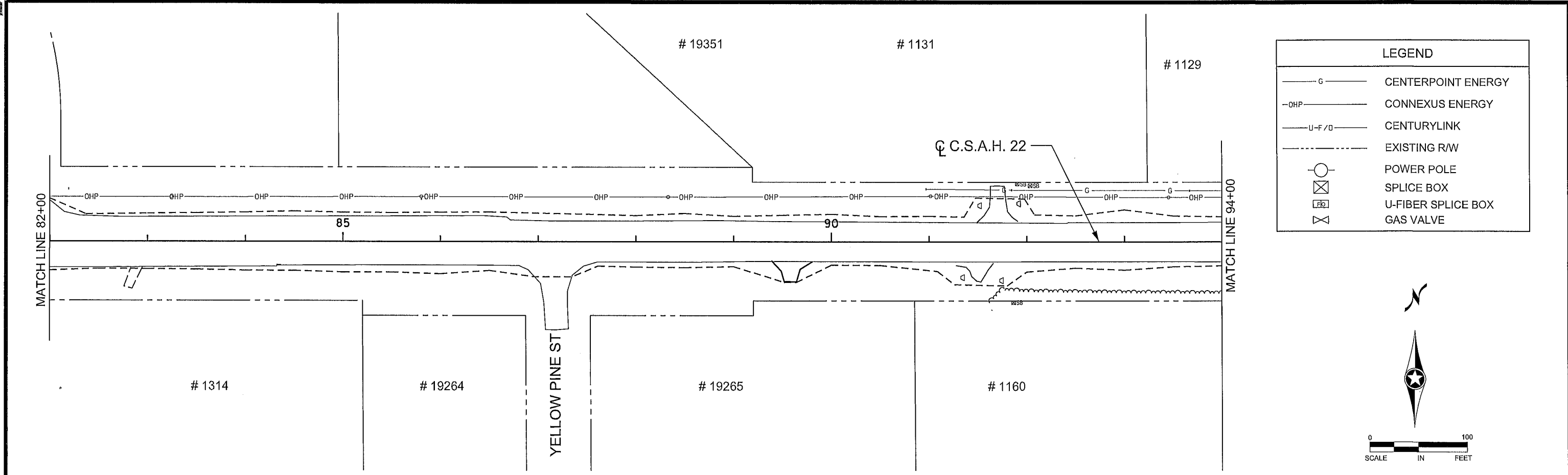
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NAME: P:\02-622-34\Plan\0262234_TYP.dgn					
03/02/2015 9:03:15 AM					



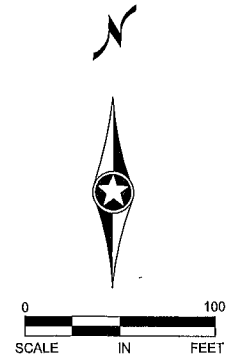
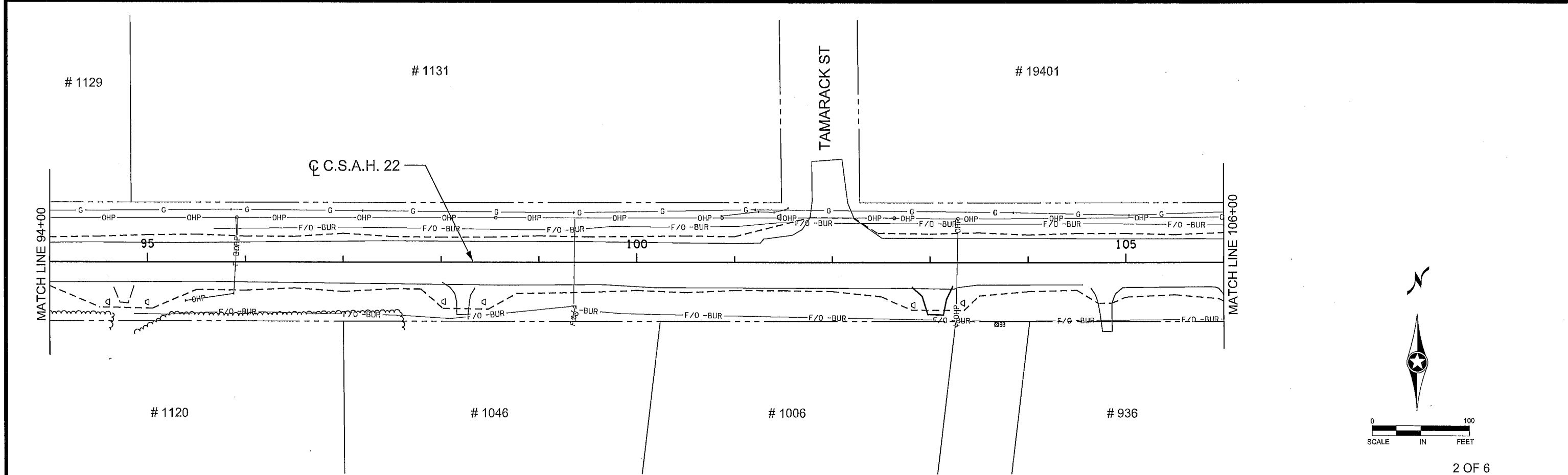
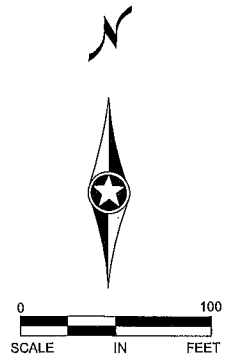
LEGEND	
	CENTERPOINT ENERGY
	CONNEXUS ENERGY
	CENTURYLINK
	EXISTING R/W
	POWER POLE
	SPLICE BOX
	U-FIBER SPLICE BOX
	GAS VALVE

1 OF 6

NO. DATE BY CKD APPR REVISION NAME: P:\02-622-34\Plan\0262234_UTIL_W1.dgn 03/02/2015 9:03:19 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY: JCF DATE: 01/09/15 DESIGN BY: NJD DATE: 01/23/15 CHECKED BY: GMP DATE: 02/06/15		 ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		EXISTING UTILITIES STA. 56+00 TO 82+00 Sheet 45 of 210 Sheets	
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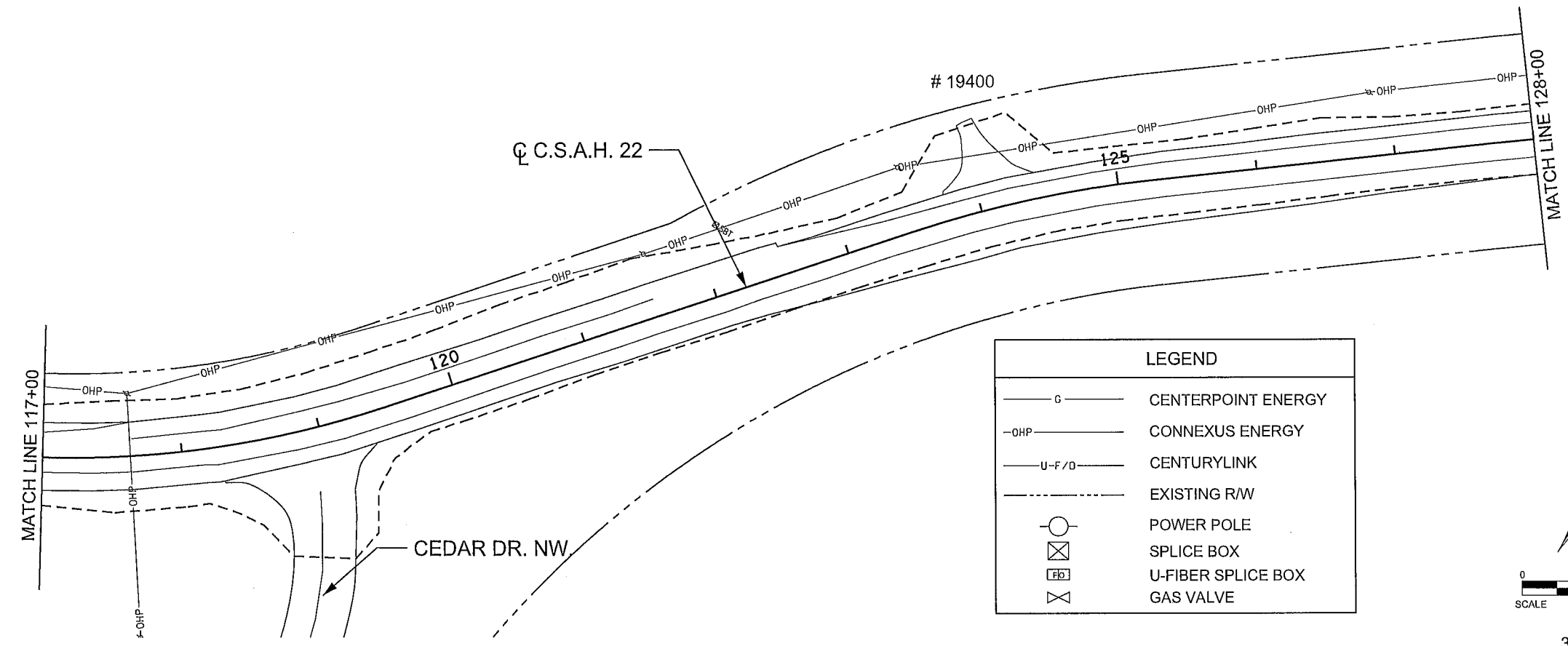
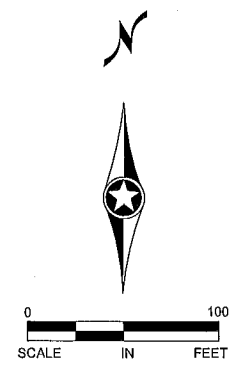
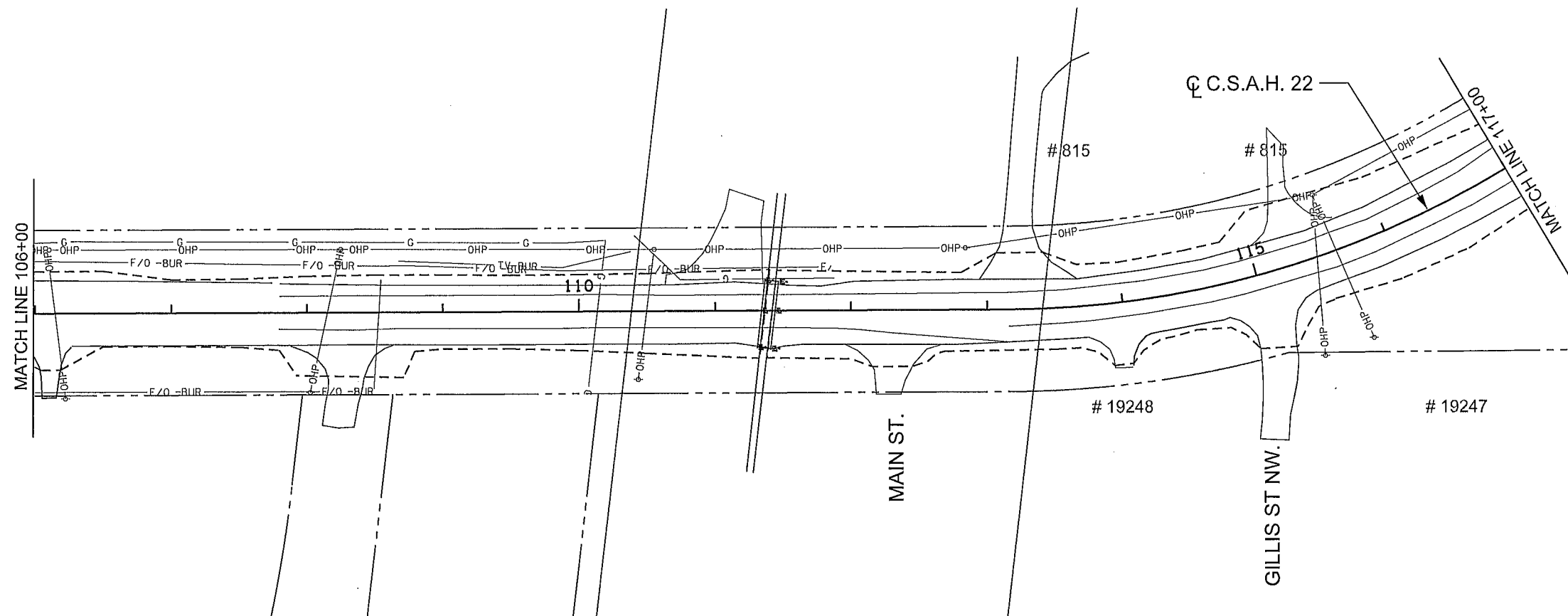
LEGEND	
—G—	CENTERPOINT ENERGY
—OHP—	CONNEXUS ENERGY
—U-F/O—	CENTURYLINK
---	EXISTING R/W
○	POWER POLE
⊗	SPLICE BOX
⊠	U-FIBER SPLICE BOX
⊗	GAS VALVE



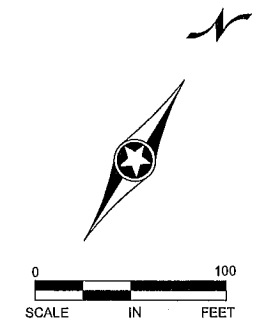
2 OF 6

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NO	DATE	BY	CKD	APPR	REVISION																					

NAME: P:\02-622-34\Plan\0262234_UTIL_W2.dgn 03/02/2015 9:03:21 AM



LEGEND	
	CENTERPOINT ENERGY
	CONNEXUS ENERGY
	CENTURYLINK
	EXISTING R/W
	POWER POLE
	SPLICE BOX
	U-FIBER SPLICE BOX
	GAS VALVE



3 OF 6

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE:

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.

STATE AID PROJECT NO. 002-622-034

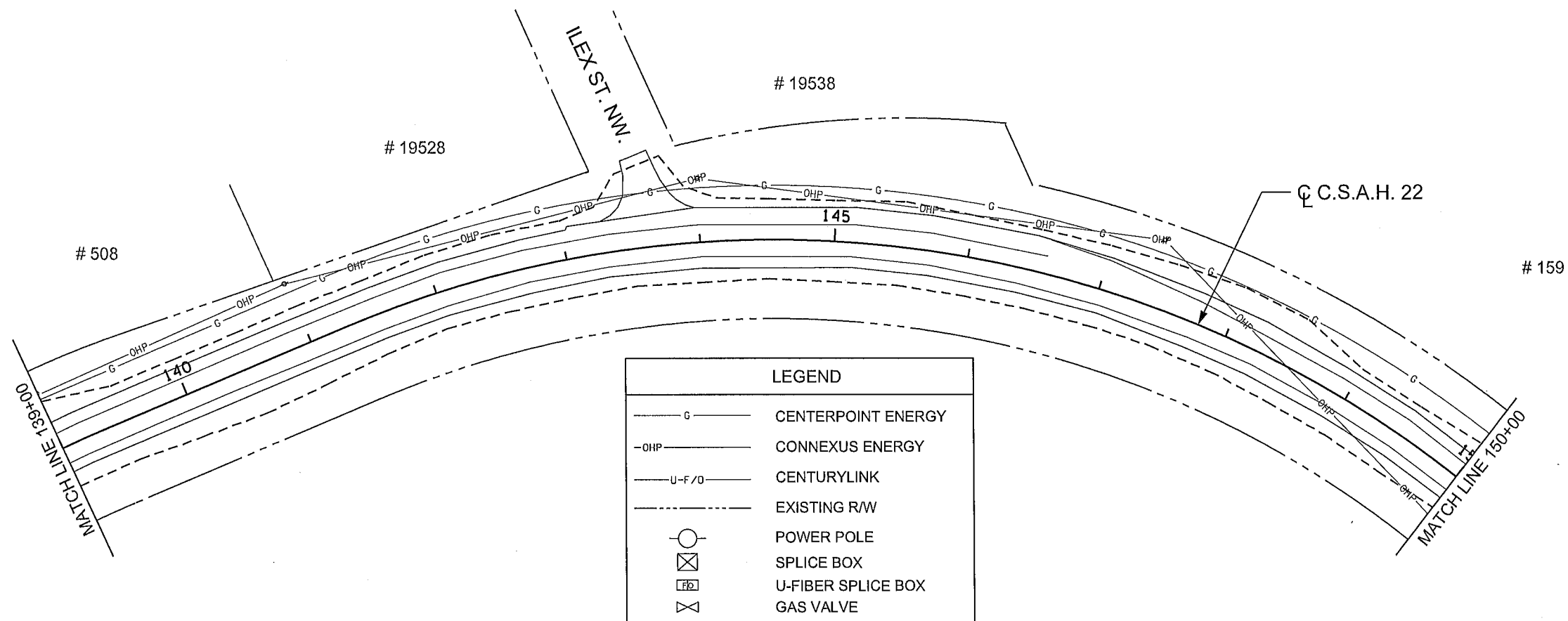
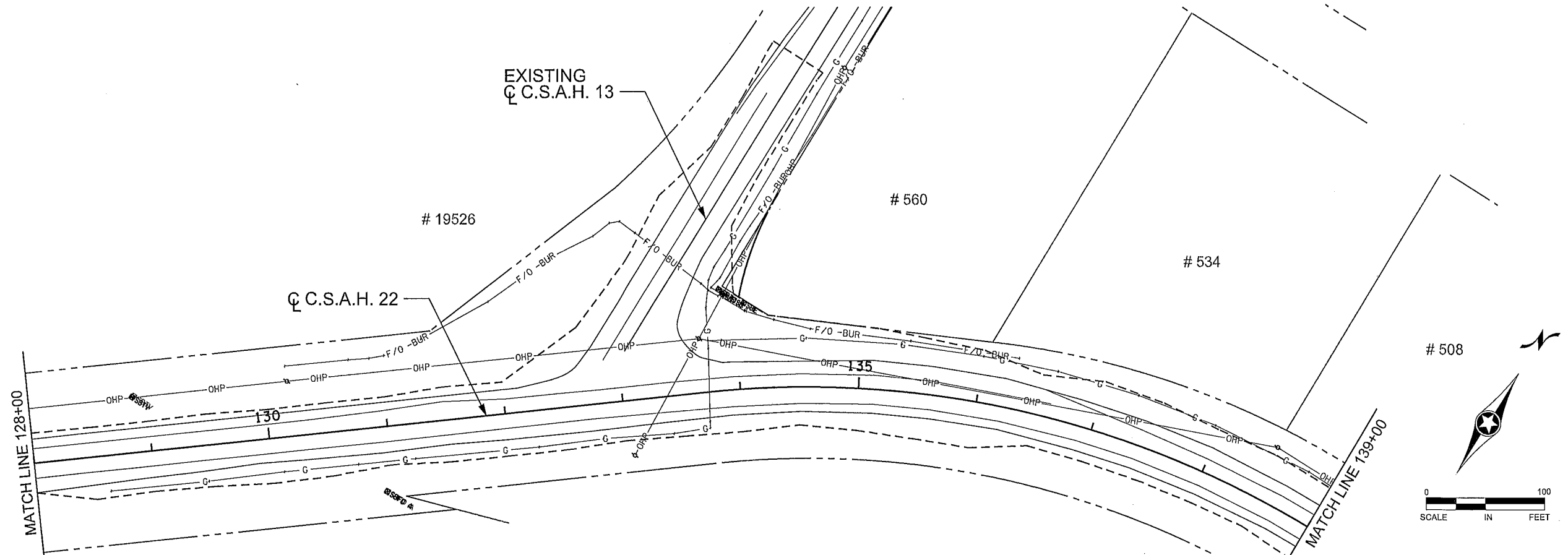
CITY PROJECT NO.

COUNTY PROJECT NO.

EXISTING UTILITIES

STA 106+00 TO 128+00

Sheet 47 of 210 Sheets



LEGEND	
— G —	CENTERPOINT ENERGY
— OHP —	CONNEXUS ENERGY
— U-F/O —	CENTURYLINK
---	EXISTING R/W
○	POWER POLE
⊗	SPLICE BOX
⊠	U-FIBER SPLICE BOX
⊞	GAS VALVE

4 OF 6

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *N. Dobda*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15



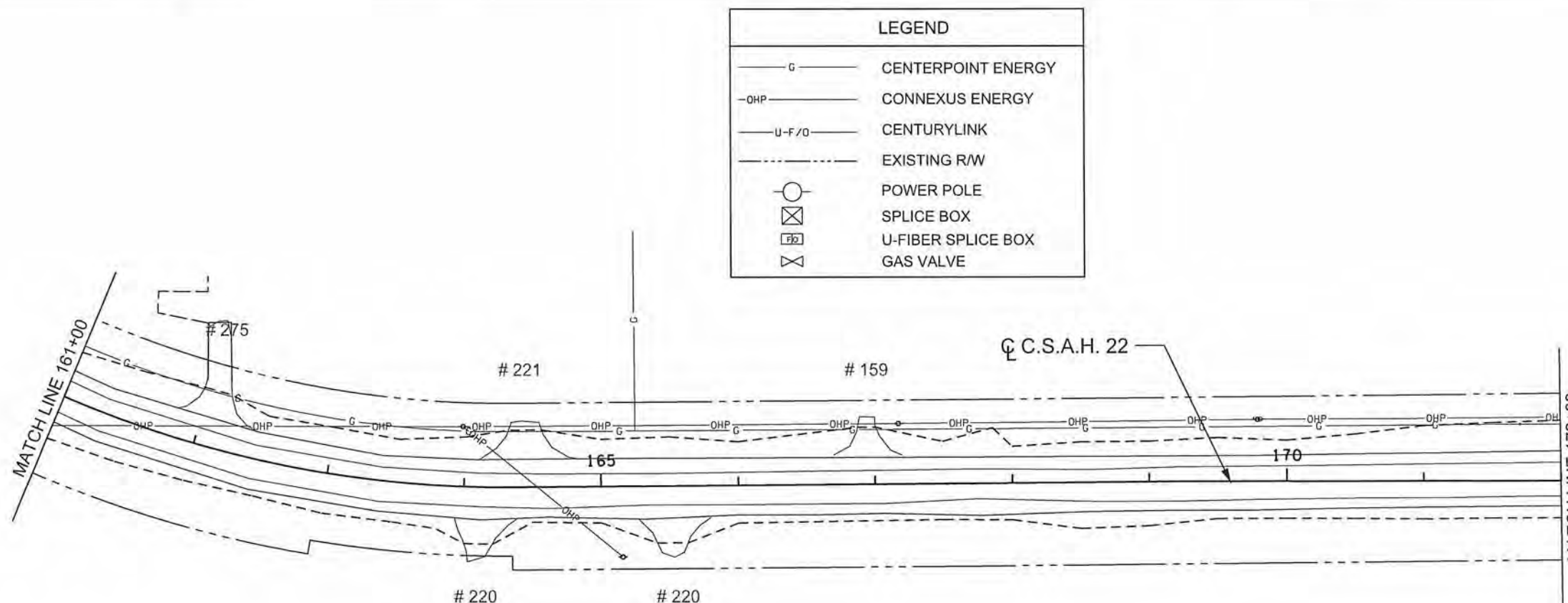
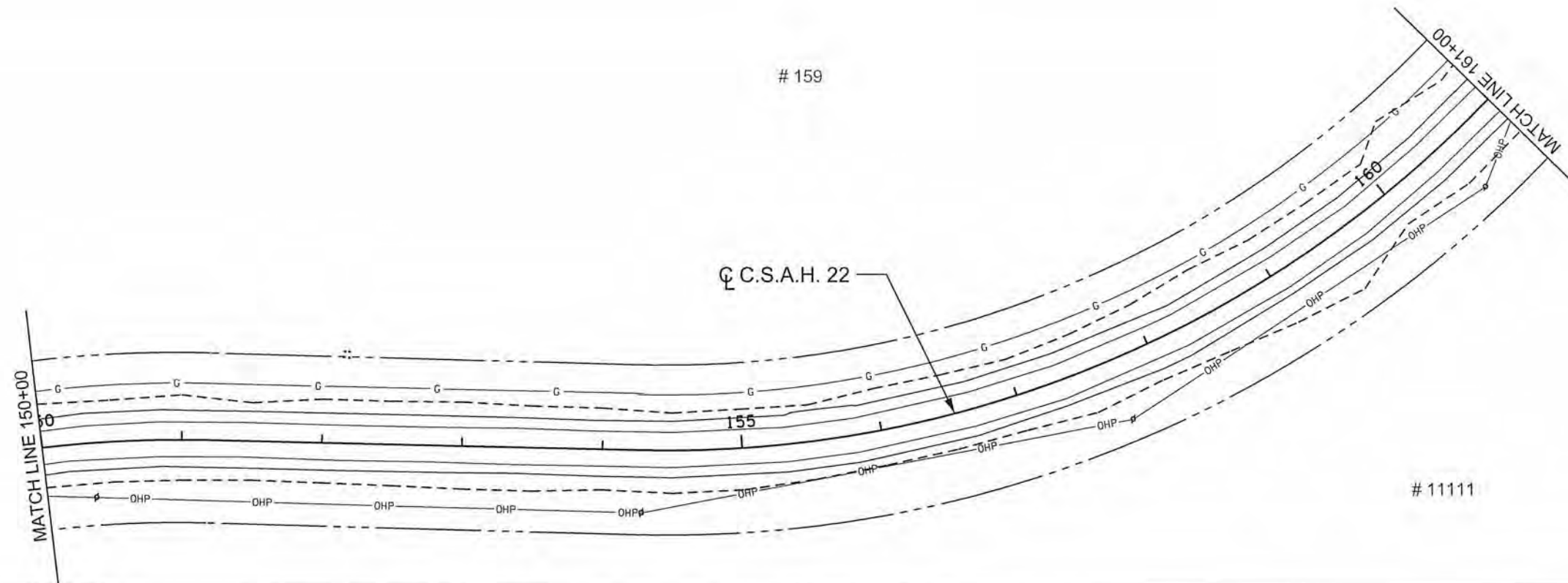
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

EXISTING UTILITIES

STA 128+00 TO 150+00

Sheet 48 of 210 Sheets



LEGEND	
— G —	CENTERPOINT ENERGY
— OHP —	CONNEXUS ENERGY
— U-F/O —	CENTURYLINK
---	EXISTING R/W
○	POWER POLE
⊗	SPLICE BOX
⊠	U-FIBER SPLICE BOX
⊕	GAS VALVE

5 OF 6

NO	DATE	BY	CKD	APPR	REVISION

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 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: *[Signature]*
 DATE: 3-2-15 LICENSE NO. 49046

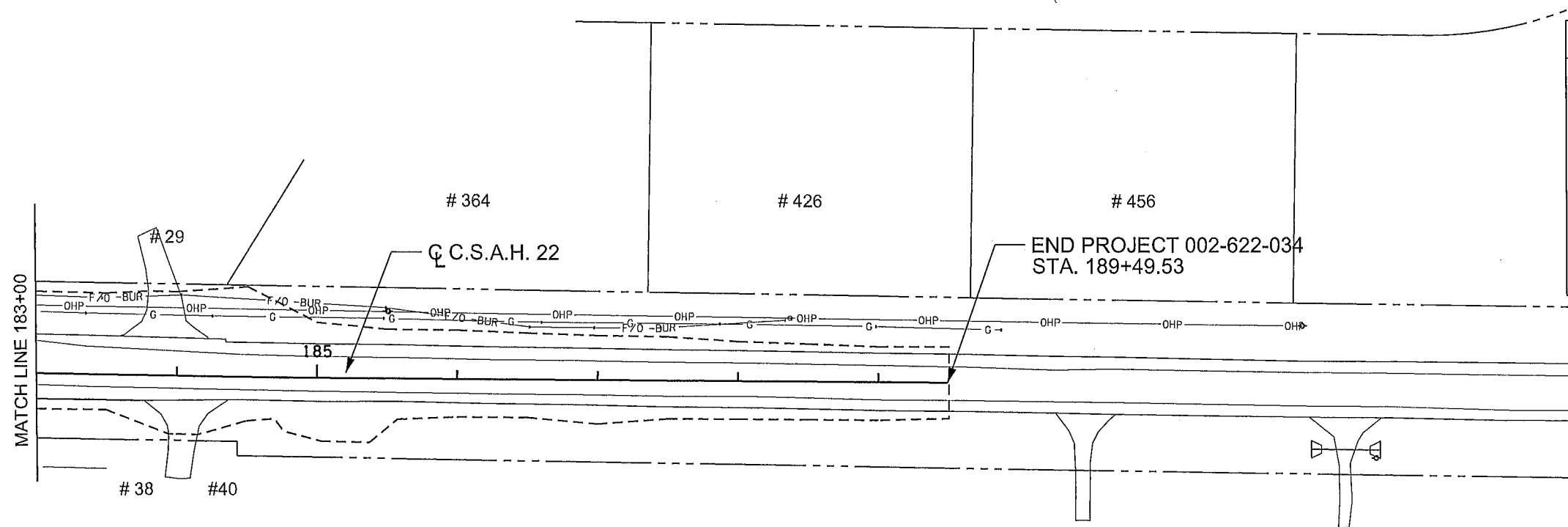
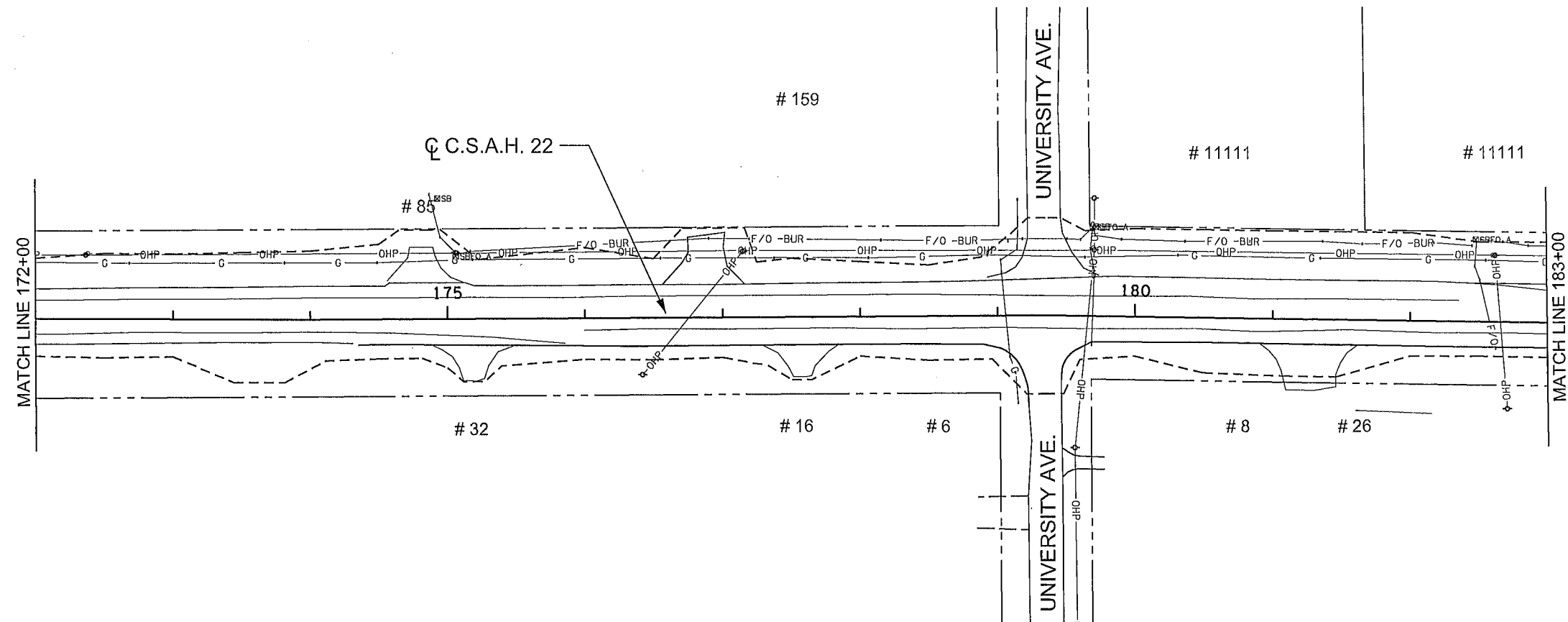
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 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/06/15



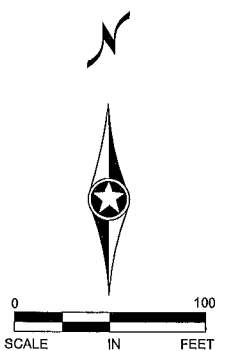
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

EXISTING UTILITIES
 STA 150+00 TO 172+00
 Sheet 49 of 210 Sheets



LEGEND	
	CENTERPOINT ENERGY
	CONNEXUS ENERGY
	CENTURYLINK
	EXISTING RW
	POWER POLE
	SPLICE BOX
	U-FIBER SPLICE BOX
	GAS VALVE



6 OF 6

NO	DATE	BY	CKD	APPR	REVISION

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SIGNATURE:

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

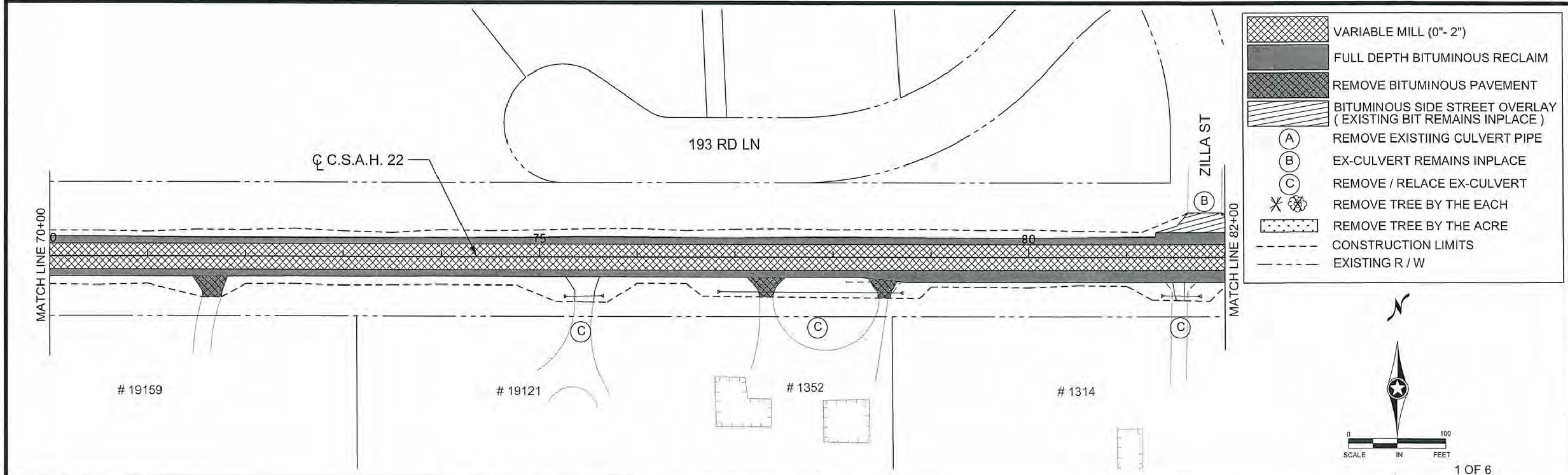
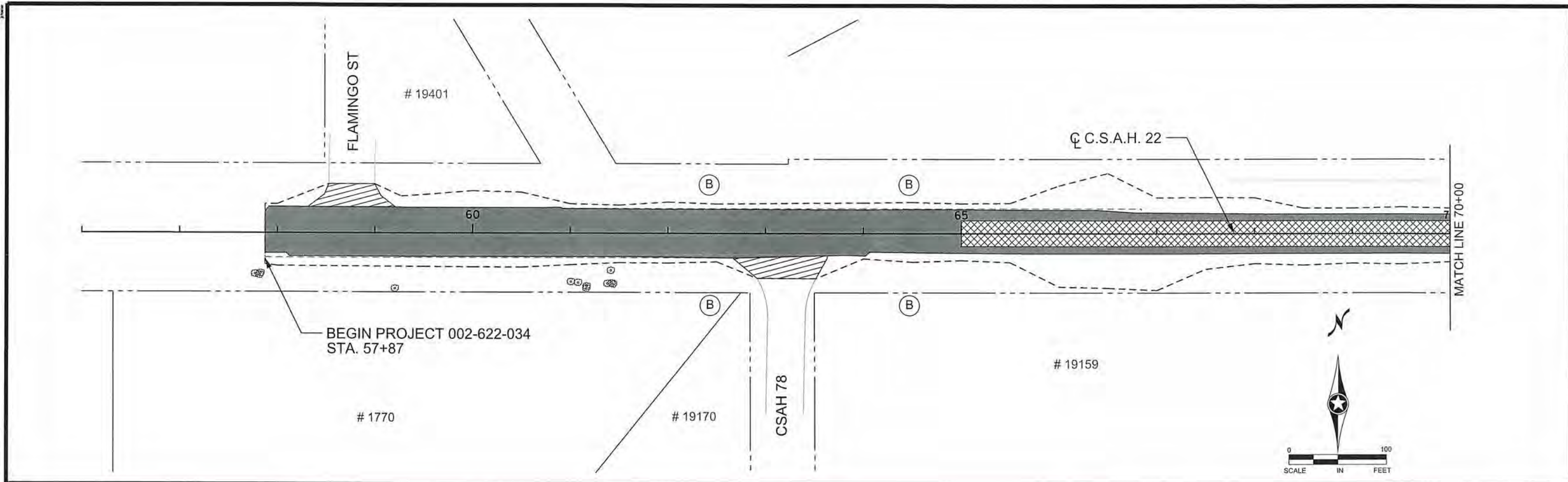
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ANOKA COUNTY
HIGHWAY DEPT.

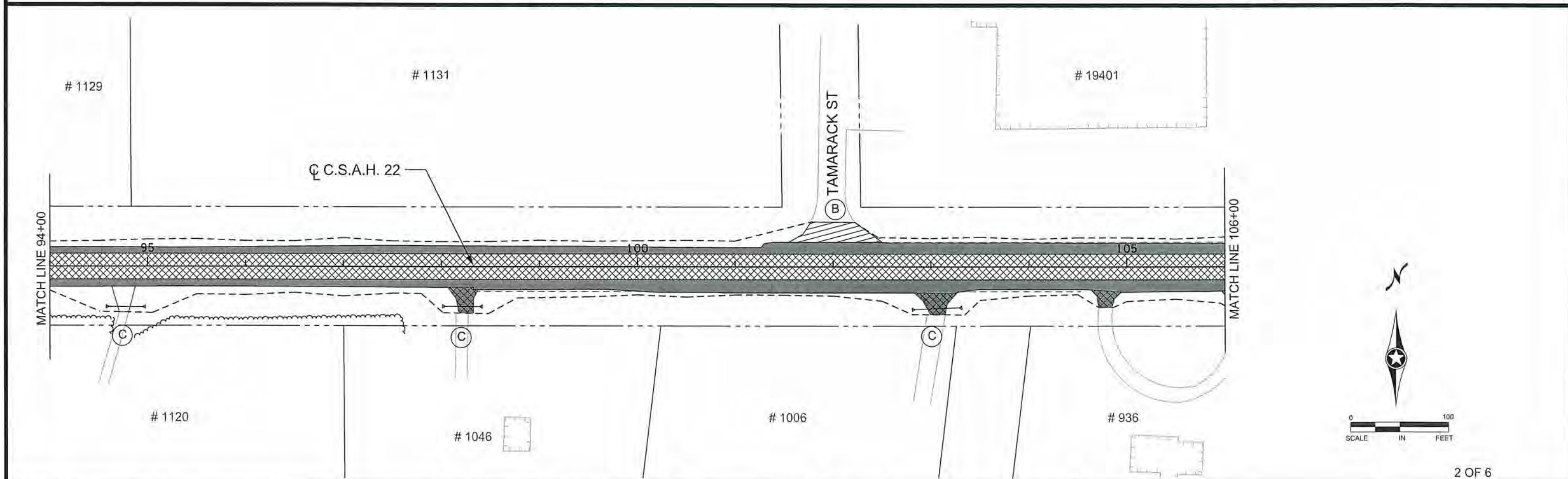
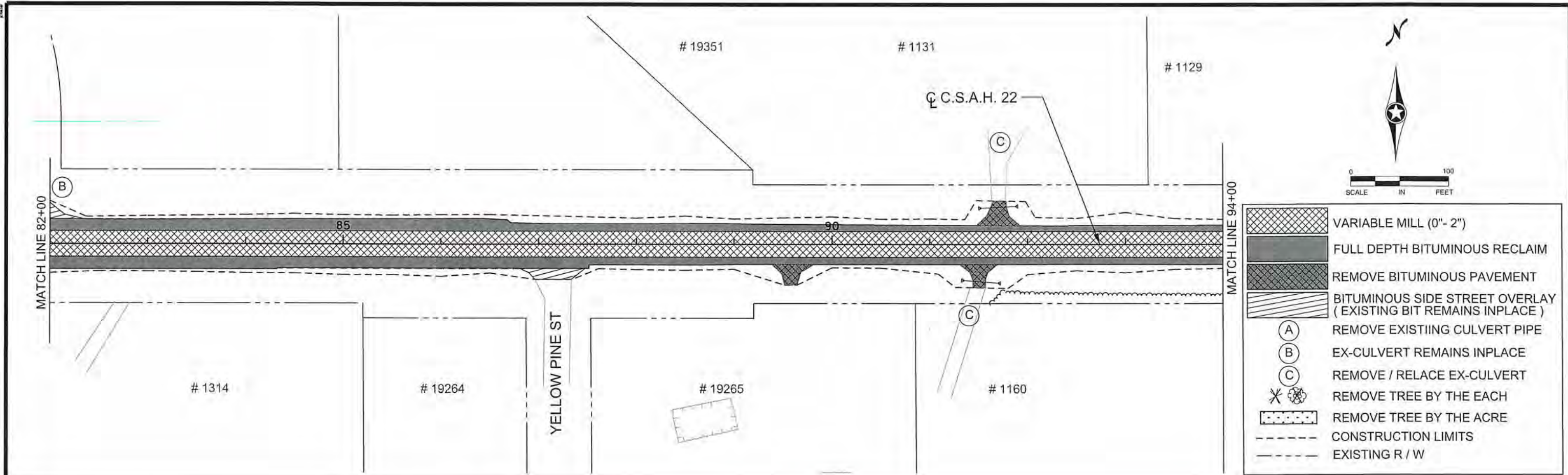
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

EXISTING UTILITIES
STA 172+00 TO 189+49.53
Sheet 50 of 210 Sheets



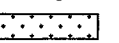
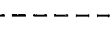
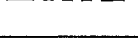
- VARIABLE MILL (0"- 2")
- FULL DEPTH BITUMINOUS RECLAIM
- REMOVE BITUMINOUS PAVEMENT
- BITUMINOUS SIDE STREET OVERLAY (EXISTING BIT REMAINS INPLACE)
- REMOVE EXISTING CULVERT PIPE
- EX-CULVERT REMAINS INPLACE
- REMOVE / RELACE EX-CULVERT
- REMOVE TREE BY THE EACH
- REMOVE TREE BY THE ACRE
- CONSTRUCTION LIMITS
- EXISTING R / W

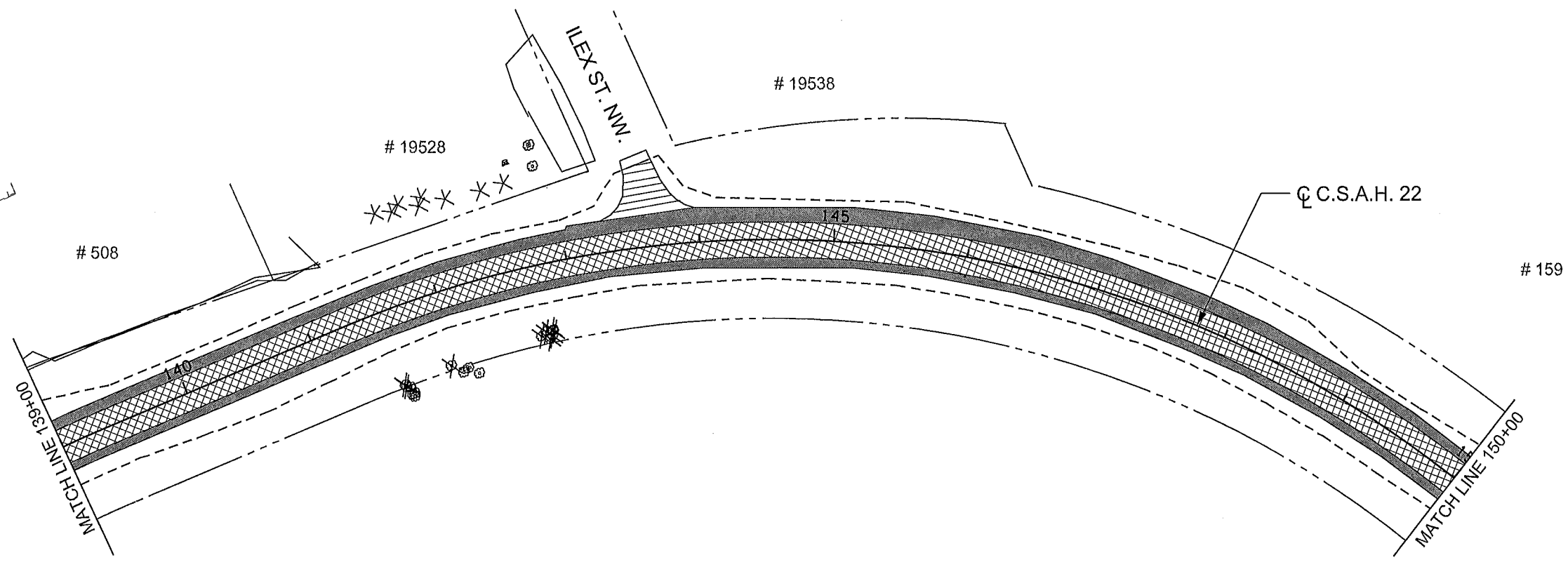
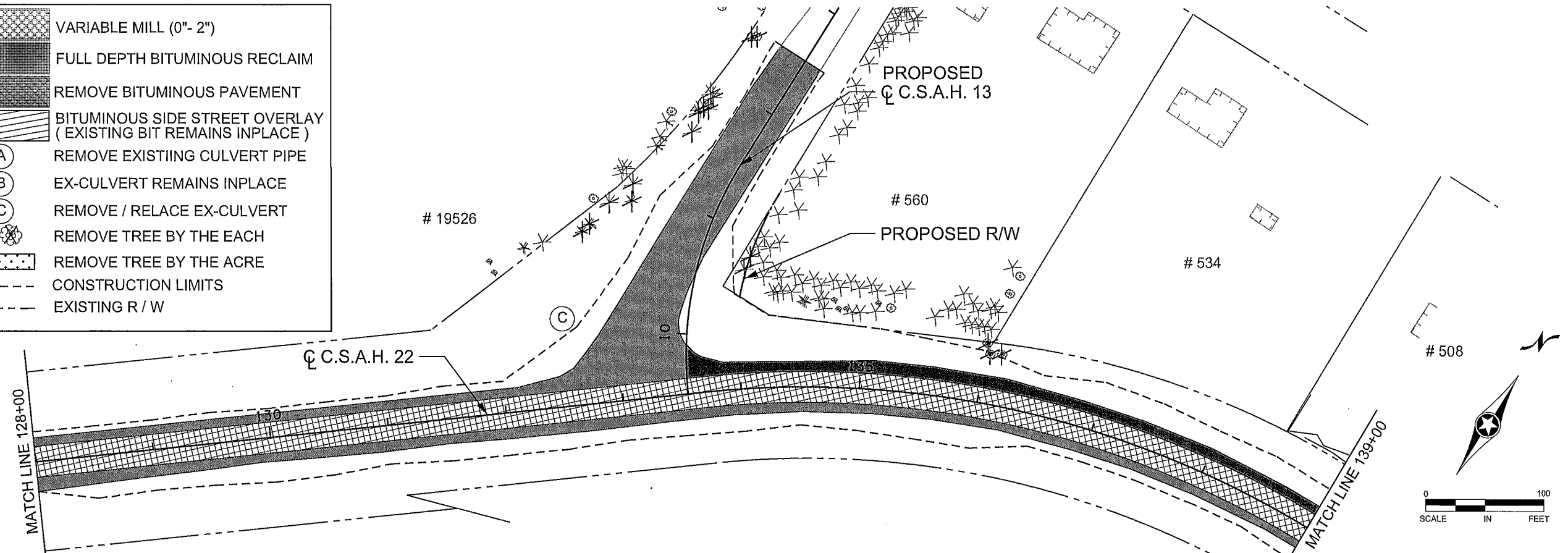
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NO	DATE	BY	CKD	APPR	REVISION																					



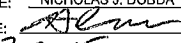
2 OF 6

NO. DATE BY CKD APPR NAME: P:\02-622-34\Plan\0262234_RM_W2.dgn 03/02/2015 9:01:41 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY: JCF DATE: 01/09/15 DESIGN BY: NJD DATE: 01/23/15 CHECKED BY: GMP DATE: 02/06/15		 ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. 002-622-034 STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		REMOVAL PLAN STA 82+00 TO 106+00 Sheet 52 of 210 Sheets	
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-  VARIABLE MILL (0" - 2")
 FULL DEPTH BITUMINOUS RECLAIM
 REMOVE BITUMINOUS PAVEMENT
 BITUMINOUS SIDE STREET OVERLAY
 (EXISTING BIT REMAINS INPLACE)
 (A) REMOVE EXISTING CULVERT PIPE
 (B) EX-CULVERT REMAINS INPLACE
 (C) REMOVE / RELACE EX-CULVERT
 REMOVE TREE BY THE EACH
 REMOVE TREE BY THE ACRE
 CONSTRUCTION LIMITS
 EXISTING R / W



NO	DATE	BY	CKD	APPR	REVISION

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 THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: 
 DATE: 3-2-15 LICENSE NO. 49046

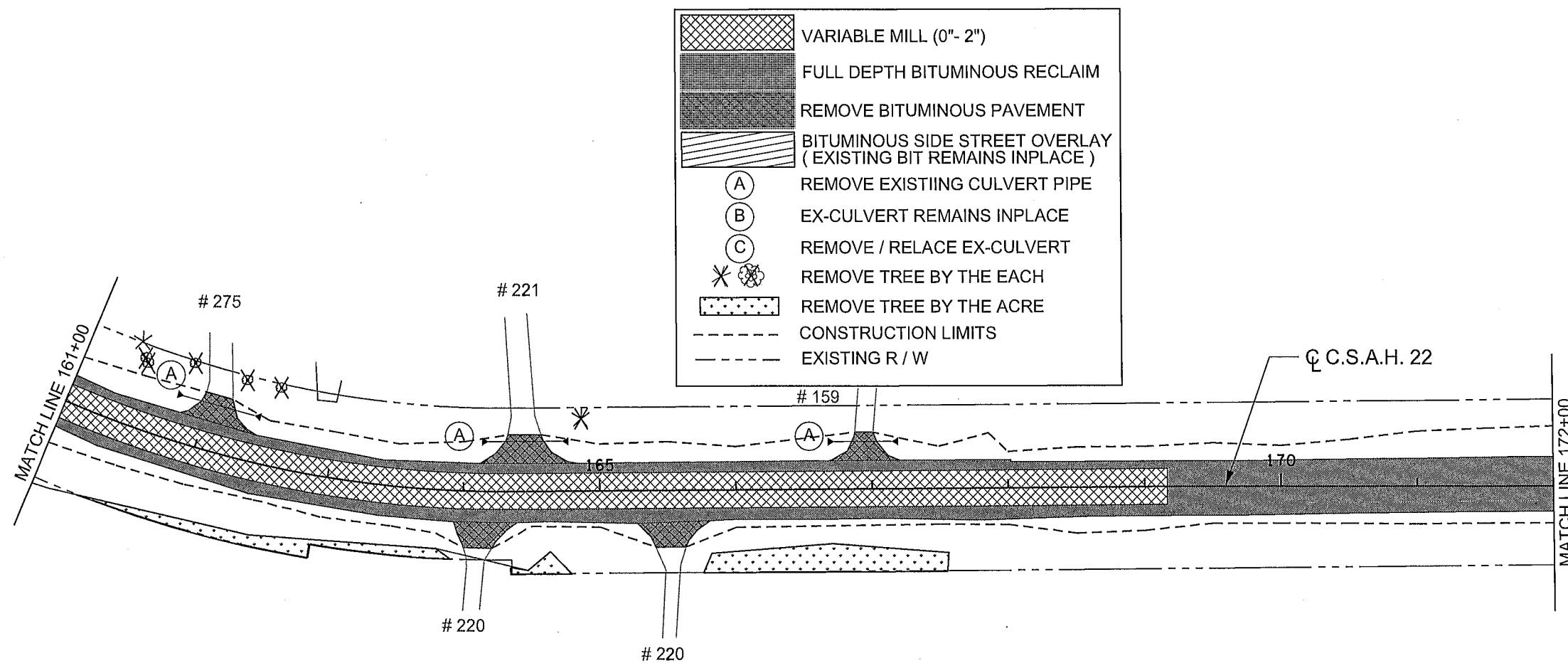
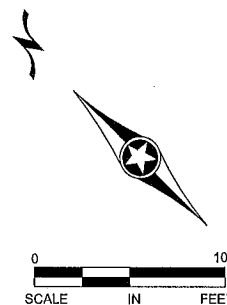
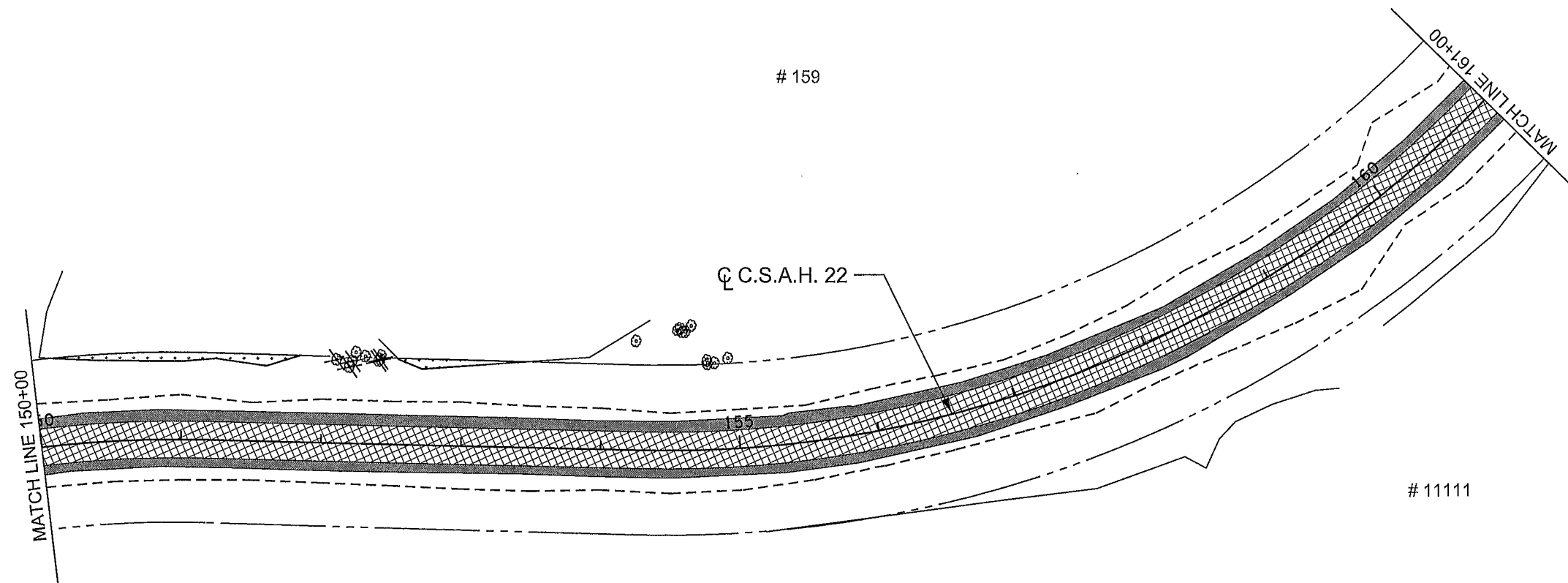
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 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/09/15



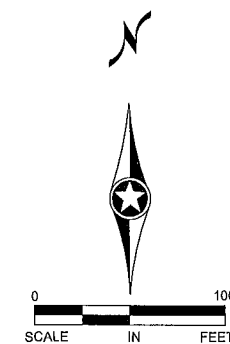
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

REMOVAL PLAN
 STA 128+00 TO 150+00
 Sheet 54 of 210 Sheets



- | | |
|-----------|--|
| | VARIABLE MILL (0" - 2") |
| | FULL DEPTH BITUMINOUS RECLAIM |
| | REMOVE BITUMINOUS PAVEMENT |
| | BITUMINOUS SIDE STREET OVERLAY
(EXISTING BIT REMAINS INPLACE) |
| (A) | REMOVE EXISTING CULVERT PIPE |
| (B) | EX-CULVERT REMAINS INPLACE |
| (C) | REMOVE / RELACE EX-CULVERT |
| | REMOVE TREE BY THE EACH |
| | REMOVE TREE BY THE ACRE |
| - - - - - | CONSTRUCTION LIMITS |
| - - - - - | EXISTING R / W |



5 OF 6

NO	DATE	BY	CKD	APPR	REVISION
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03/02/2015 9:01:48 AM					

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE:

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

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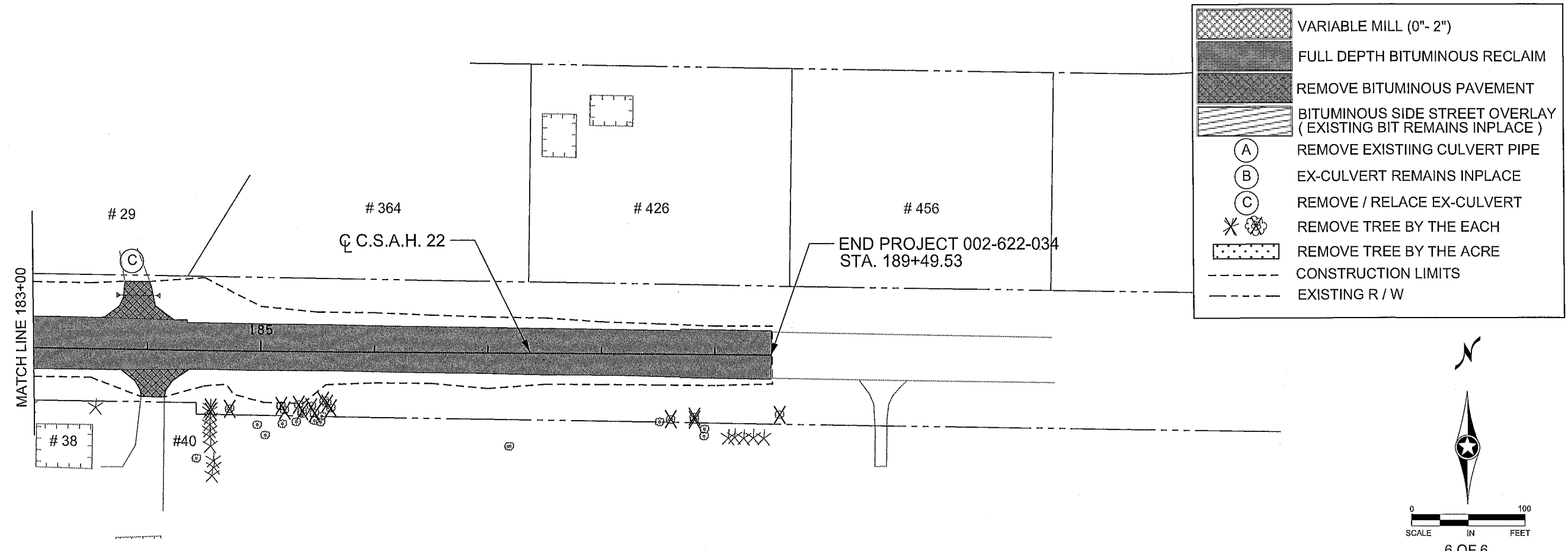
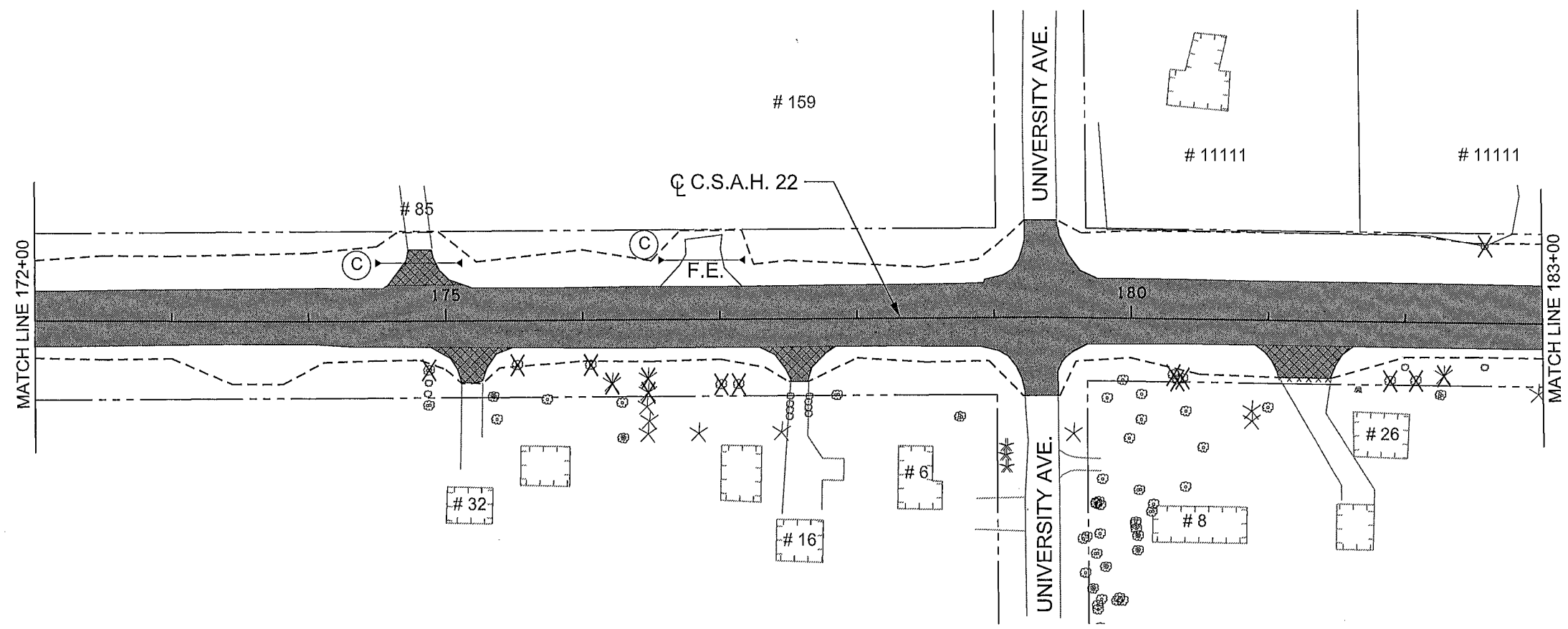
**ANOKA COUNTY
HIGHWAY DEPT.**

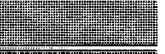
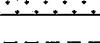
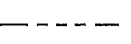
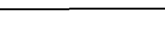
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

REMOVAL PLAN

STA 150+00 TO 172+00

Sheet 55 of 210 Sheets

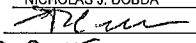


-  VARIABLE MILL (0"- 2")
-  FULL DEPTH BITUMINOUS RECLAIM
-  REMOVE BITUMINOUS PAVEMENT
-  BITUMINOUS SIDE STREET OVERLAY (EXISTING BIT REMAINS INPLACE)
-  REMOVE EXISTING CULVERT PIPE
-  EX-CULVERT REMAINS INPLACE
-  REMOVE / RELACE EX-CULVERT
-  REMOVE TREE BY THE EACH
-  REMOVE TREE BY THE ACRE
-  CONSTRUCTION LIMITS
-  EXISTING R / W

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: 

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

 ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

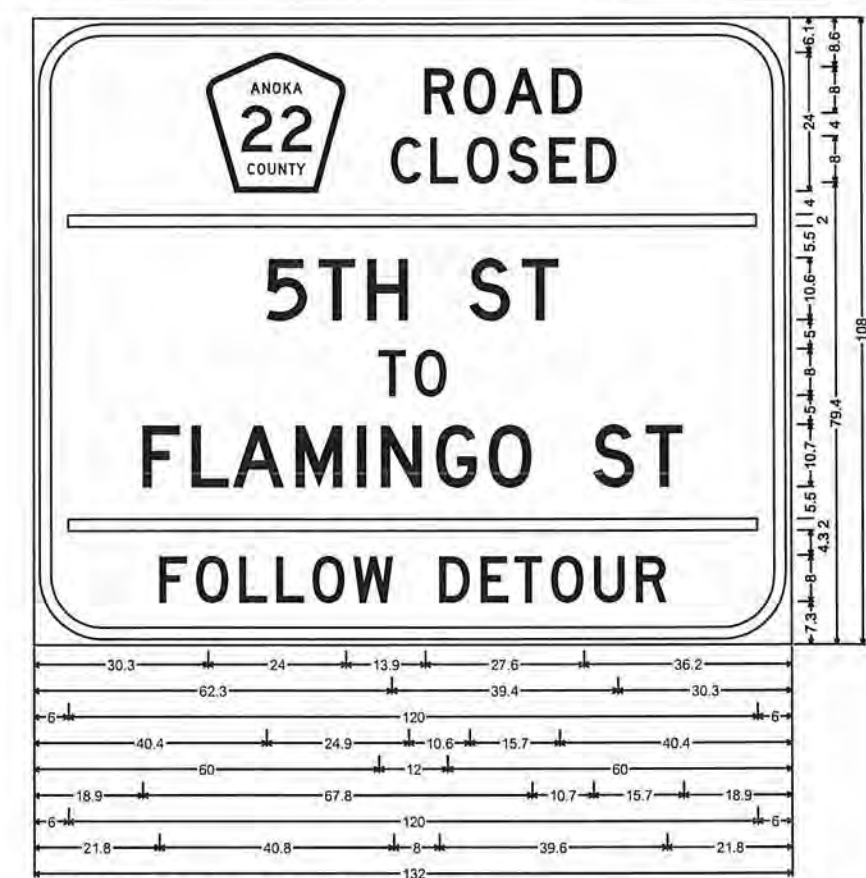
REMOVAL PLAN
STA 172+00 TO 189+49.53
Sheet 56 of 210 Sheets

J			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
M1-6A W20-1 W20-2	24" x 24" 48" x 48"		• 2 • 2
M1-6A W20-2	24" x 24" 48" x 48"		• 4 • 4
W20-3	48" x 48"		• 2
M4-10R TYPE III	48" x 18" 8 FOOT		SEE NOTE ② • 1
M4-10L TYPE III	48" x 18" 8 FOOT		SEE NOTE ② • 1
R11-3 TYPE III	48" x 30" 8 FOOT		SEE NOTE ② • 3
G20-X2	132"x 108"		• 3
G20-X1	60" x 48"		• 3
G20-X2	132"x 108"		• 3

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
M4-8A M3-4A M1-6A	24" x 12" 24" x 12" 24" x 24" 21" x 15"		• 2 • 2 • 4 • 4 • 6
M4-8A M3-2A M1-6A	24" x 12" 24" x 12" 24" x 24" 21" x 15"		• 4 • 3 • 5 • 4 • 8
M4-8A M1-6A	24" x 12" 24" x 24" 21" x 15"		• 1 • 1 • 1 • 1 • 2
M4-6A M4-8A M1-6A	24" x 12" 24" x 12" 24" x 24"		• 2
G20-X1	54" x 48"		• 2

- NOTES:
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED JANUARY 2014
 - ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD

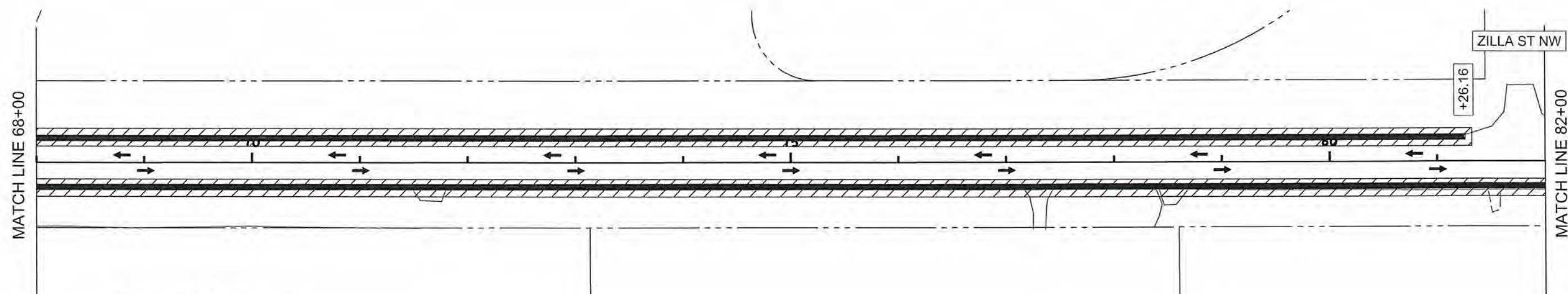
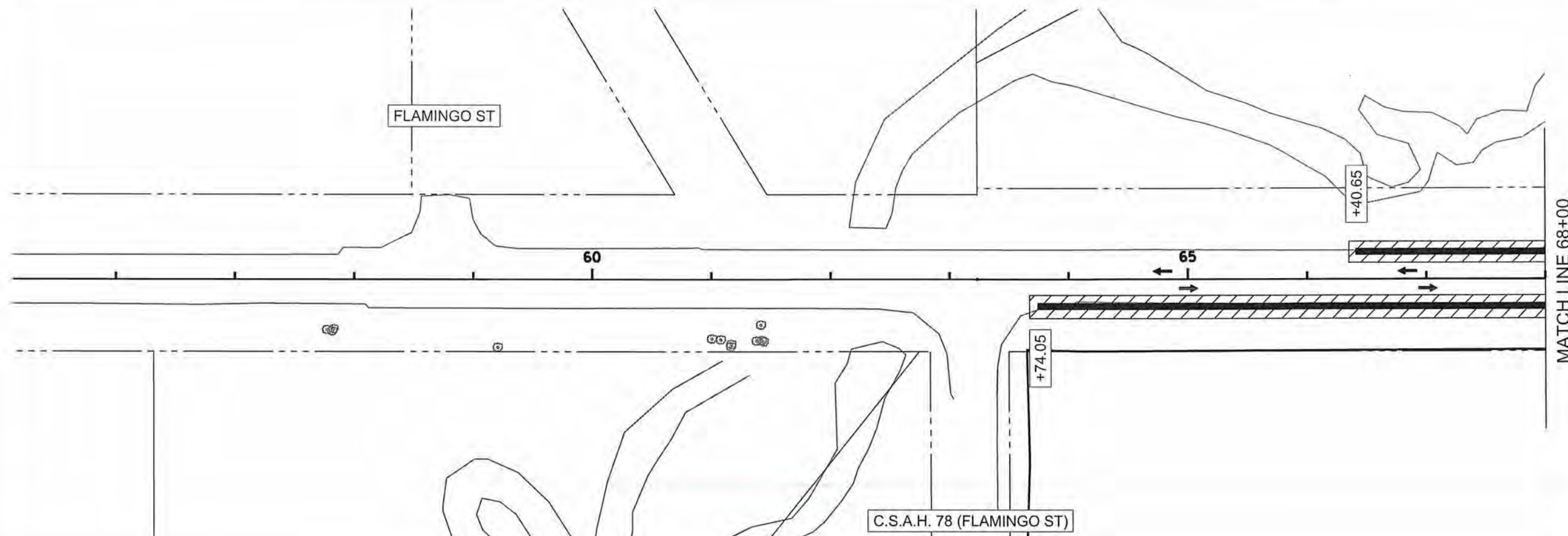
* SIGN TO BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL CLOSING DATE OF ROAD CLOSURE AND IMPLEMENTATION OF DETOUR SIGNING. SIGNS TO BE REMOVED AT TIME OF DETOUR INSTALLATION.



G20-X2_132x108; 12.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;
[ROAD] D; [CLOSED] D; [5TH ST] D; [TO] D; [FLAMINGO ST] D; [FOLLOW] D; [DETOUR] D;



G20-X2_132x108; 12.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;
[ROAD] D; [CLOSED] D; [FLAMINGO ST] D; [TO] D; [5TH ST] D; [FOLLOW] D; [DETOUR] D;



CONSTRUCTION NOTES:

STAGE 1

ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
CSAH 22 PAVEMENT RECLAMATION AROUND UNIVERSITY DURING THIS STAGE
RAILROAD CROSSING TO BE ADJUSTED BY BNSF DURING THIS STAGE

STAGING NOTES:

STAGE 1

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
ALL LOCAL TRAFFIC BETWEEN BNSF RR CROSSING AND UNIVERSITY AVE
TO BE ROUTED THROUGH CLOSURE AT CONTRACTORS DISCRETION.

1 OF 5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_1-P1X1.dgn					
03/02/2015 9:01:57 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME,
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THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: *N. Dobda*
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/08/15

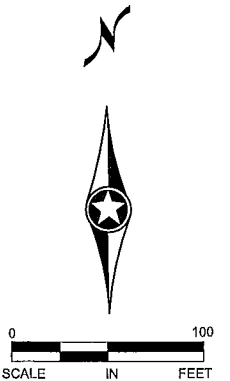
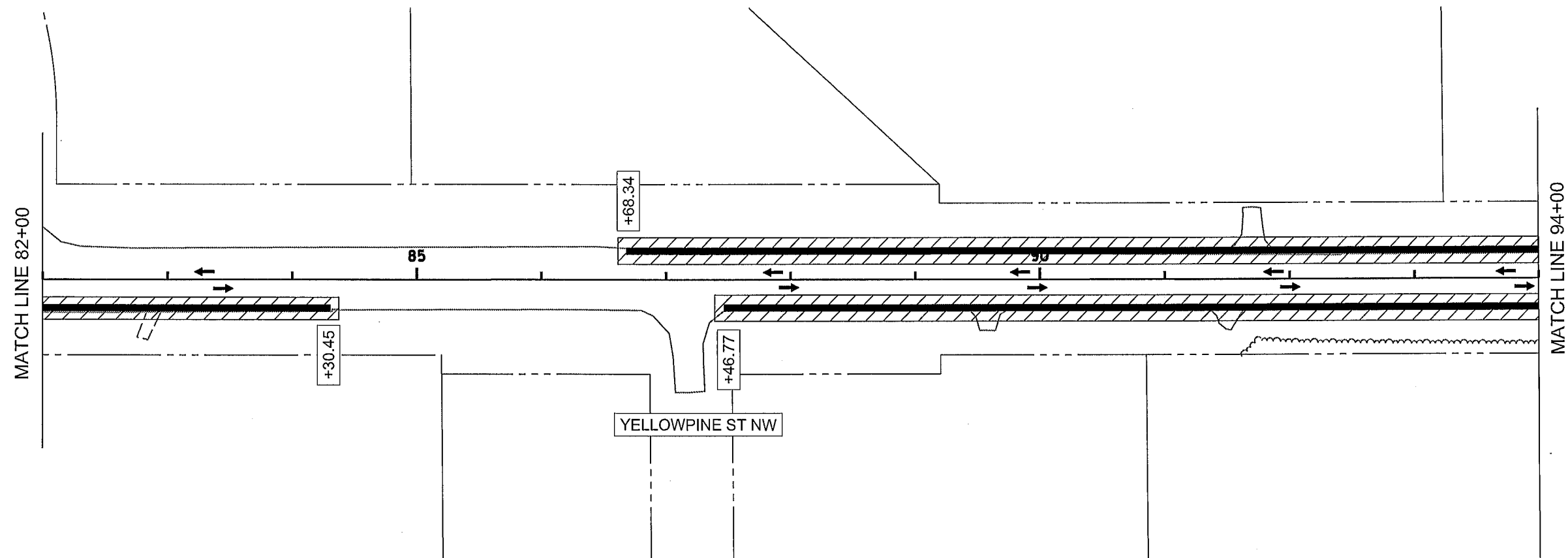


ANOKA COUNTY
HIGHWAY DEPT.

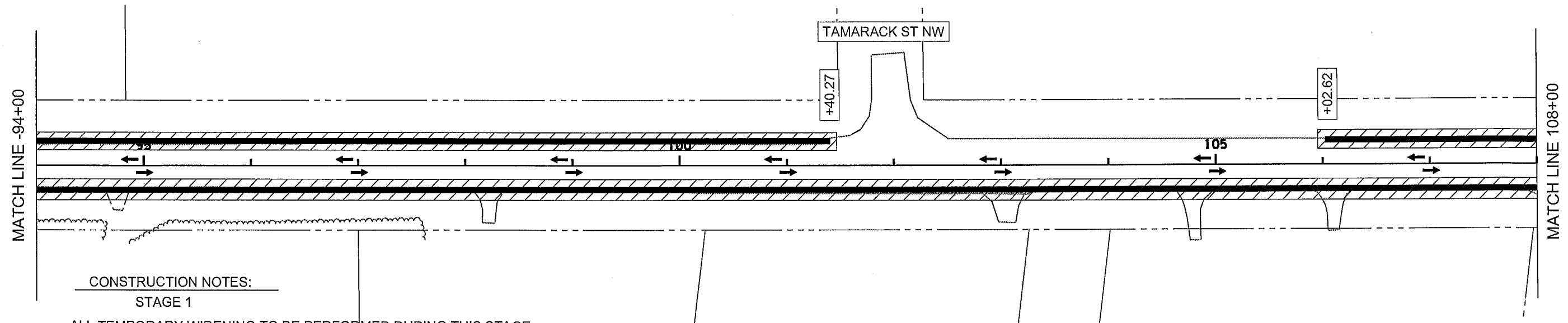
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 1

Sheet 59 of 210 Sheets



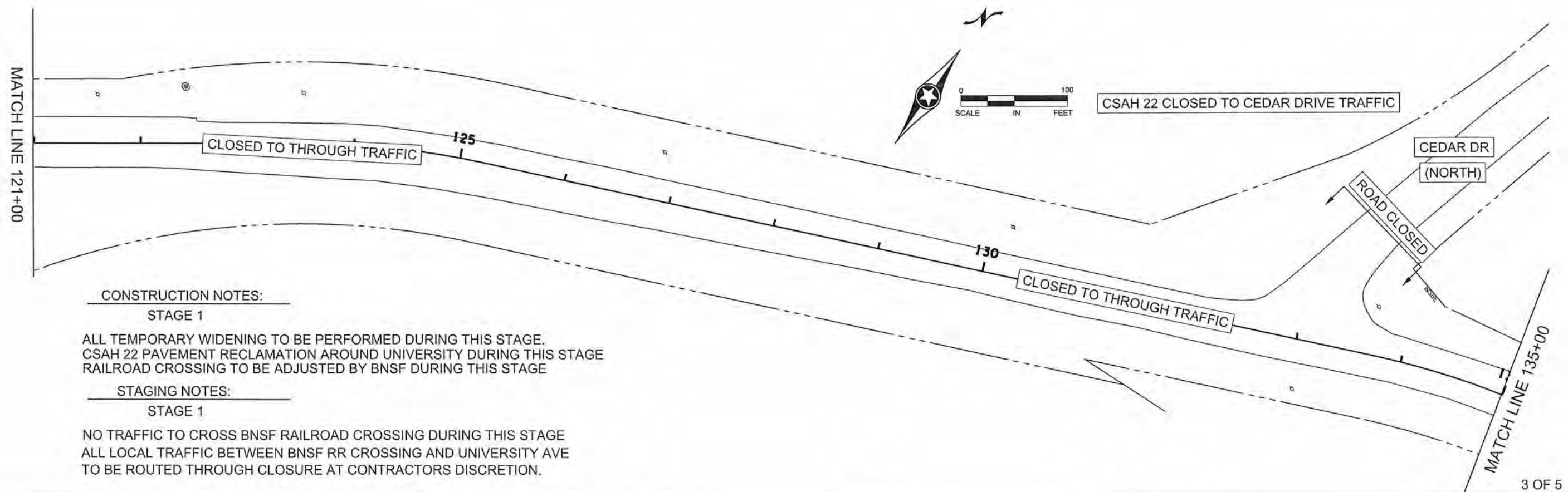
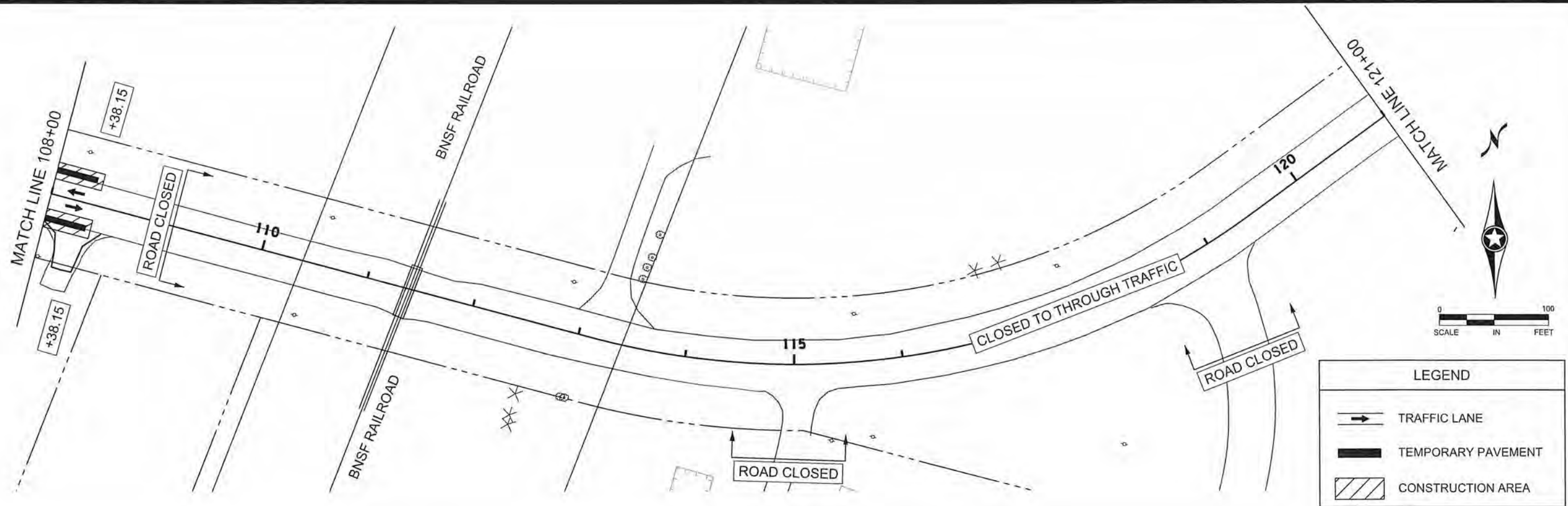
LEGEND	
	TRAFFIC LANE
	TEMPORARY PAVEMENT
	CONSTRUCTION AREA



CONSTRUCTION NOTES:
 STAGE 1
 ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
 CSAH 22 PAVEMENT RECLAMATION AROUND UNIVERSITY DURING THIS STAGE
 RAILROAD CROSSING TO BE ADJUSTED BY BNSF DURING THIS STAGE

STAGING NOTES:
 STAGE 1
 NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 ALL LOCAL TRAFFIC BETWEEN BNSF RR CROSSING AND UNIVERSITY AVE
 TO BE ROUTED THROUGH CLOSURE AT CONTRACTORS DISCRETION.

NO DATE BY CKD APPR REVISION NAME: P:\02-622-34\Plan\0262234_STG_1-P1X2.dgn 03/02/2015 9:02:00 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY: JCF DATE: 01/09/15 DESIGN BY: NJD DATE: 01/23/15 CHECKED BY: GMP DATE: 02/09/15		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		STAGING PLAN STAGE 1 Sheet 60 of 210 Sheets	
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NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_1-P1X4.dgn					
03/02/2015 9:02:02 AM					

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *[Signature]*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

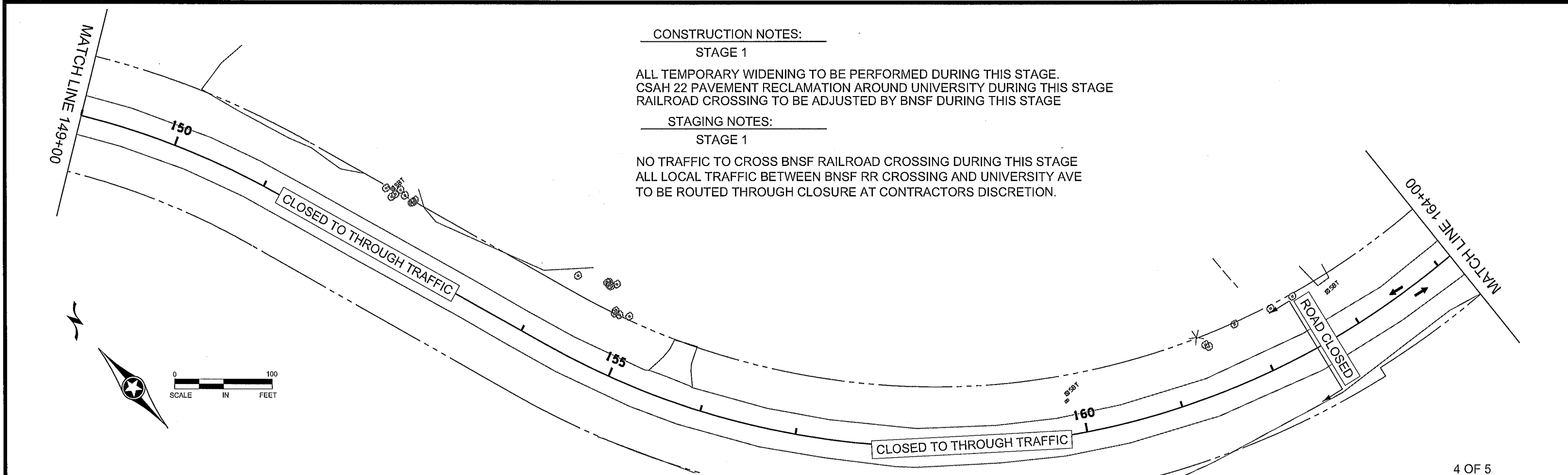
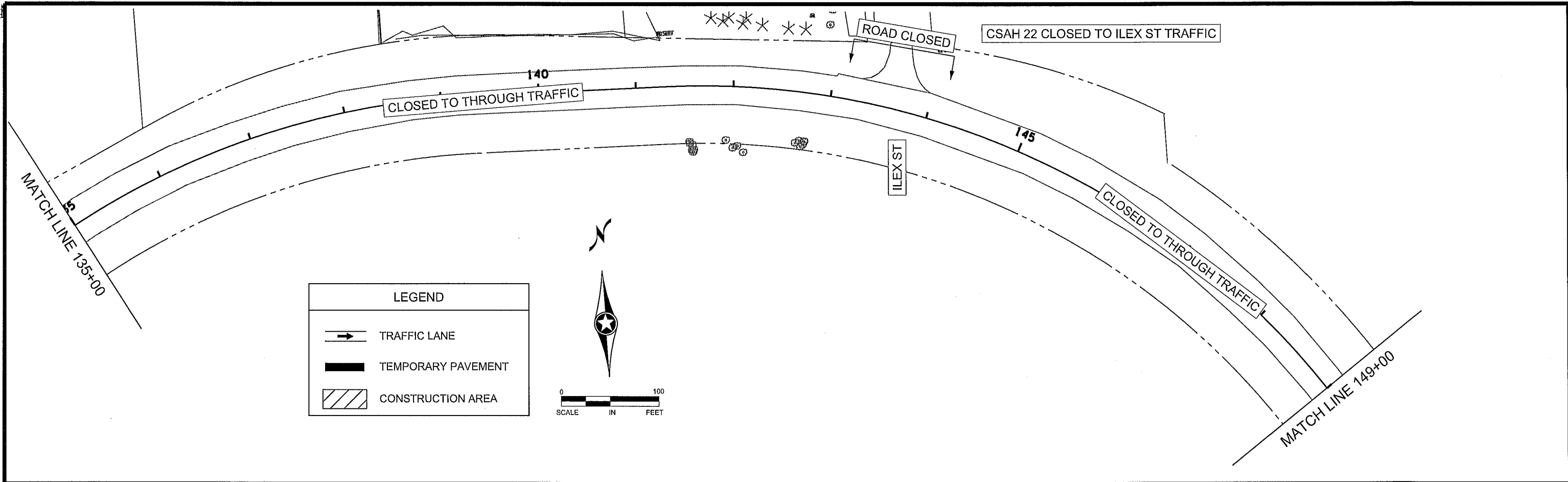


**ANOKA COUNTY
HIGHWAY DEPT.**

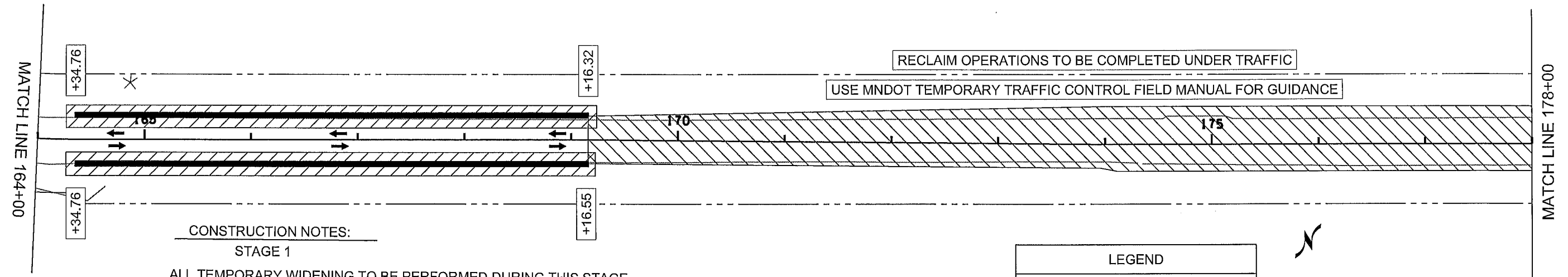
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 CITY PROJECT NO.
 COUNTY PROJECT NO.

**STAGING PLAN
STAGE 1**

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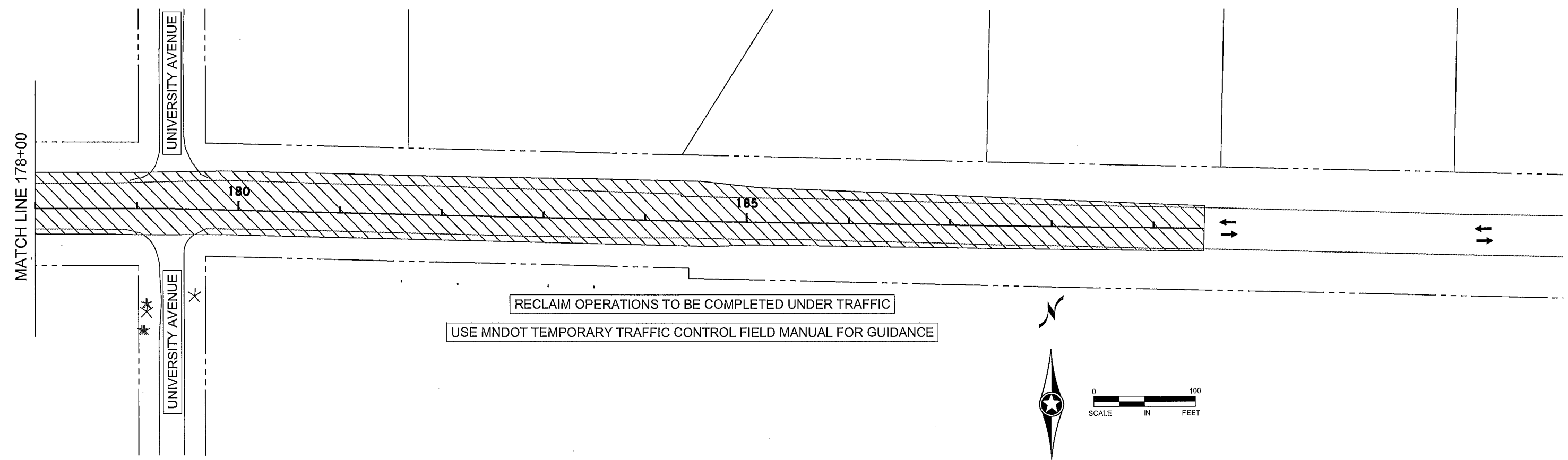
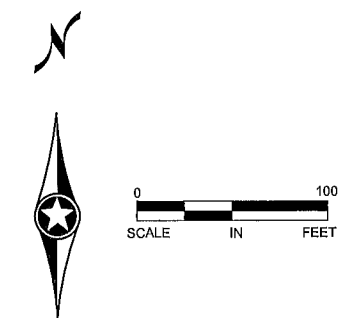
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NO	DATE	BY	CKD	APPR	REVISION																					



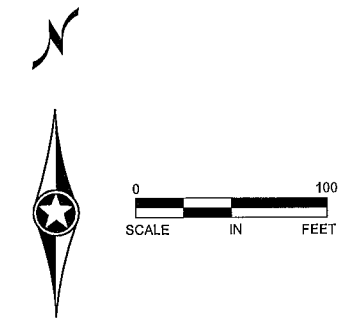
CONSTRUCTION NOTES:
 STAGE 1
 ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
 CSAH 22 PAVEMENT RECLAMATION AROUND UNIVERSITY DURING THIS STAGE
 RAILROAD CROSSING TO BE ADJUSTED BY BNSF DURING THIS STAGE

STAGING NOTES:
 STAGE 1
 NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 ALL LOCAL TRAFFIC BETWEEN BNSF RR CROSSING AND UNIVERSITY AVE
 TO BE ROUTED THROUGH CLOSURE AT CONTRACTORS DISCRETION.

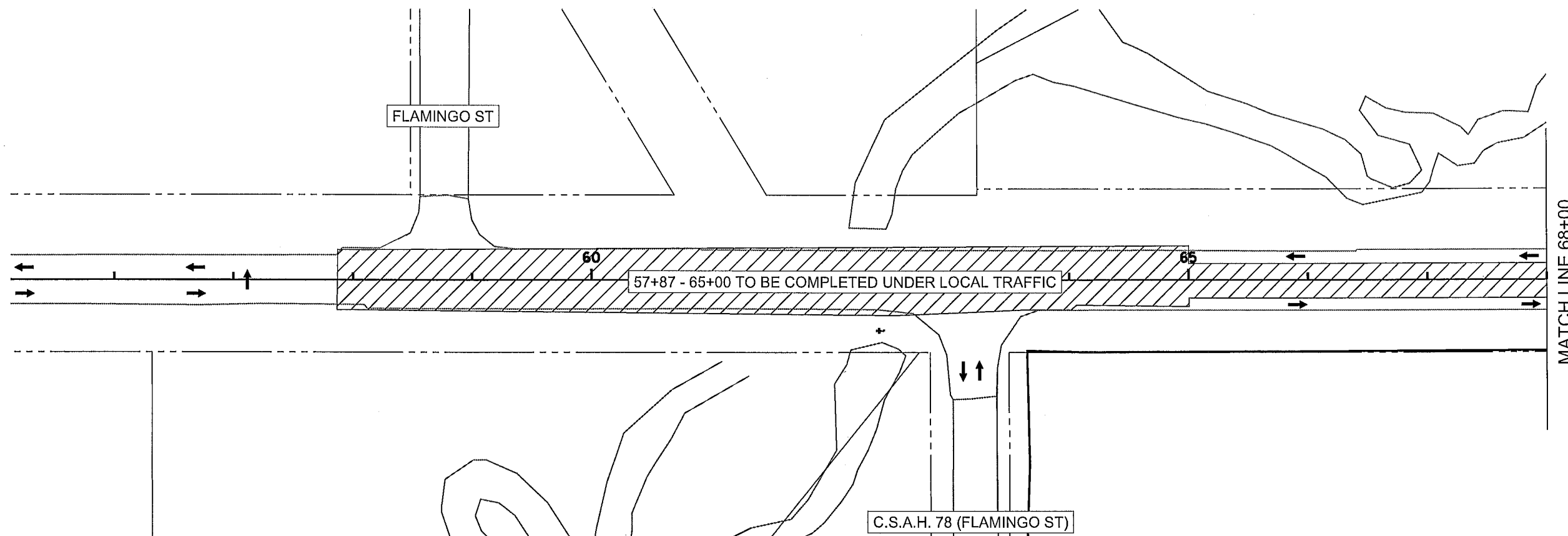
LEGEND	
	TRAFFIC LANE
	TEMPORARY PAVEMENT
	CONSTRUCTION AREA



RECLAIM OPERATIONS TO BE COMPLETED UNDER TRAFFIC
USE MNDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL FOR GUIDANCE



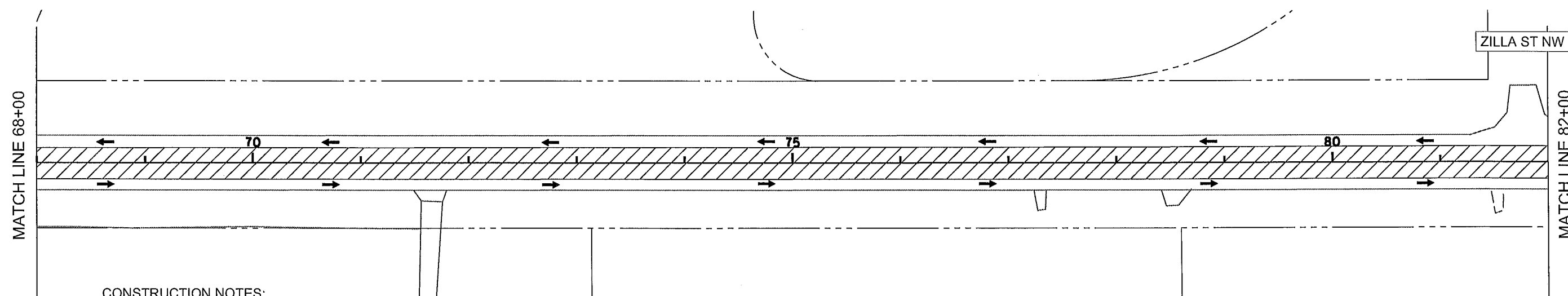
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LEGEND

→ TRAFFIC LANE

▨ CONSTRUCTION AREA



CONSTRUCTION NOTES:
STAGE 2

MAINLINE VARIABLE MILLING TO BE PERFORMED DURING THIS STAGE
CSAH 22 WIDENING EARTHWORK AROUND UNIVERSITY DURING THIS STAGE
RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR

STAGING NOTES:
STAGE 2

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
CSAH 22 CLOSED FROM BNSF RR CROSSING TO 161+80.
TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.

1 OF 5

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Plan\0262234 STG 2-P1X1.dgn 03/02/2015 9:02:10 AM

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *[Signature]*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

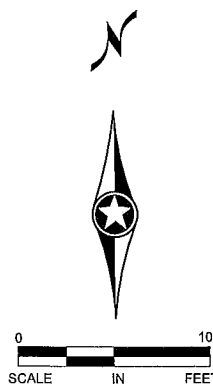
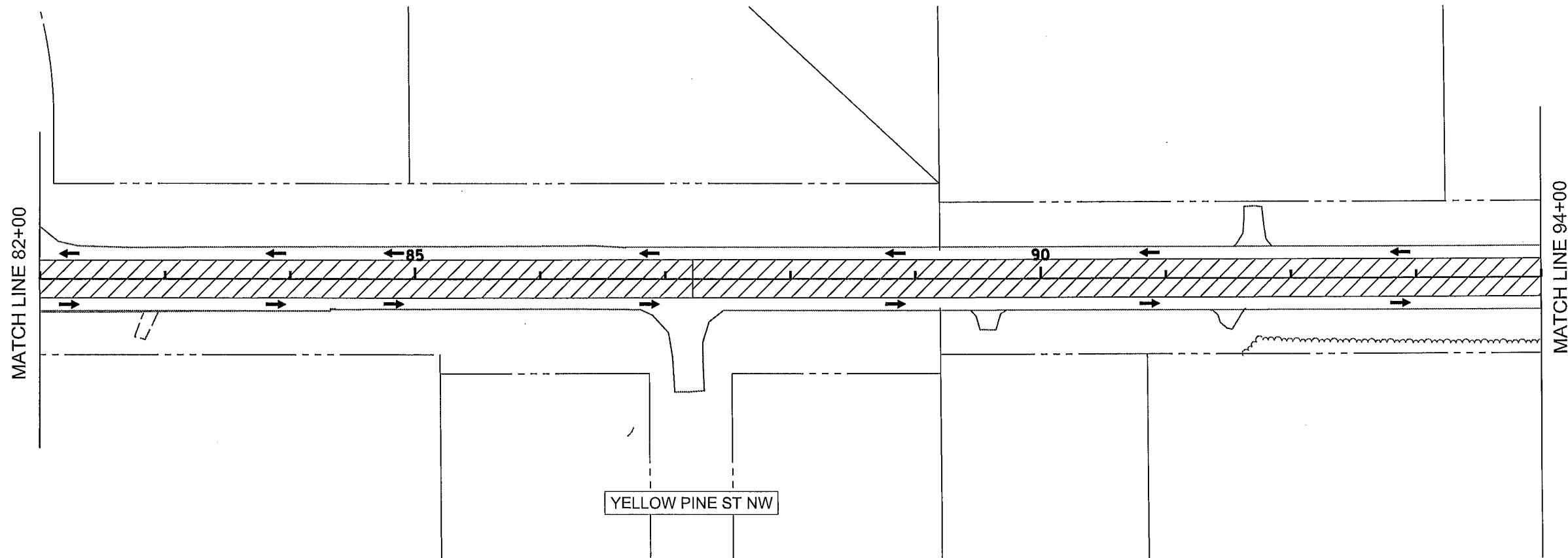


**ANOKA COUNTY
HIGHWAY DEPT.**

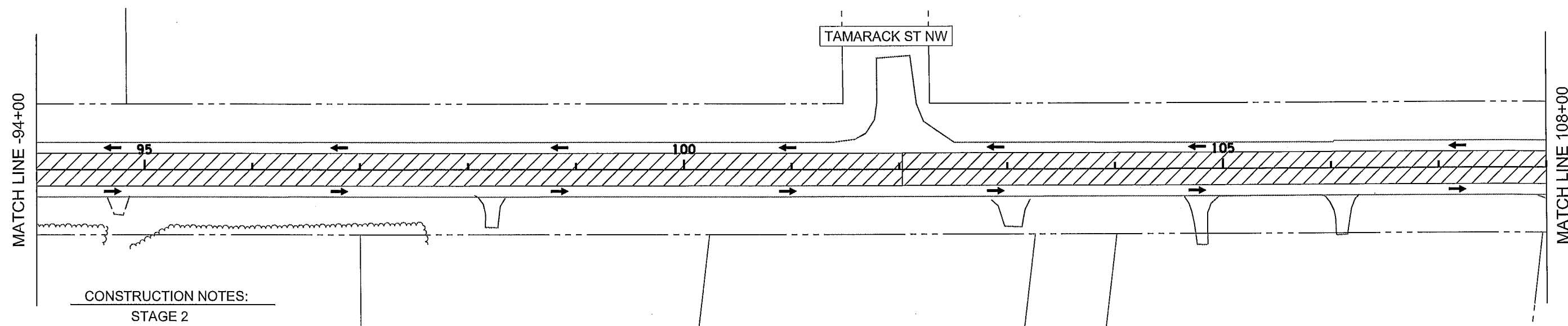
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

**STAGING PLAN
STAGE 2**

Sheet 64 of 210 Sheets



LEGEND	
	TRAFFIC LANE
	CONSTRUCTION AREA



CONSTRUCTION NOTES:

STAGE 2

MAINLINE VARIABLE MILLING TO BE PERFORMED DURING THIS STAGE
 CSAH 22 WIDENING EARTHWORK AROUND UNIVERSITY DURING THIS STAGE
 RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR

STAGING NOTES:

STAGE 2

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 CSAH 22 CLOSED FROM BNSF RR CROSSING TO 161+80.
 TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_2-P2X2.dgn					
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE:
 DATE: 3-2-15 LICENSE NO. 49046

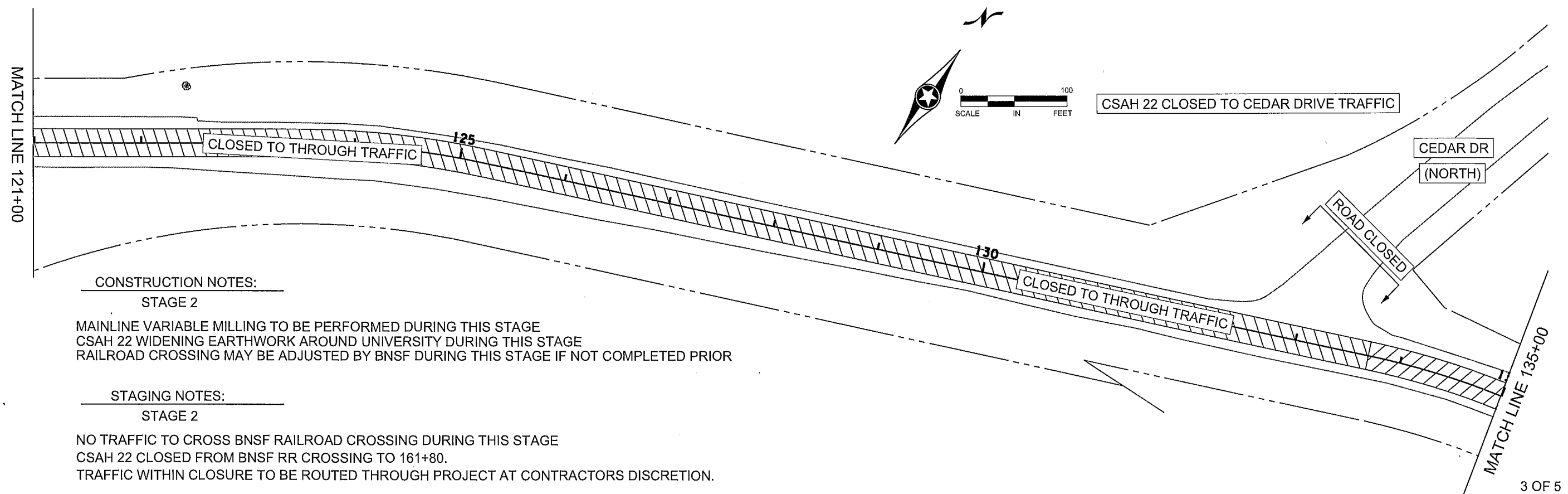
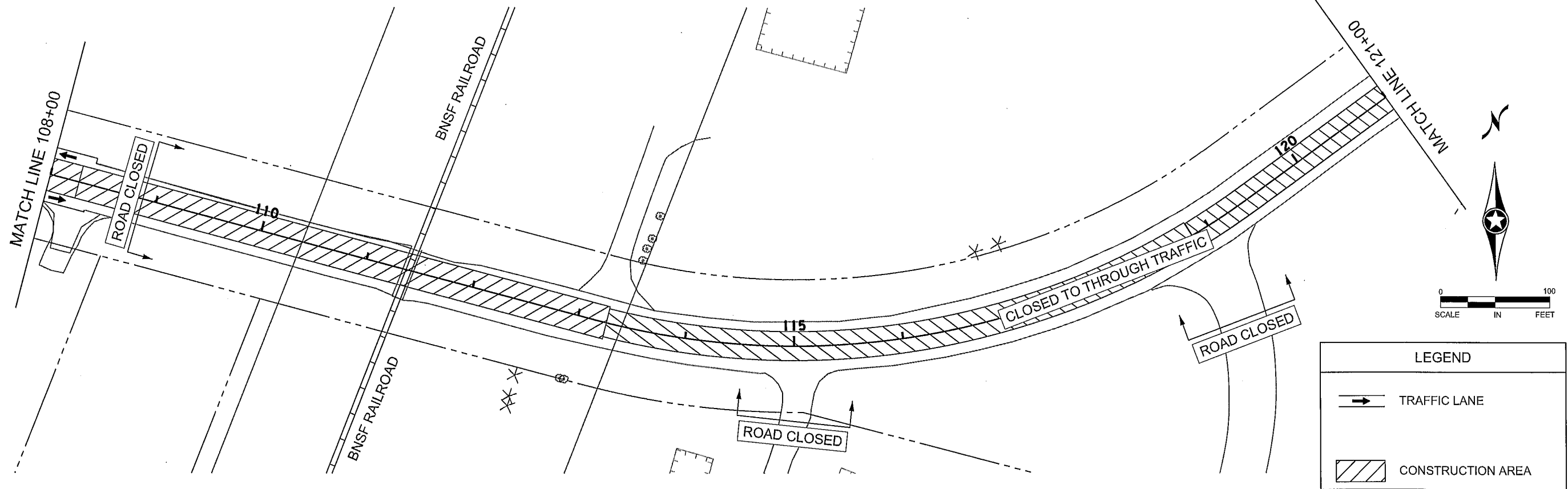
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 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/06/15



**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

**STAGING PLAN
 STAGE 2**



CONSTRUCTION NOTES:

STAGE 2

MAINLINE VARIABLE MILLING TO BE PERFORMED DURING THIS STAGE
 CSAH 22 WIDENING EARTHWORK AROUND UNIVERSITY DURING THIS STAGE
 RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR

STAGING NOTES:

STAGE 2

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 CSAH 22 CLOSED FROM BNSF RR CROSSING TO 161+80.
 TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.

3 OF 5

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Plan\0262234_STG_2-P4X4.dgn 03/02/2015 9:02:15 AM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: *Nicholas J. Dobda*
 DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/06/15

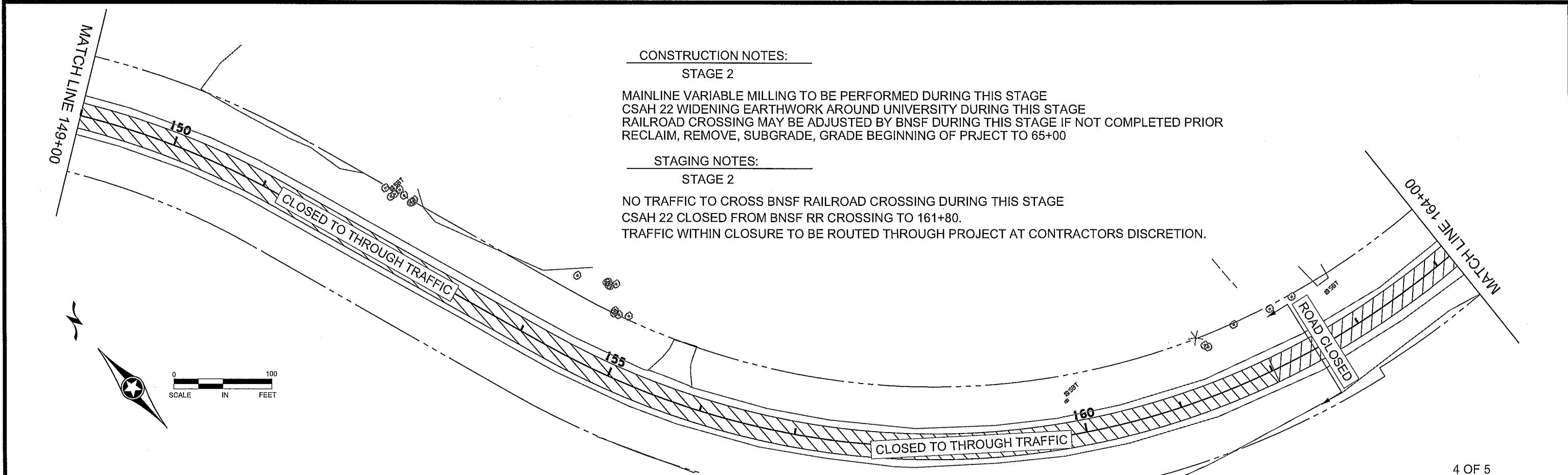
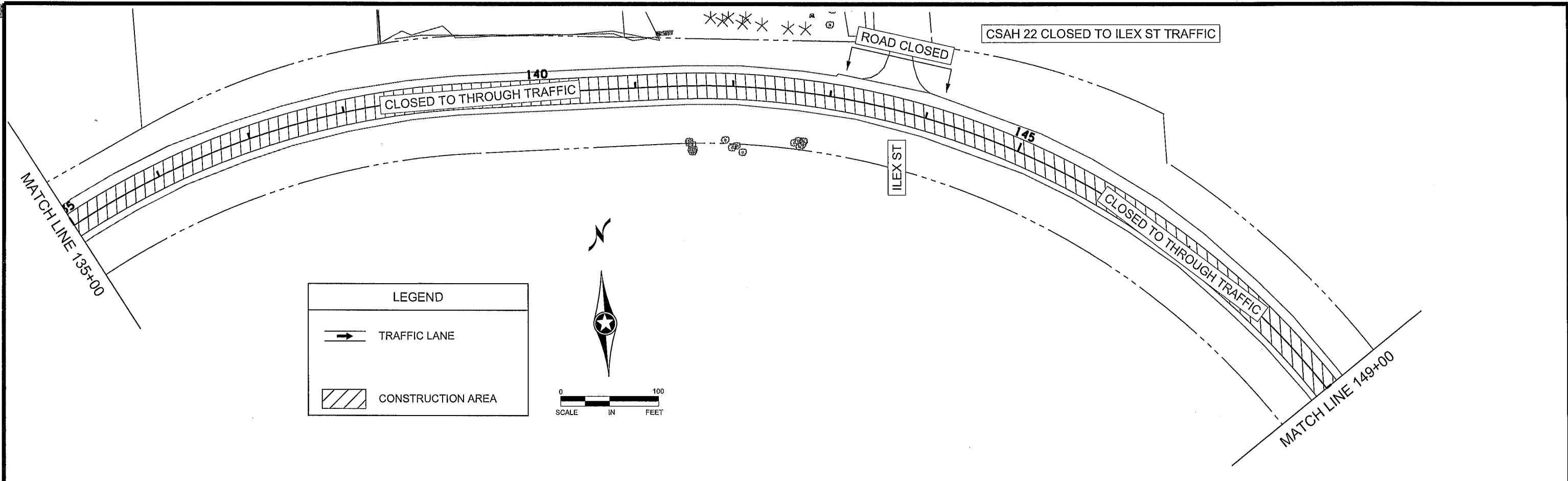


ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

STAGING PLAN
 STAGE 2

Sheet 66 of 210 Sheets



CONSTRUCTION NOTES:

STAGE 2

MAINLINE VARIABLE MILLING TO BE PERFORMED DURING THIS STAGE
 CSAH 22 WIDENING EARTHWORK AROUND UNIVERSITY DURING THIS STAGE
 RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR
 RECLAIM, REMOVE, SUBGRADE, GRADE BEGINNING OF PROJECT TO 65+00

STAGING NOTES:

STAGE 2

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 CSAH 22 CLOSED FROM BNSF RR CROSSING TO 161+80.
 TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
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 THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: *[Signature]*
 DATE: 3-2-15 LICENSE NO. 49046

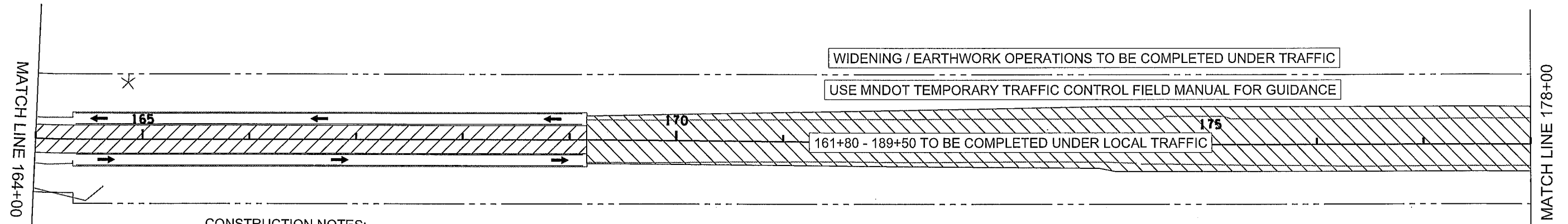
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 DESIGN BY NJD DATE 01/23/15
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**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

**STAGING PLAN
 STAGE 2**



CONSTRUCTION NOTES:
STAGE 2

MAINLINE VARIABLE MILLING TO BE PERFORMED DURING THIS STAGE
CSAH 22 WIDENING EARTHWORK AROUND UNIVERSITY DURING THIS STAGE
RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR
RECLAIM, REMOVE, SUBGRADE, GRADE BEGINNING OF PRJECT TO 65+00

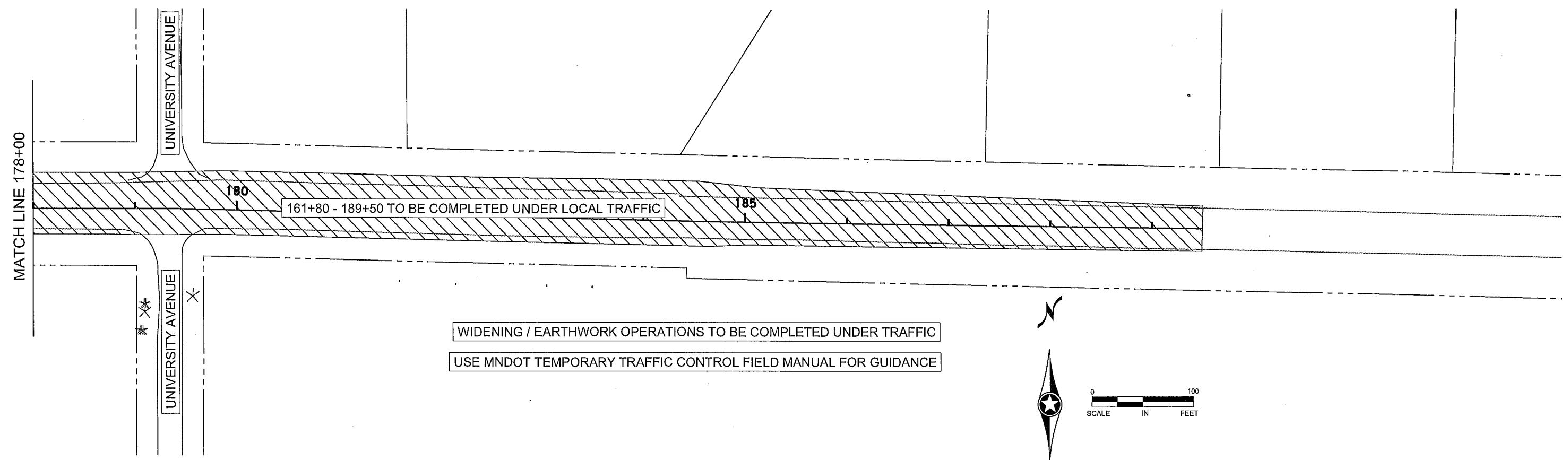
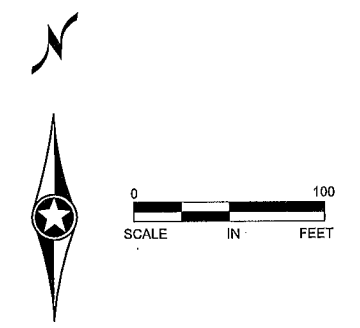
STAGING NOTES:
STAGE 2

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
CSAH 22 CLOSED FROM BNSF RR CROSSING TO 161+80.
TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.

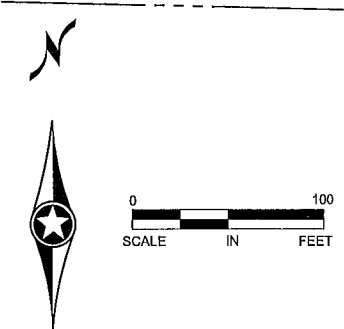
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→ TRAFFIC LANE

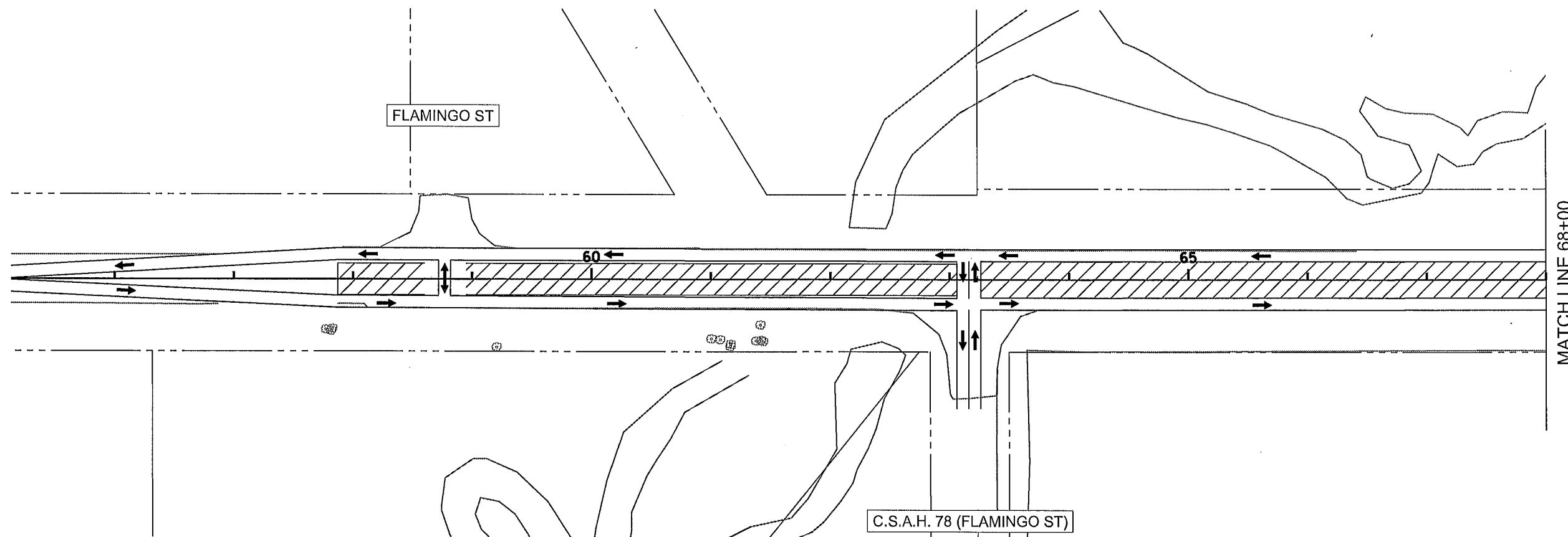
▨ CONSTRUCTION AREA



WIDENING / EARTHWORK OPERATIONS TO BE COMPLETED UNDER TRAFFIC
USE MNDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL FOR GUIDANCE



NO DATE BY CKD APPR REVISION NAME: P:\02-622-34\Plan\0262234_STG_2-P6X6.dgn 03/02/2015 9:02:19 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY: JCF DATE: 01/09/15 DESIGN BY: NJD DATE: 01/23/15 CHECKED BY: GMP DATE: 02/08/15		 ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		STAGING PLAN STAGE 2 Sheet 68 of 210 Sheets	
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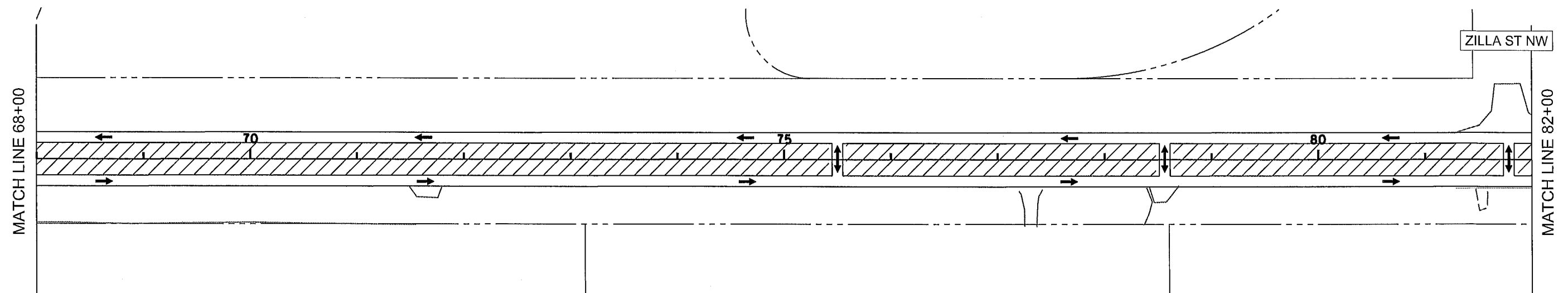


MATCH LINE 68+00

LEGEND

→ TRAFFIC LANE

▨ CONSTRUCTION AREA



CONSTRUCTION NOTES:

STAGE 3

26' MAINLINE CONCRETE PAVING TO BE COMPLETED DURING THIS STAGE
RAILROAD CROSSING MUST BE COMPLETED BY BNSF PRIOR TO THIS STAGE

STAGING NOTES:

STAGE 3

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT AS INDICATED IN THESE STAGING PLANS.
CONSTRUCTION TRAFFIC MUST CROSS BNSF RAILROAD CROSSING DURING THIS STAGE.

1 OF 5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_3-P1X1.dgn					
03/02/2015 9:02:24 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: *Nicholas J. Dobda*
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/09/15

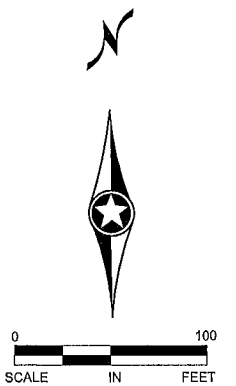
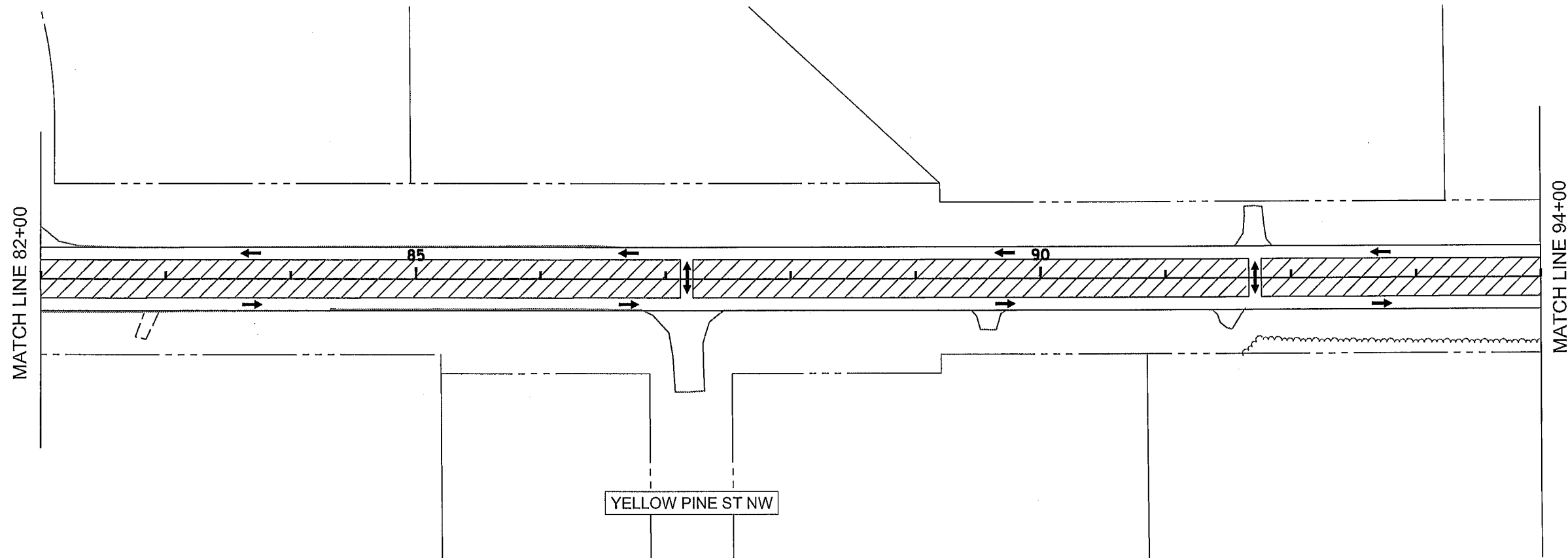


ANOKA COUNTY
HIGHWAY DEPT.

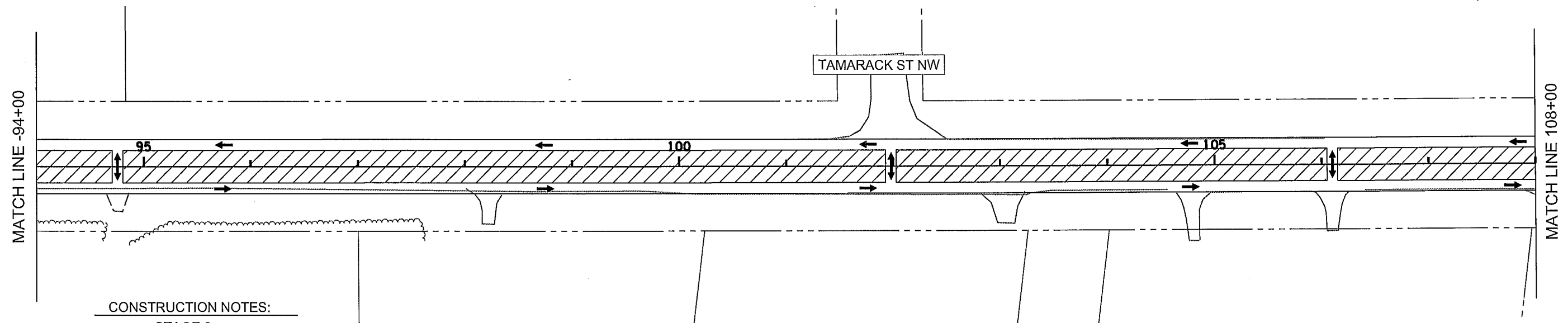
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 3

Sheet 69 of 210 Sheets



LEGEND	
	TRAFFIC LANE
	CONSTRUCTION AREA



CONSTRUCTION NOTES:
STAGE 3

26' MAINLINE CONCRETE PAVING TO BE COMPLETED DURING THIS STAGE
RAILROAD CROSSING MUST BE COMPLETED BY BNSF PRIOR TO THIS STAGE

STAGING NOTES:
STAGE 3

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT AS INDICATED IN THESE STAGING PLANS.
CONSTRUCTION TRAFFIC MUST CROSS BNSF RAILROAD CROSSING DURING THIS STAGE.

2 OF 5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_3-P2X2.dgn 03/02/2015 9:02:26 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE:
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15

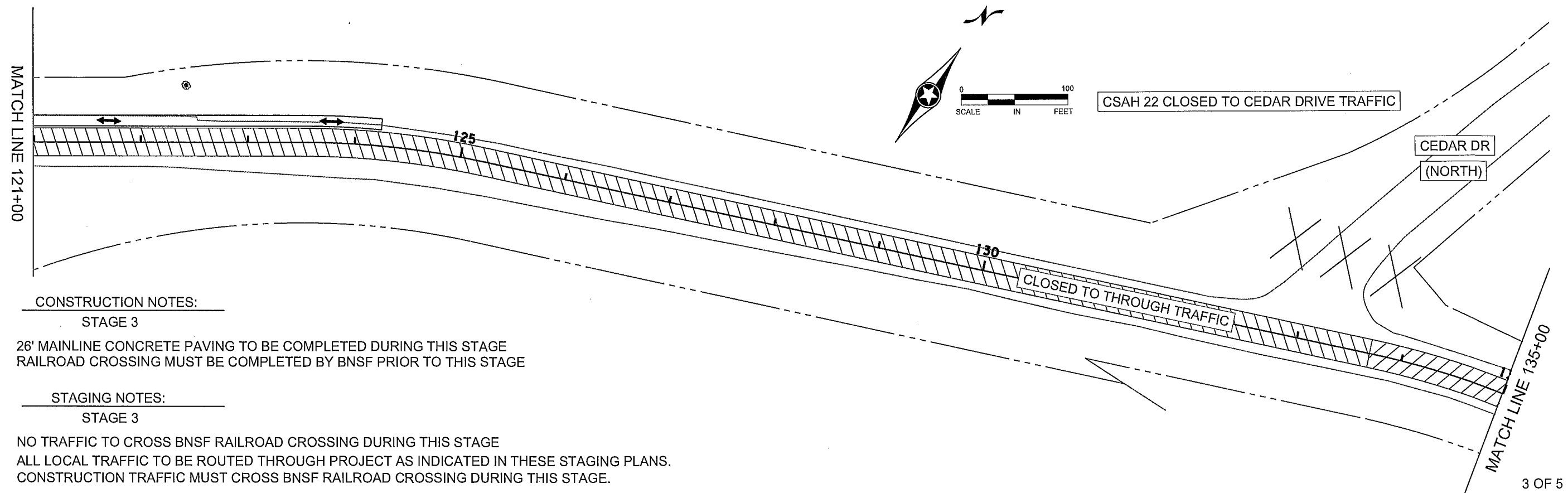
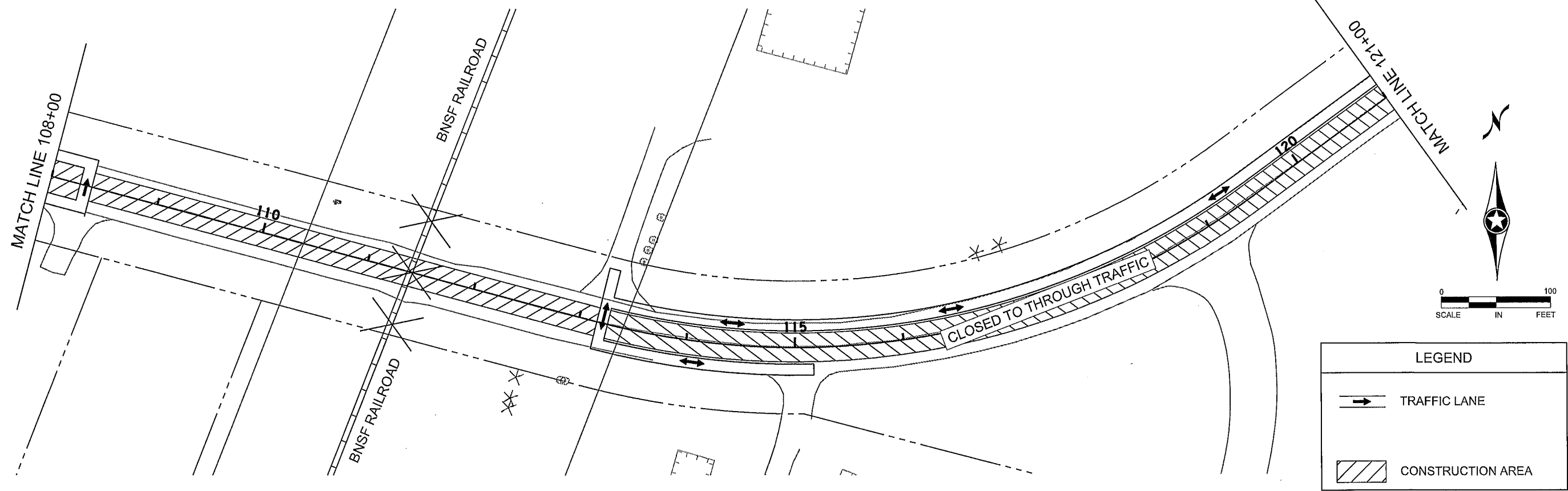


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 3

Sheet 70 of 210 Sheets



NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *Nicholas J. Dobda*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15



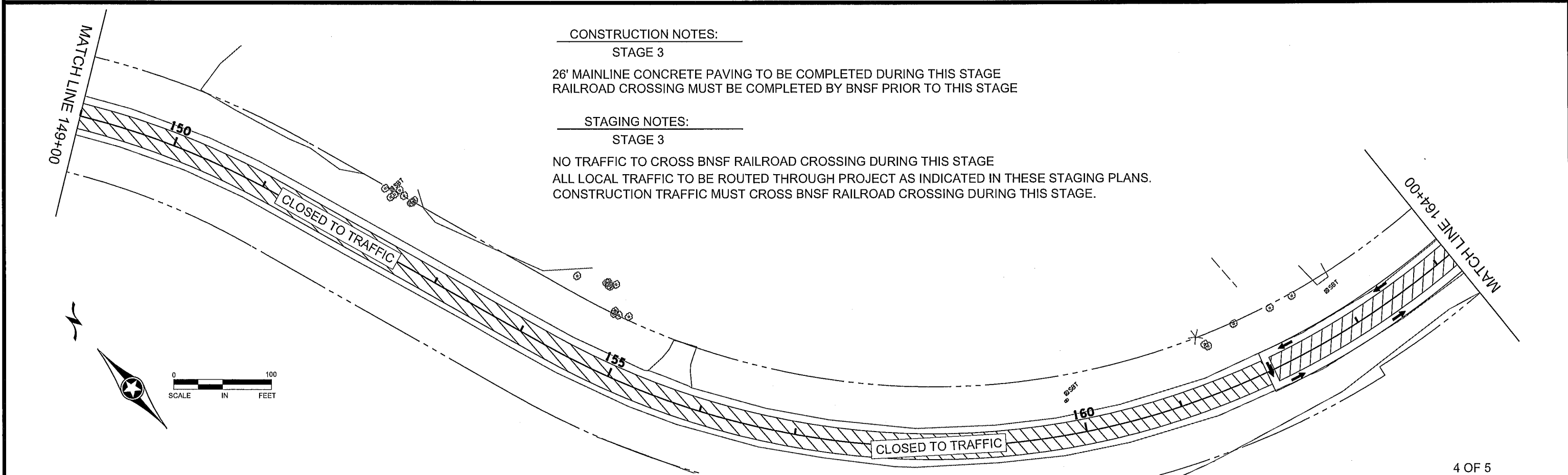
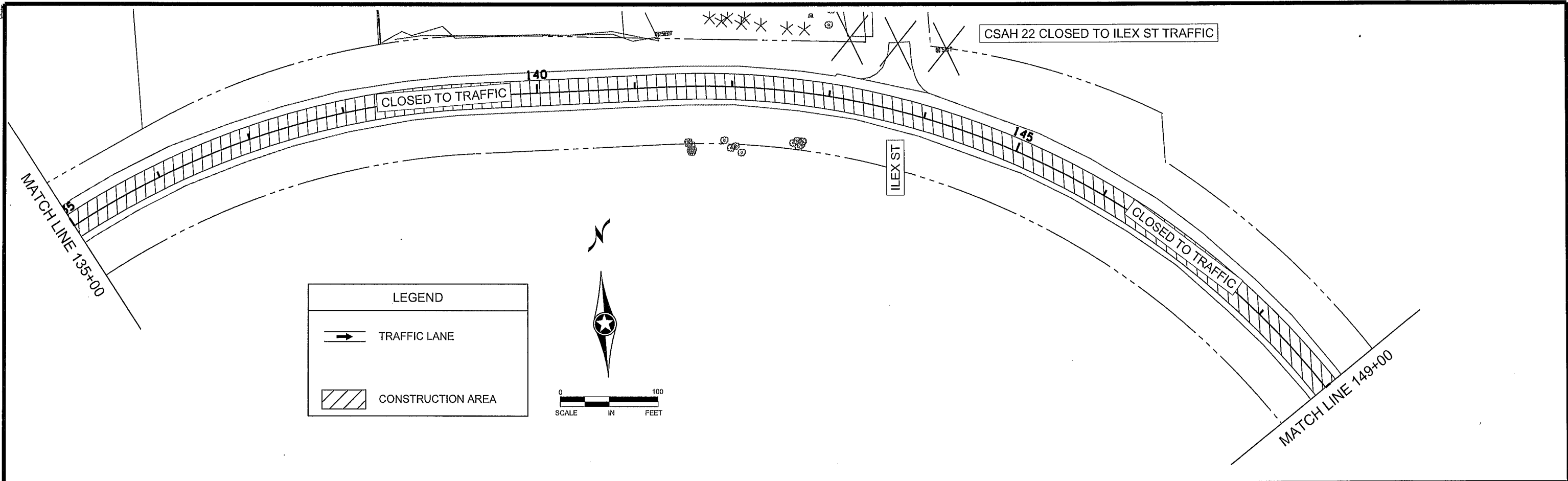
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 3

Sheet 71 of 210 Sheets

3 OF 5

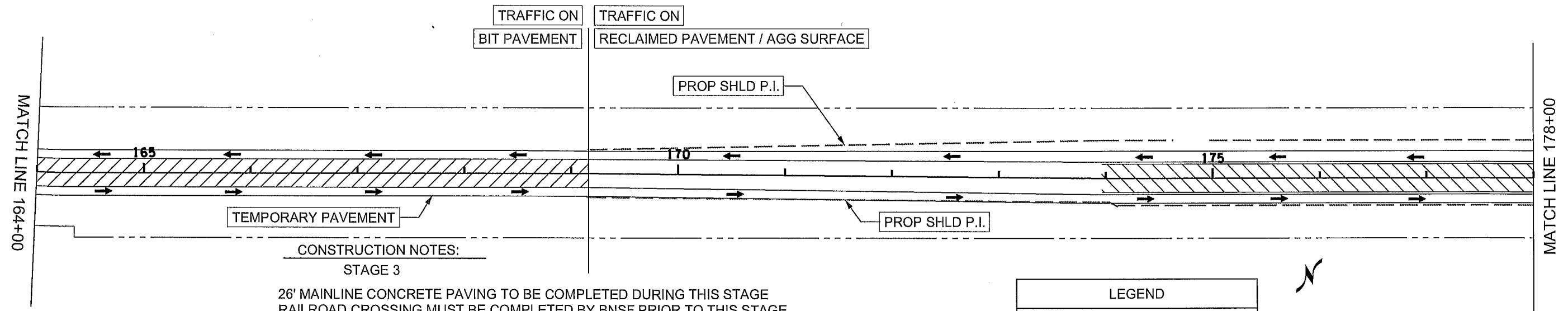


CONSTRUCTION NOTES:
STAGE 3

26' MAINLINE CONCRETE PAVING TO BE COMPLETED DURING THIS STAGE
RAILROAD CROSSING MUST BE COMPLETED BY BNSF PRIOR TO THIS STAGE

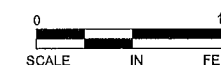
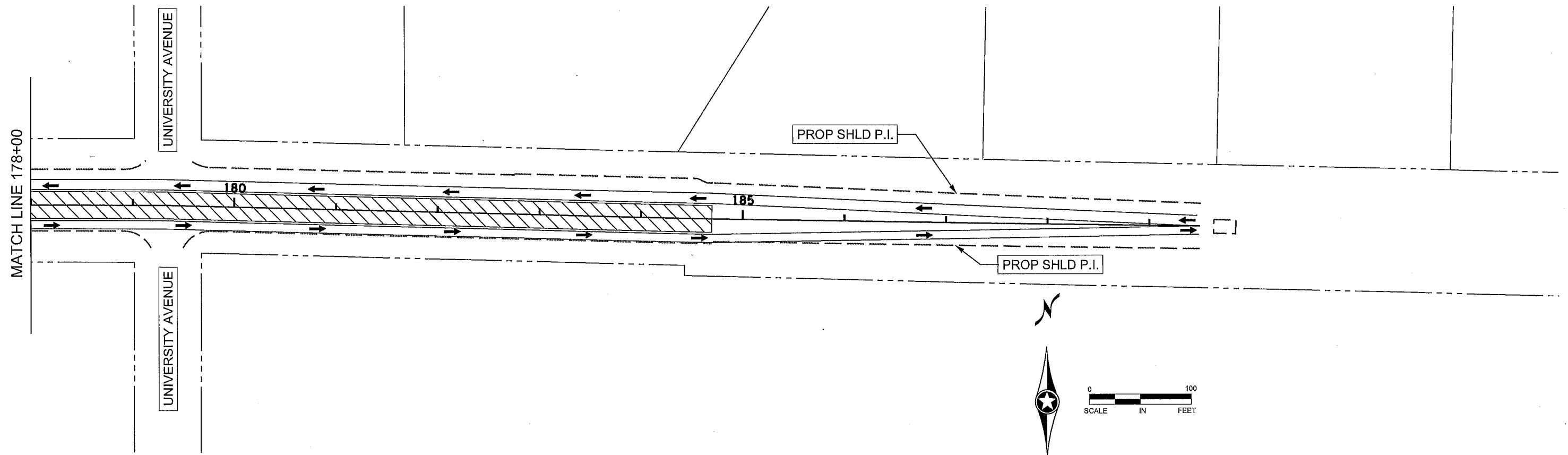
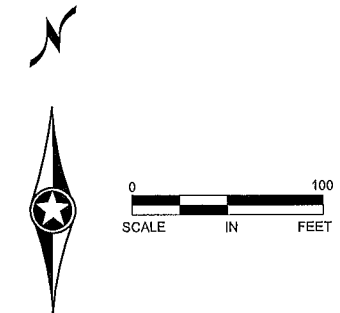
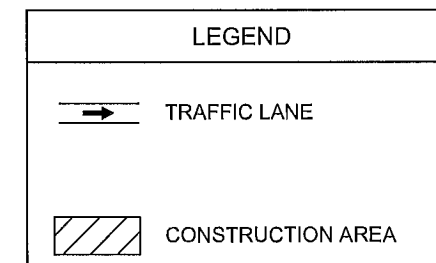
STAGING NOTES:
STAGE 3

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT AS INDICATED IN THESE STAGING PLANS.
CONSTRUCTION TRAFFIC MUST CROSS BNSF RAILROAD CROSSING DURING THIS STAGE.



CONSTRUCTION NOTES:
STAGE 3
26' MAINLINE CONCRETE PAVING TO BE COMPLETED DURING THIS STAGE
RAILROAD CROSSING MUST BE COMPLETED BY BNSF PRIOR TO THIS STAGE

STAGING NOTES:
STAGE 3
NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT AS INDICATED IN THESE STAGING PLANS.
CONSTRUCTION TRAFFIC MUST CROSS BNSF RAILROAD CROSSING DURING THIS STAGE.



5 OF 5

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Plan\0262234_STG_3-P6X6.dgn 03/02/2015 9:02:32 AM

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: *Nicholas J. Dobda*
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15

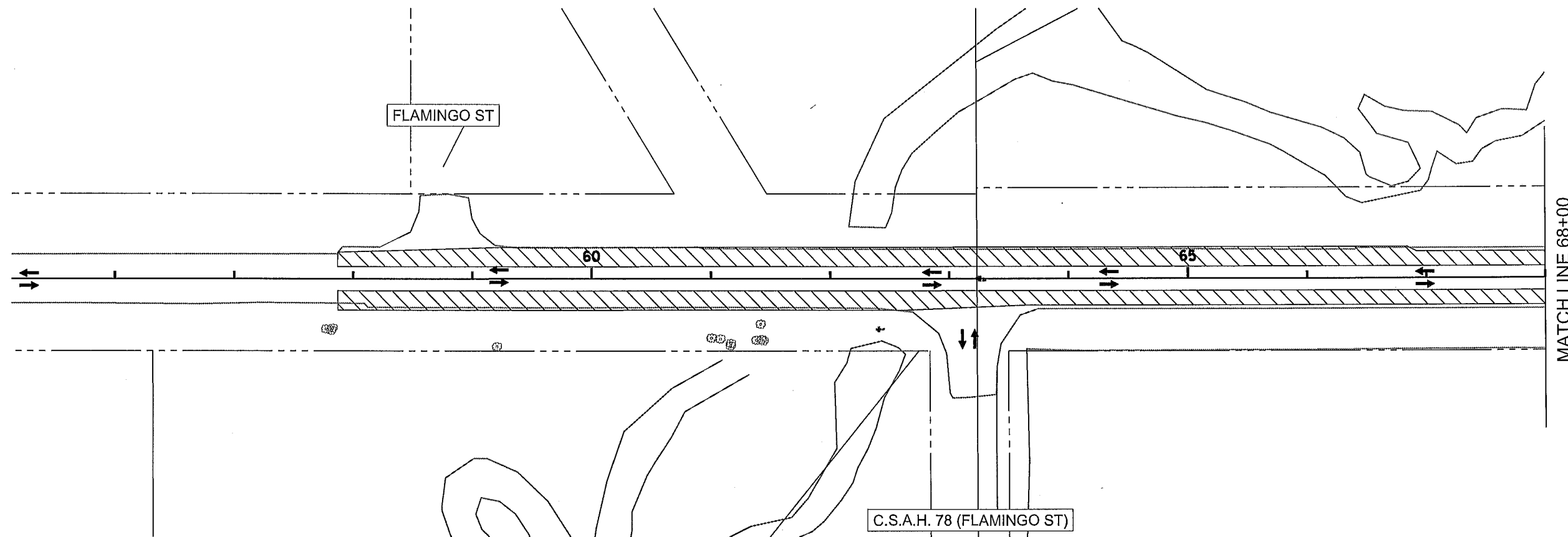


ANOKA COUNTY
HIGHWAY DEPT.

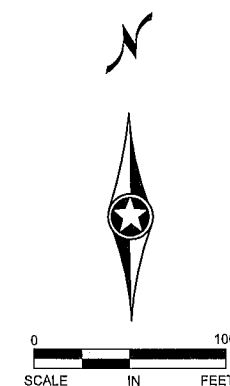
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STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 3

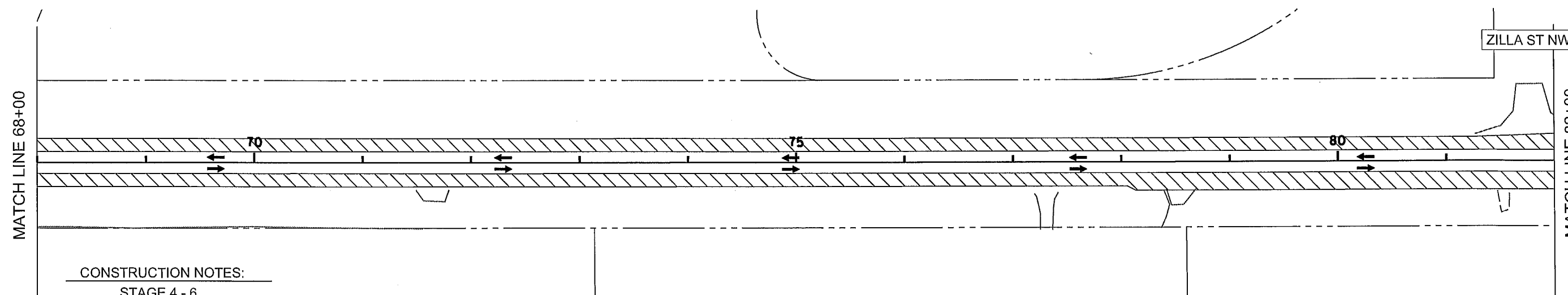
Sheet 73 of 210 Sheets



MATCH LINE 68+00



LEGEND	
	TRAFFIC LANE
	CONSTRUCTION AREA



MATCH LINE 68+00

MATCH LINE 82+00

CONSTRUCTION NOTES:

STAGE 4 - 6

STAGE 4 & 5 - SHOULDER PREP / WIDENING
STAGE 6 - BITUMINOUS SHOULDER / TURN LANE PAVING
SEE SHEETS 79 - 81 FOR UNIVERSITY AVENUE STAGES 4 - 6

STAGING NOTES:

STAGE 4 - 6

NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT ON NEWLY POURED CONCRETE
AS SOON AS CONCRETE HAS BEEN DEEMED CURED AND READY TO HANDLE TRAFFIC.
IN THE VICINITY OF UNIVERSITY AVENUE, LOCAL TRAFFIC TO USE AVAILABLE CONCRETE /
AGGREGATE SURFACE NOT BEING CONSTRUCTED / PAVED.

1 OF 5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_4-P1X1.dgn 03/02/2015 9:02:37 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE:
DATE: 3-2-15 LICENSE NO. 49046

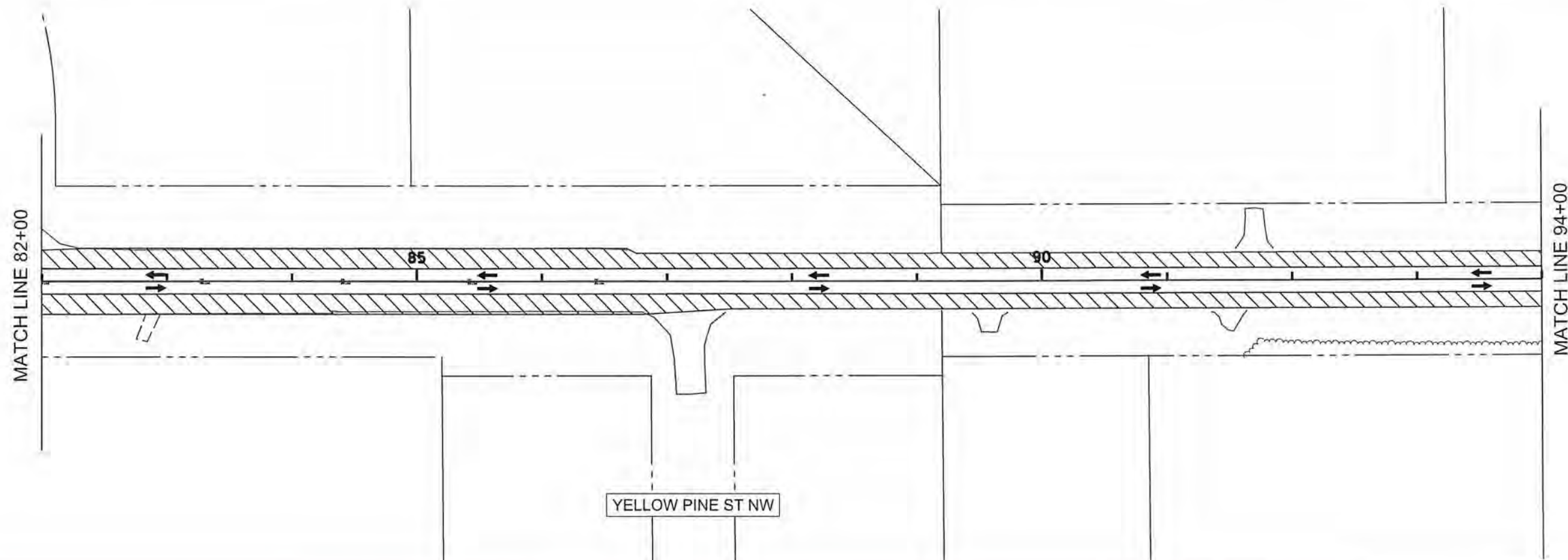
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DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



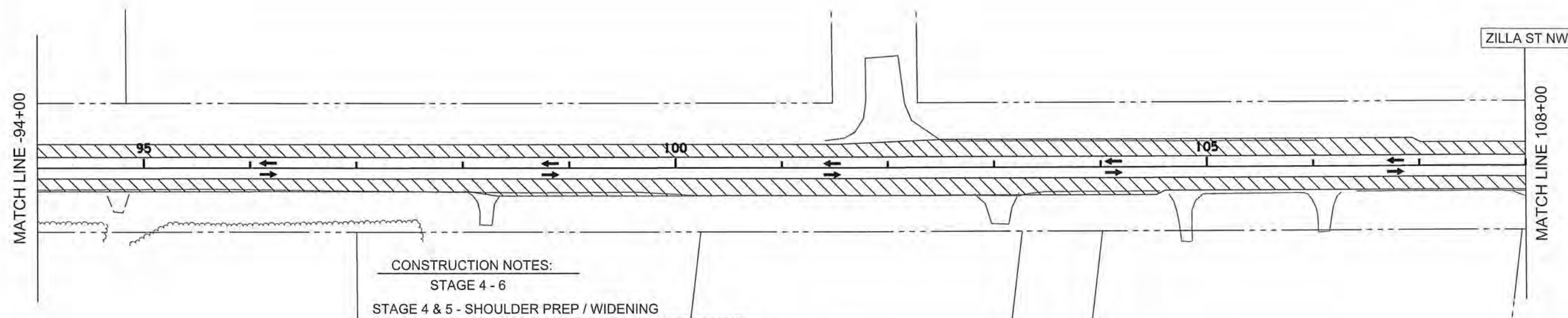
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 4 - 5 - 6
Sheet 74 of 210 Sheets



LEGEND	
	TRAFFIC LANE
	CONSTRUCTION AREA



CONSTRUCTION NOTES:
 STAGE 4 - 6
 STAGE 4 & 5 - SHOULDER PREP / WIDENING
 STAGE 6 - BITUMINOUS SHOULDER / TURN LANE PAVING
 SEE SHEETS 79 - 81 FOR UNIVERSITY AVENUE STAGES 4 - 6

STAGING NOTES:
 STAGE 4 - 6
 NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT ON NEWLY POURED CONCRETE
 AS SOON AS CONCRETE HAS BEEN DEEMED CURED AND READY TO HANDLE TRAFFIC.
 IN THE VICINITY OF UNIVERSITY AVENUE, LOCAL TRAFFIC TO USE AVAILBLE CONCRETE /
 AGGREGATE SURFACE NOT BEING CONSTRUCTED / PAVED.

2 OF 5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_4-P2X2.dgn 03/02/2015 9:02:39 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE:
 DATE: 3-2-15 LICENSE NO. 49046

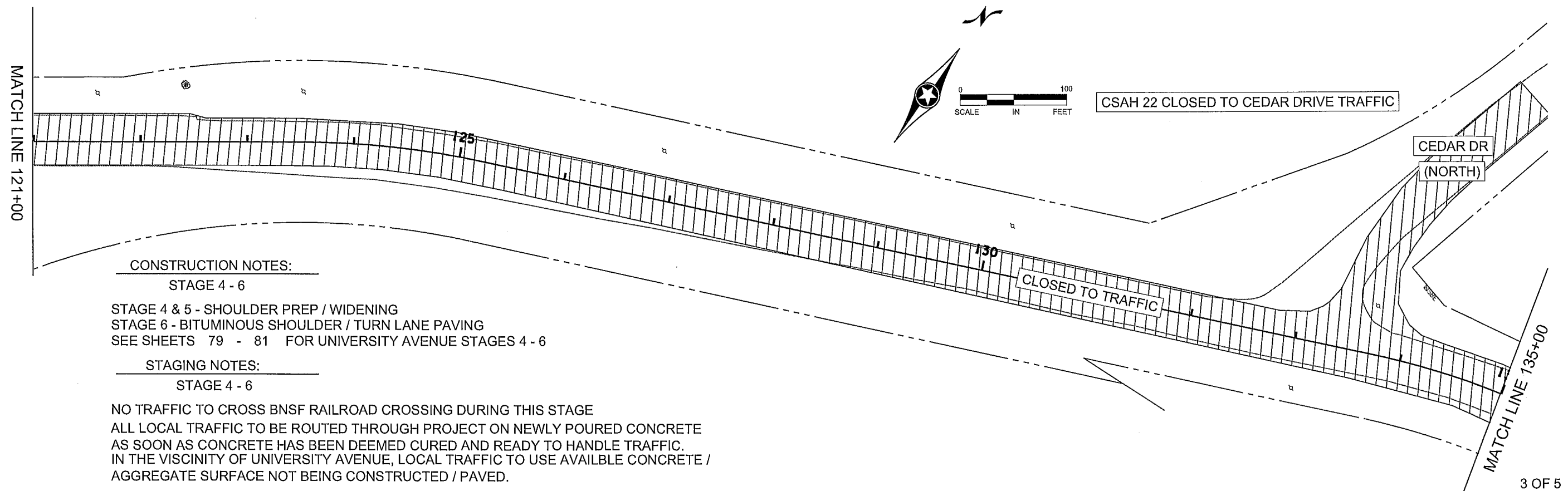
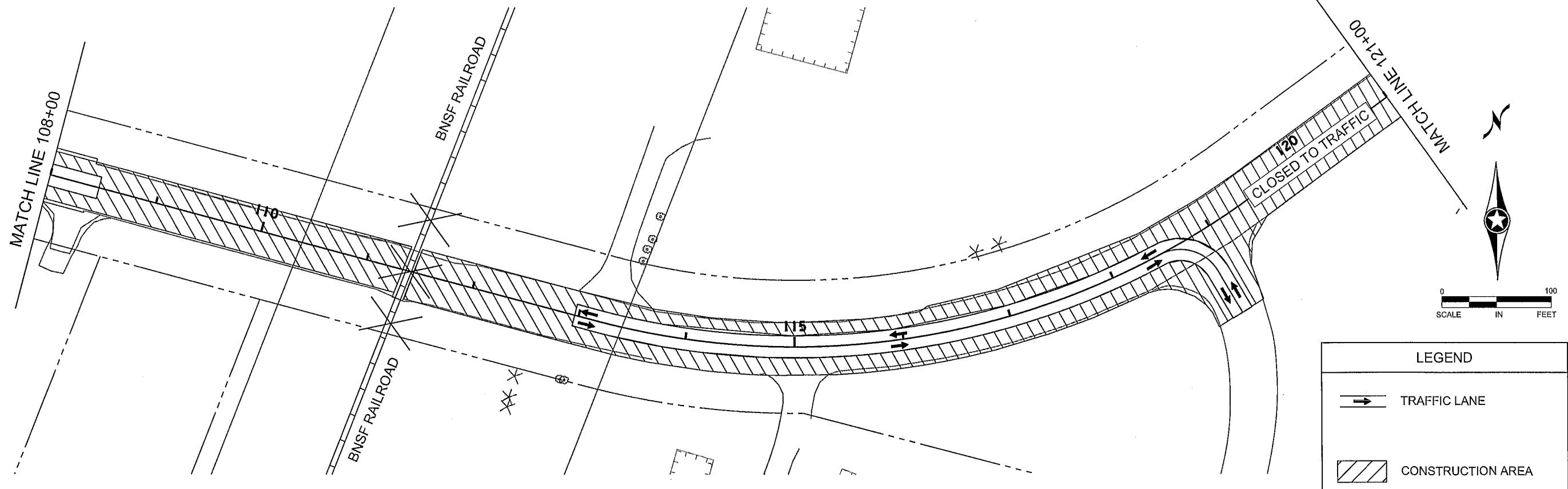
DRAWN BY JCF DATE 01/09/15
 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/08/15



**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

STAGING PLAN
 STAGE 4 - 5 - 6
 Sheet 75 of 210 Sheets



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_4-P4X3.dgn					
03/02/2015 9:02:42 AM					

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *[Signature]*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

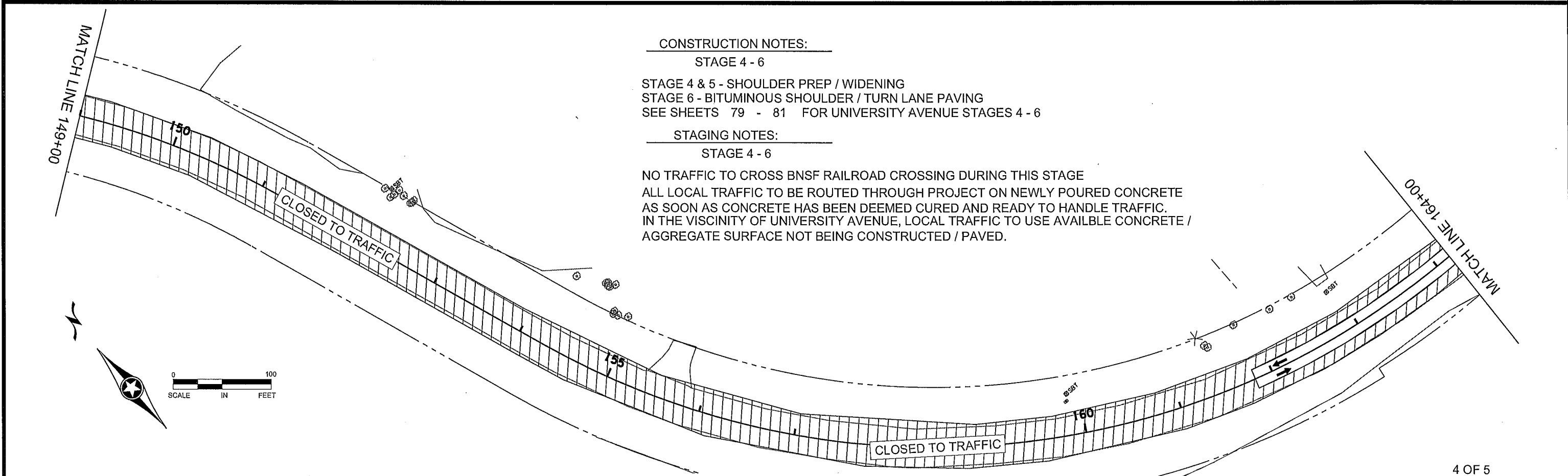
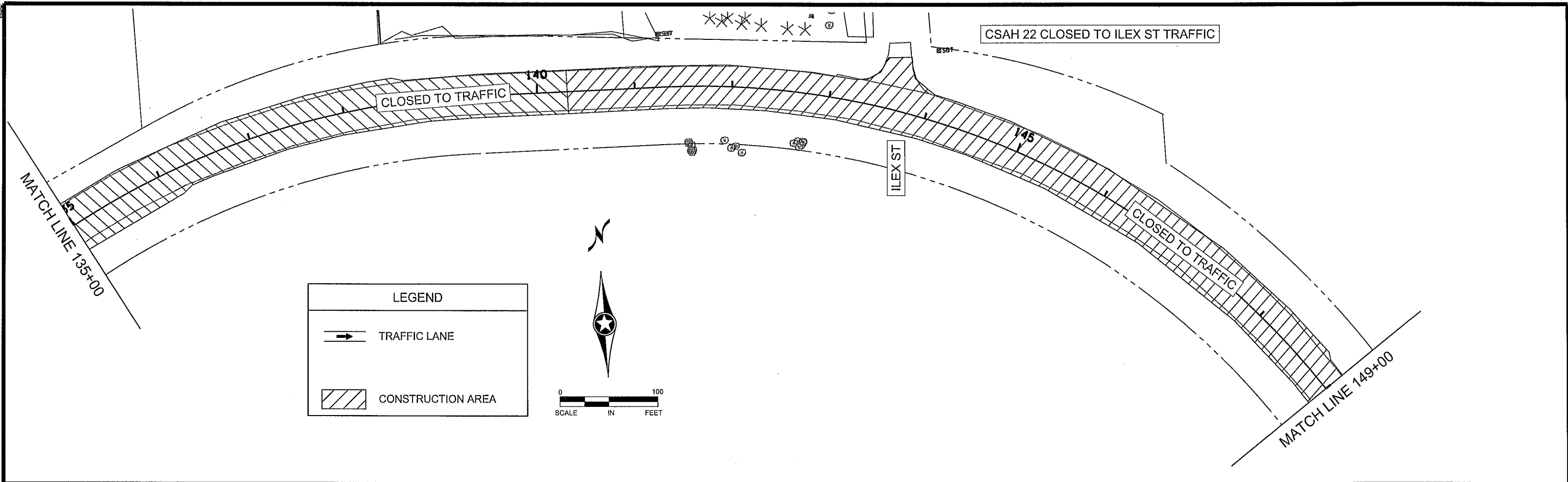
CHECKED BY GMP DATE 02/09/15



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

STAGING PLAN
 STAGE 4 - 5 - 6
 Sheet 76 of 210 Sheets



4 OF 5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_4-P5X5.dgn					
03/02/2015 9:02:44 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: NICHOLAS J. DOBDA
 SIGNATURE: *[Signature]*
 DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/09/15

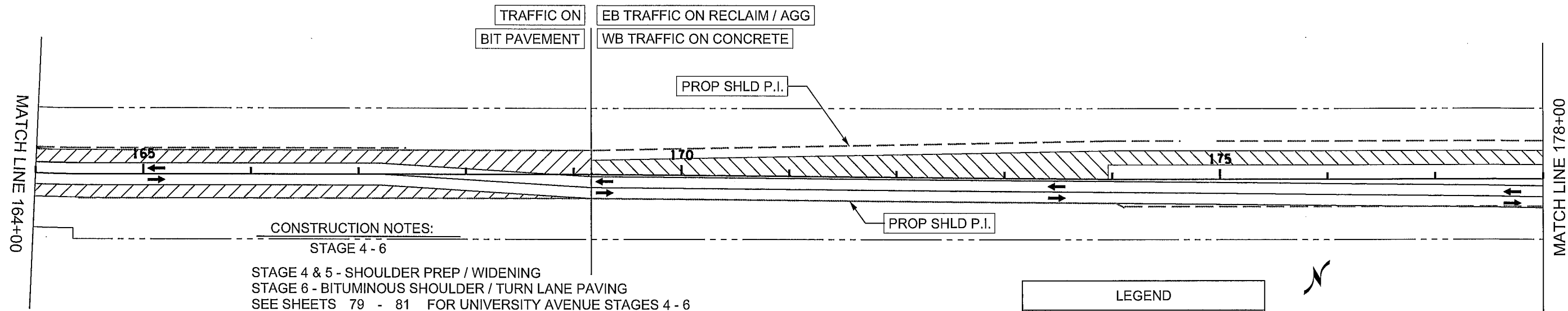


ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
 CITY PROJECT NO.
 COUNTY PROJECT NO.

STAGING PLAN
 STAGE 4 - 5 - 6

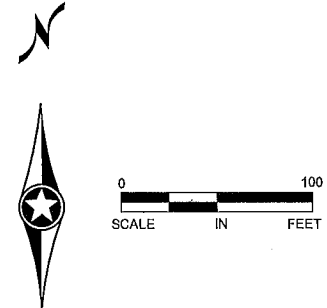
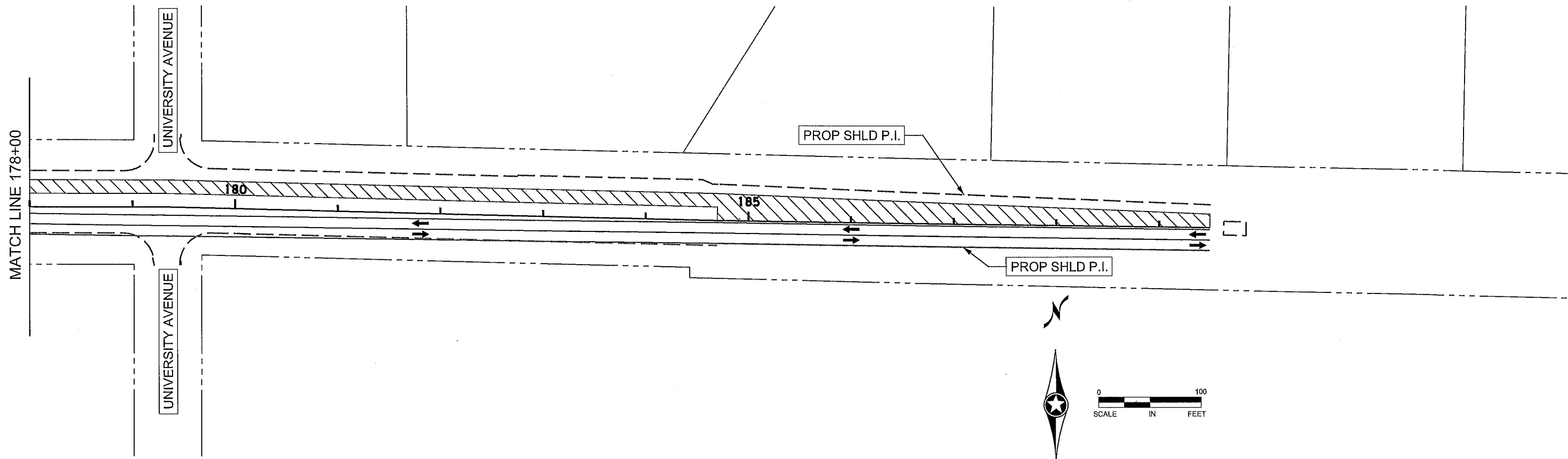
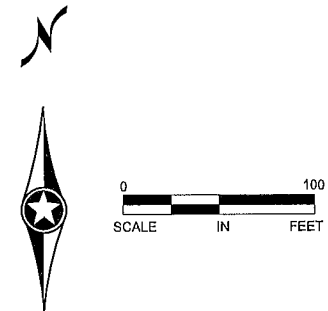
Sheet 77 of 210 Sheets

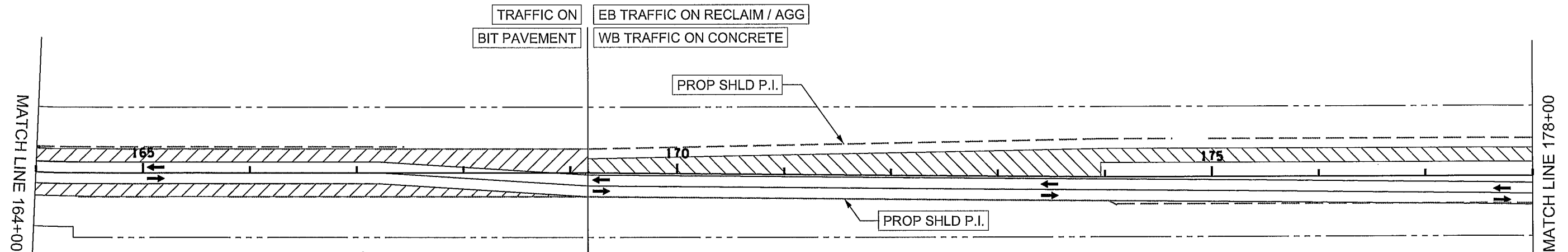


CONSTRUCTION NOTES:
 STAGE 4 - 6
 STAGE 4 & 5 - SHOULDER PREP / WIDENING
 STAGE 6 - BITUMINOUS SHOULDER / TURN LANE PAVING
 SEE SHEETS 79 - 81 FOR UNIVERSITY AVENUE STAGES 4 - 6

STAGING NOTES:
 STAGE 4 - 6
 NO TRAFFIC TO CROSS BNSF RAILROAD CROSSING DURING THIS STAGE
 ALL LOCAL TRAFFIC TO BE ROUTED THROUGH PROJECT ON NEWLY POURED CONCRETE
 AS SOON AS CONCRETE HAS BEEN DEEMED CURED AND READY TO HANDLE TRAFFIC.
 IN THE VICINITY OF UNIVERSITY AVENUE, LOCAL TRAFFIC TO USE AVAILBLE CONCRETE /
 AGGREGATE SURFACE NOT BEING CONSTRUCTED / PAVED.

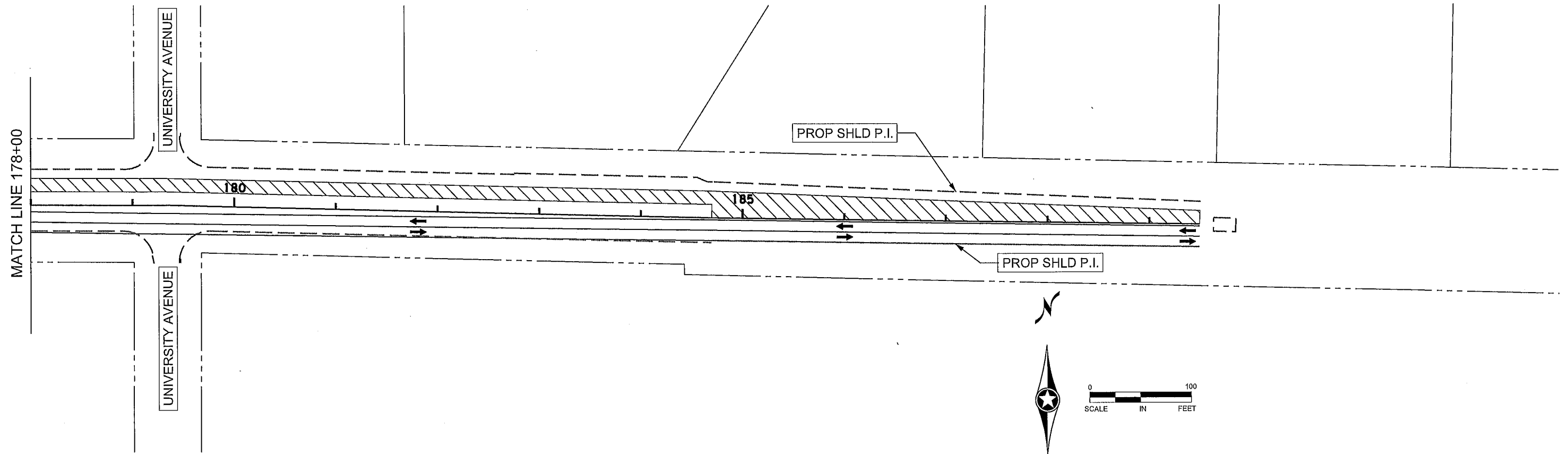
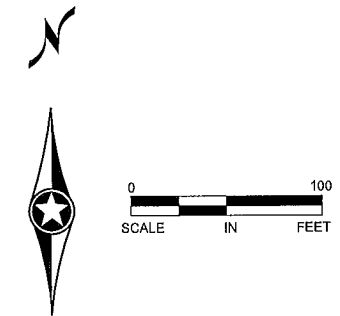
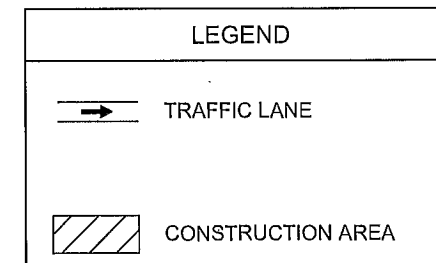
LEGEND	
	TRAFFIC LANE
	CONSTRUCTION AREA





CONSTRUCTION NOTES:
UNIVERSITY STAGE 4
CONCRETE PAVING - WB THRU & TAPERS

STAGING NOTES:
UNIVERSITY STAGE 4
WB LOCAL TRAFFIC ON SOUTHERNMOST CONCRETE THRU LANE
EB LOCAL TRAFFIC ON AGGREGATE SURFACE ADJACENT TO SOUTHERNMOST CONCRETE THRU LANE



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_4-UV.dgn					
03/02/2015 9:02:47 AM					

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *Nicholas J. Dobda*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/08/15

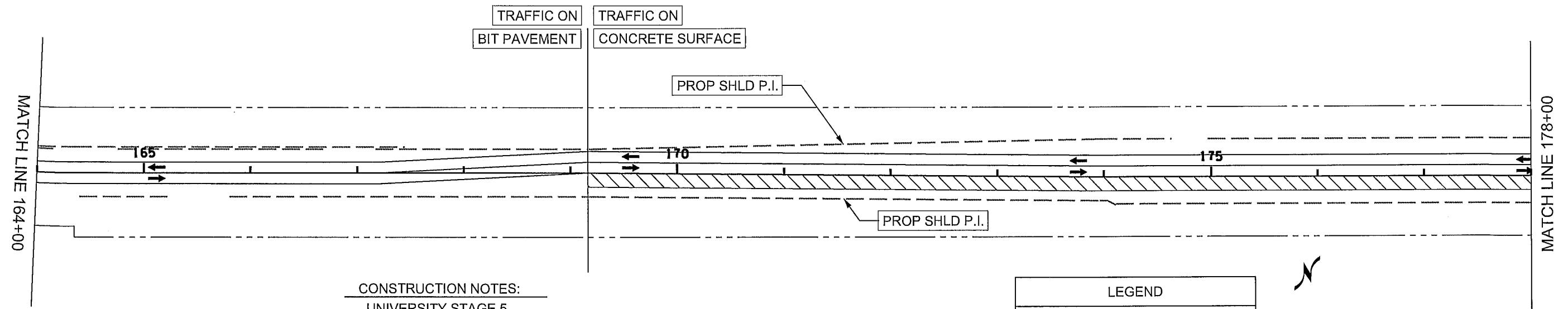


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

STAGING PLAN
STAGE 4 - UNIVERSITY

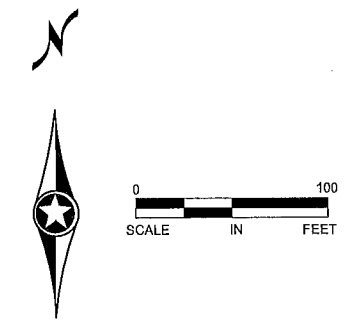
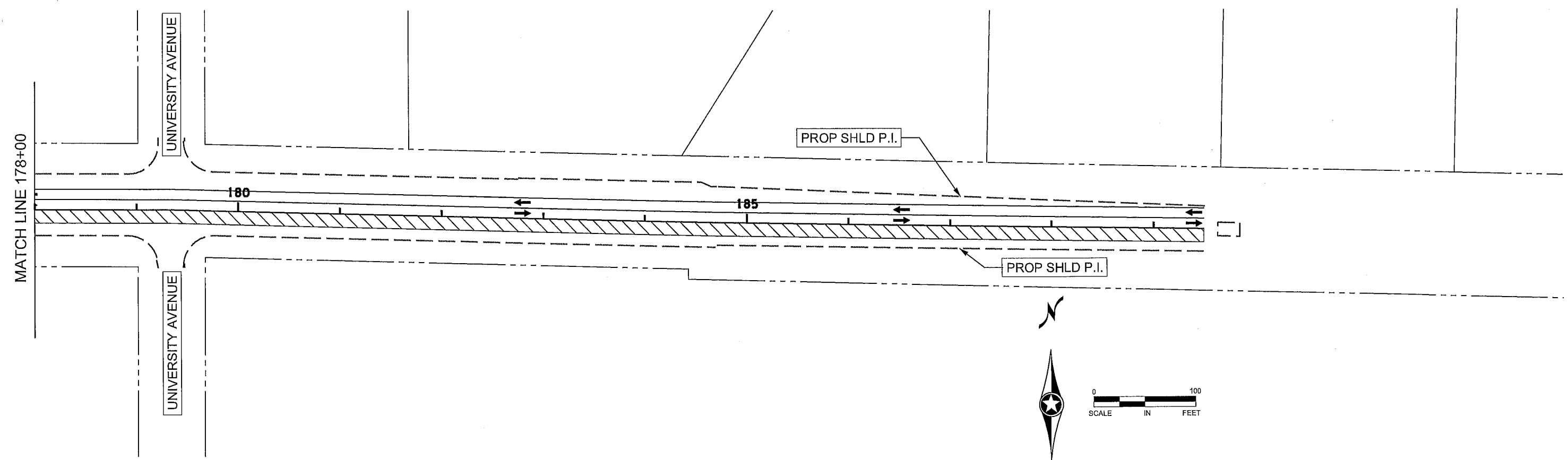
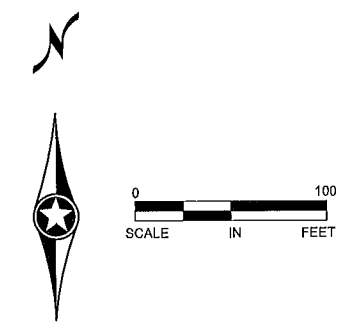
Sheet 79 of 210 Sheets



CONSTRUCTION NOTES:
 UNIVERSITY STAGE 5
 CONCRETE PAVING - EB THRU

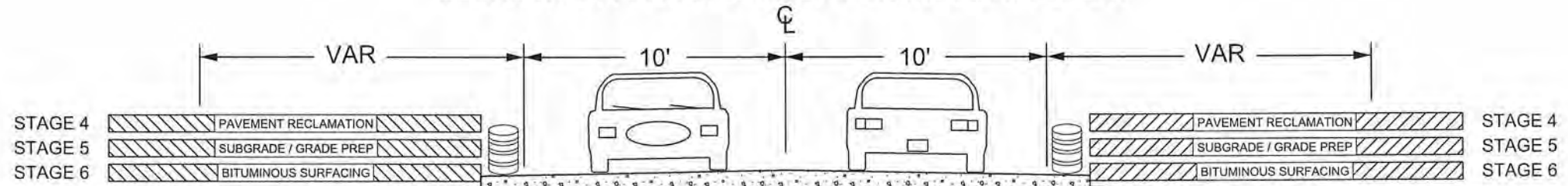
STAGING NOTES:
 UNIVERSITY STAGE 4
 LOCAL TRAFFIC TO TRAVEL ON EXISTING CONCRETE PAVEMENT

LEGEND	
	TRAFFIC LANE
	CONSTRUCTION AREA



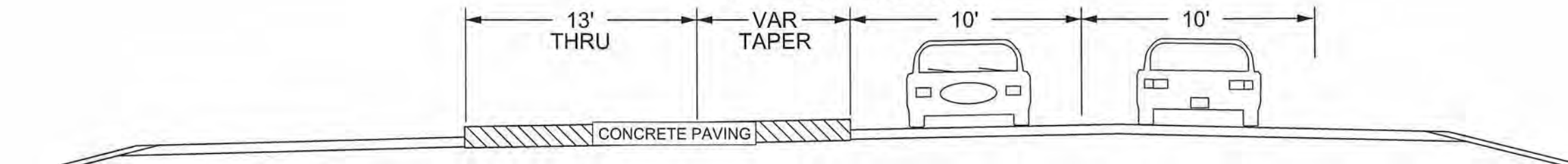
C.S.A.H. 22

STAGE 4 - 6 LANE CONFIGURATION
FLAMINGO STREET TO UNIVERSITY AVENUE
LOCAL TRAFFIC ROUTED ATOP CONCRETE PAVEMENT

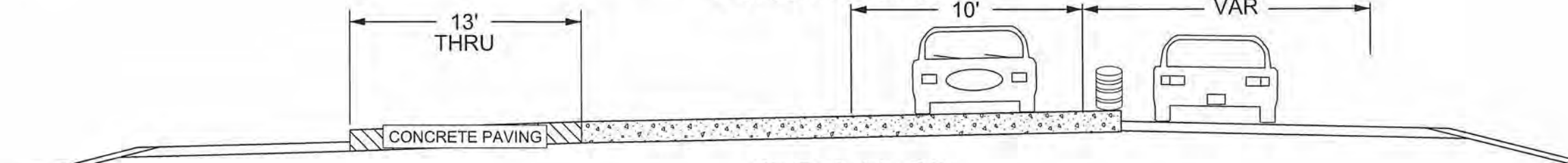


C.S.A.H. 22

STAGE 4 LANE CONFIGURATION - UNIVERSITY AVE
169+16.20 - 173+96.12
184+69.72 - 189+49.53

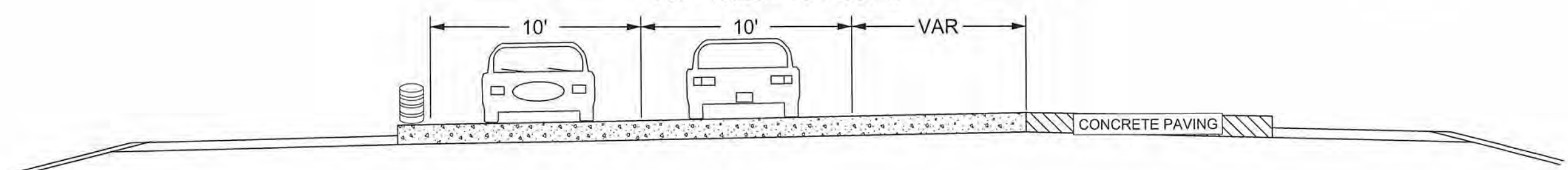


STAGE 4 LANE CONFIGURATION - UNIVERSITY AVE
173+96.12 - 184+69.72

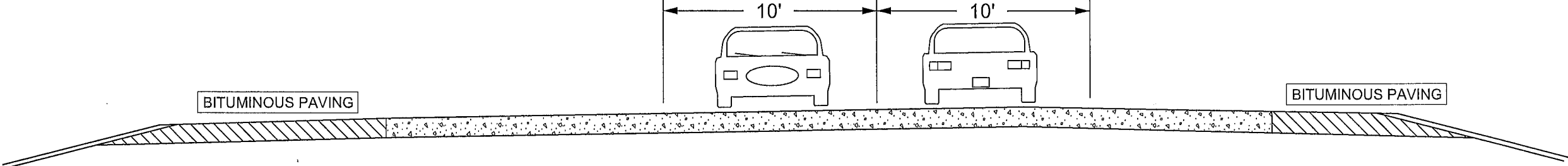


C.S.A.H. 22

STAGE 5 LANE CONFIGURATION - UNIVERSITY AVE
169+16.20 - 184+69.72



C.S.A.H. 22
STAGE 6 LANE CONFIGURATION - UNIVERSITY AVE



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Plan\0262234_STG_4-6.dgn					
03/02/2015 9:02:34 AM					

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: *Nicholas J. Dobda*
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

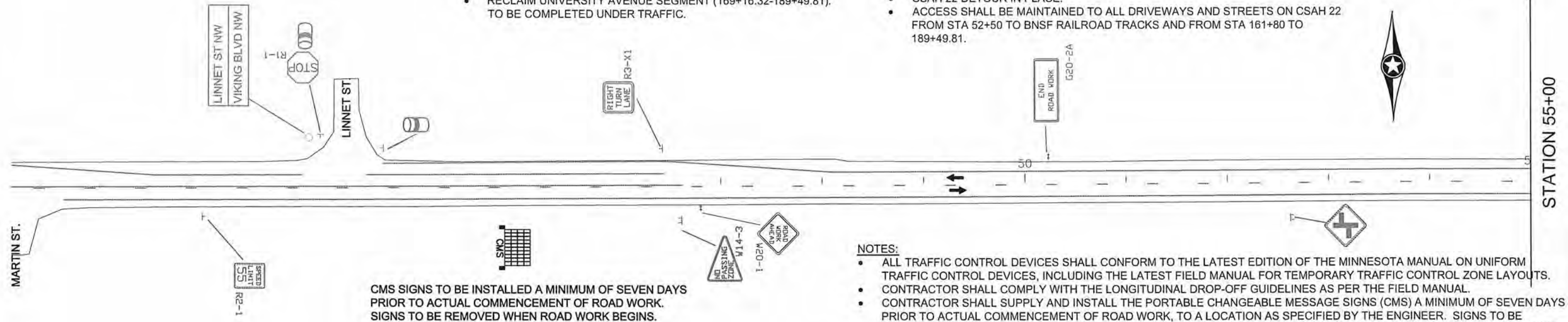
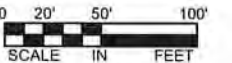
STAGING TYPICAL SECTIONS
STAGE 4, 5, 6
Sheet 83 of 210 Sheets

STAGE 1 CONSTRUCTION NOTES:

- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
- RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81). TO BE COMPLETED UNDER TRAFFIC.

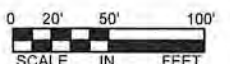
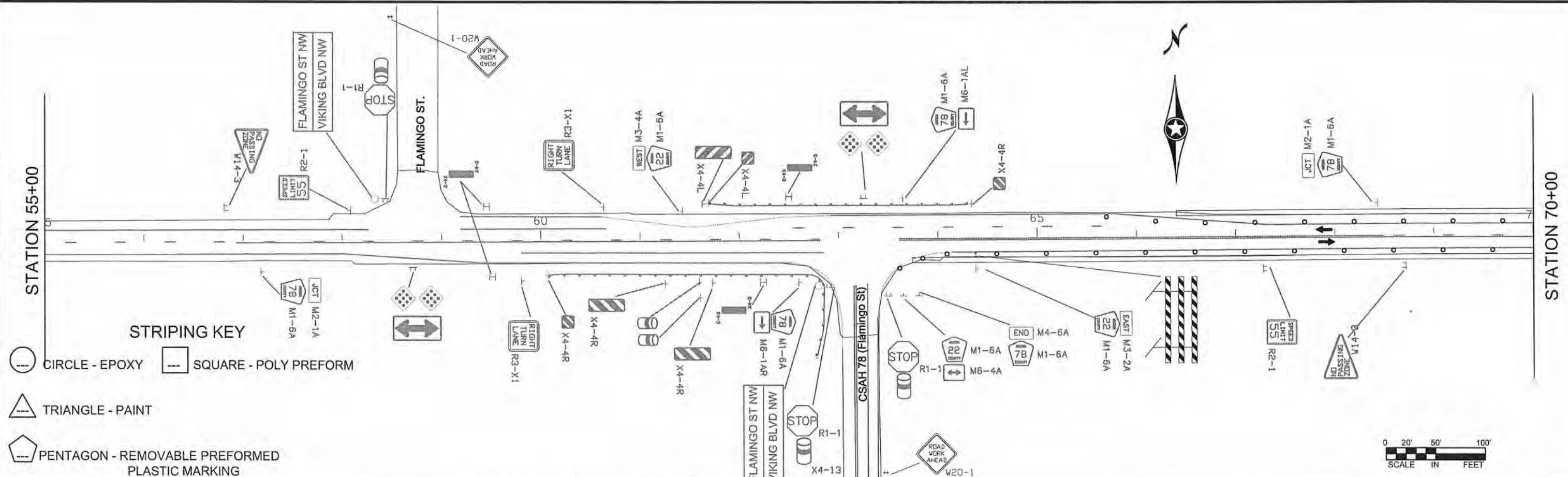
STAGE 1 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.



NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGNS (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.



NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: ANDREW WITTER

SIGNATURE: *Andrew Witter*

DATE: 3/2/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

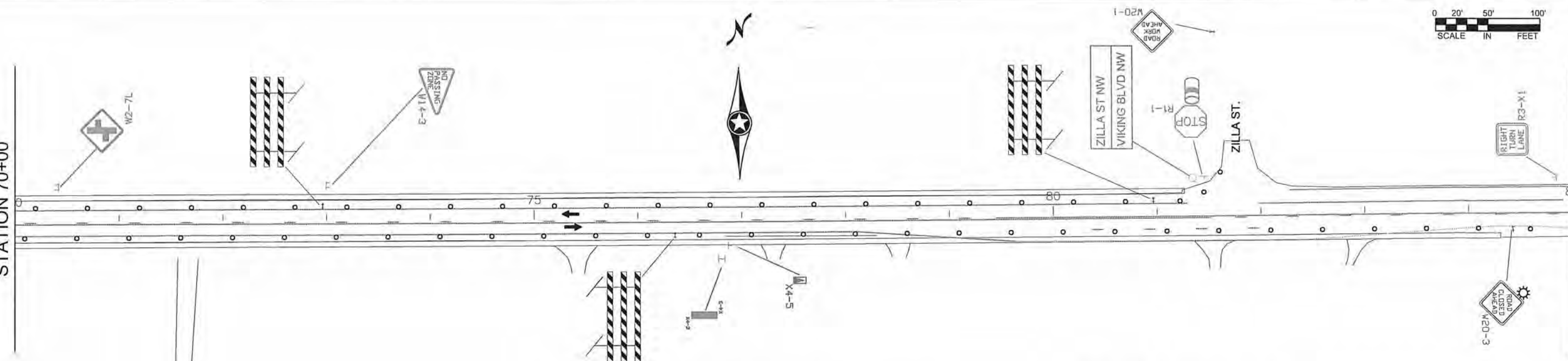
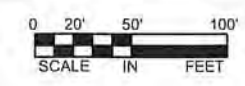
COUNTY PROJECT NO. _____

STAGE 1
TRAFFIC CONTROL

Sheet 84 of 210 Sheets

STATION 70+00

STATION 85+00



STAGE 1 CONSTRUCTION NOTES:

- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
- RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81). TO BE COMPLETED UNDER TRAFFIC.

STAGE 1 TRAFFIC CONTROL NOTES:

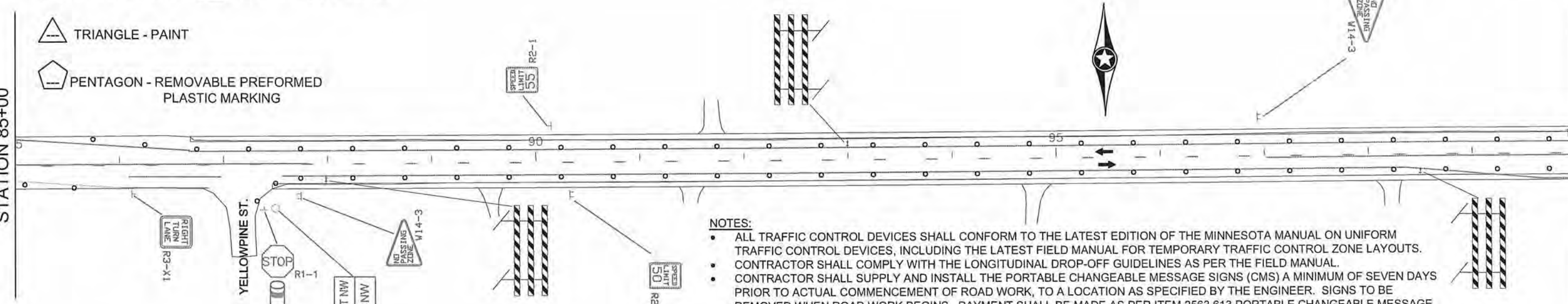
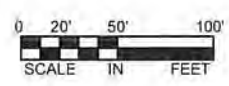
- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

STATION 85+00

STATION 100+00



NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGNS (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

NO	DATE	BY	CHKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: ANDREW WITTER
SIGNATURE:
DATE: 3/21/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15
DESIGN BY: SRT DATE: 2/10/15
CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

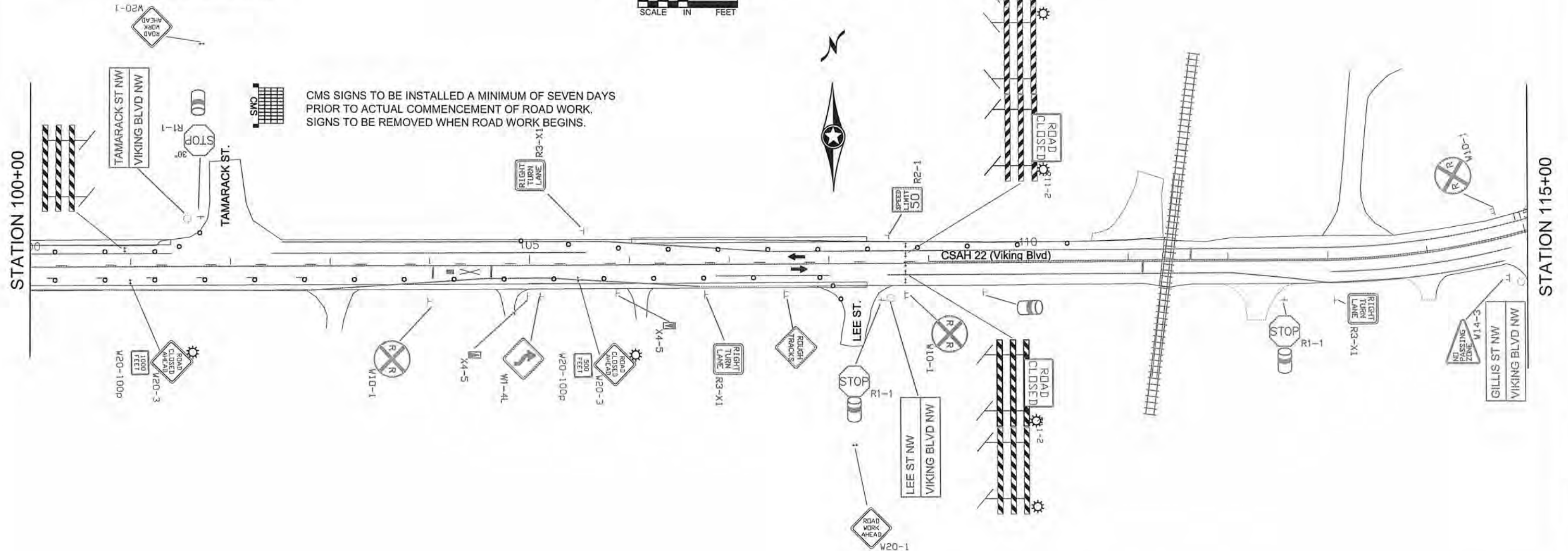
STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 1
TRAFFIC CONTROL
Sheet 85 of 210 Sheets

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

0 20' 50' 100'
SCALE IN FEET



CMS SIGNS TO BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS.

STAGE 1 CONSTRUCTION NOTES:

- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
- RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81), TO BE COMPLETED UNDER TRAFFIC.

0 20' 50' 100'
SCALE IN FEET

STAGE 1 TRAFFIC CONTROL NOTES:

- CS AH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CS AH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CS AH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGNS (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: ANDREW WITTER
SIGNATURE: *[Signature]*
DATE: 3/21/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15
DESIGN BY: SRT DATE: 2/10/15
CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

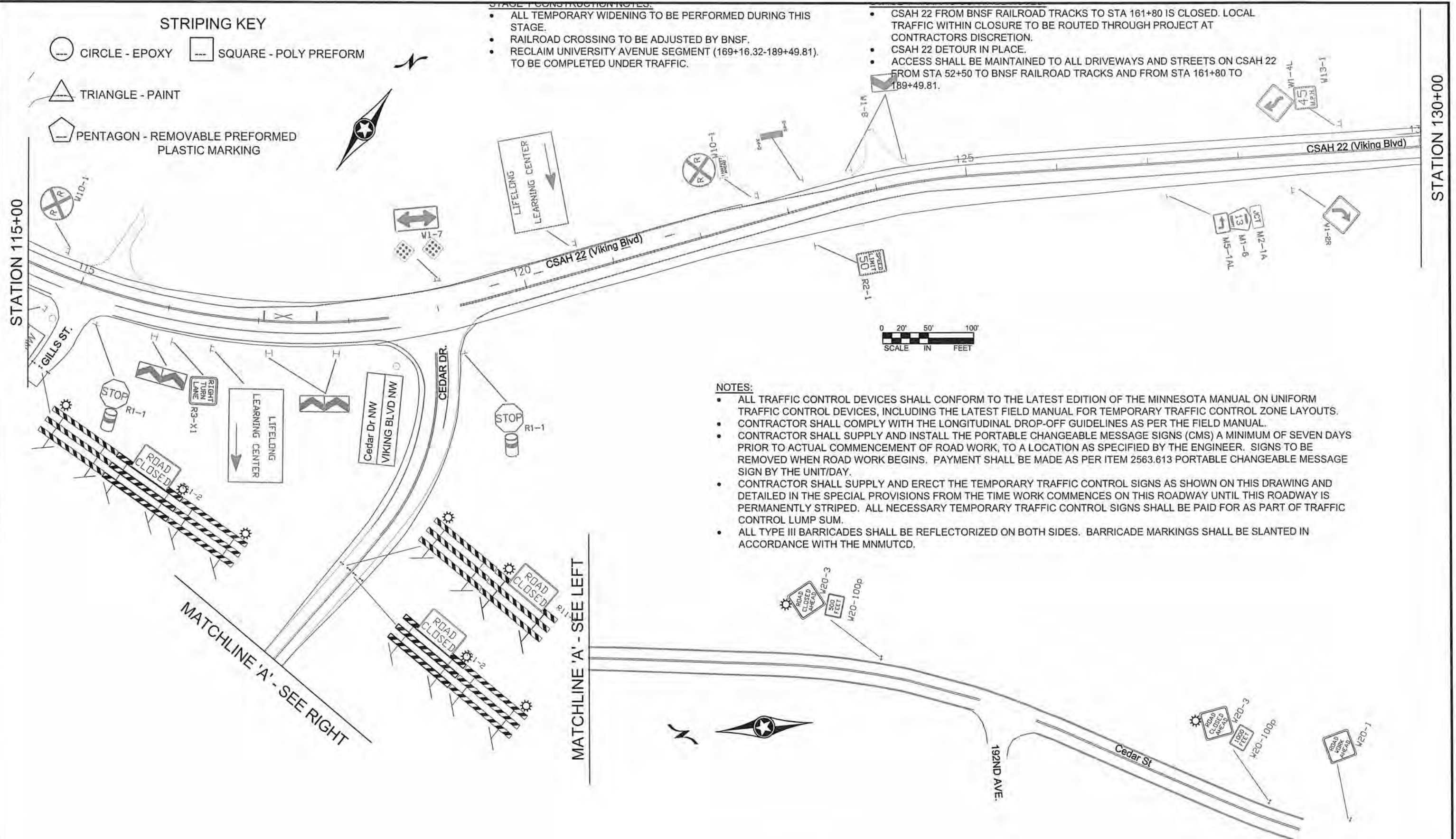
STAGE 1
TRAFFIC CONTROL
Sheet 86 of 210 Sheets

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

- ## STAGE 1 CONSTRUCTION NOTES:
- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
 - RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
 - RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81). TO BE COMPLETED UNDER TRAFFIC.

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.



NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGNS (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: ANDREW WITTER

SIGNATURE: *Andrew Witter*

DATE: 3/1/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 1
TRAFFIC CONTROL

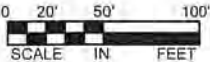
Sheet 87 of 210 Sheets

STAGE 1 CONSTRUCTION NOTES:

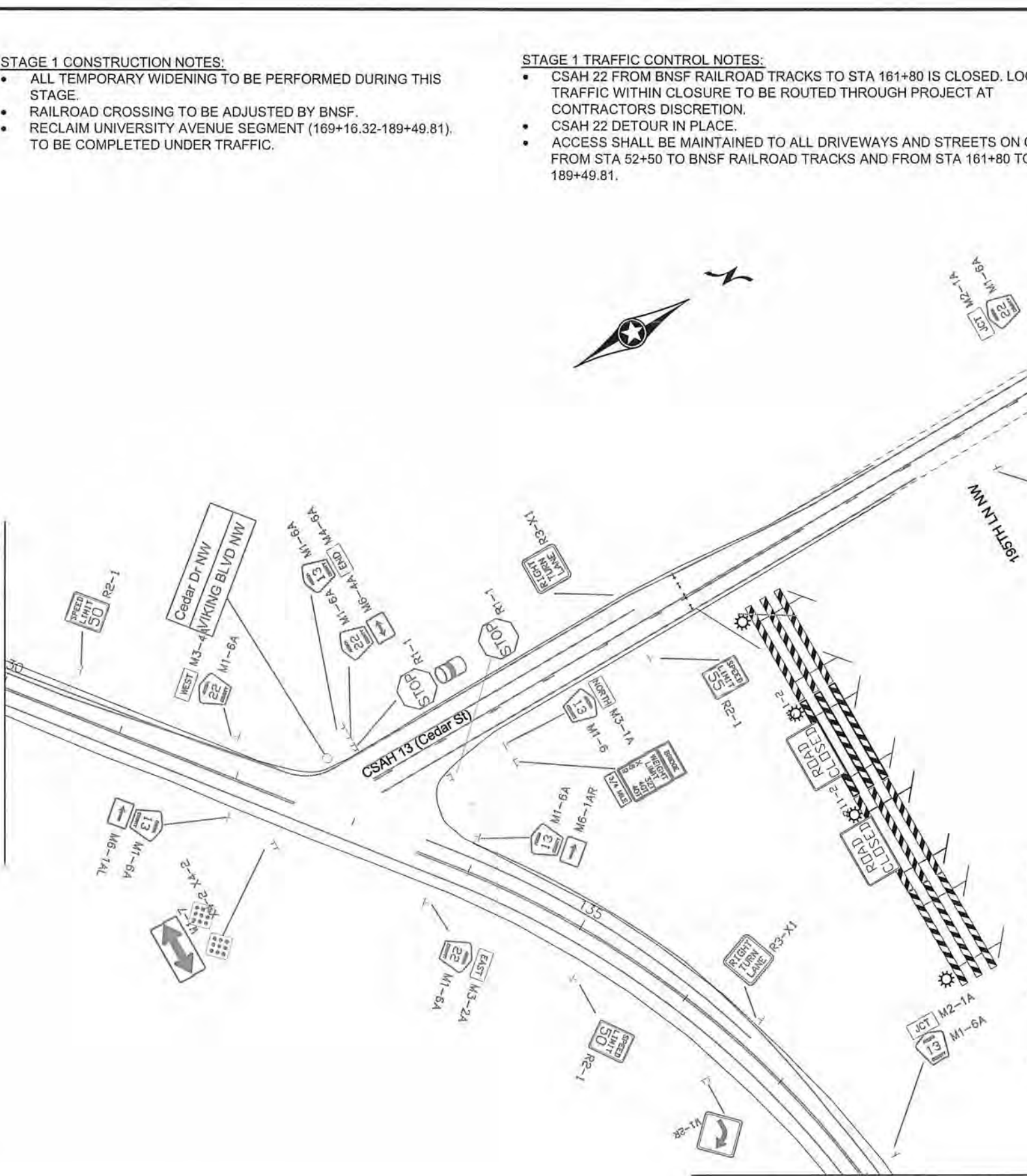
- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
- RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81), TO BE COMPLETED UNDER TRAFFIC.

STAGE 1 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.



STATION 130+00



STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGNS (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

STATION 138+00

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: ANDREW WITTER
SIGNATURE:
DATE: 3/2/15 REG. NO. 42757

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CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 1
TRAFFIC CONTROL
Sheet 88 of 210 Sheets

STATION 138+00

CSAH 22 (Viking Blvd)

STAGE 1 CONSTRUCTION NOTES:

- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
- RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81). TO BE COMPLETED UNDER TRAFFIC.

STAGE 1 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

STRIPING KEY

- CIRCLE - EPOXY SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

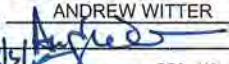
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SCALE IN FEET

STATION 155+00

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: ANDREW WITTER

SIGNATURE: 

DATE: 3/15/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 1
TRAFFIC CONTROL

Sheet 89 of 210 Sheets

STATION 155+00

STAGE 1 CONSTRUCTION NOTES:

- ALL TEMPORARY WIDENING TO BE PERFORMED DURING THIS STAGE.
- RAILROAD CROSSING TO BE ADJUSTED BY BNSF.
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81). TO BE COMPLETED UNDER TRAFFIC.

STAGE 1 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 52+50 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO 189+49.81.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

0 20' 50' 100'
SCALE IN FEET

STRIPING KEY

- CIRCLE - EPOXY SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

CONSTRUCTION AREA

STATION 171+00

STATION 171+00

STATION 186+00

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

PRINT NAME: ANDREW WITTER

SIGNATURE: *[Signature]*

DATE: 2/2/15 REG. NO. 42757

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

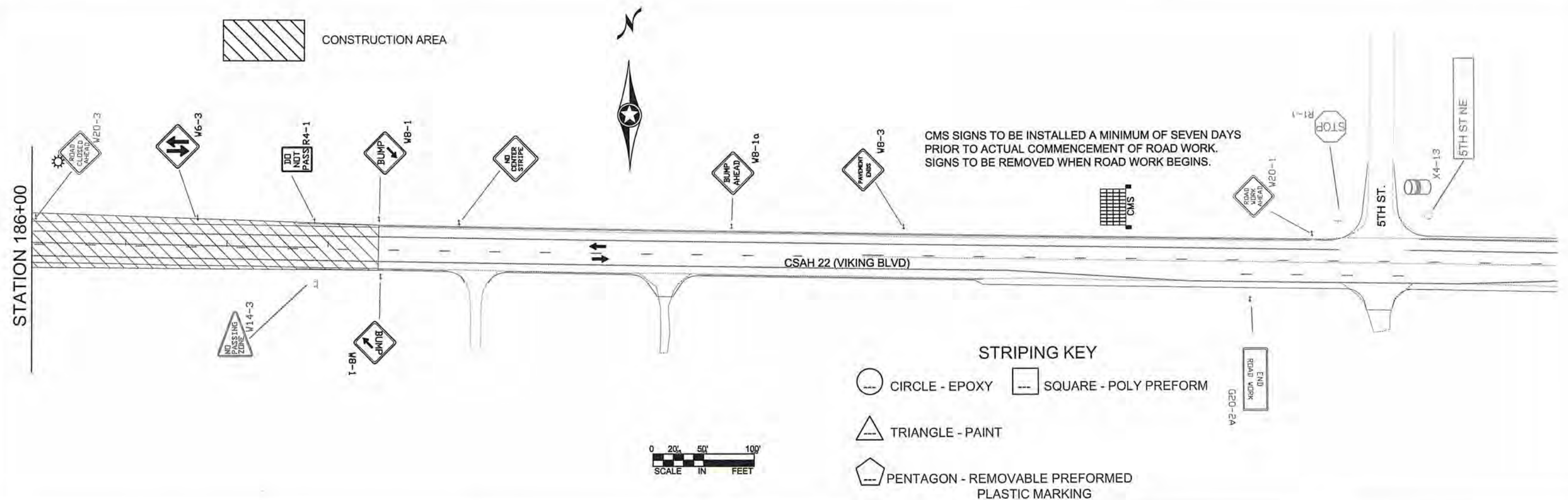
STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 1
TRAFFIC CONTROL

Sheet 90 of 210 Sheets



NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

STAGE 1 TRAFFIC CONTROL NOTES:

- CSAH 22 DETOUR IN PLACE.
- CSAH 22 OPEN TO LOCAL TRAFFIC ONLY BETWEEN BNSF RAILROAD TRACKS AND CEDAR DRIVE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND UNIVERSITY AVENUE ON CSAH 22 FROM STA 161+80 TO 188+00.

STAGE 1 CONSTRUCTION NOTES:

- VARIABLE MILLING OPERATIONS FROM BNSF RAILROAD TRACKS TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32)
- RECLAIM UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.81) STAGING FOR PAVEMENT RECLAMATION OF CSAH 22 IN THE VICINITY OF UNIVERSITY AVENUE WILL USE MNDOT TEMPORARY TRAFFIC CONTROL MANUAL (2014).
- UPON COMPLETION OF PAVEMENT RECLAMATION OF CSAH 22 IN THE VICINITY OF UNIVERSITY AVENUE, TWO WAY TWO LANE TRAFFIC TO BE CENTERED WITHIN CSAH 22 AS WIDENING OPERATIONS COMMENCE (SHOWN AS STAGE 1 IN THIS PLAN).

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: ANDREW WITTER

SIGNATURE: *[Signature]*

DATE: 2/15/15 REG. NO. 42757

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ANOKA COUNTY
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STAGE 1
TRAFFIC CONTROL

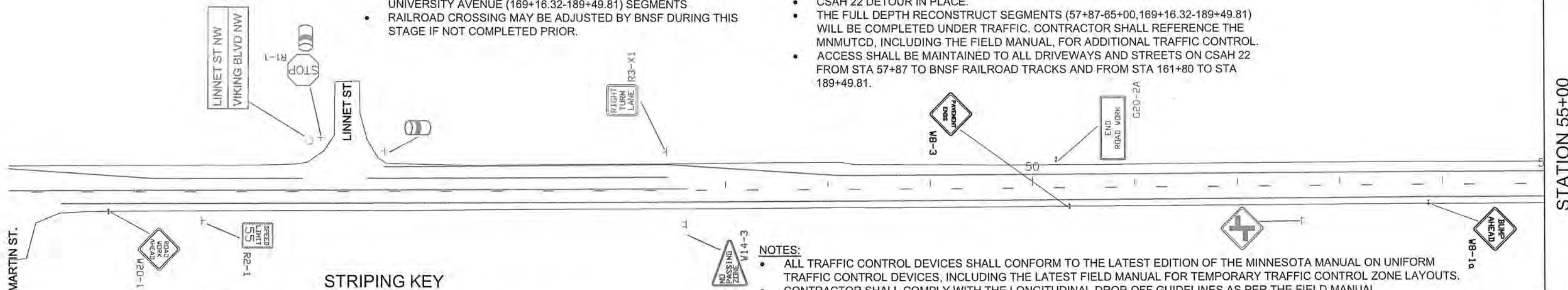
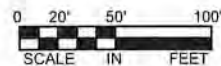
Sheet 91 of 210 Sheets

STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
- FULL DEPTH RECONSTRUCT FOR CSAH 78 (57+87-65+00) AND UNIVERSITY AVENUE (169+16.32-189+49.81) SEGMENTS
- RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR.

STAGE 2 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- THE FULL DEPTH RECONSTRUCT SEGMENTS (57+87-65+00, 169+16.32-189+49.81) WILL BE COMPLETED UNDER TRAFFIC. CONTRACTOR SHALL REFERENCE THE MNMUTCD, INCLUDING THE FIELD MANUAL, FOR ADDITIONAL TRAFFIC CONTROL.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.



STRIPING KEY

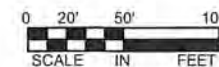
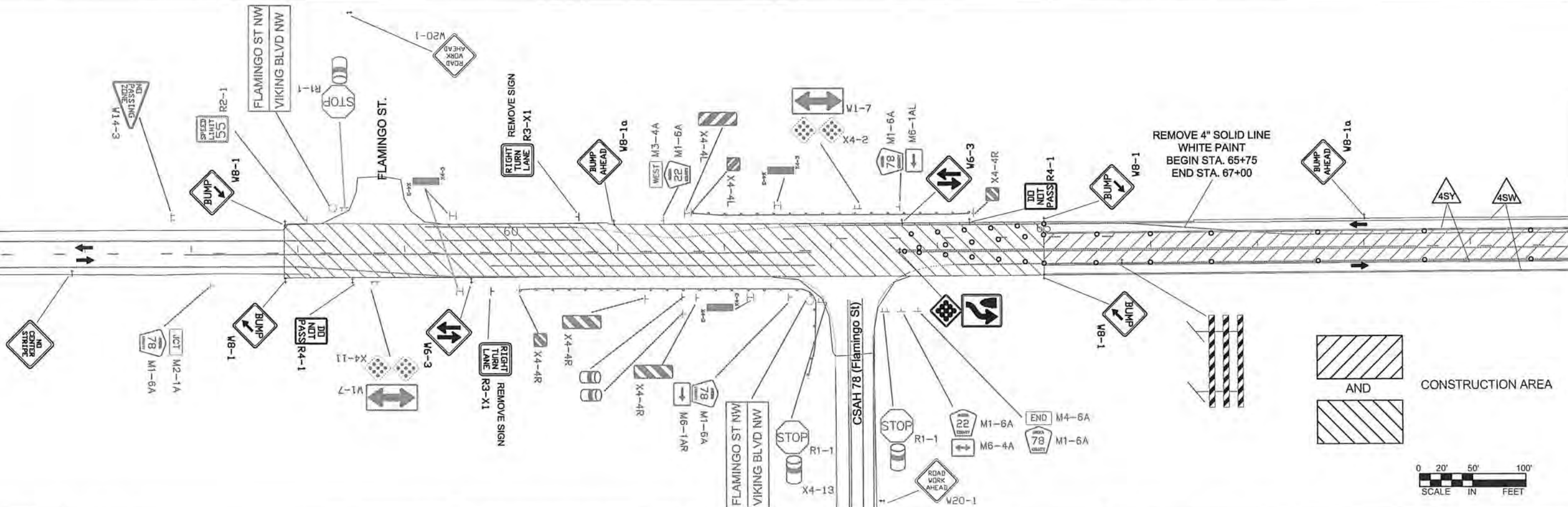
- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

NOTES:

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- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

STATION 55+00

STATION 70+00



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: ANDREW WITTER
 SIGNATURE: [Signature]
 DATE: 3/21/15 REG. NO. 42757

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ANOKA COUNTY
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 COUNTY PROJECT NO. _____

STAGE 2
 TRAFFIC CONTROL

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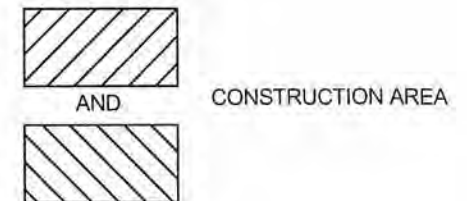
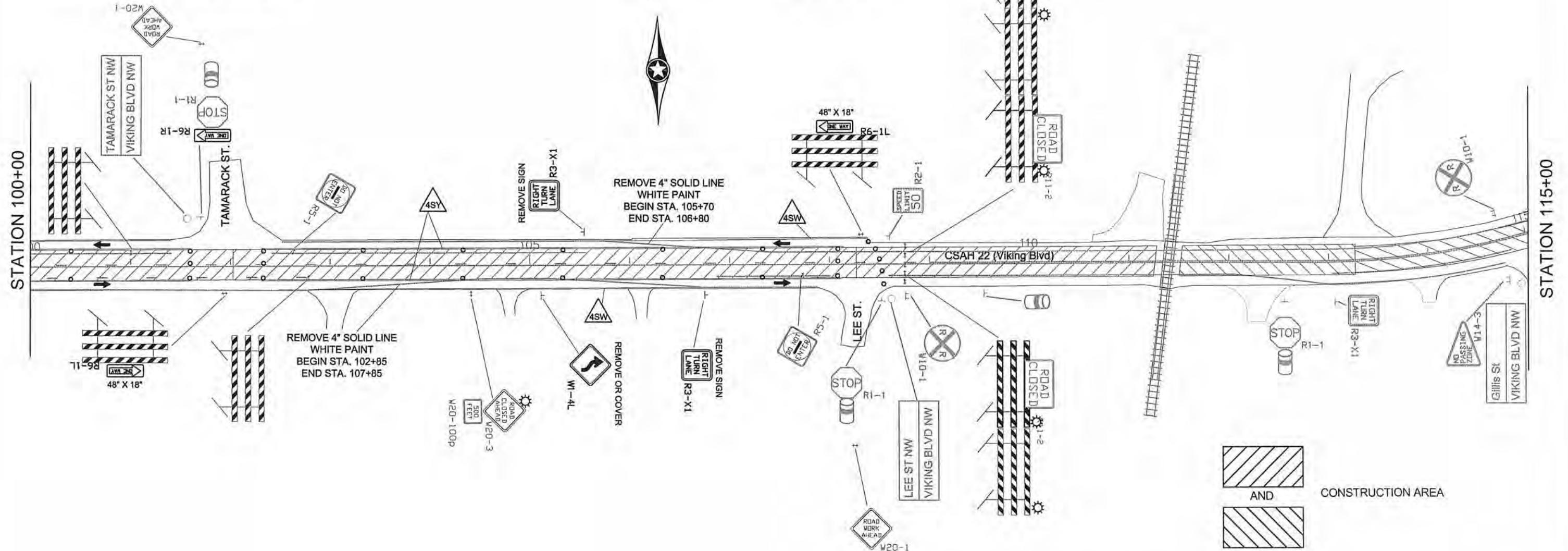
NO	DATE	BY	CKD	APPR	REVISION

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STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

0 20' 50' 100'
SCALE IN FEET



STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
- FULL DEPTH RECONSTRUCT FOR CSAH 78 (57+87-65+00) AND UNIVERSITY AVENUE (169+16.32-189+49.81) SEGMENTS
- RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR.

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SCALE IN FEET

STAGE 2 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- THE FULL DEPTH RECONSTRUCT SEGMENTS (57+87-65+00, 169+16.32-189+49.81) WILL BE COMPLETED UNDER TRAFFIC. CONTRACTOR SHALL REFERENCE THE MNMUTCD, INCLUDING THE FIELD MANUAL, FOR ADDITIONAL TRAFFIC CONTROL.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.

NOTES:

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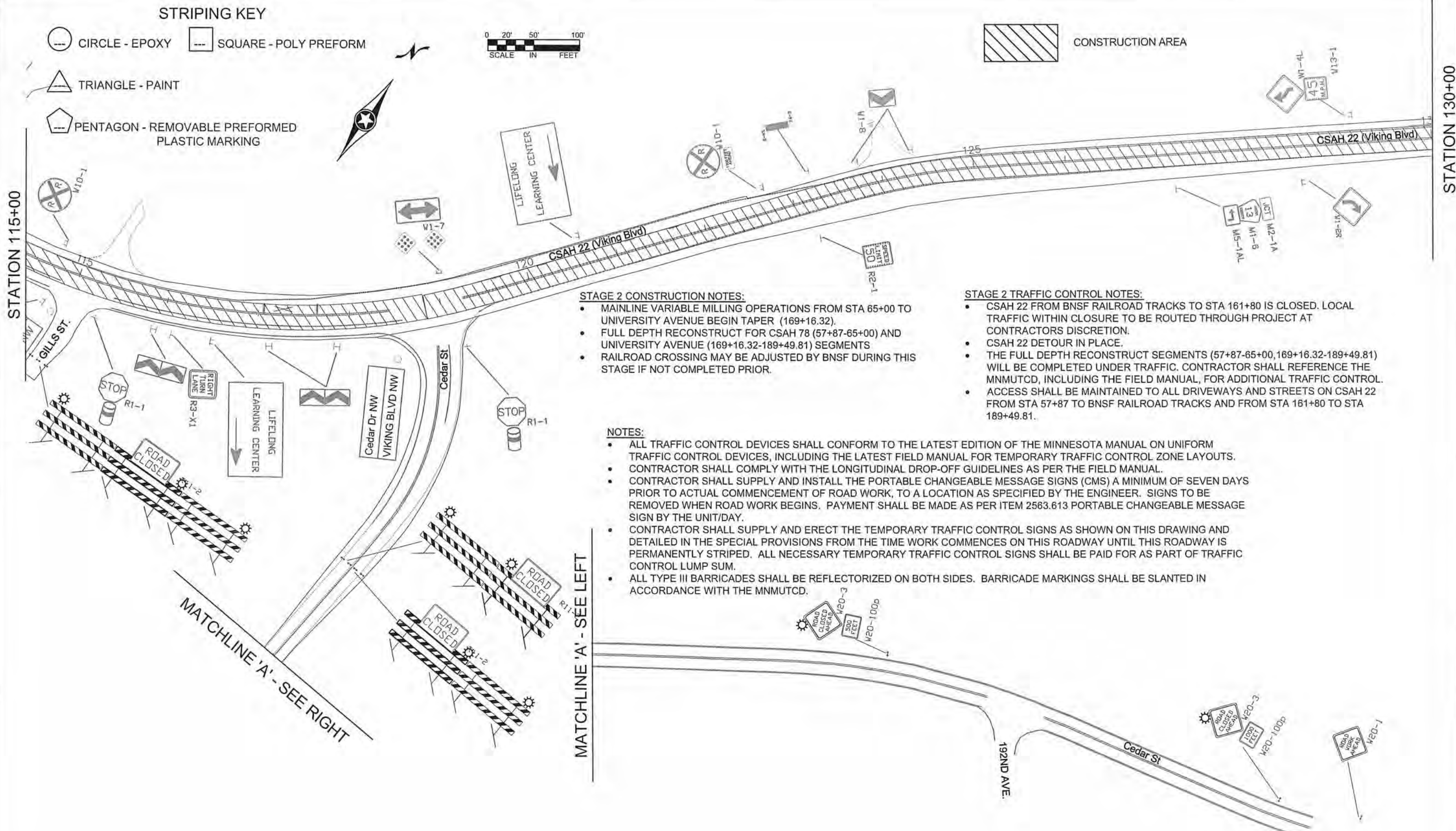
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STAGE 2
TRAFFIC CONTROL
Sheet 94 of 210 Sheets



STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
- FULL DEPTH RECONSTRUCT FOR CSAH 78 (57+87-65+00) AND UNIVERSITY AVENUE (169+16.32-189+49.81) SEGMENTS
- RAILROAD CROSSING MAY BE ADJUSTED BY BNSF DURING THIS STAGE IF NOT COMPLETED PRIOR.

STAGE 2 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- THE FULL DEPTH RECONSTRUCT SEGMENTS (57+87-65+00, 169+16.32-189+49.81) WILL BE COMPLETED UNDER TRAFFIC. CONTRACTOR SHALL REFERENCE THE MNMUTCD, INCLUDING THE FIELD MANUAL, FOR ADDITIONAL TRAFFIC CONTROL.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

NO					DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Baset\TRAFFIC\TC STAGE 2.dwg									
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.									
PRINT NAME: ANDREW WITTER									
SIGNATURE: <i>[Signature]</i>									
DATE: 3/2/15 REG. NO. 42757									
DRAWN BY: SRT DATE: 2/10/15					ANOKA COUNTY HIGHWAY DEPT.				
DESIGN BY: SRT DATE: 2/10/15					STATE PROJECT NO. _____				
CHECKED BY: RB DATE: 2/13/15					STATE AID PROJECT NO. 002-622-034				
					STATE AID PROJECT NO. _____				
					COUNTY PROJECT NO. _____				
STAGE 2 TRAFFIC CONTROL									
Sheet 95 of 210 Sheets									

STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
- FULL DEPTH RECONSTRUCT FOR CSAH 78 (57+87-65+00) AND UNIVERSITY AVENUE (169+16.32-189+49.81) SEGMENTS
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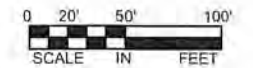
STAGE 2 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
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AND

CONSTRUCTION AREA



STATION 130+00

STATION 138+00

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
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PRINT NAME: ANDREW WITTER

SIGNATURE: *[Signature]*

DATE: 3/2/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 2
TRAFFIC CONTROL

Sheet 96 of 210 Sheets

STATION 138+00

CSAH 22 (Viking Blvd)

STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
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STAGE 2 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- THE FULL DEPTH RECONSTRUCT SEGMENTS (57+87-65+00, 169+16.32-189+49.81) WILL BE COMPLETED UNDER TRAFFIC. CONTRACTOR SHALL REFERENCE THE MNMUTCD, INCLUDING THE FIELD MANUAL, FOR ADDITIONAL TRAFFIC CONTROL.
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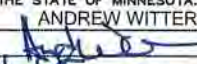
STRIPING KEY

- CIRCLE - EPOXY SQUARE - POLY PREFORM
TRIANGLE - PAINT
PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

CONSTRUCTION AREA

0 20' 50' 100'
SCALE IN FEET

STATION 155+00

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: ANDREW WITTER
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ANOKA COUNTY
HIGHWAY DEPT.

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STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 2
TRAFFIC CONTROL

Sheet 97 of 210 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Basetraffic\ITC STAGE 2.dwg

STATION 155+00

STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
- FULL DEPTH RECONSTRUCT FOR CSAH 78 (57+87-65+00) AND UNIVERSITY AVENUE (169+16.32-189+49.81) SEGMENTS
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STAGE 2 TRAFFIC CONTROL NOTES:

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STRIPING KEY

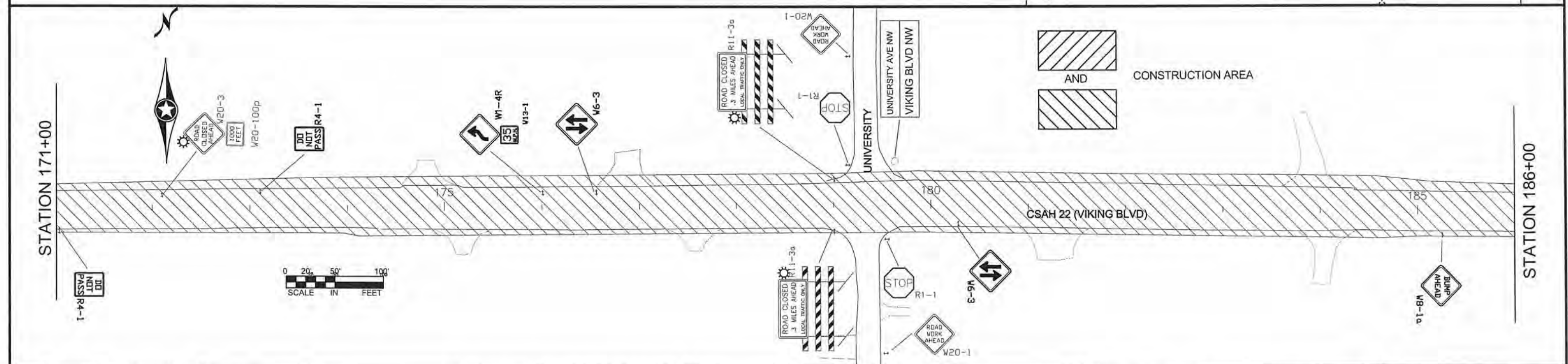
- CIRCLE - EPOXY SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

0 20 50 100
SCALE IN FEET

STATION 171+00

STATION 171+00

STATION 186+00



NO	DATE	BY	CKD	APPR	REVISION

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

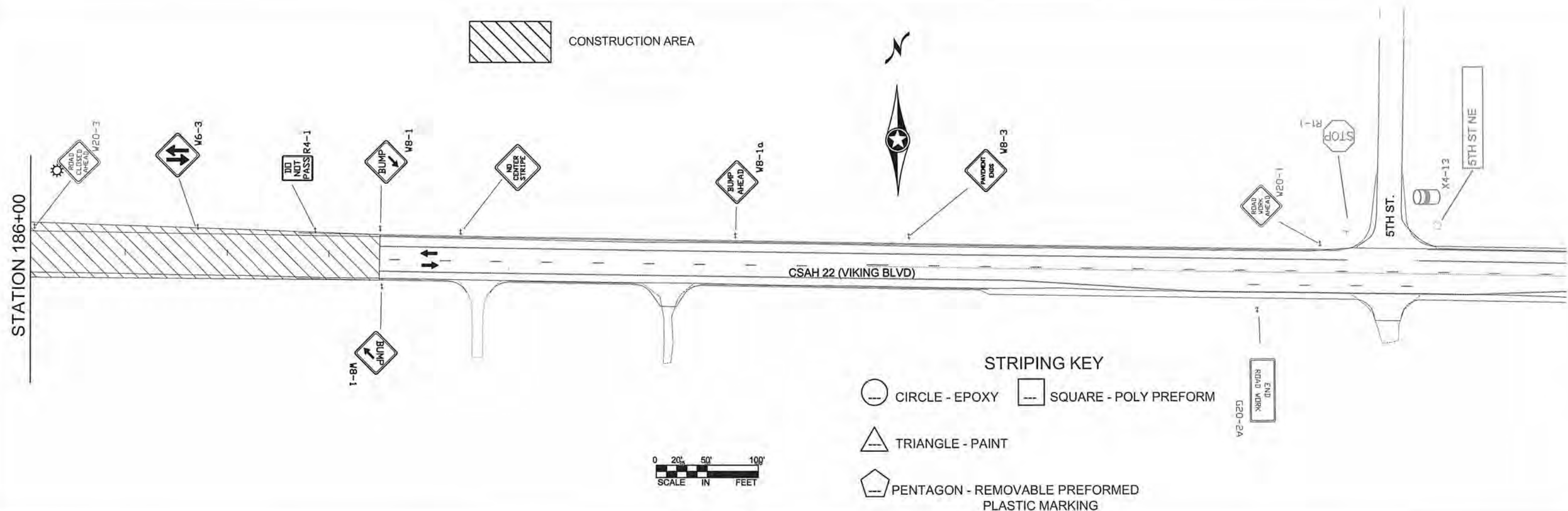
STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 2
TRAFFIC CONTROL

Sheet 98 of 210 Sheets



STAGE 2 CONSTRUCTION NOTES:

- MAINLINE VARIABLE MILLING OPERATIONS FROM STA 65+00 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32).
- FULL DEPTH RECONSTRUCT FOR CSAH 78 (57+87-85+00) AND UNIVERSITY AVENUE (169+16.32-189+49.81) SEGMENTS
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NAME: P:\02-622-34\Basetraffic\ITC STAGE 2.dwg					

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PRINT NAME: ANDREW WITTER
SIGNATURE:
DATE: 3/2/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15
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ANOKA COUNTY
HIGHWAY DEPT.

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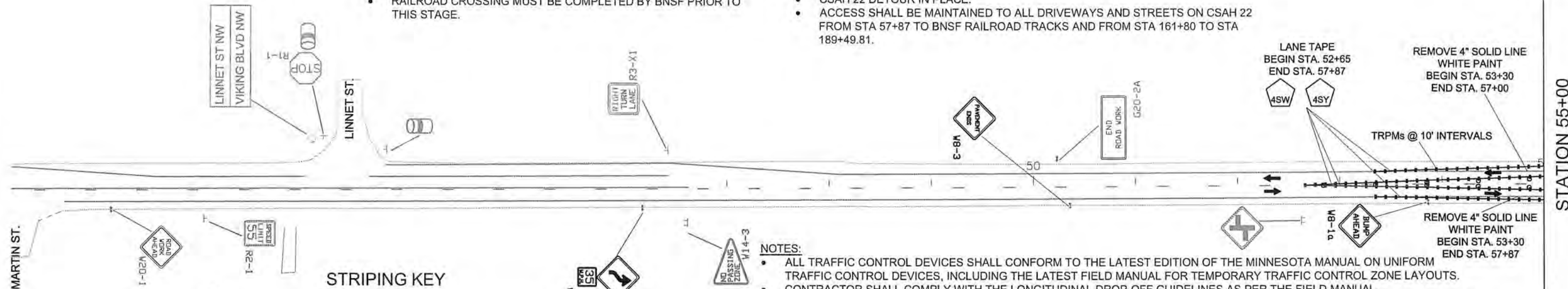
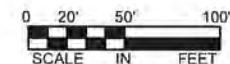
STAGE 2
TRAFFIC CONTROL
Sheet 99 of 210 Sheets

STAGE 3 CONSTRUCTION NOTES:

- MAINLINE CONCRETE PAVING OPERATIONS FROM STA 57+87 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32) AND FROM STA 173+96.21 TO STA 184+69.63.
- RAILROAD CROSSING MUST BE COMPLETED BY BNSF PRIOR TO THIS STAGE.

STAGE 3 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
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STRIPING KEY

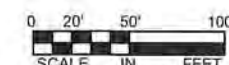
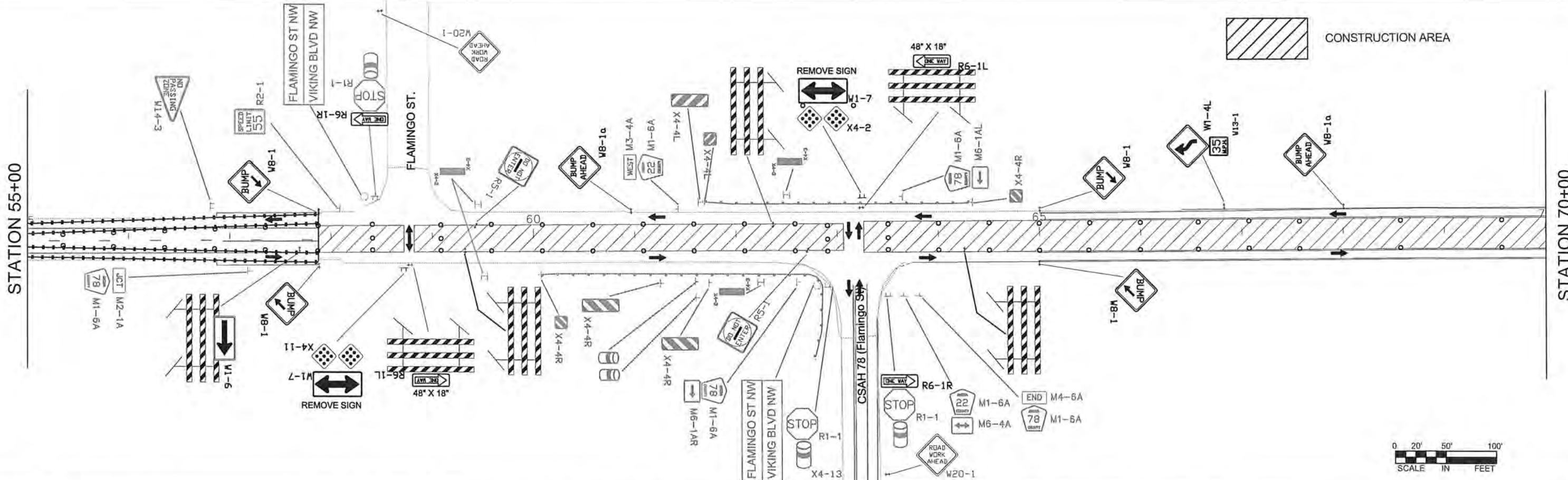
CIRCLE - EPOXY SQUARE - POLY PREFORM

TRIANGLE - PAINT

PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

NOTES:

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SIGNATURE: *[Signature]*

DATE: 3/21/15 REG. NO. 42757

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ANOKA COUNTY
HIGHWAY DEPT.

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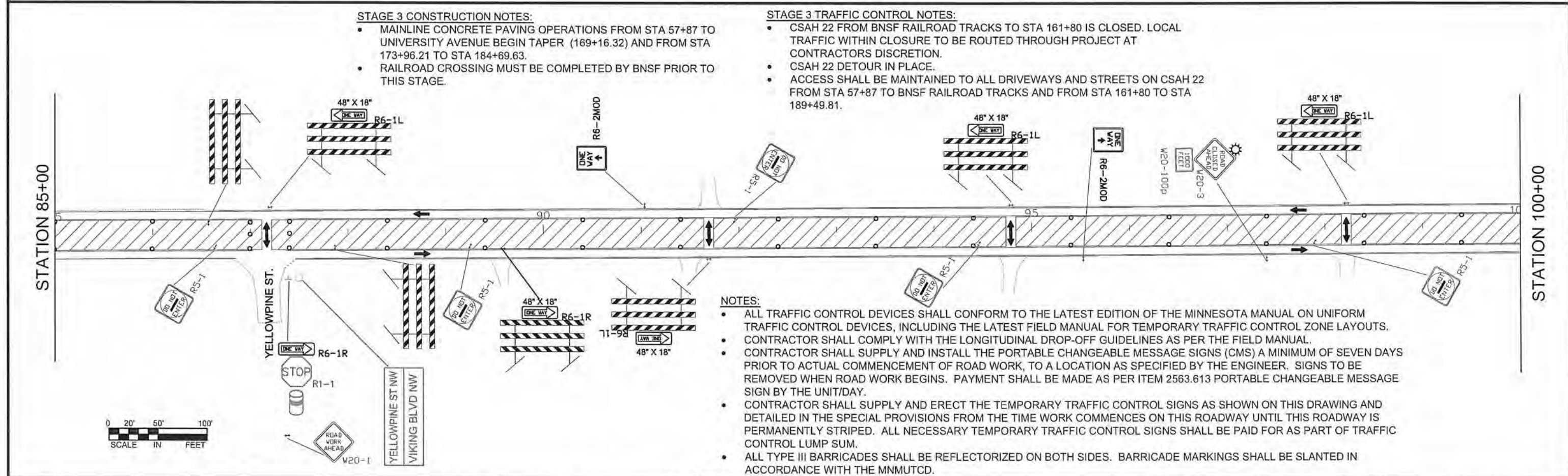
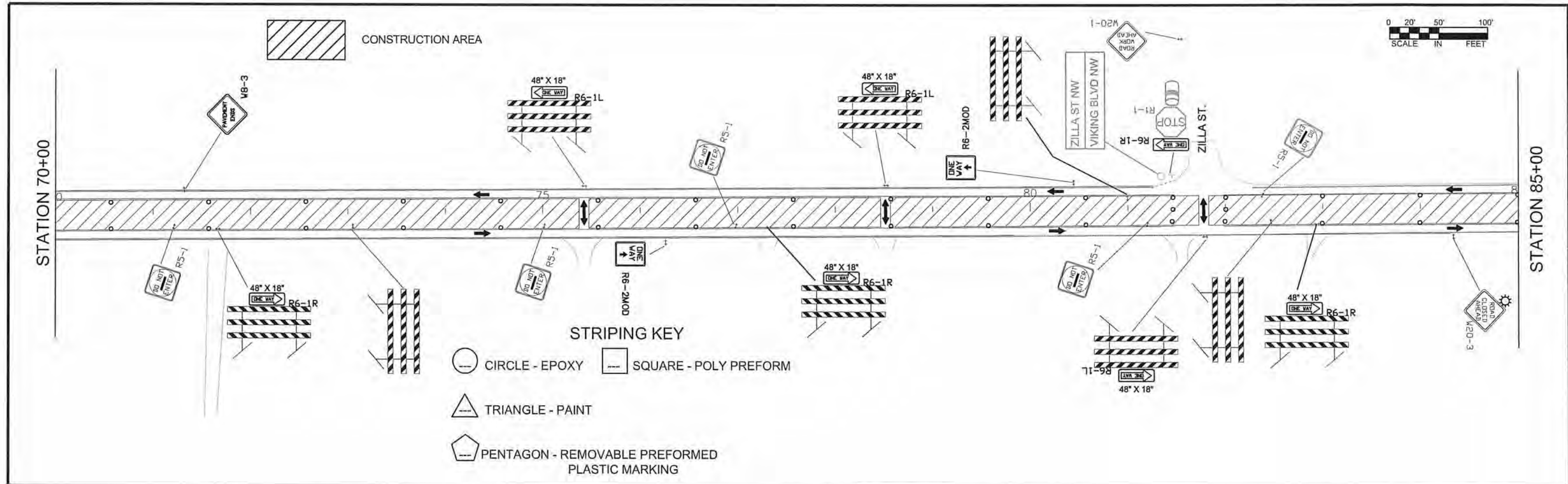
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STAGE 3
TRAFFIC CONTROL

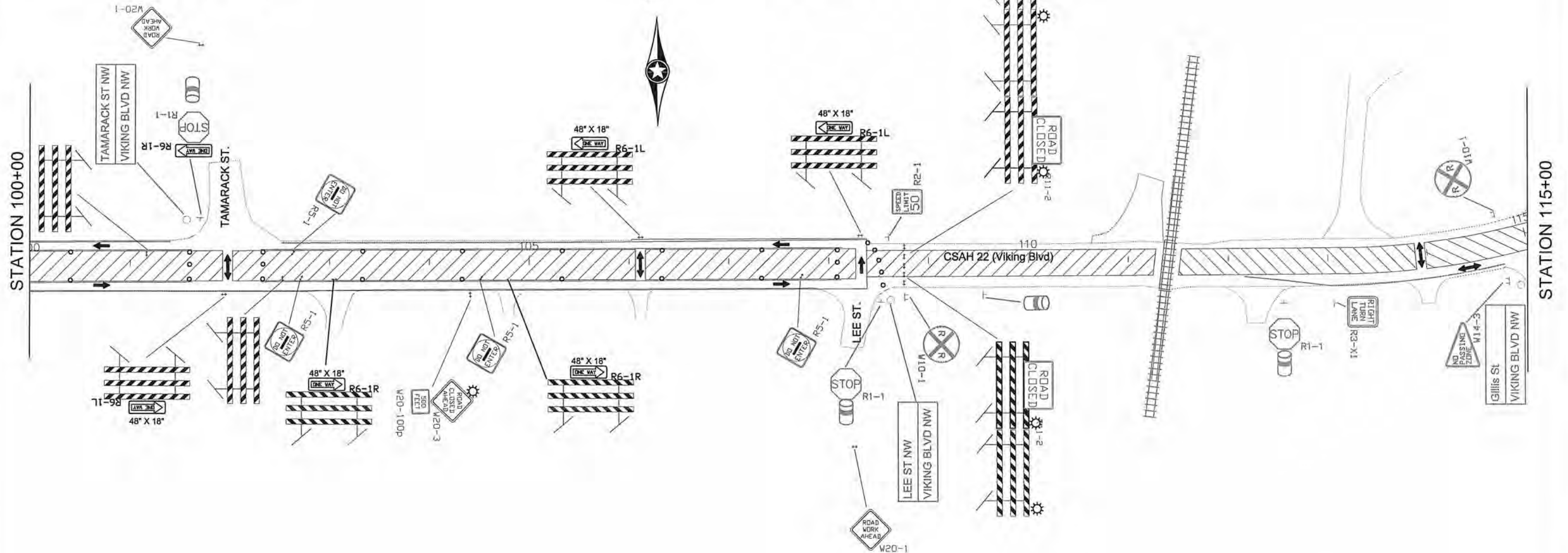
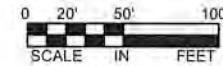
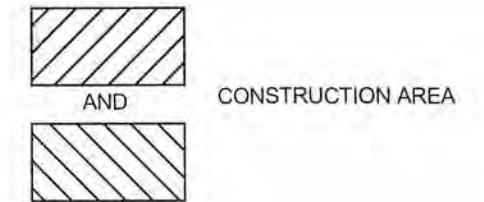
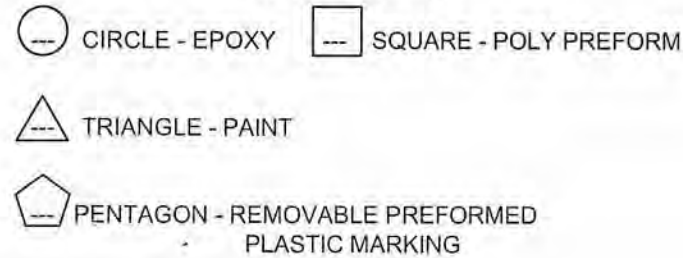
Sheet 100 of 210 Sheets



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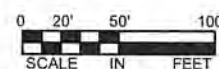
NAME: P:\02-622-34\Baset\TRAFFIC\TC STAGE 3.dwg

STRIPING KEY



STAGE 3 CONSTRUCTION NOTES:

- MAINLINE CONCRETE PAVING OPERATIONS FROM STA 57+87 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32) AND FROM STA 173+96.21 TO STA 184+69.63.
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STAGE 3 TRAFFIC CONTROL NOTES:

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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Baset\TRAFFIC\CTC STAGE 3.dwg

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

PRINT NAME: ANDREW WITTER

SIGNATURE: *[Signature]*

DATE: 3/2/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 3
TRAFFIC CONTROL

Sheet 102 of 210 Sheets

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

0 20' 50' 100'
SCALE IN FEET

CONSTRUCTION AREA

STATION 115+00

STATION 130+00

STAGE 3 CONSTRUCTION NOTES:

- MAINLINE CONCRETE PAVING OPERATIONS FROM STA 57+87 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32) AND FROM STA 173+96.21 TO STA 184+69.63.
- RAILROAD CROSSING MUST BE COMPLETED BY BNSF PRIOR TO THIS STAGE.

STAGE 3 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

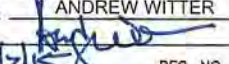
MATCHLINE 'A' - SEE LEFT

MATCHLINE 'A' - SEE RIGHT

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: ANDREW WITTER

SIGNATURE: 

DATE: 3/25/15 REG. NO. 42757

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DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

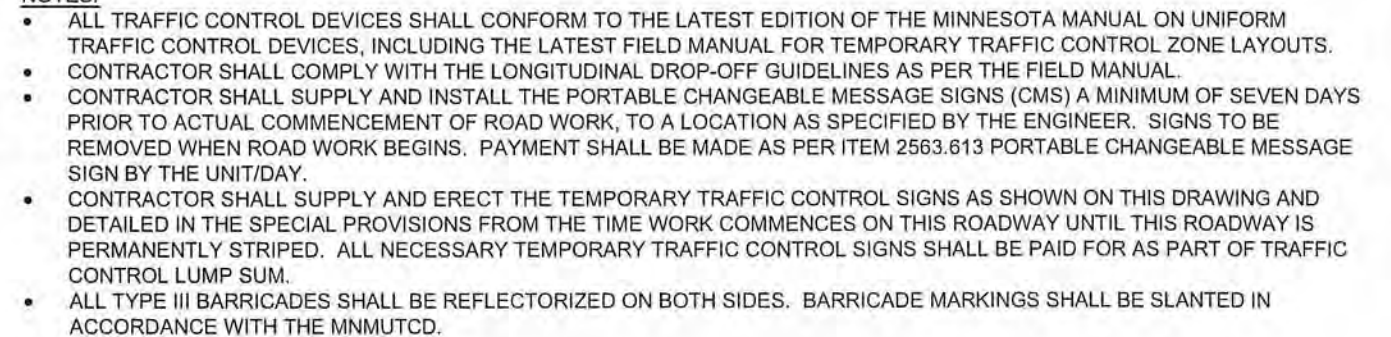
COUNTY PROJECT NO. _____

STAGE 3
TRAFFIC CONTROL

Sheet 103 of 210 Sheets

- MAINLINE CONCRETE PAVING OPERATIONS FROM STA 57+87 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32) AND FROM STA 173+96.21 TO STA 184+69.63.
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NO	DATE	BY	CKD	APPR	REVISION									
NAME: P:\02-622-34\Basel\TRAFFIC\TC STAGE 3.dwg														

STATION 138+00

CSAH 22 (Viking Blvd)

STAGE 3 CONSTRUCTION NOTES:

- MAINLINE CONCRETE PAVING OPERATIONS FROM STA 57+87 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32) AND FROM STA 173+96.21 TO STA 184+69.63.
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STAGE 3 TRAFFIC CONTROL NOTES:

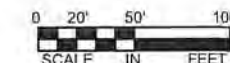
- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
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STRIPING KEY

- CIRCLE - EPOXY SQUARE - POLY PREFORM
TRIANGLE - PAINT
PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



CONSTRUCTION AREA



STATION 155+00

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: ANDREW WITTER
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DATE: 3/2/15 REG. NO. 42757

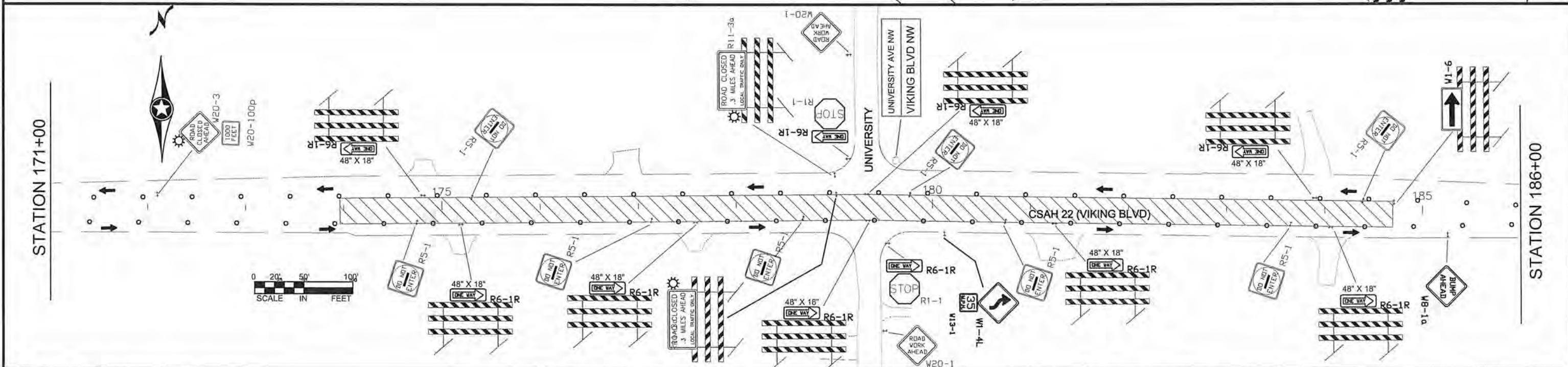
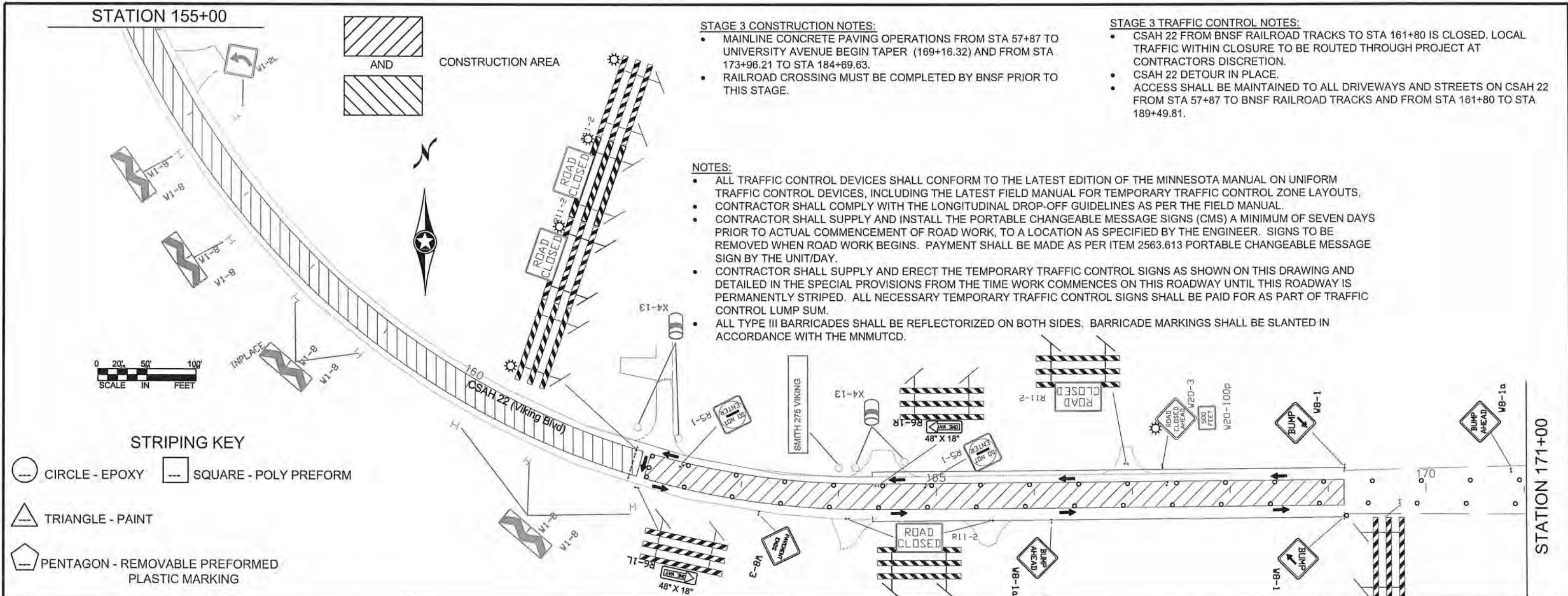
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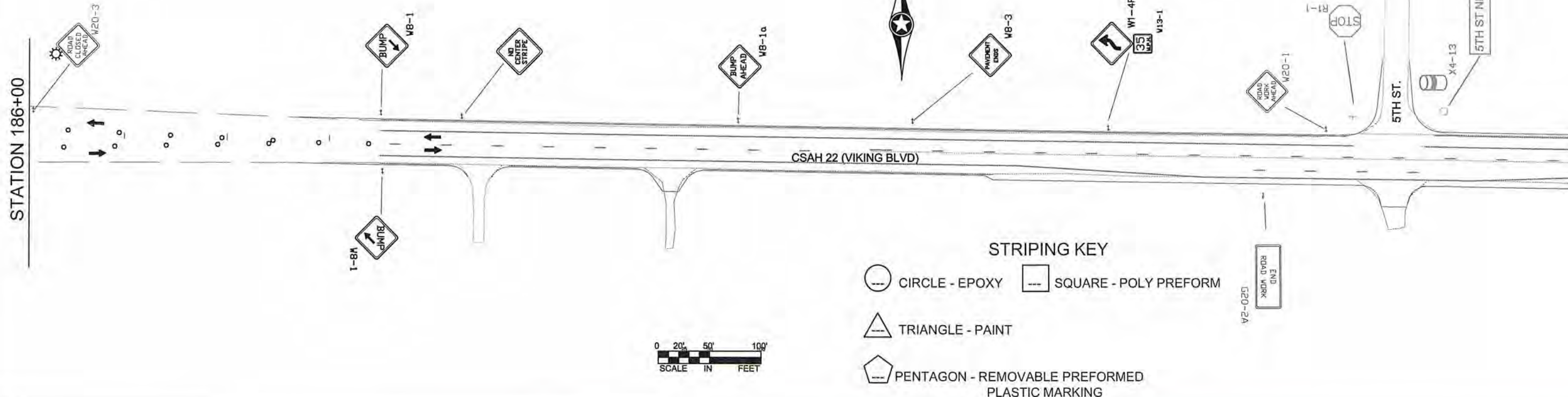
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
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STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 3
TRAFFIC CONTROL
Sheet 105 of 210 Sheets



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STAGE 3 CONSTRUCTION NOTES:

- MAINLINE CONCRETE PAVING OPERATIONS FROM STA 57+87 TO UNIVERSITY AVENUE BEGIN TAPER (169+16.32) AND FROM STA 173+96.21 TO STA 184+69.63.
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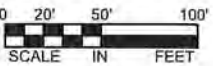
STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 3
TRAFFIC CONTROL

Sheet 107 of 210 Sheets

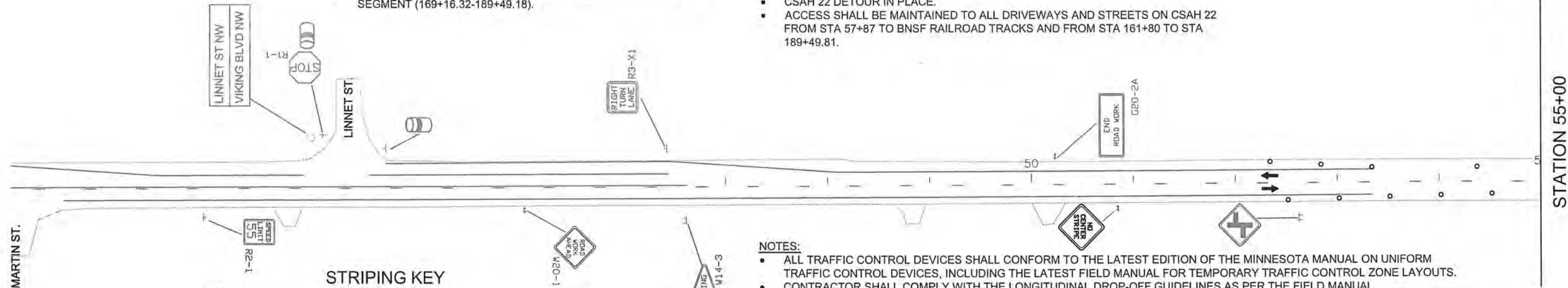


STAGE 4 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
- CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.18).

STAGE 4 TRAFFIC CONTROL NOTES:

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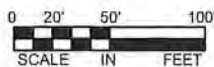
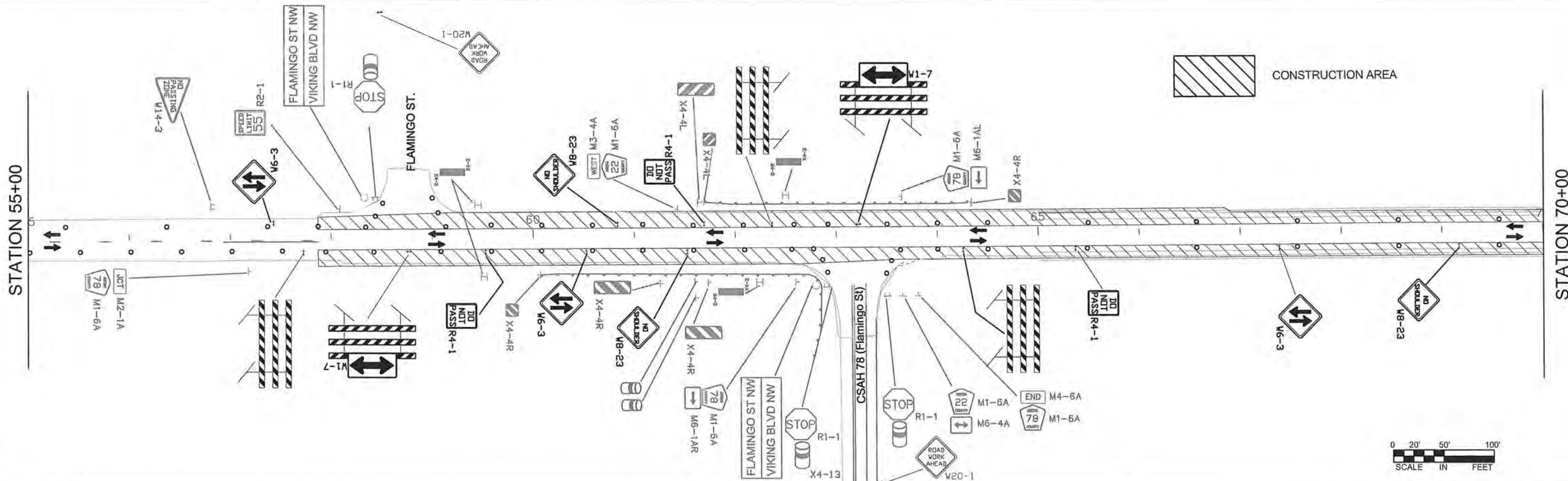


STRIPING KEY

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- SQUARE - POLY PREFORM
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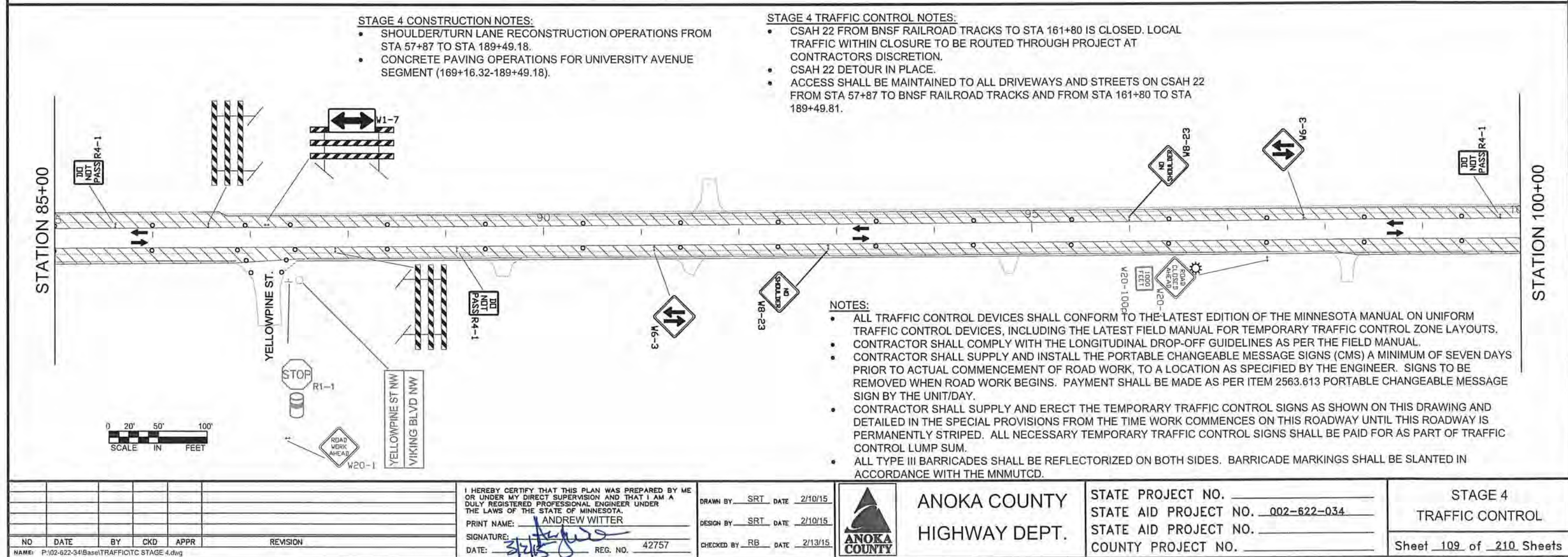
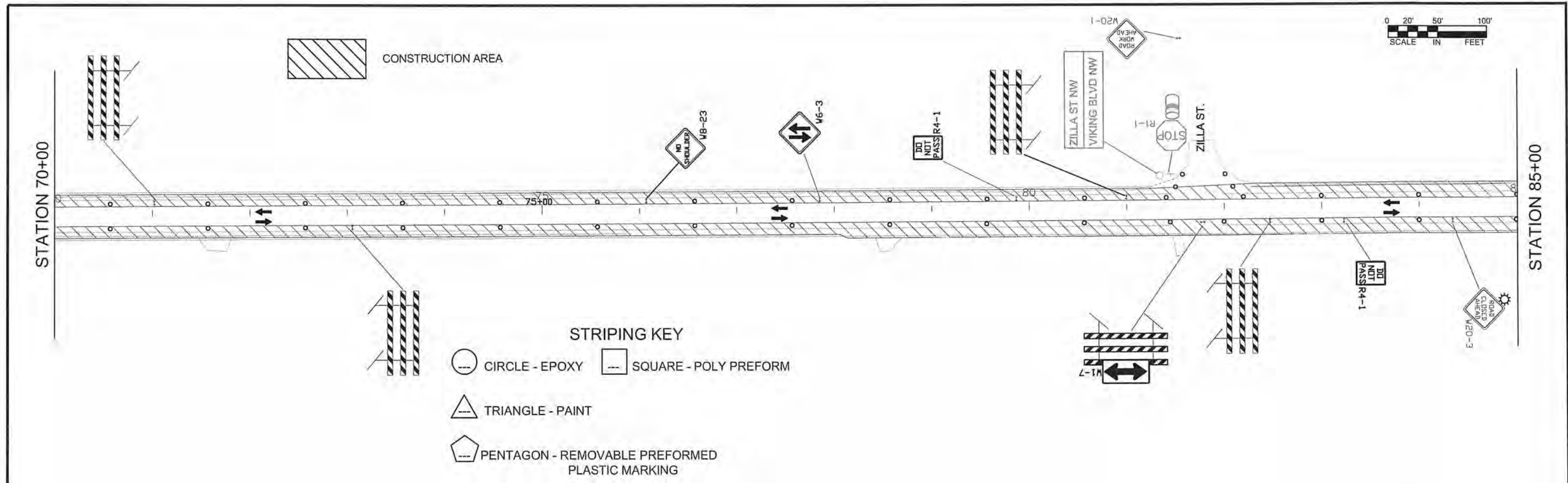
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STAGE 4
TRAFFIC CONTROL

Sheet 108 of 210 Sheets



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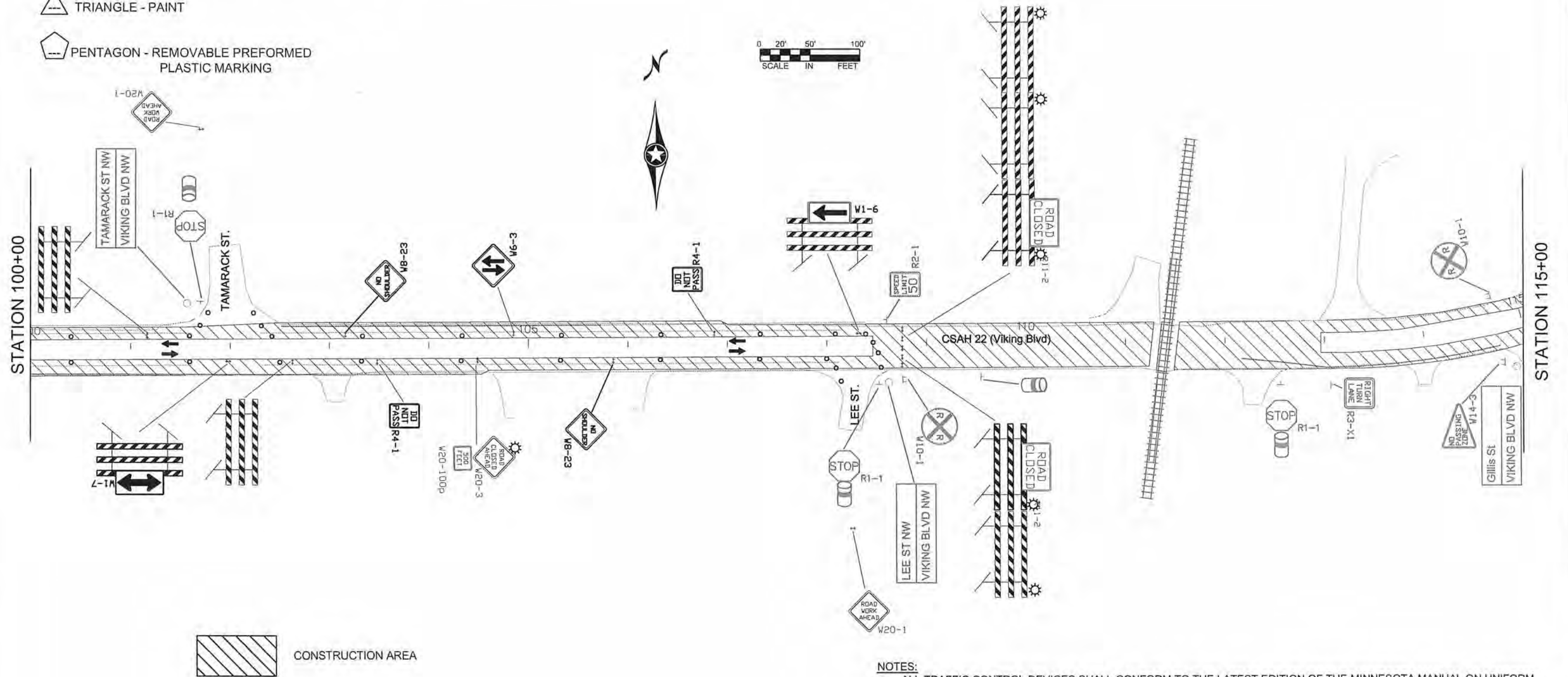
COUNTY PROJECT NO. _____

STAGE 4
TRAFFIC CONTROL

Sheet 109 of 210 Sheets

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STAGE 4 CONSTRUCTION NOTES:

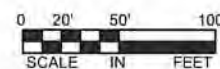
- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
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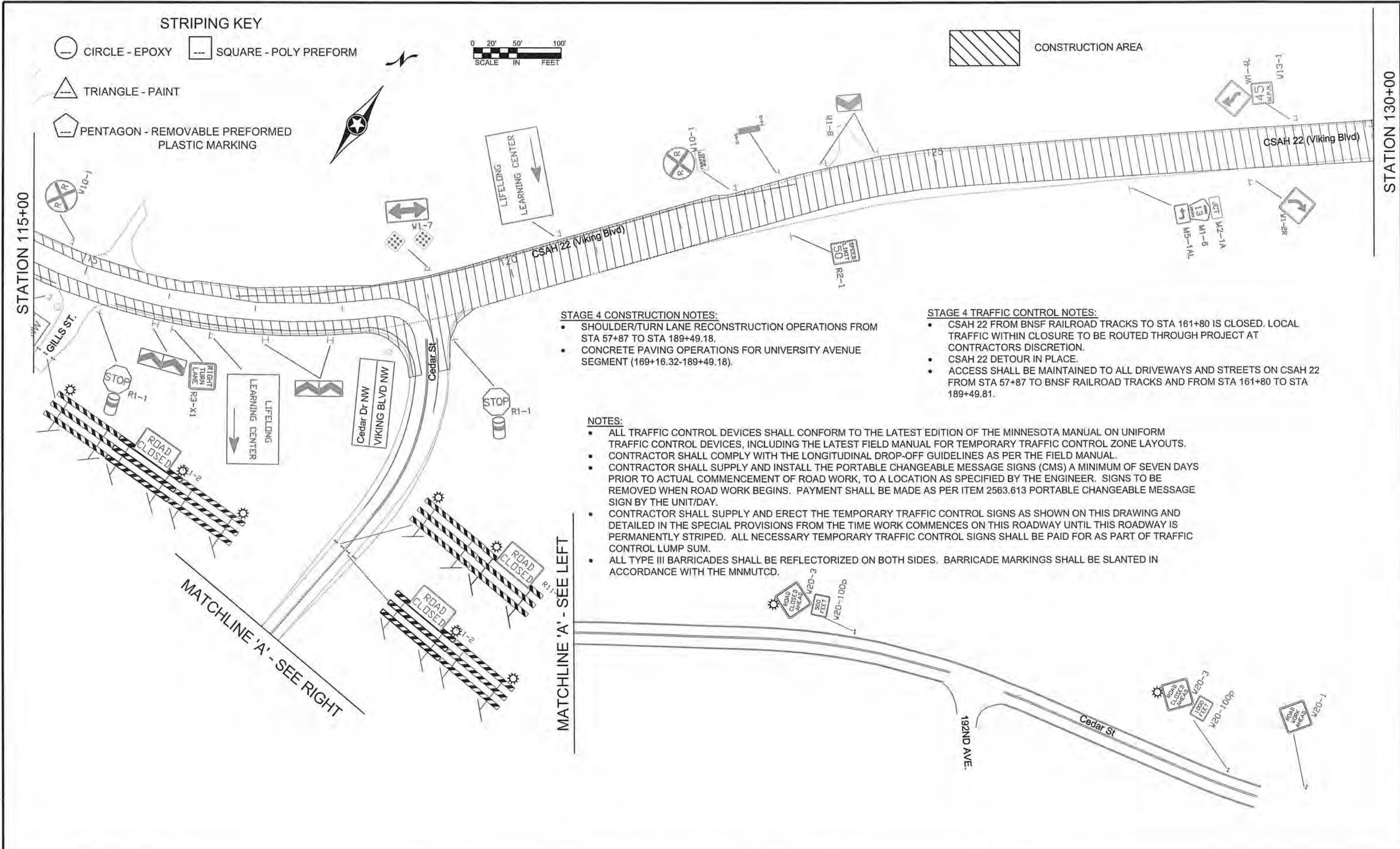
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STAGE 4
TRAFFIC CONTROL

Sheet 110 of 210 Sheets



STRIPING KEY

- CIRCLE - EPOXY
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CONSTRUCTION AREA

STAGE 4 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
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STAGE 4
TRAFFIC CONTROL

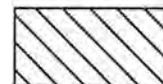
Sheet 111 of 210 Sheets

STAGE 4 CONSTRUCTION NOTES:

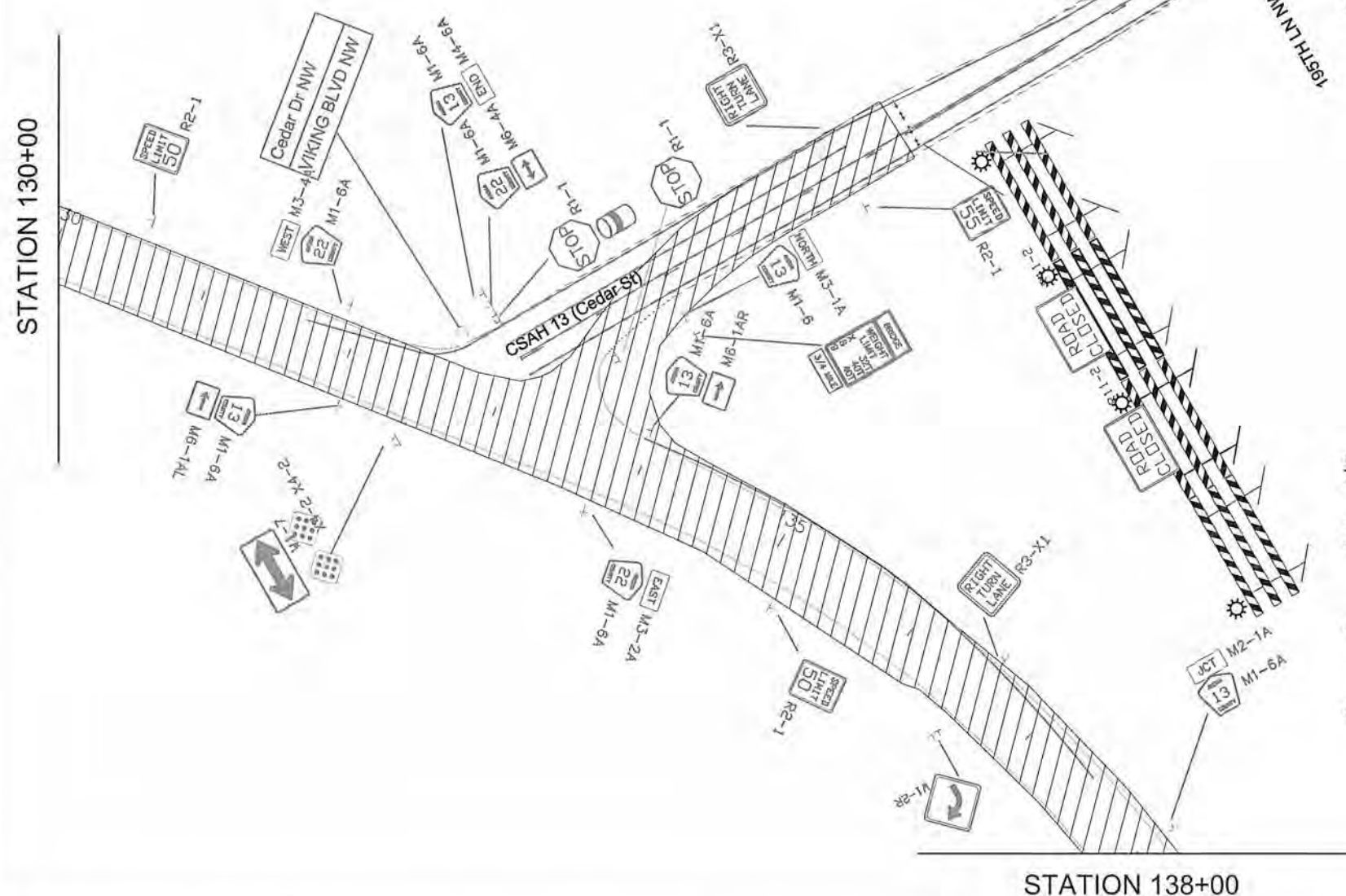
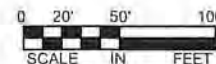
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- CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.18).

STAGE 4 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.



CONSTRUCTION AREA



STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
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- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

STATION 138+00

NO	DATE	BY	CKD	APPR	REVISION

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 PRINT NAME: ANDREW WITTER
 SIGNATURE: *[Signature]*
 DATE: 3/2/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15
 DESIGN BY: SRT DATE: 2/10/15
 CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-622-034
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____

STAGE 4
 TRAFFIC CONTROL
 Sheet 112 of 210 Sheets

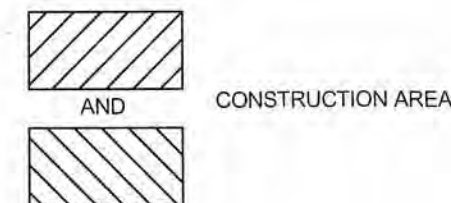
STATION 138+00

CSAH 22 (Viking Blvd)

STATION 155+00

STRIPING KEY

- CIRCLE - EPOXY SQUARE - POLY PREFORM
TRIANGLE - PAINT
PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



STAGE 4 CONSTRUCTION NOTES:

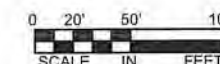
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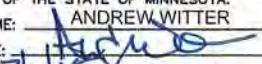
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PRINT NAME: ANDREW WITTER

SIGNATURE: 

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

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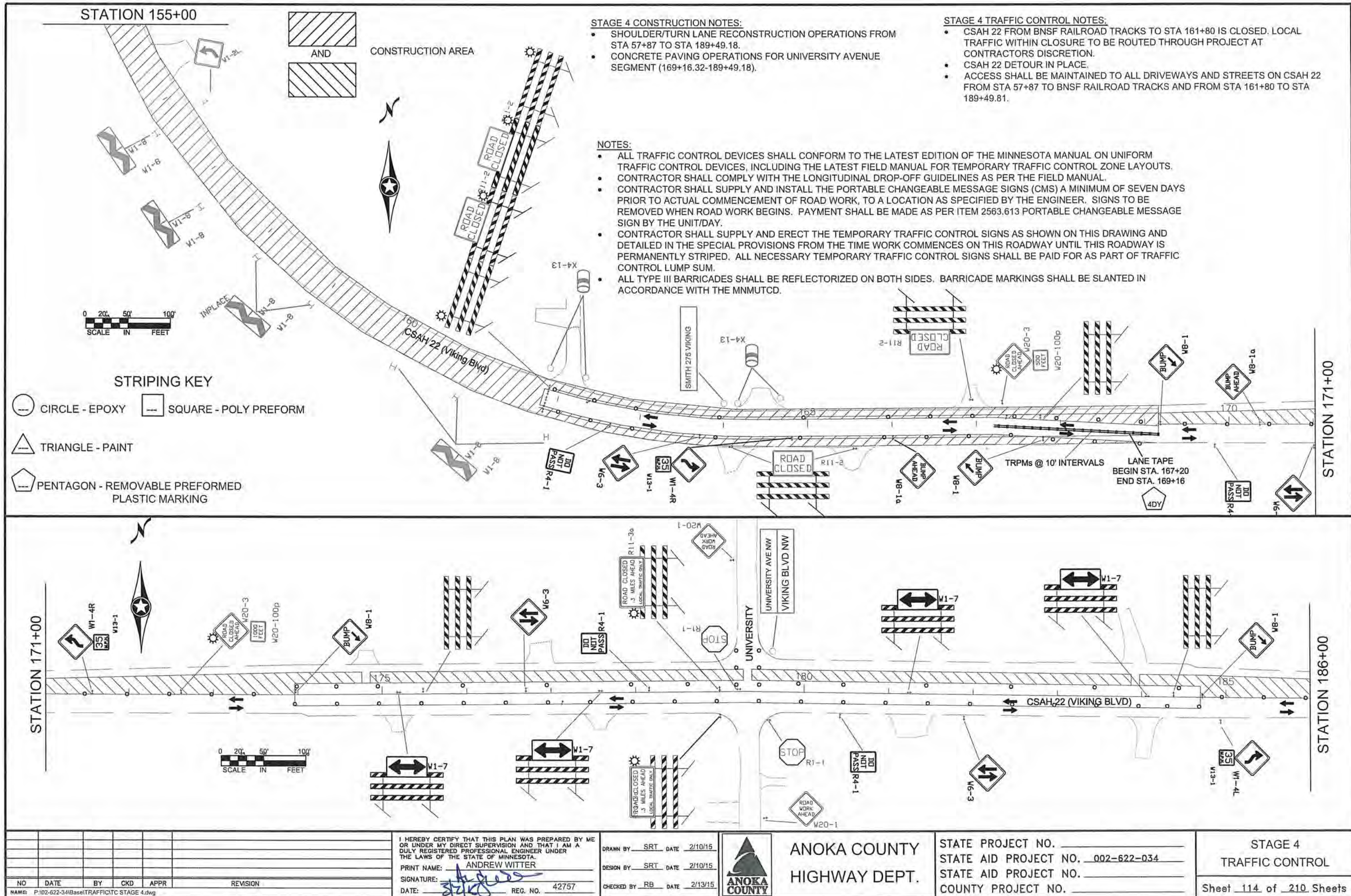
COUNTY PROJECT NO. _____

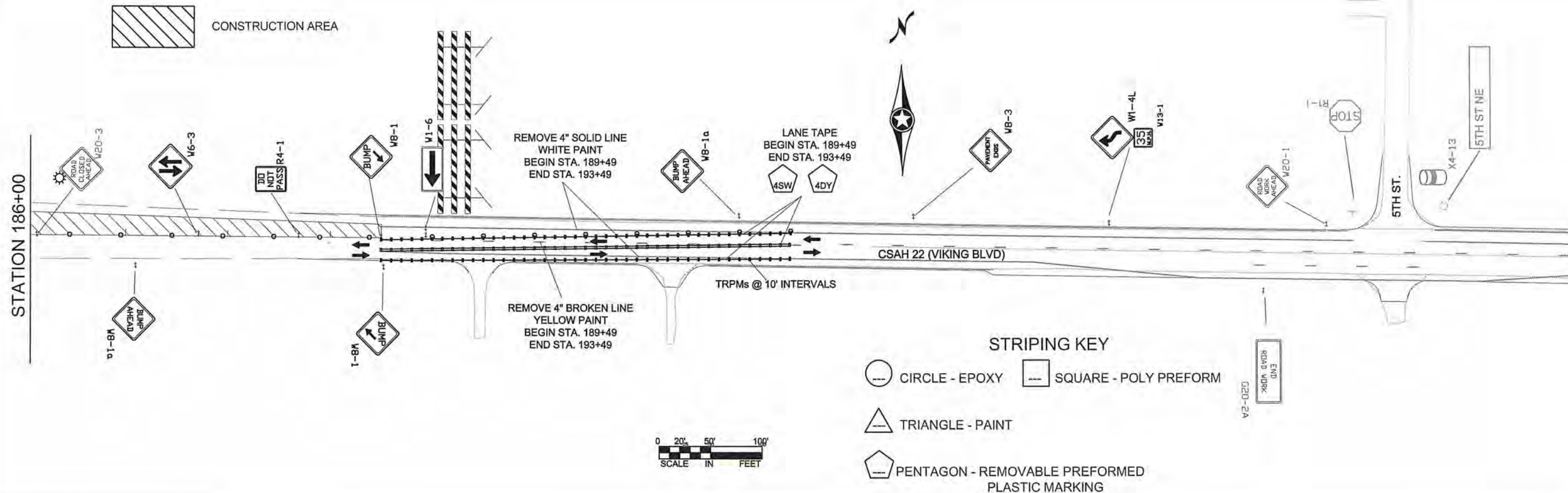
STAGE 4
TRAFFIC CONTROL

Sheet 113 of 210 Sheets

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Basetraffic\TC STAGE 4.dwg





STAGE 4 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
- CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT (169+16.32-189+49.18).

STAGE 4 TRAFFIC CONTROL NOTES:

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ANOKA COUNTY
HIGHWAY DEPT.

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STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

STAGE 4
TRAFFIC CONTROL

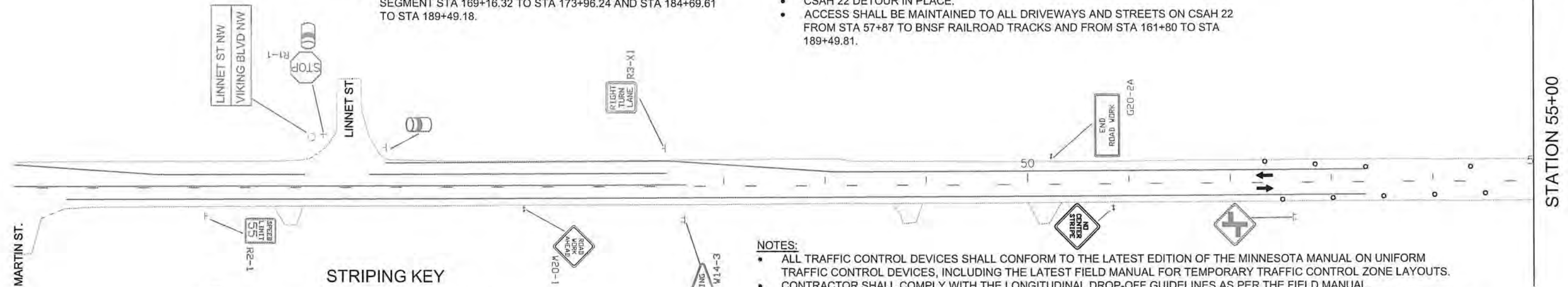
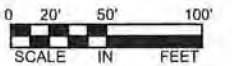
Sheet 115 of 210 Sheets

STAGE 5 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
- CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT STA 169+16.32 TO STA 173+96.24 AND STA 184+69.61 TO STA 189+49.18.

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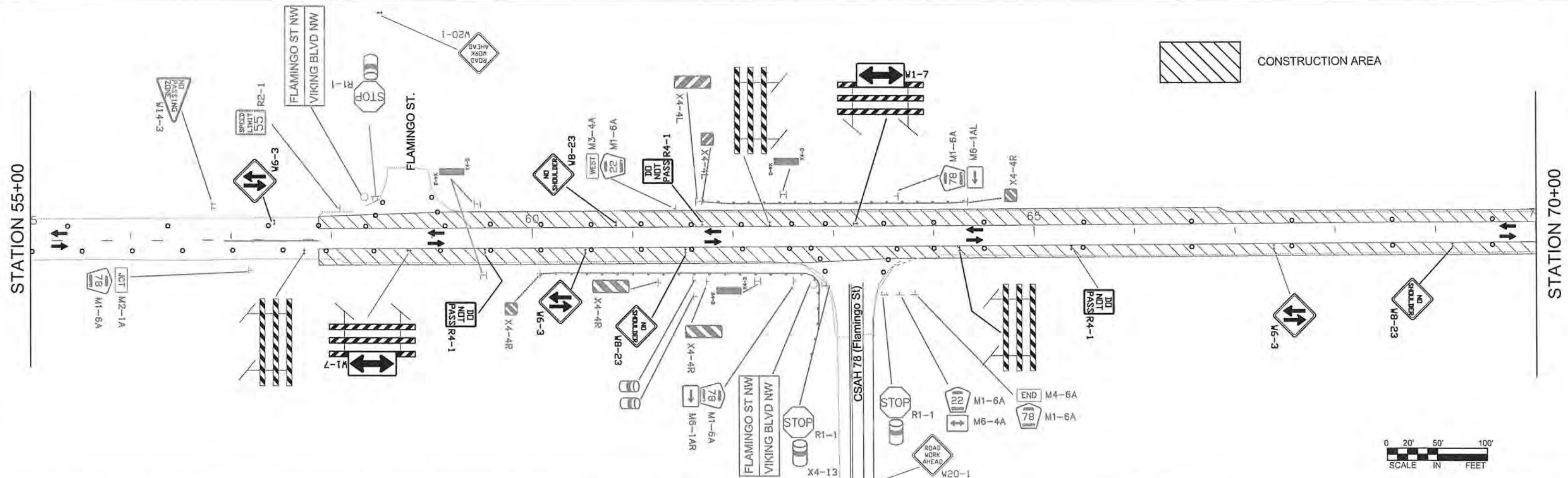


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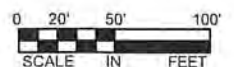
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CONSTRUCTION AREA



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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

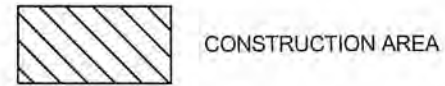
COUNTY PROJECT NO. _____

STAGE 5
TRAFFIC CONTROL

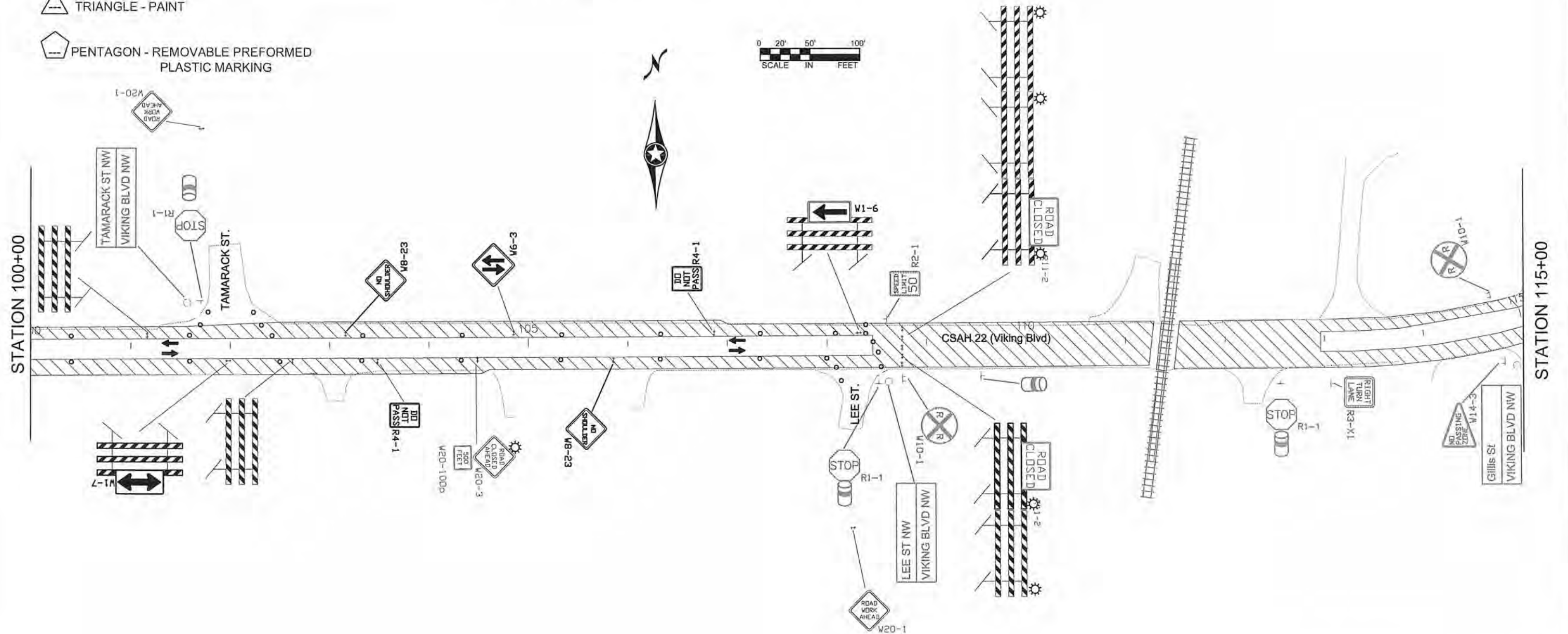
Sheet 116 of 210 Sheets

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



0 20' 50' 100'
SCALE IN FEET



STAGE 5 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
- CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT STA 169+16.32 TO STA 173+96.24 AND STA 184+69.61 TO STA 189+49.18.

0 20' 50' 100'
SCALE IN FEET

STAGE 5 TRAFFIC CONTROL NOTES:

- CS AH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
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ANOKA COUNTY
HIGHWAY DEPT.

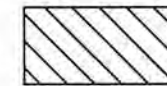
STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 5
TRAFFIC CONTROL
Sheet 118 of 210 Sheets

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

0 20' 50' 100'
SCALE IN FEET



CONSTRUCTION AREA

STATION 115+00

STATION 130+00

STAGE 5 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
- CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT STA 169+16.32 TO STA 173+96.24 AND STA 184+69.61 TO STA 189+49.18.

STAGE 5 TRAFFIC CONTROL NOTES:

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MATCHLINE 'A' - SEE LEFT

MATCHLINE 'A' - SEE RIGHT

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ANOKA COUNTY
HIGHWAY DEPT.

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STAGE 5
TRAFFIC CONTROL

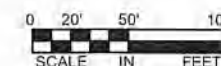
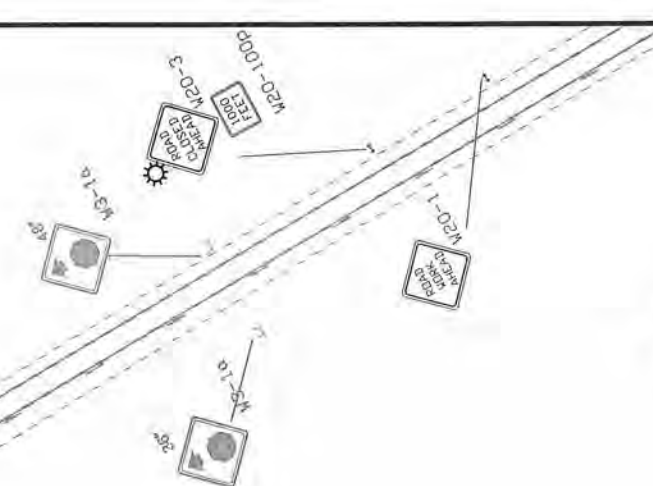
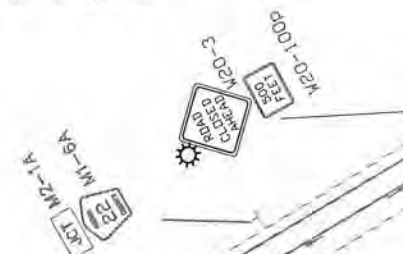
Sheet 119 of 210 Sheets

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
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CONSTRUCTION AREA



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STATION 130+00

CSAH 13 (Cedar St)

STATION 138+00

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Basil\TRAFFIC\TC STAGE 5.dwg					

DATE: 3/2/87 REG. NO. 42757

CHECKED BY RB DATE 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 5

TRAFFIC CONTROL

Sheet 120 of 210 Sheets

STATION 138+00

CSAH 22 (Viking Blvd)

STAGE 5 CONSTRUCTION NOTES:

- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
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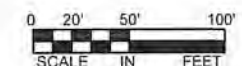
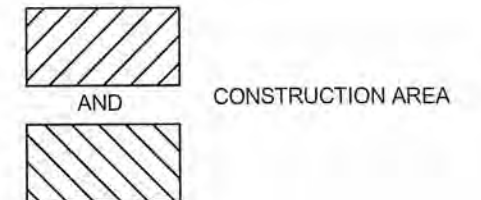
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- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.

STRIPING KEY

- CIRCLE - EPOXY SQUARE - POLY PREFORM
TRIANGLE - PAINT
PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



STATION 155+00

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: ANDREW WITTER
SIGNATURE:
DATE: 3/13/15 REG. NO. 42757

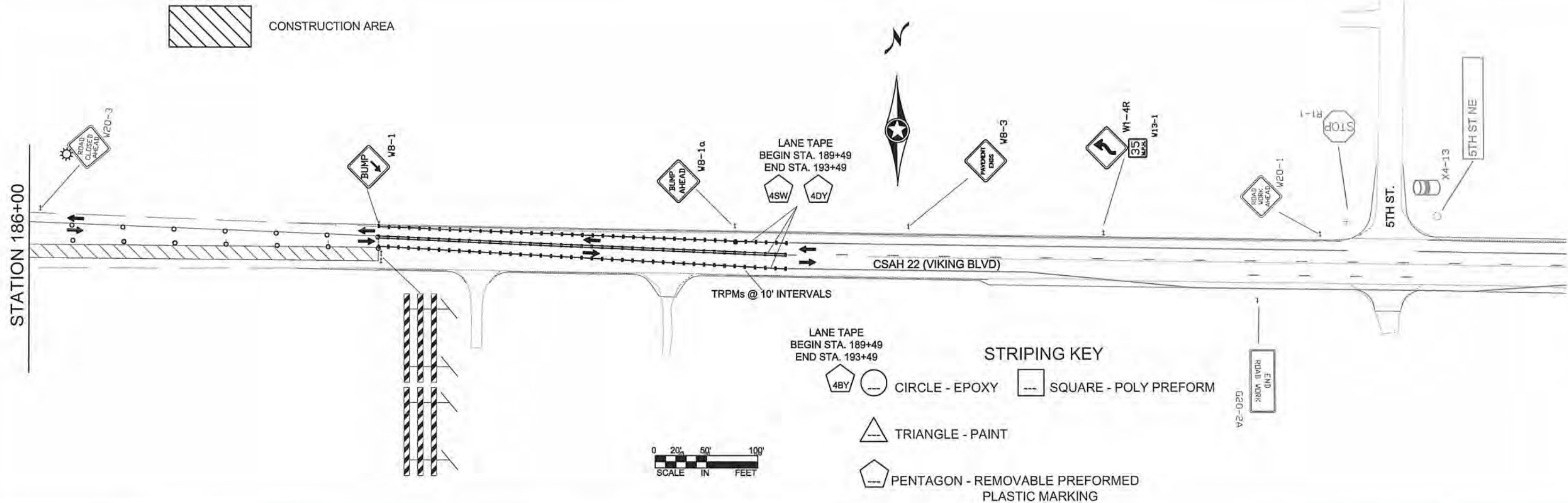
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DESIGN BY: SRT DATE: 2/10/15
CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 5
TRAFFIC CONTROL
Sheet 121 of 210 Sheets



- STAGE 5 CONSTRUCTION NOTES:**
- SHOULDER/TURN LANE RECONSTRUCTION OPERATIONS FROM STA 57+87 TO STA 189+49.18.
 - CONCRETE PAVING OPERATIONS FOR UNIVERSITY AVENUE SEGMENT STA 169+16.32 TO STA 173+96.24 AND STA 184+69.61 TO STA 189+49.18.

- STAGE 5 TRAFFIC CONTROL NOTES:**
- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
 - CSAH 22 DETOUR IN PLACE.
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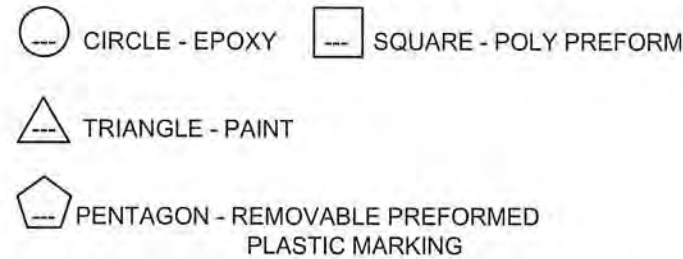
- NOTES:**
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
 - CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
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 - CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
 - ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DRAWN BY <u>SRT</u> DATE <u>2/10/15</u>			ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. _____	STAGE 5
					PRINT NAME: <u>ANDREW WITTER</u>		DESIGN BY <u>SRT</u> DATE <u>2/10/15</u>				STATE AID PROJECT NO. <u>002-622-034</u>	TRAFFIC CONTROL
					SIGNATURE: <u>[Signature]</u>		CHECKED BY <u>RB</u> DATE <u>2/13/15</u>				COUNTY PROJECT NO. _____	Sheet <u>123</u> of <u>210</u> Sheets
NO	DATE	BY	CKD	APPR	REVISION	DATE: <u>3/2/15</u>	REG. NO. <u>42757</u>					

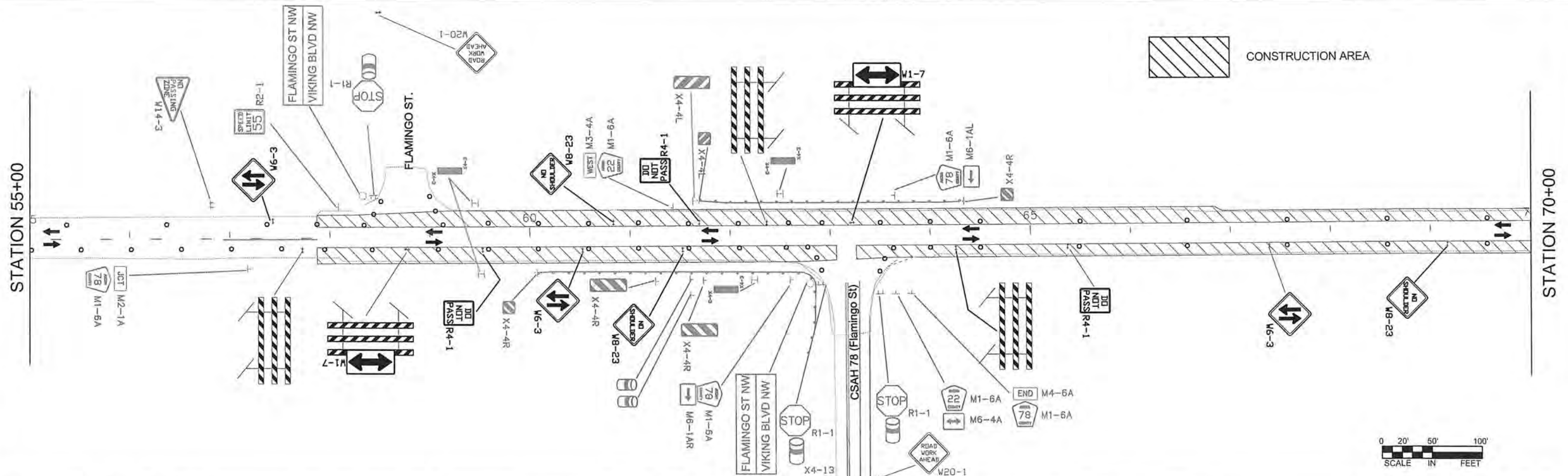
NAME: P:\02-622-34\Bases\TRAFFIC\TC STAGE 5.dwg

STAGE 6 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
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PRINT NAME: ANDREW WITTER

SIGNATURE: [Signature]

DATE: 3/15/84 REG. NO. 42757

CHECKED BY RB DATE 2/13/15



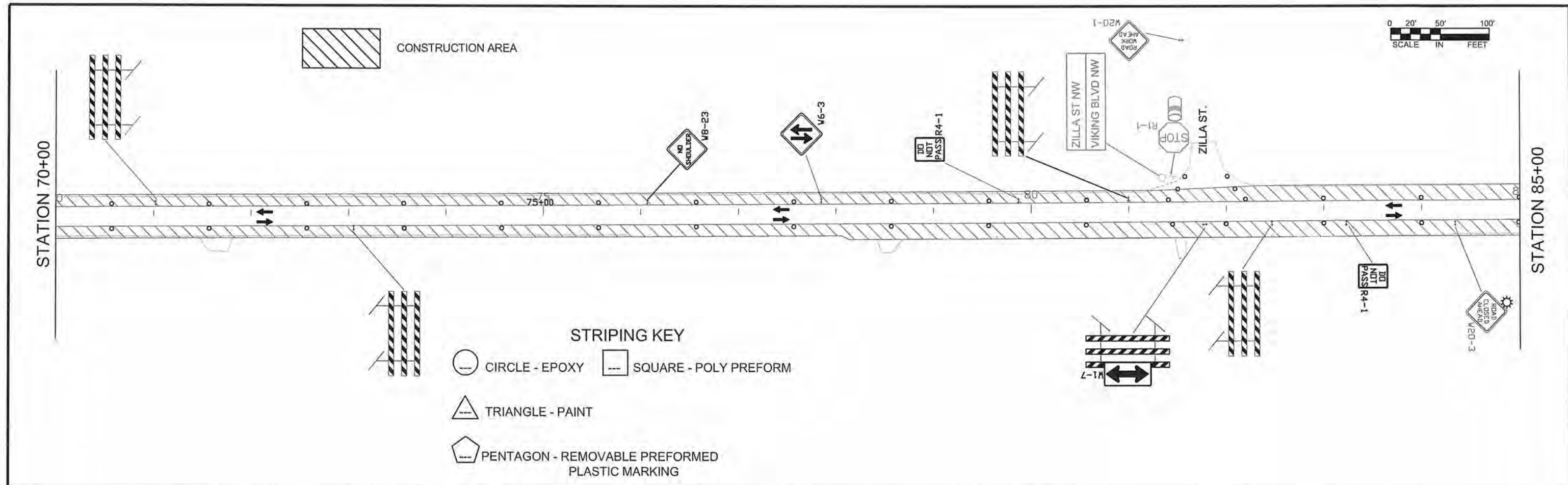
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 6

TRAFFIC CONTROL

Sheet 124 of 210 Sheets

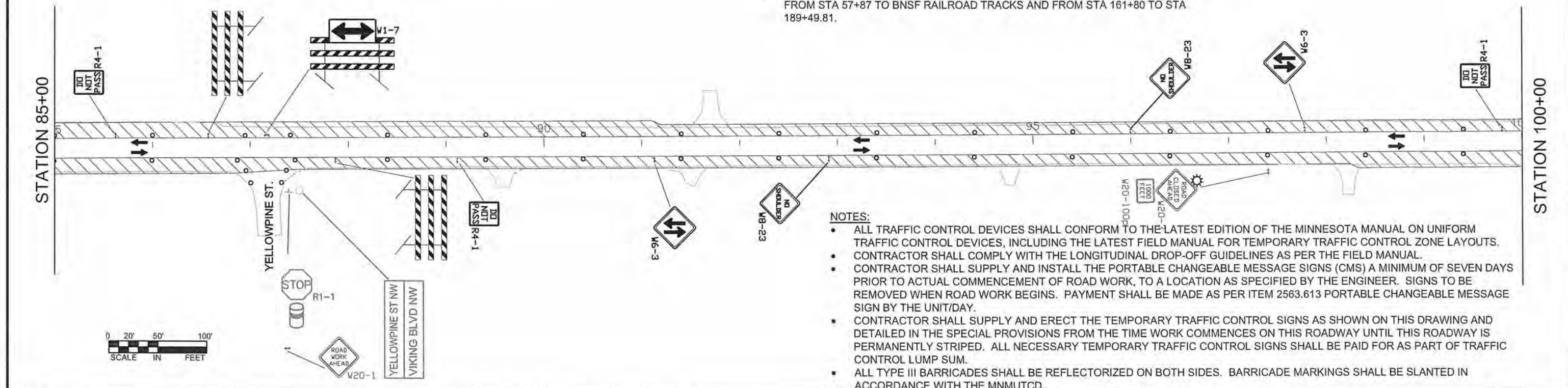


STAGE 6 CONSTRUCTION NOTES:

- BITUMINOUS SHOULDER/TURN LANE PAVING OPERATIONS FROM STA 57+87 TO STA 189+49.18.

STAGE 6 TRAFFIC CONTROL NOTES:

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PRINT NAME: ANDREW WITTER

SIGNATURE: *Andrew Witter*

DATE: 3/21/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
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STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

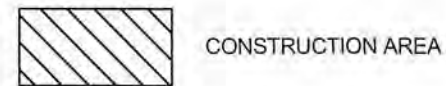
COUNTY PROJECT NO. _____

STAGE 6
TRAFFIC CONTROL

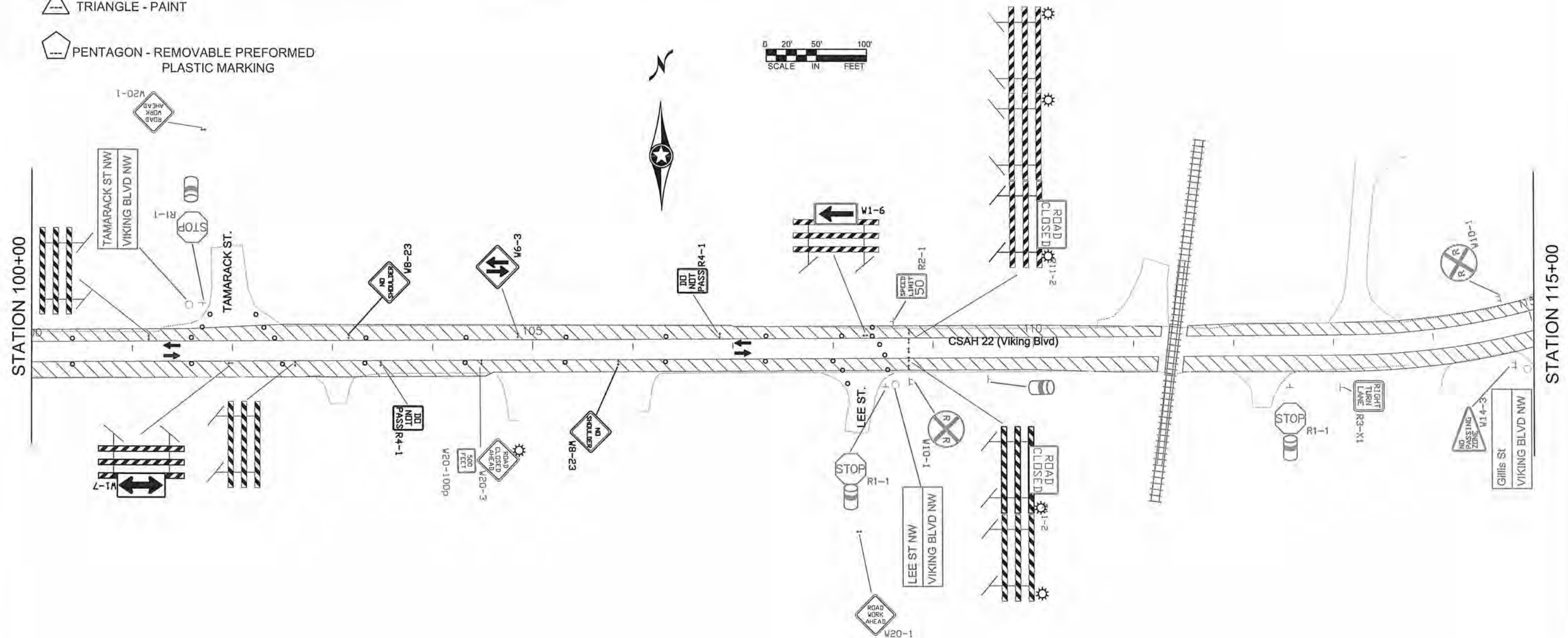
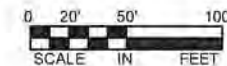
Sheet 125 of 210 Sheets

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



CONSTRUCTION AREA



STAGE 6 CONSTRUCTION NOTES:

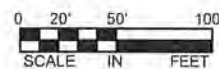
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PRINT NAME: ANDREW WITTER

SIGNATURE: [Signature]

DATE: 3/2/15 REG. NO. 42757

DRAWN BY SRT DATE 2/10/15

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.

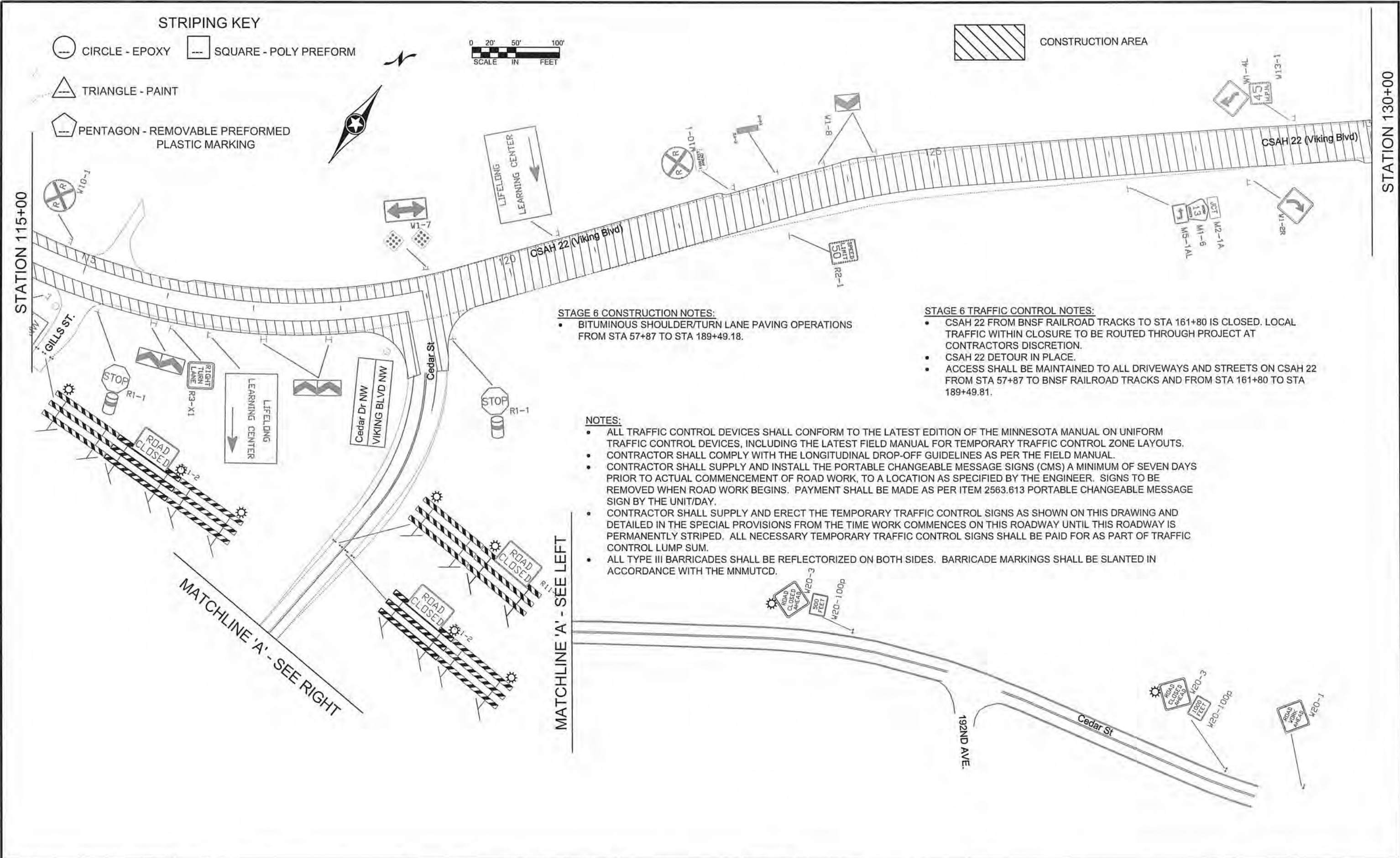
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STATE AID PROJECT NO.

COUNTY PROJECT NO.

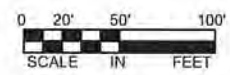
STAGE 6
TRAFFIC CONTROL

Sheet 126 of 210 Sheets



STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - POLY PREFORM
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



CONSTRUCTION AREA

STAGE 6 CONSTRUCTION NOTES:

- BITUMINOUS SHOULDER/TURN LANE PAVING OPERATIONS FROM STA 57+87 TO STA 189+49.18.

STAGE 6 TRAFFIC CONTROL NOTES:

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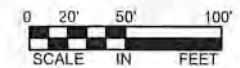
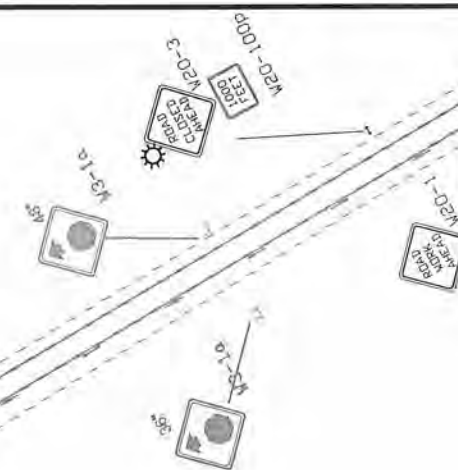
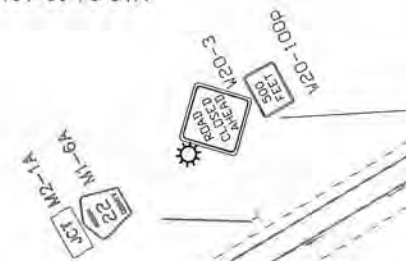
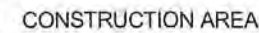
STATION 115+00

STATION 130+00

NO					DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Bases\TRAFFIC\TC STAGE 6.dwg									
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.									
PRINT NAME: ANDREW WITTER									
SIGNATURE: <i>[Signature]</i>									
DATE: 3/2/15 REG. NO. 42757									
DRAWN BY: SRT DATE: 2/10/15					DESIGN BY: SRT DATE: 2/10/15				
CHECKED BY: RB DATE: 2/13/15									
ANOKA COUNTY HIGHWAY DEPT.					STATE PROJECT NO. 002-622-034				
STATE AID PROJECT NO. 002-622-034					COUNTY PROJECT NO.				
STAGE 6 TRAFFIC CONTROL					Sheet 127 of 210 Sheets				

- BITUMINOUS SHOULDER/TURN LANE PAVING OPERATIONS FROM STA 57+87 TO STA 189+49.18.

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STATION 130+00

CSAH 13 (Cedar St)

Cedar Dr NW
VIKING BLVD NW

WEST M3-4A M7-6A

M1-6,
M6-7AL


 EAST
 M3-24
 M1-6A



STATION 138+00

 CIRCLE - EPOXY SQUARE - POLY PREFORM
 TRIANGLE - PAINT
 PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

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NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Base\TRAFFIC\ITC STAGE 6.dwg					

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DATE: 3/2/15 REG. NO. 42757

DRAWN BY SRT DATE 2/10/15

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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STAGE 6

TRAFFIC CONTROL

Sheet 128 of 210 Sheets

STATION 138+00

CSAH 22 (Viking Blvd)

STAGE 6 CONSTRUCTION NOTES:

- BITUMINOUS SHOULDER/TURN LANE PAVING OPERATIONS FROM STA 57+87 TO STA 189+49.18.

STAGE 6 TRAFFIC CONTROL NOTES:

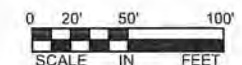
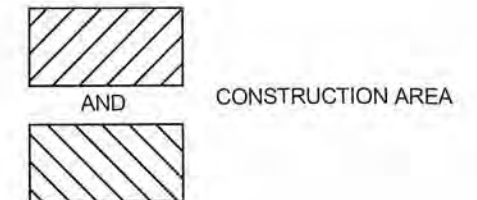
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STRIPING KEY

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TRIANGLE - PAINT
PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



STATION 155+00

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: ANDREW WITTER
SIGNATURE:
DATE: 2/13/15 REG. NO. 42757

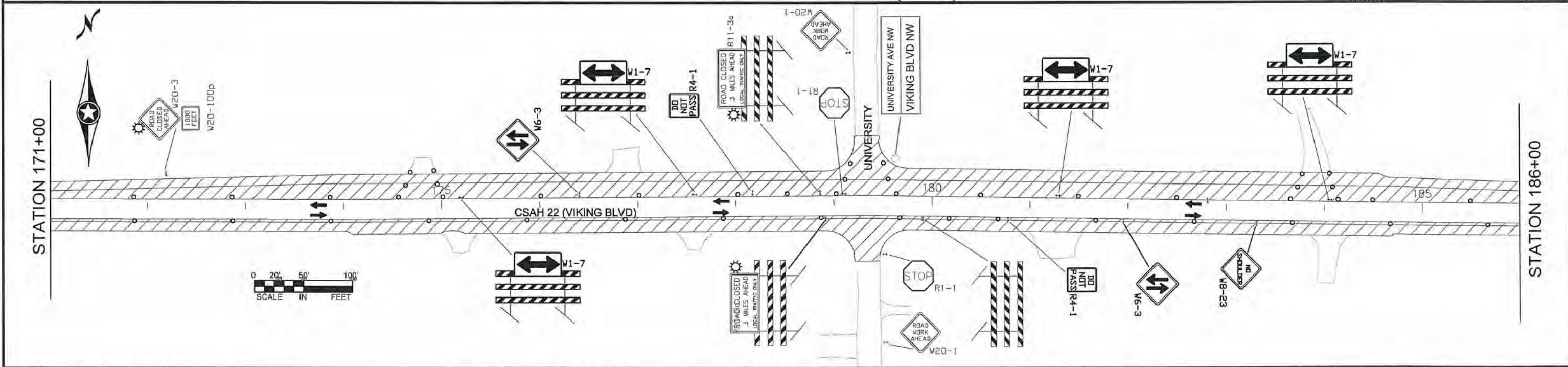
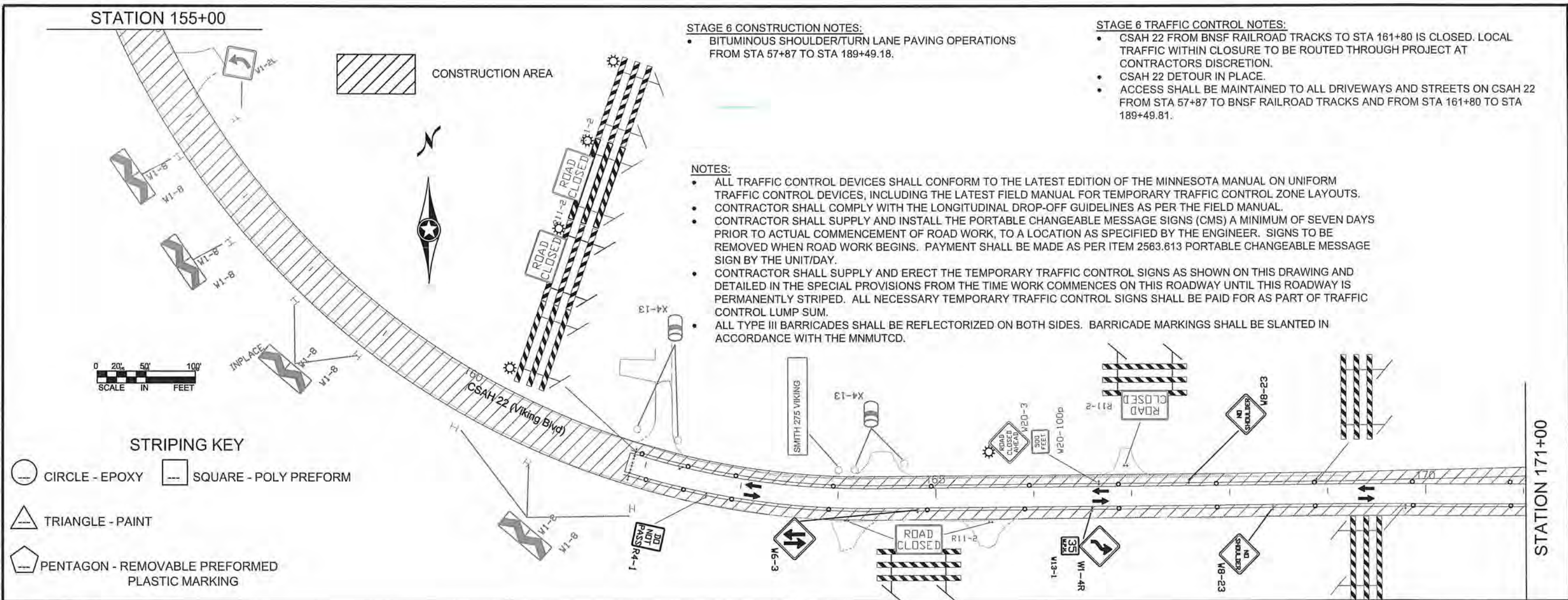
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ANOKA COUNTY
HIGHWAY DEPT.

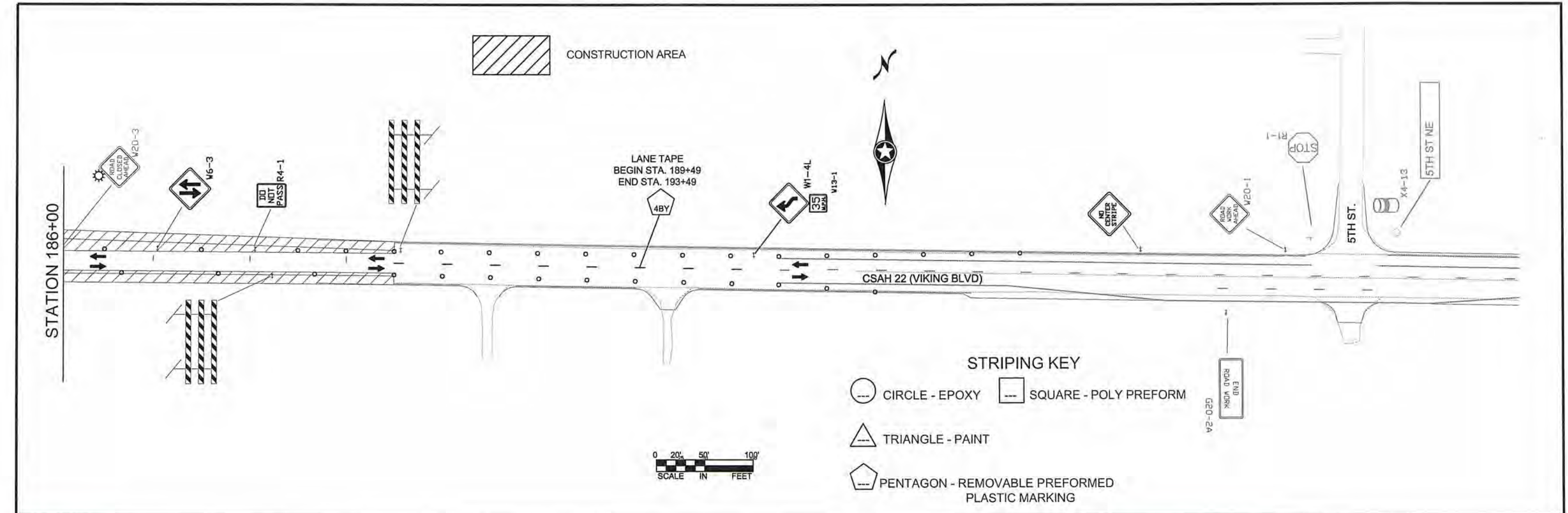
STATE PROJECT NO. _____
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STAGE 6
TRAFFIC CONTROL
Sheet 129 of 210 Sheets



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NO	DATE	BY	CKD	APPR	REVISION							

NAME: P:\02-622-34\Baset\TRAFFIC\TC STAGE 6.dwg



STAGE 6 CONSTRUCTION NOTES:

- BITUMINOUS SHOULDER/TURN LANE PAVING OPERATIONS FROM STA 57+87 TO STA 189+49.18.

STAGE 6 TRAFFIC CONTROL NOTES:

- CSAH 22 FROM BNSF RAILROAD TRACKS TO STA 161+80 IS CLOSED. LOCAL TRAFFIC WITHIN CLOSURE TO BE ROUTED THROUGH PROJECT AT CONTRACTORS DISCRETION.
- CSAH 22 DETOUR IN PLACE.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND STREETS ON CSAH 22 FROM STA 57+87 TO BNSF RAILROAD TRACKS AND FROM STA 161+80 TO STA 189+49.81.

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND INSTALL THE PORTABLE CHANGEABLE MESSAGE SIGNS (CMS) A MINIMUM OF SEVEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
- CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: ANDREW WITTER

SIGNATURE: *[Signature]*

DATE: 3/21/15 REG. NO. 42757

DRAWN BY: SRT DATE: 2/10/15

DESIGN BY: SRT DATE: 2/10/15

CHECKED BY: RB DATE: 2/13/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

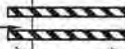
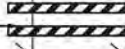
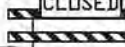
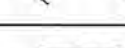
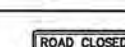
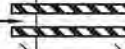
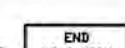
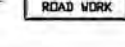
STAGE 6 TRAFFIC
CONTROL

Sheet 131 of 210 Sheets

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4	QTY. STG. 5	QTY. STG. 6
R1-1	48" x 48"		0	2	2	2	2	2
R4-1	24" x 30"		3	5	0	15	15	14
R5-1	30" x 30"		0	5	26	0	0	0
R6-1R	36" x 12"		0	3	7	0	0	0
W6-2MOD	24" x 30"		0	0	4	0	0	0
W8-1a	48" x 48"		3	6	7	4	2	0
W8-1	48" x 48"		4	8	8	6	2	0
W8-3	48" x 48"		2	4	4	1	1	0
W8-23	48" x 48"		0	0	0	8	8	11
W6-3	48" x 48"		4	6	0	12	12	11
W20-1	48" x 48"		2	2	1	1	1	2
W20-1	48" x 48"		12	12	12	12	12	12
W1-6	48" x 24"		0	0	0	2	1	1
TYPE II	8 FOOT		0	0	0	2	1	1
W1-6	48" x 24"		0	0	2	0	0	0
TYPE II	8 FOOT		0	0	2	0	0	0
W1-7	48" x 24"		0	0	0	9	10	9
TYPE II	8 FOOT		0	0	0	9	10	9

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MNMUTCD.

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4	QTY. STG. 5	QTY. STG. 6
R6-1R	48" x 18"		0	0	15	0	0	0
TYPE II	8 FOOT		0	0	15	0	0	0
R6-1L	48" x 18"		0	4	13	0	0	0
	8 FOOT		0	4	13	0	0	0
R11-2	48" x 30"		4	4	7	7	7	7
TYPE II	8 FOOT		4	4	7	7	7	7
R11-2	48" x 30"		6	6	6	6	6	6
TYPE II	8 FOOT		6	6	6	6	6	6
R11-4	60" x 30"		1	1	1	1	1	1
TYPE II	8 FOOT		1	1	1	1	1	1
G20-2A	48" x 24"		2	2	2	2	2	2
W1-4L	48" x 48"		0	0	2	2	2	1
W13-1	30" x 30"		0	0	2	2	2	1
W1-4R	48" x 48"		0	1	2	2	2	1
W13-1	30" x 30"		0	1	2	2	2	1
W20-3	48" x 48"		10	10	10	10	10	10
W20-100p	42" x 18"		4	4	4	4	4	4
			4	4	4	4	4	4

M.U.T.C.D. CODE	SIZE	INSERT	QTY. STG. 1	QTY. STG. 2	QTY. STG. 3	QTY. STG. 4	QTY. STG. 5	QTY. STG. 6
FLASHER			6	6	6	6	6	6
TYPE III	8 FOOT		14	6	6	21	21	22
FLASHER			7	7	7	7	7	7
TYPE III	8 FOOT		7	15	18	7	7	7
REFLECTORIZED REBOUNDABLE DRUM			204	168	271	253	286	261
R4-7	24" x 30"		0	2	0	0	0	0
X4-2	18" x 18"		0	2	0	0	0	0
CHANGABLE MESSAGE BOARD			2	0	0	0	0	0
R11-4	60" x 30"		1	1	1	1	1	1
TYPE III	8 FOOT		1	1	1	1	1	1

CUSTOM SIGN DETAILS



R6-2_MOD;
1.50" Radius, 0.63" Border, 0.38" Indent, Black on White;
[ONE] D specified length;
[WAY] D;
Arrow Custom - 8.00" 90°;

K TEMPORARY PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
PAVEMENT MARKING REMOVAL	LIN FT	3215
TEMPORARY RAISED PAVEMENT MARKER	EACH	483
4" WHITE LATEX PAINT	LIN FT	7065
4" YELLOW LATEX PAINT	LIN FT	8330
REMOVABLE PREFORM PLASTIC MARKING (WHITE)	LIN FT	2510
REMOVABLE PREFORM PLASTIC MARKING (YELLOW)	LIN FT	3450

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: ANDREW WITTER
SIGNATURE:
DATE: 3/13/15 REG. NO. 42757

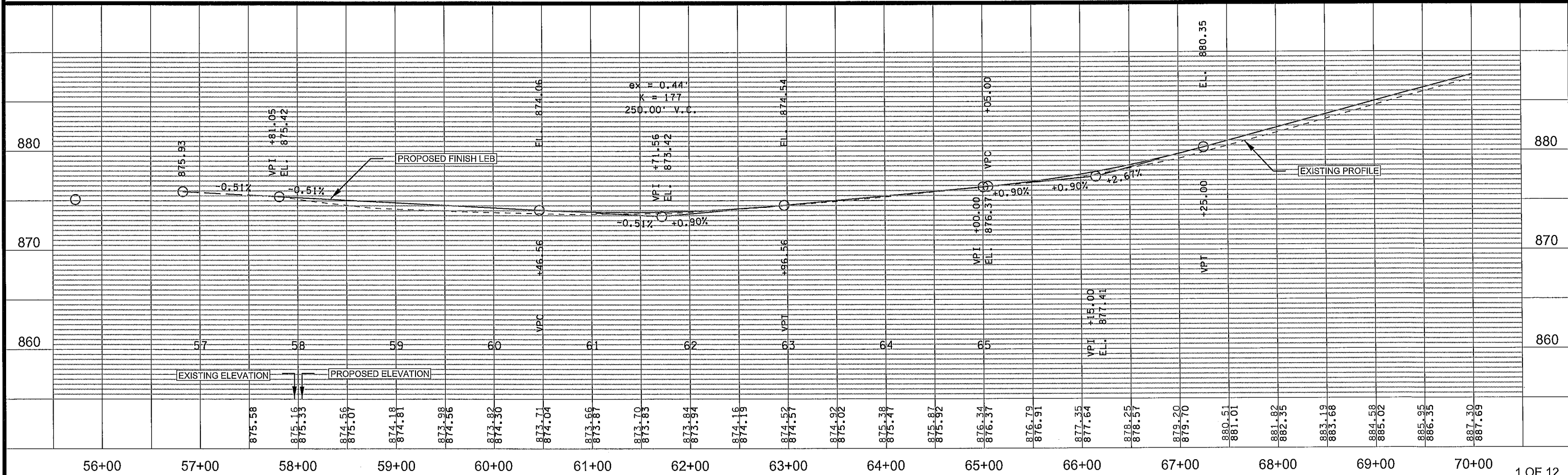
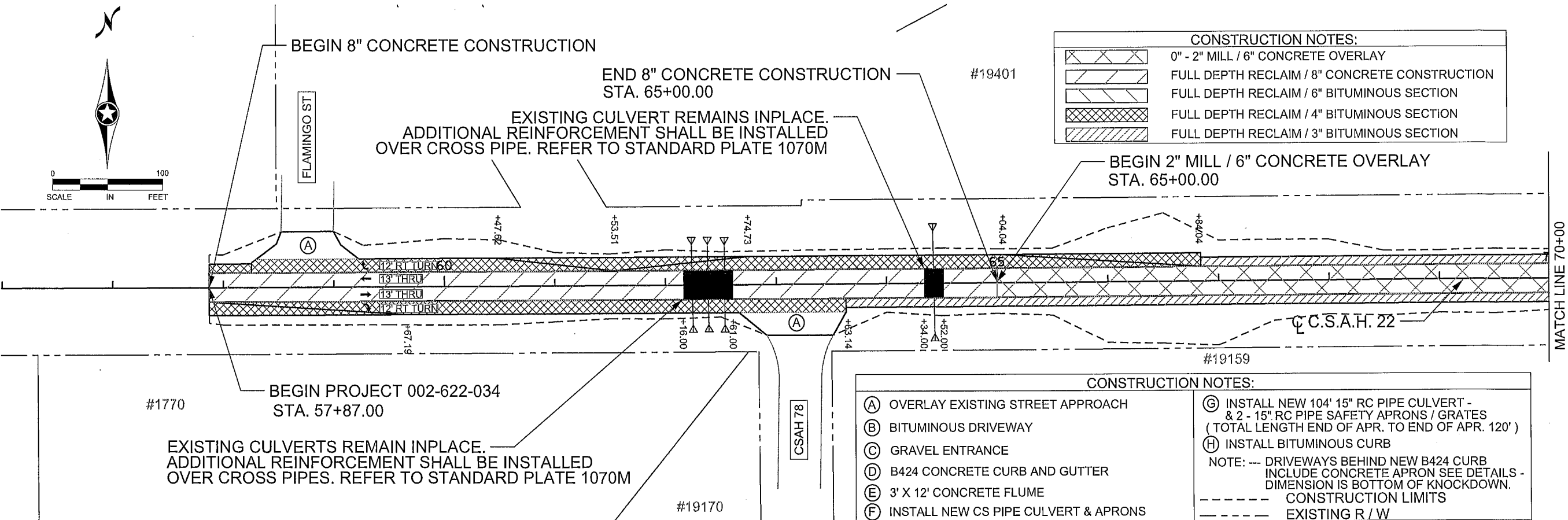
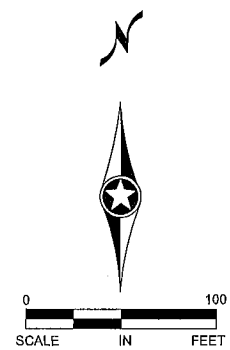
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CHECKED BY: RB DATE: 2/13/15



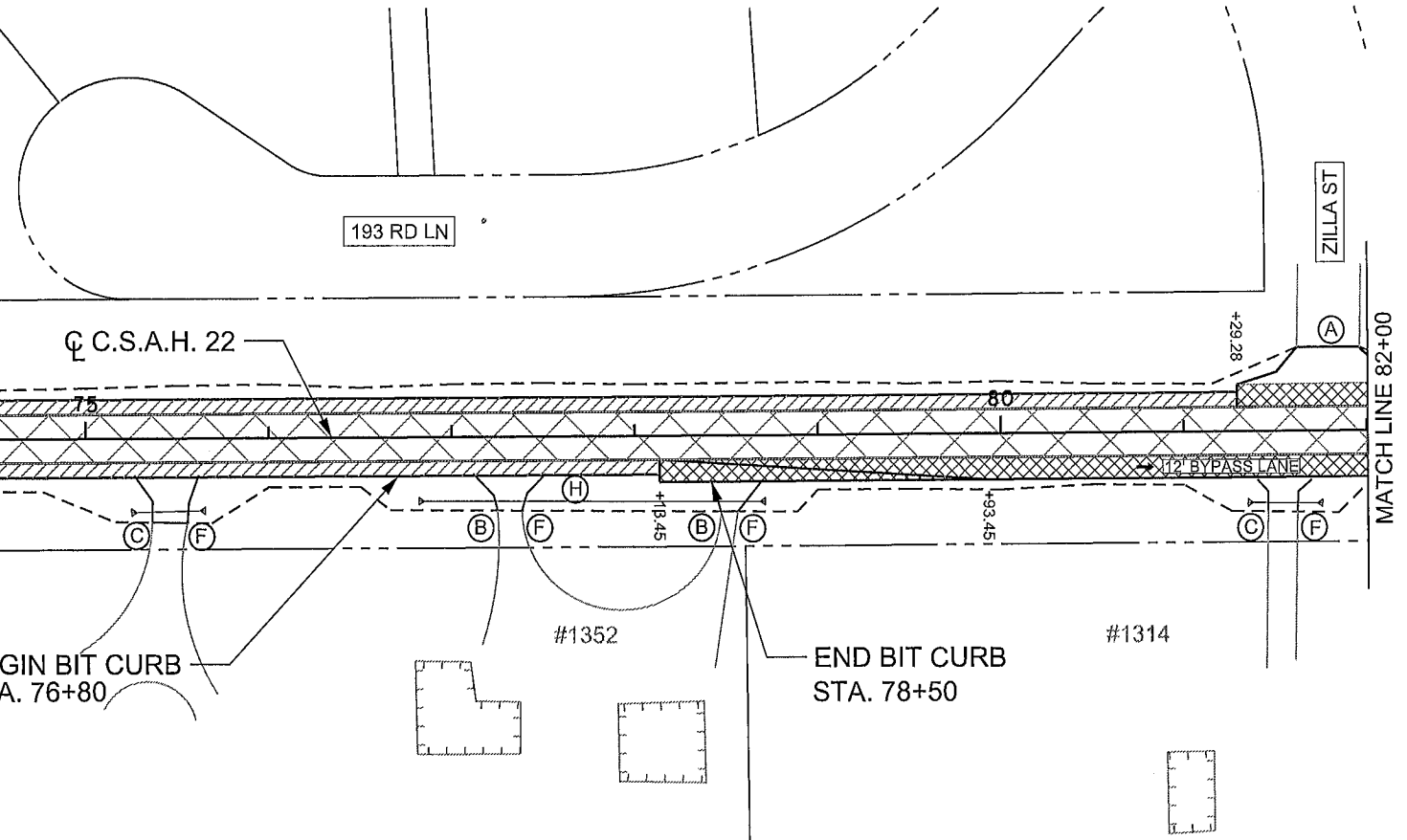
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-622-034
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

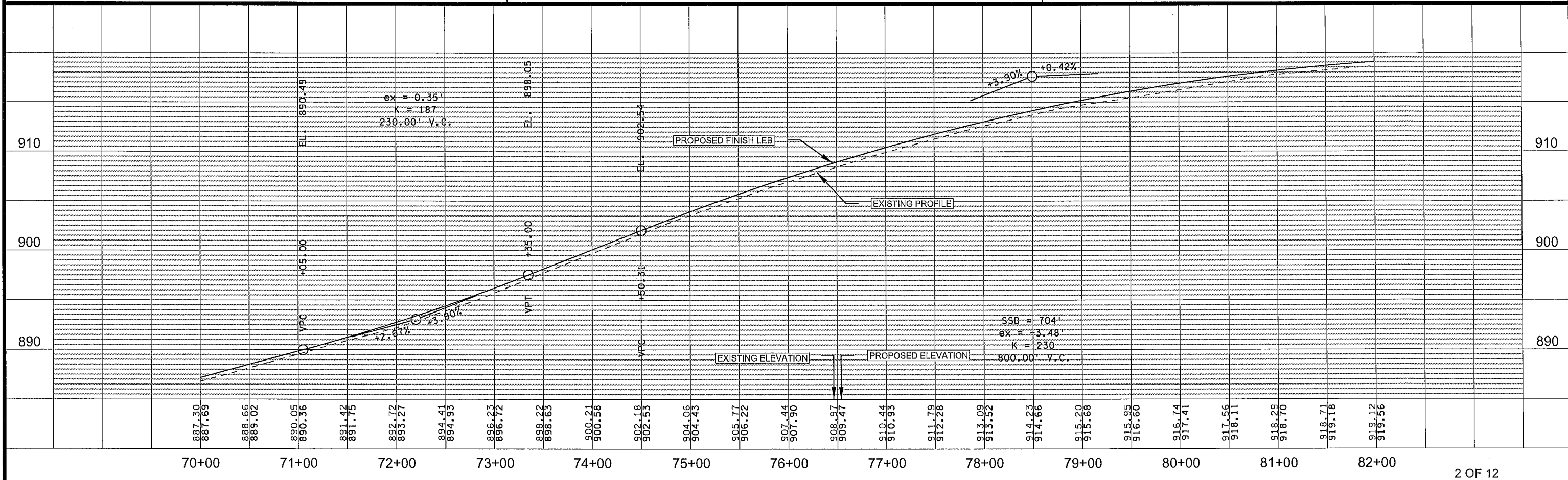
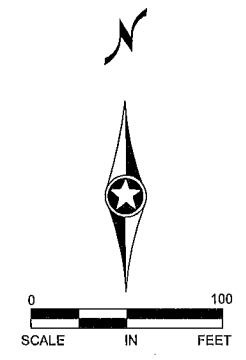
TRAFFIC CONTROL
SIGNING QUANTITIES
Sheet 132 of 210 Sheets

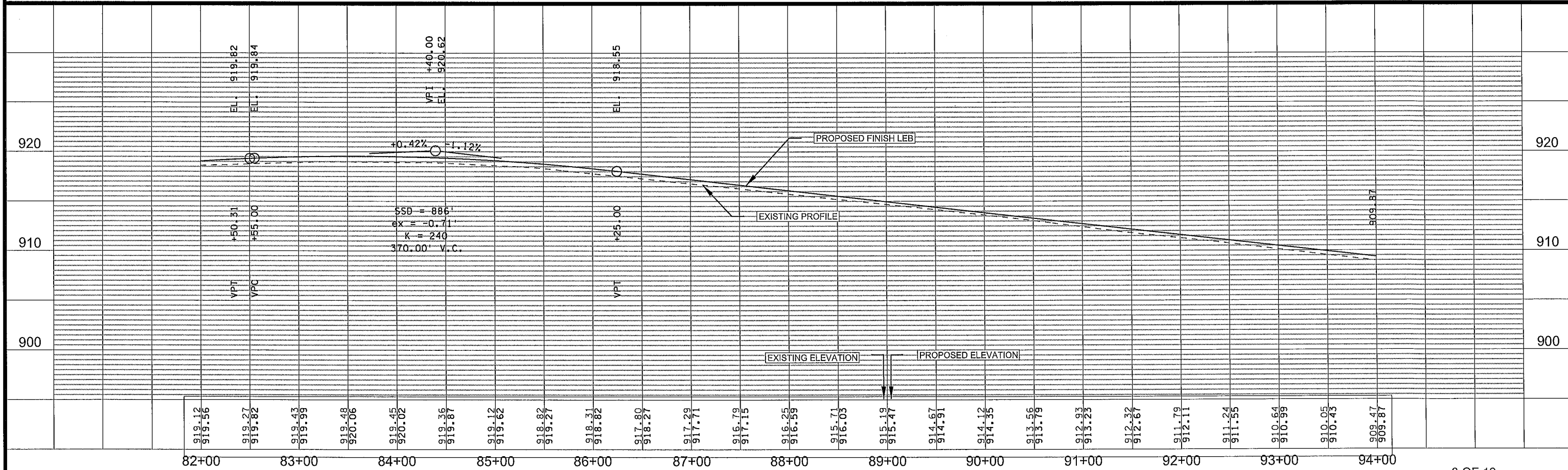
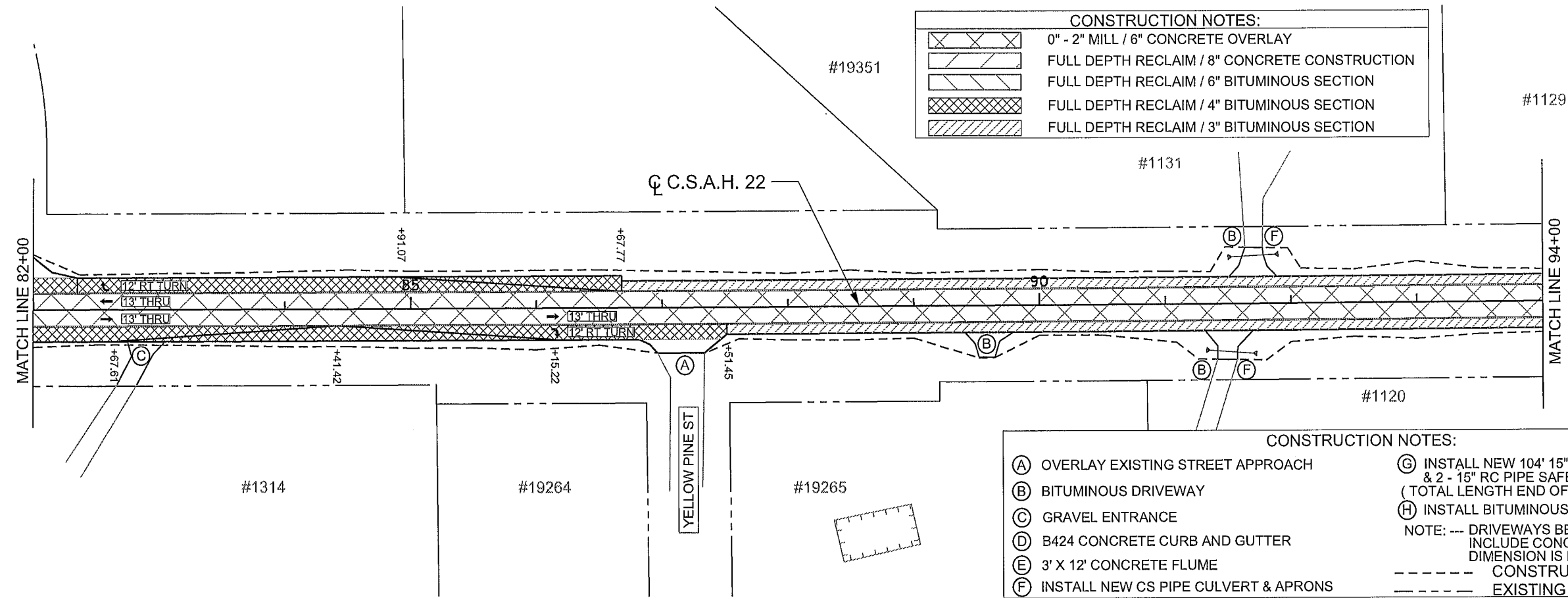


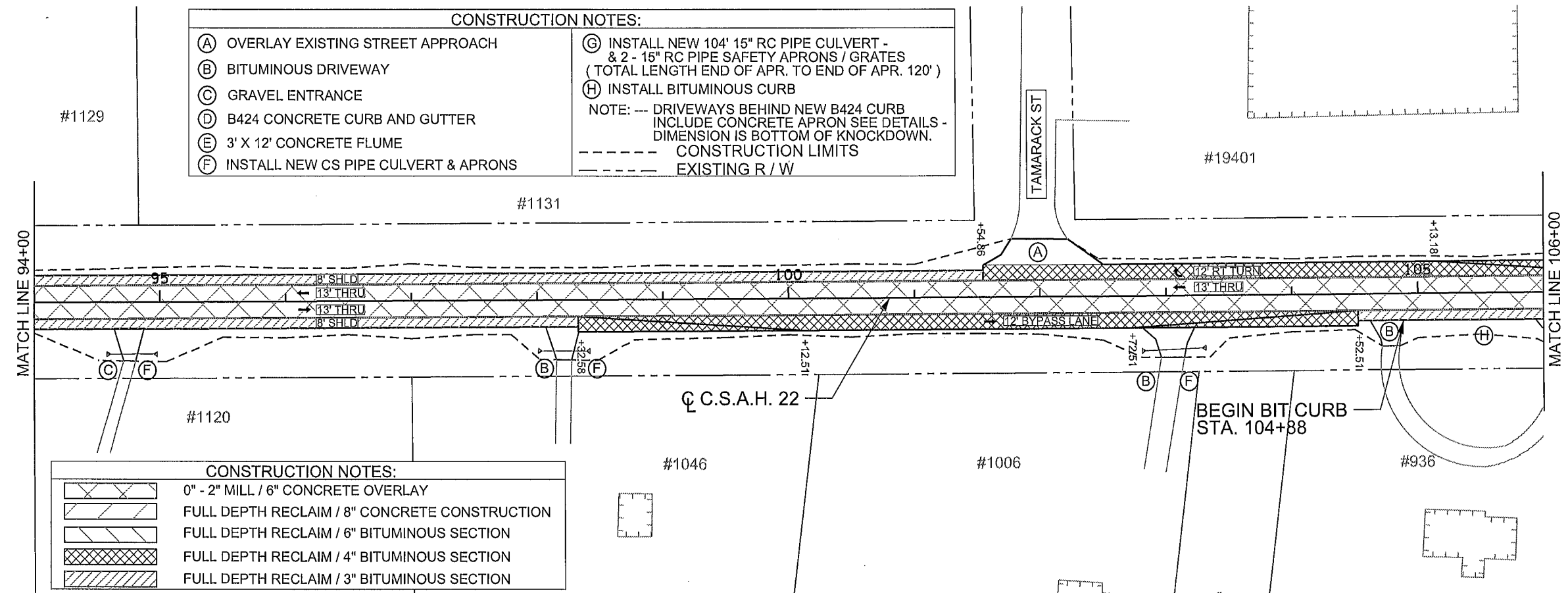
- CONSTRUCTION NOTES:
- (A) OVERLAY EXISTING STREET APPROACH
 - (B) BITUMINOUS DRIVEWAY
 - (C) GRAVEL ENTRANCE
 - (D) B424 CONCRETE CURB AND GUTTER
 - (E) 3' X 12' CONCRETE FLUME
 - (F) INSTALL NEW CS PIPE CULVERT & APRONS
 - (G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
 - (H) BITUMINOUS CURB. SEE TAB FOR LOCATIONS
- NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
- CONSTRUCTION LIMITS
- EXISTING R / W



- CONSTRUCTION NOTES:
- 0" - 2" MILL / 6" CONCRETE OVERLAY
 - FULL DEPTH RECLAIM / 8" CONCRETE CONSTRUCTION
 - FULL DEPTH RECLAIM / 6" BITUMINOUS SECTION
 - FULL DEPTH RECLAIM / 4" BITUMINOUS SECTION
 - FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION

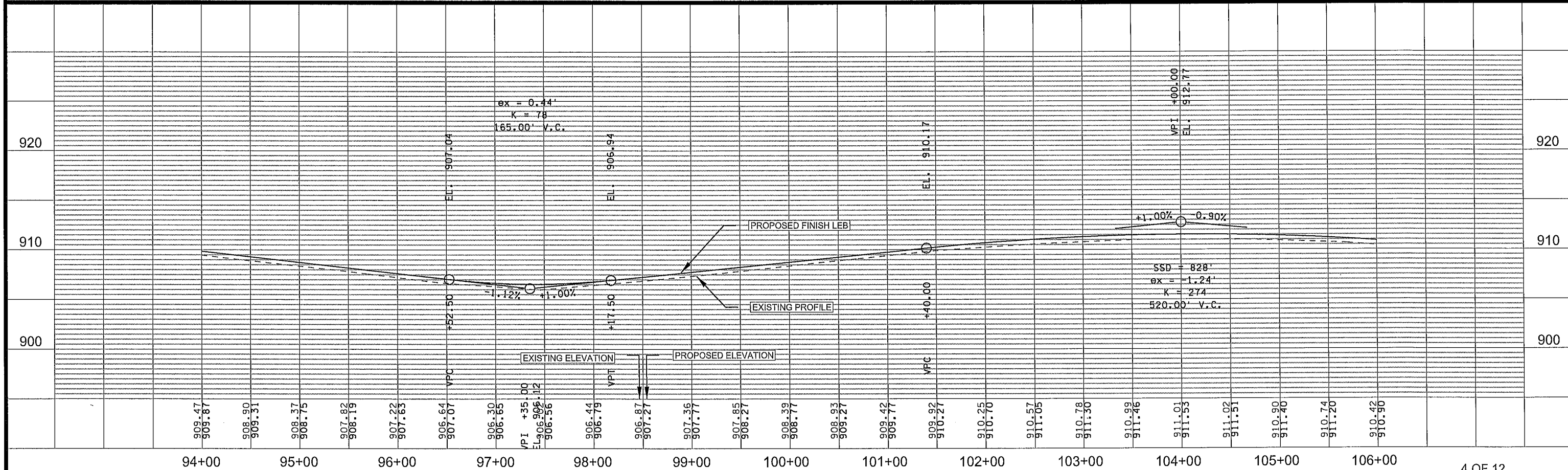




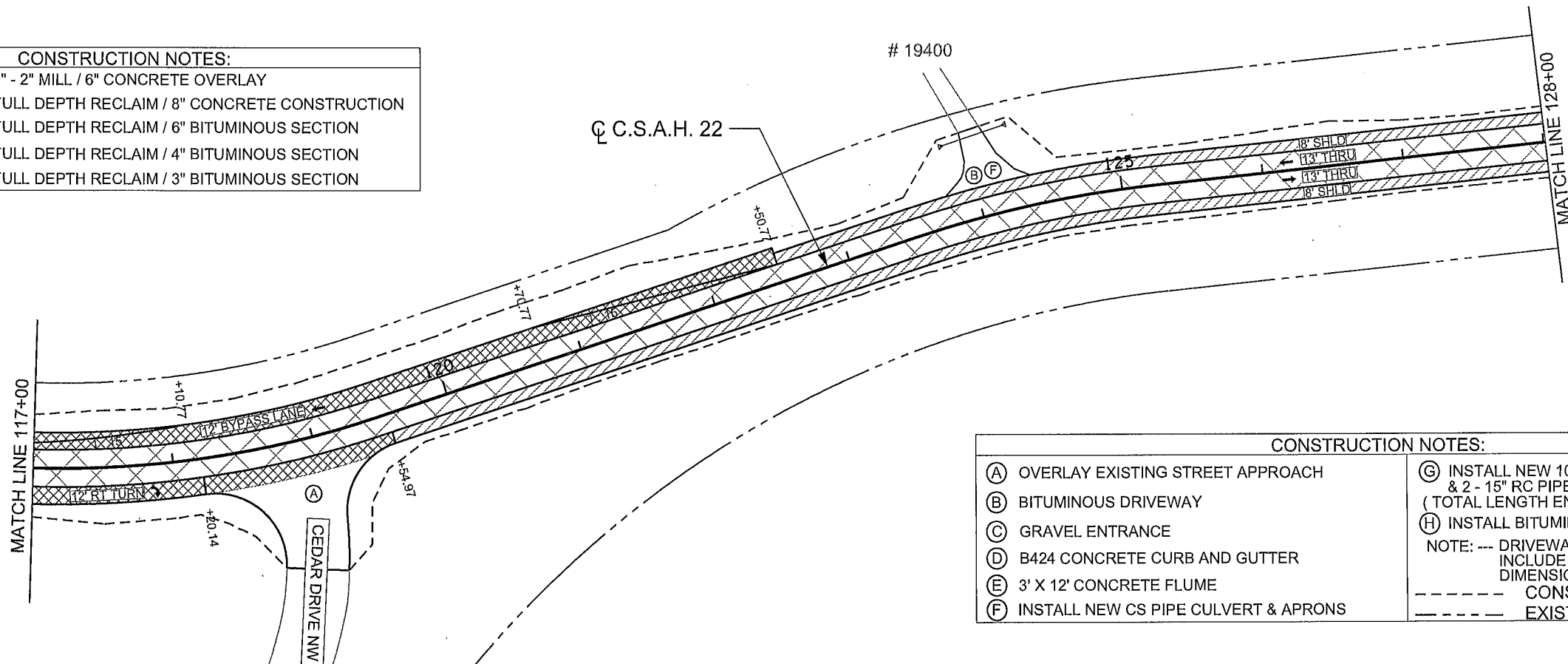


- CONSTRUCTION NOTES:**
- (A) OVERLAY EXISTING STREET APPROACH
 - (B) BITUMINOUS DRIVEWAY
 - (C) GRAVEL ENTRANCE
 - (D) B424 CONCRETE CURB AND GUTTER
 - (E) 3' X 12' CONCRETE FLUME
 - (F) INSTALL NEW CS PIPE CULVERT & APRONS
 - (G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
 - (H) INSTALL BITUMINOUS CURB
- NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
- CONSTRUCTION LIMITS
 --- EXISTING R / W

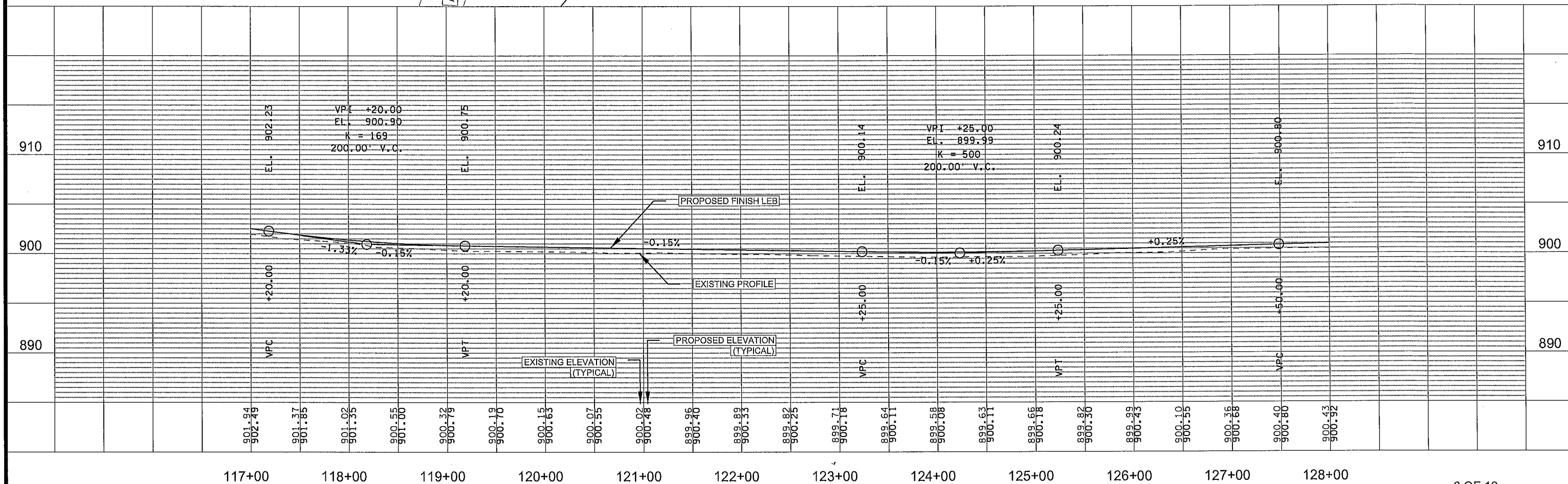
- CONSTRUCTION NOTES:**
- 0" - 2" MILL / 6" CONCRETE OVERLAY
 - FULL DEPTH RECLAIM / 8" CONCRETE CONSTRUCTION
 - FULL DEPTH RECLAIM / 6" BITUMINOUS SECTION
 - FULL DEPTH RECLAIM / 4" BITUMINOUS SECTION
 - FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION



CONSTRUCTION NOTES:	
	0" - 2" MILL / 6" CONCRETE OVERLAY
	FULL DEPTH RECLAIM / 8" CONCRETE CONSTRUCTION
	FULL DEPTH RECLAIM / 6" BITUMINOUS SECTION
	FULL DEPTH RECLAIM / 4" BITUMINOUS SECTION
	FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION



CONSTRUCTION NOTES:	
(A) OVERLAY EXISTING STREET APPROACH	(G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
(B) BITUMINOUS DRIVEWAY	(H) INSTALL BITUMINOUS CURB
(C) GRAVEL ENTRANCE	NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
(D) B424 CONCRETE CURB AND GUTTER	--- CONSTRUCTION LIMITS
(E) 3' X 12' CONCRETE FLUME	--- EXISTING R / W
(F) INSTALL NEW CS PIPE CULVERT & APRONS	



NO DATE BY CKD APPR NAME: P:\02-622-34\Plan\0262234_PP2.dgn 03/02/2015 9:01:18 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046					DRAWN BY JCF DATE 01/09/15 DESIGN BY NJD DATE 01/23/15 CHECKED BY GMP DATE 02/06/15					ANOKA COUNTY HIGHWAY DEPT.					STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.					CONSTRUCTION PLAN STA 117+00 TO 128+00 Sheet 138 of 210 Sheets				
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CONSTRUCTION NOTES:
(A) OVERLAY EXISTING STREET APPROACH
(B) BITUMINOUS DRIVEWAY
(C) GRAVEL ENTRANCE
(D) B424 CONCRETE CURB AND GUTTER
(E) 3' X 12' CONCRETE FLUME
(F) INSTALL NEW CS PIPE CULVERT & APRONS

(G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
(H) INSTALL BITUMINOUS CURB
NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
- - - - - CONSTRUCTION LIMITS
- - - - - EXISTING R / W

CONSTRUCTION NOTES:

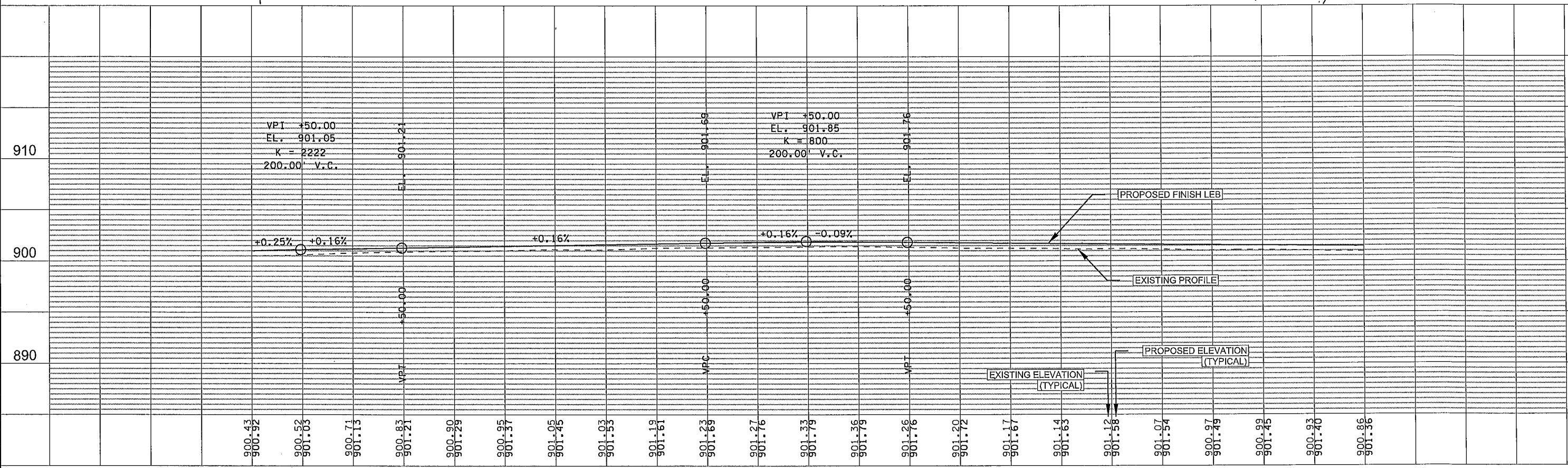
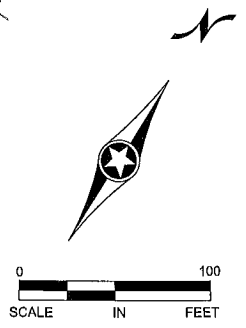
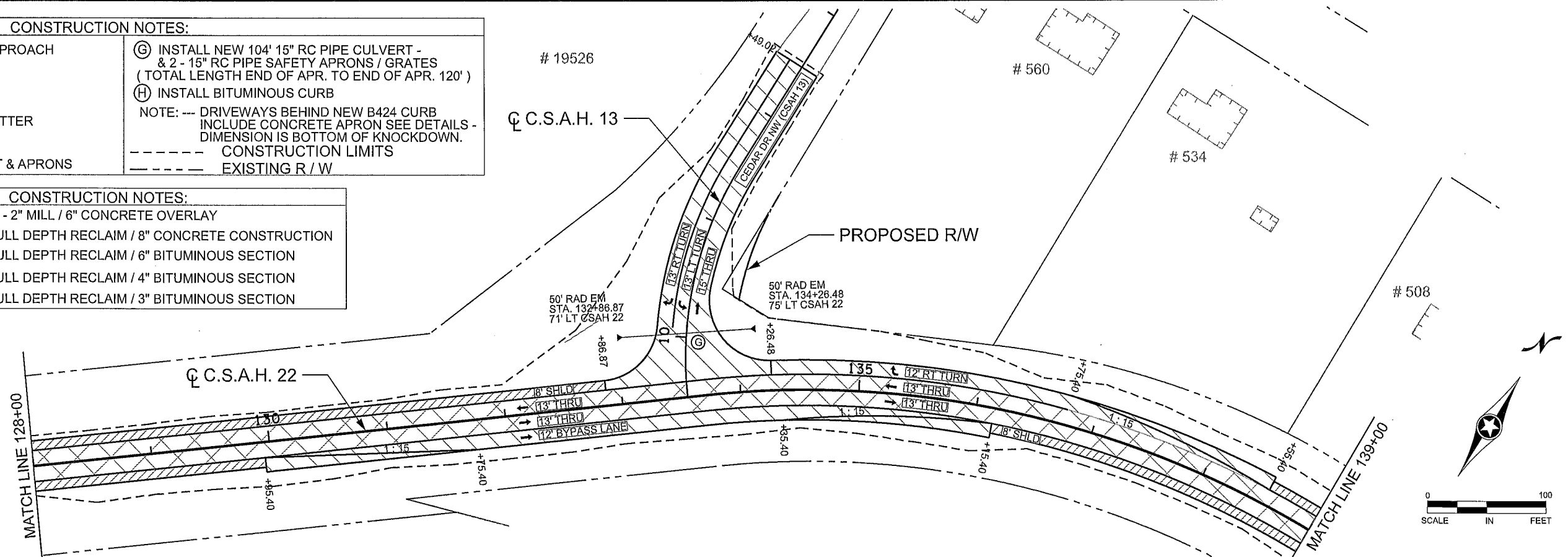
0" - 2" MILL / 6" CONCRETE OVERLAY

FULL DEPTH RECLAIM / 8" CONCRETE CONSTRUCTION

FULL DEPTH RECLAIM / 6" BITUMINOUS SECTION

FULL DEPTH RECLAIM / 4" BITUMINOUS SECTION

FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION



128+00	129+00	130+00	131+00	132+00	133+00	134+00	135+00	136+00	137+00	138+00	139+00
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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-34\Plan\0262234_PP3.dgn

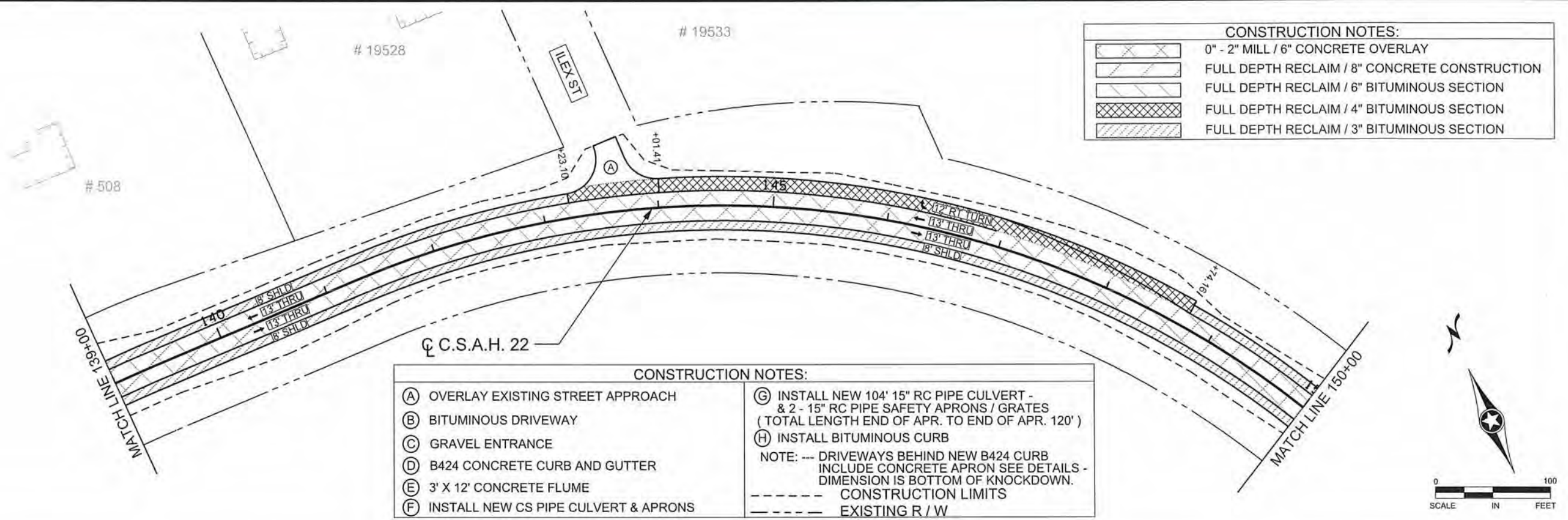
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE:
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY: JCF DATE: 01/09/15
DESIGN BY: NJD DATE: 01/23/15
CHECKED BY: GMP DATE: 02/06/15

ANOKA COUNTY
HIGHWAY DEPT.

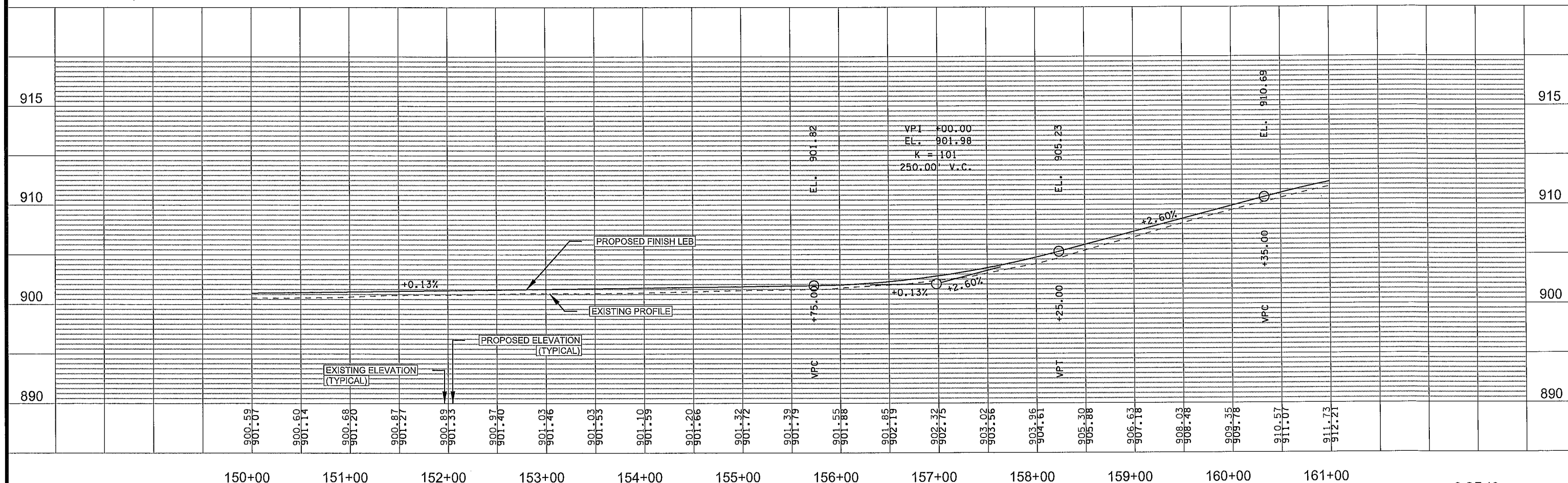
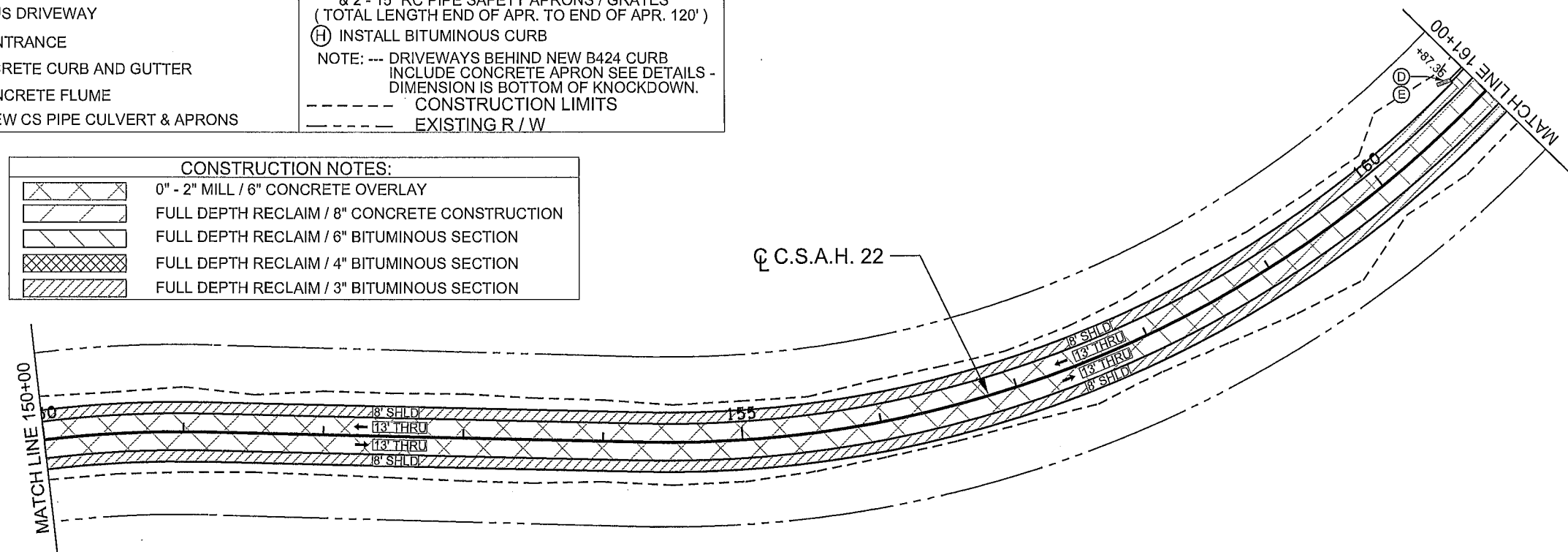
STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

CONSTRUCTION PLAN
STA 128+00 TO 139+00
Sheet 139 of 210 Sheets



CONSTRUCTION NOTES:	
(A) OVERLAY EXISTING STREET APPROACH	(G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
(B) BITUMINOUS DRIVEWAY	(H) INSTALL BITUMINOUS CURB
(C) GRAVEL ENTRANCE	NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
(D) B424 CONCRETE CURB AND GUTTER	----- CONSTRUCTION LIMITS
(E) 3' X 12' CONCRETE FLUME	----- EXISTING R / W
(F) INSTALL NEW CS PIPE CULVERT & APRONS	

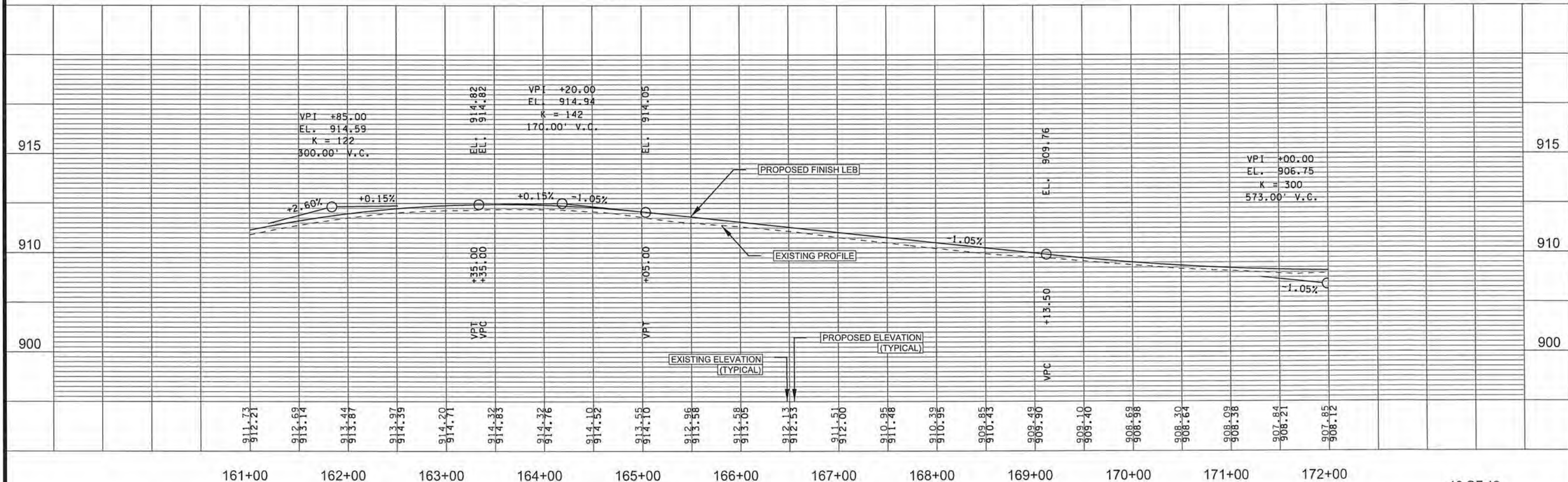
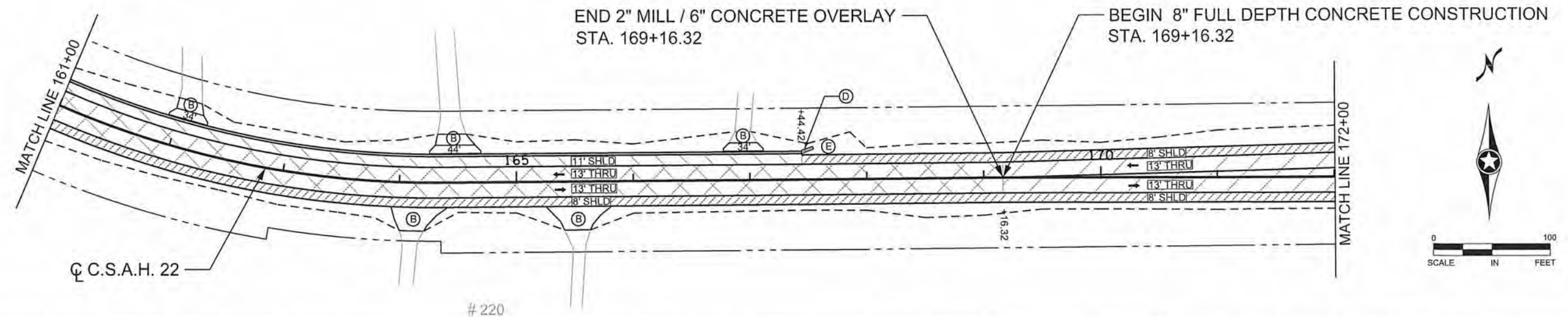
CONSTRUCTION NOTES:	
	0" - 2" MILL / 6" CONCRETE OVERLAY
	FULL DEPTH RECLAIM / 8" CONCRETE CONSTRUCTION
	FULL DEPTH RECLAIM / 6" BITUMINOUS SECTION
	FULL DEPTH RECLAIM / 4" BITUMINOUS SECTION
	FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION



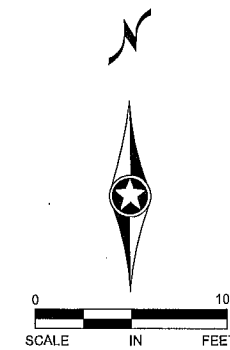
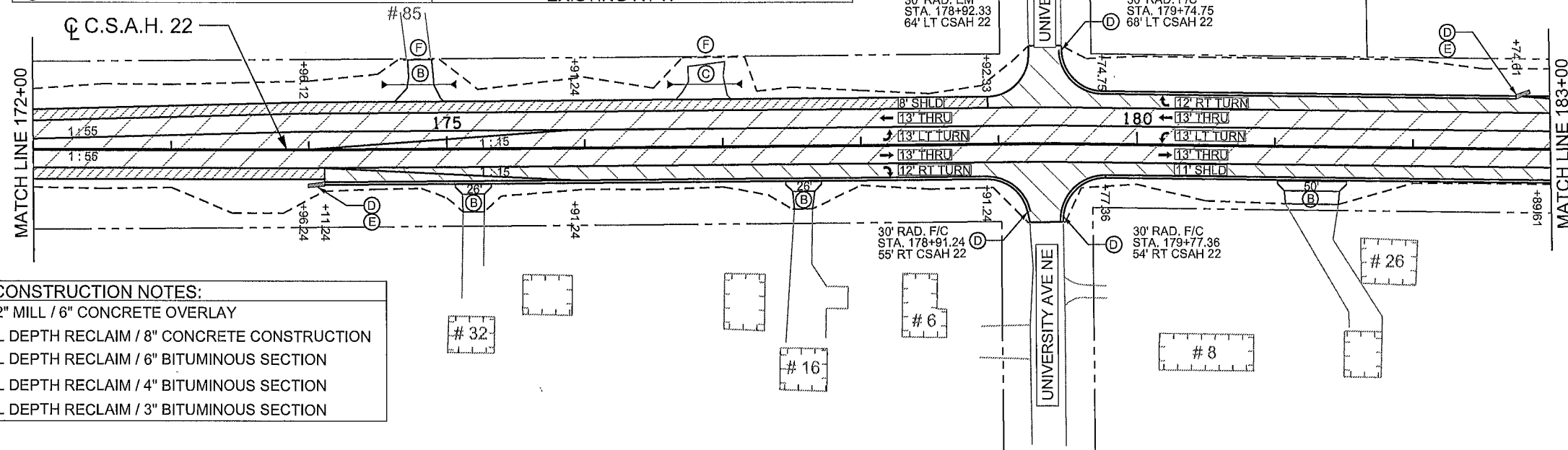
NO DATE BY CKD APPR NAME: P:\02-622-34\Plan\0262234_PP5.dgn					REVISION 03/02/2015 9:01:24 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: DATE: 3-2-15 LICENSE NO. 49046					DRAWN BY JCF DATE 01/09/15 DESIGN BY NJD DATE 01/23/15 CHECKED BY GMP DATE 02/06/15					ANOKA COUNTY HIGHWAY DEPT.					STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.					CONSTRUCTION PLAN STA 150+00 TO 161+00 Sheet 141 of 210 Sheets				
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- CONSTRUCTION NOTES:
- (A) OVERLAY EXISTING STREET APPROACH
 - (B) BITUMINOUS DRIVEWAY
 - (C) GRAVEL ENTRANCE
 - (D) B424 CONCRETE CURB AND GUTTER
 - (E) 3' X 12' CONCRETE FLUME
 - (F) INSTALL NEW CS PIPE CULVERT & APRONS
 - (G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
 - (H) INSTALL BITUMINOUS CURB
- NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
- CONSTRUCTION LIMITS
- EXISTING R / W

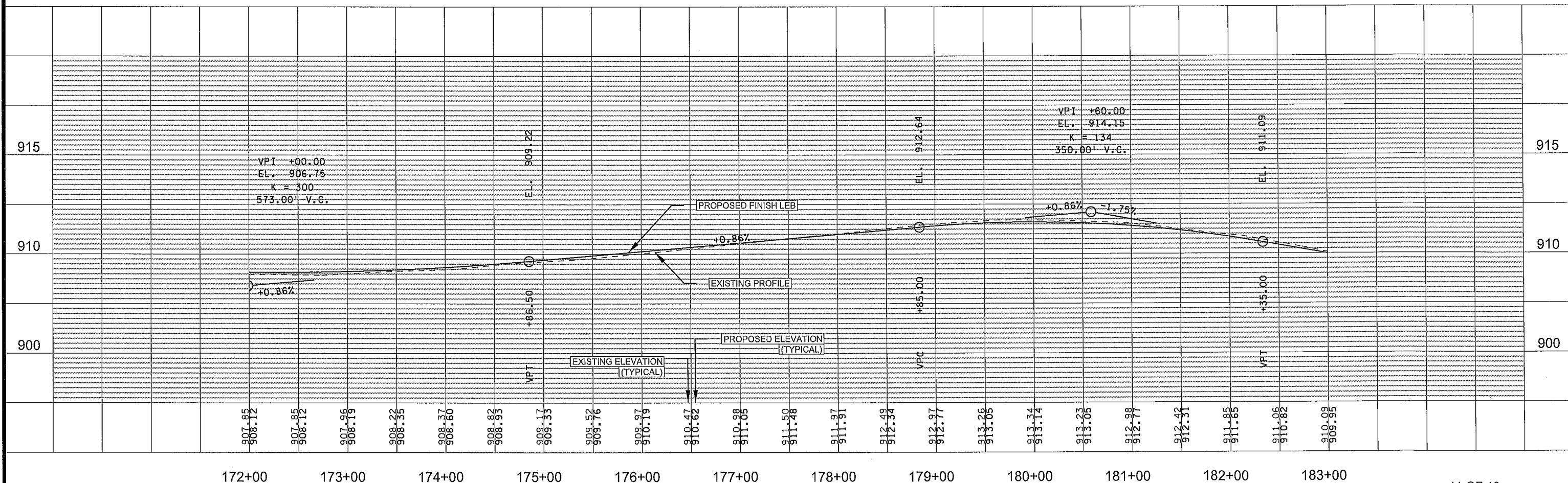
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 - FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION



- CONSTRUCTION NOTES:
- (A) OVERLAY EXISTING STREET APPROACH
 - (B) BITUMINOUS DRIVEWAY
 - (C) GRAVEL ENTRANCE
 - (D) B424 CONCRETE CURB AND GUTTER
 - (E) 3' X 12' CONCRETE FLUME
 - (F) INSTALL NEW CS PIPE CULVERT & APRONS
 - (G) INSTALL NEW 104' 15" RC PIPE CULVERT - & 2 - 15" RC PIPE SAFETY APRONS / GRATES (TOTAL LENGTH END OF APR. TO END OF APR. 120')
 - (H) INSTALL BITUMINOUS CURB
- NOTE: --- DRIVEWAYS BEHIND NEW B424 CURB INCLUDE CONCRETE APRON SEE DETAILS - DIMENSION IS BOTTOM OF KNOCKDOWN.
- CONSTRUCTION LIMITS
- EXISTING R / W



- CONSTRUCTION NOTES:
- 0" - 2" MILL / 6" CONCRETE OVERLAY
 - FULL DEPTH RECLAIM / 8" CONCRETE CONSTRUCTION
 - FULL DEPTH RECLAIM / 6" BITUMINOUS SECTION
 - FULL DEPTH RECLAIM / 4" BITUMINOUS SECTION
 - FULL DEPTH RECLAIM / 3" BITUMINOUS SECTION



NO	DATE	BY	CKD	APPR	REVISION
1	03/02/2015	NJD	CKD	APPR	9:01:27 AM

NAME: P:\02-622-34\Plan\0262234_PP7.dgn

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: *[Signature]*

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY: JCF DATE: 01/09/15

DESIGN BY: NJD DATE: 01/23/15

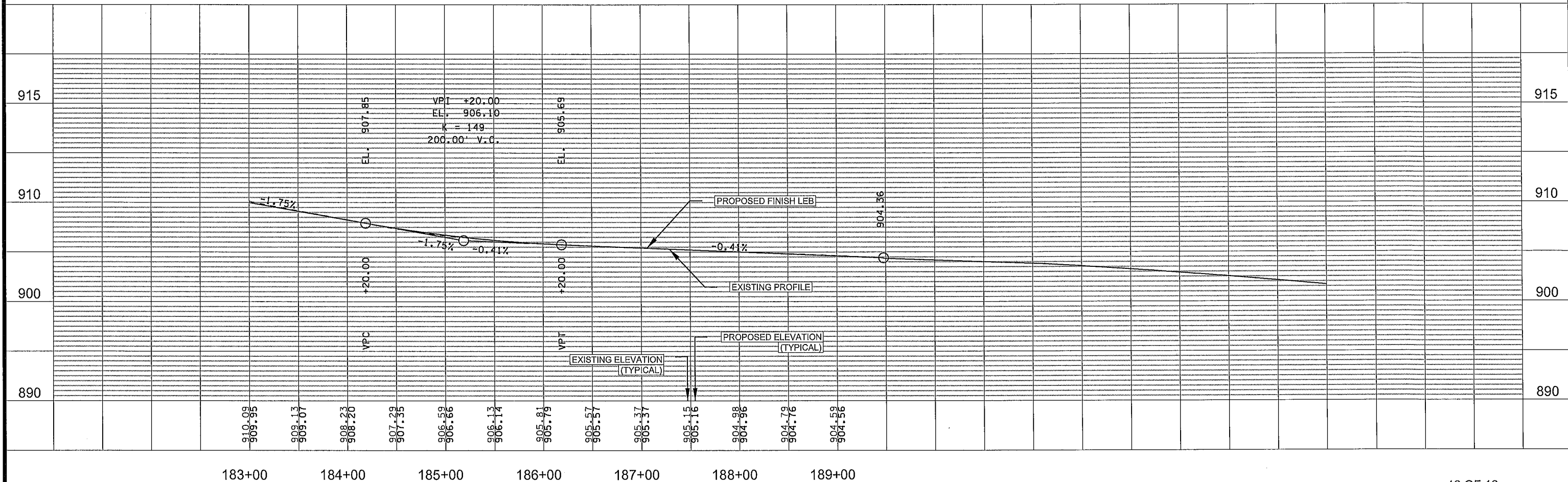
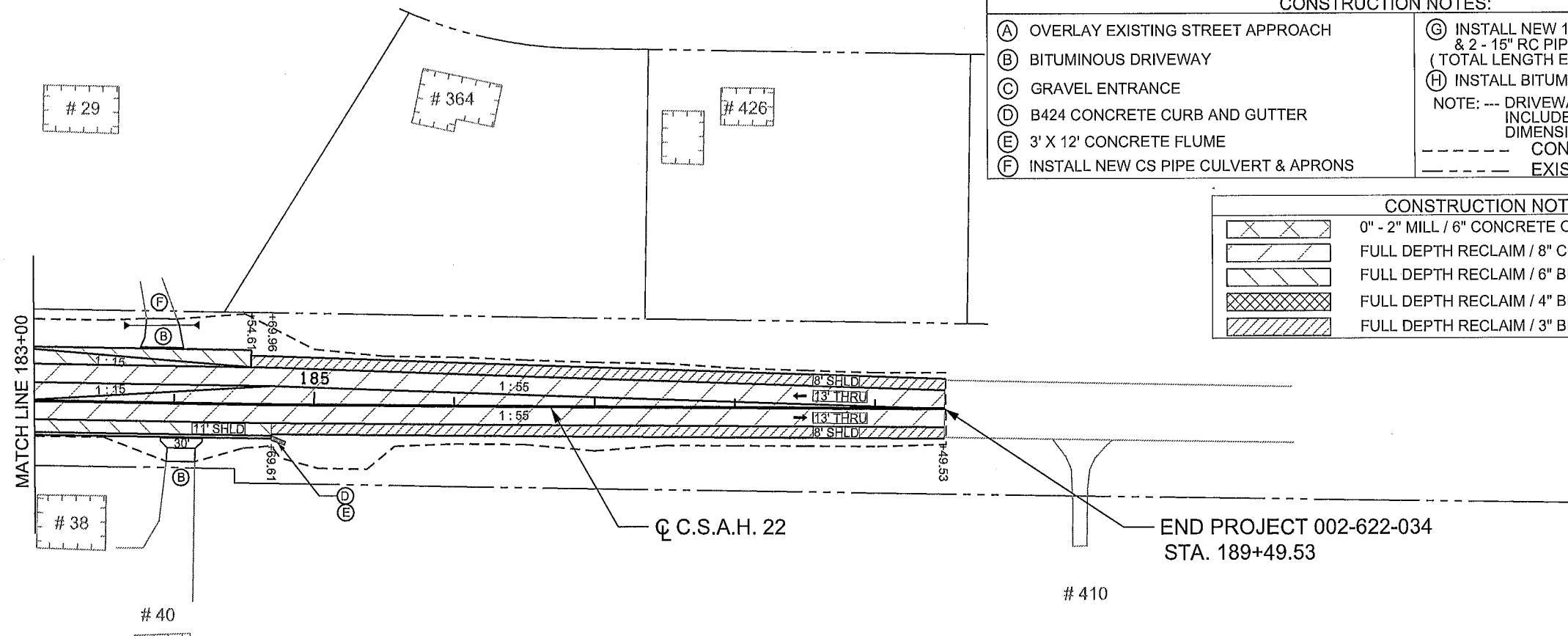
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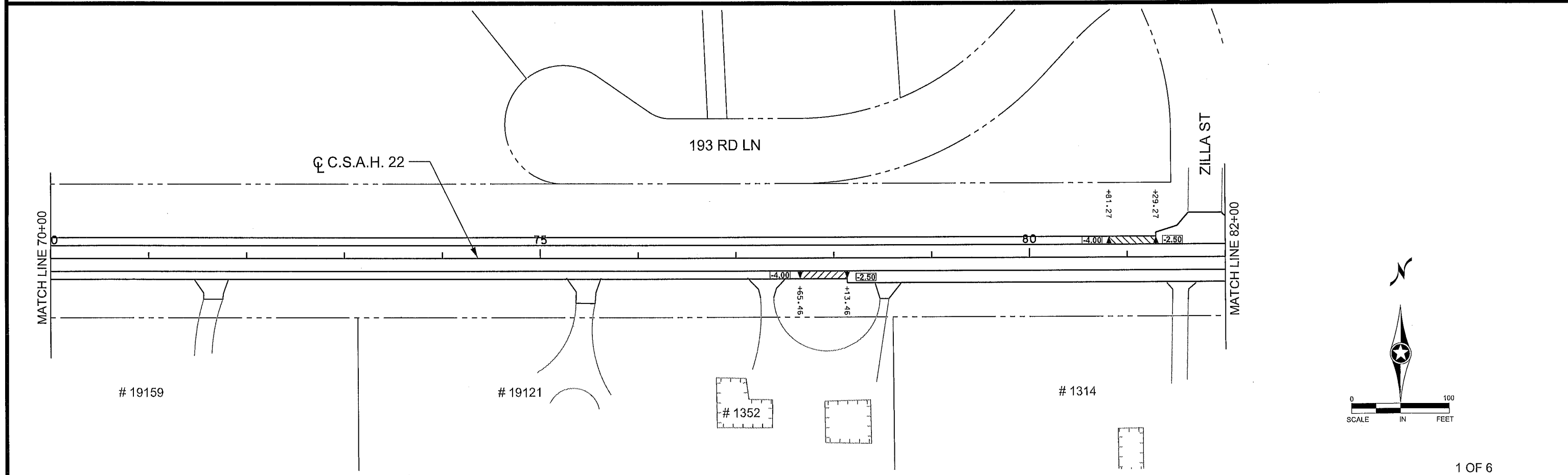
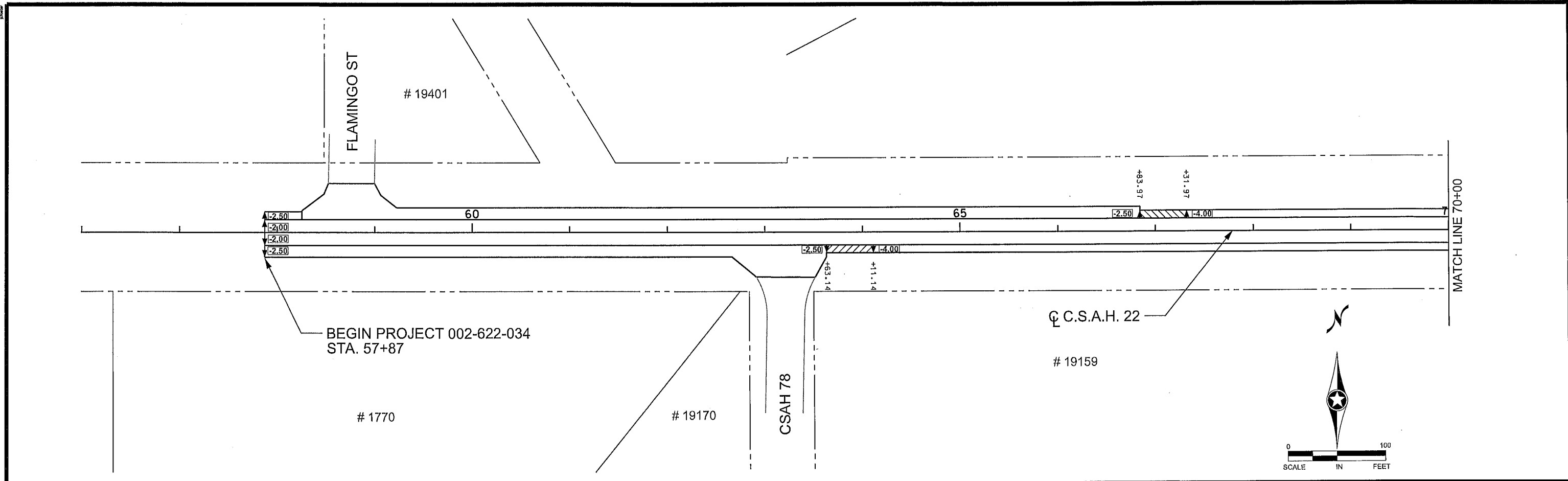


ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

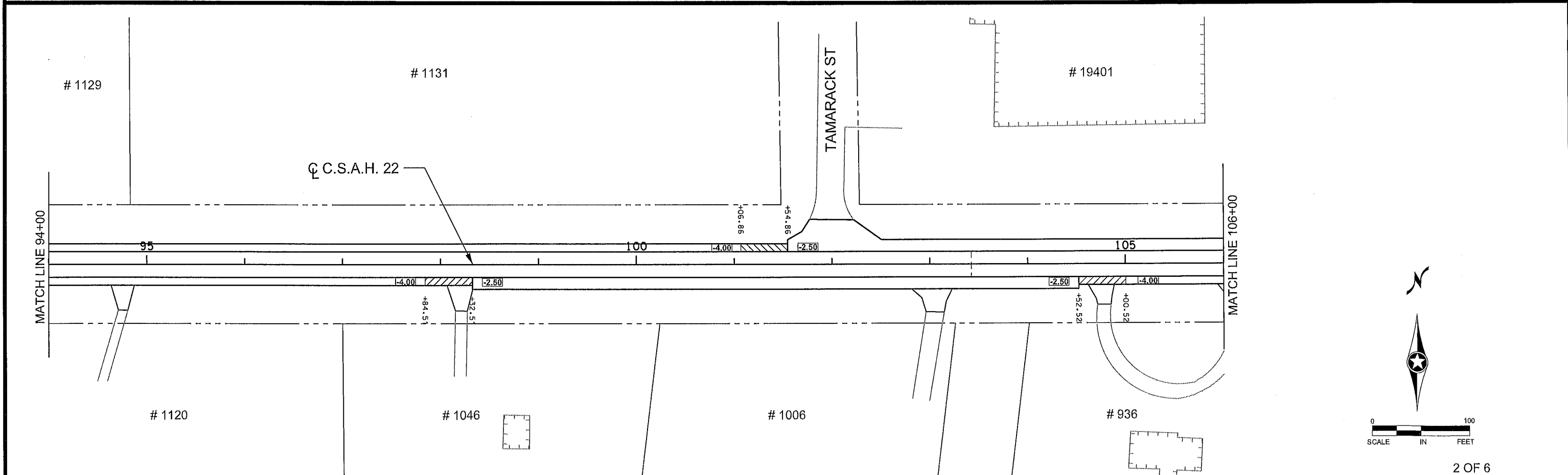
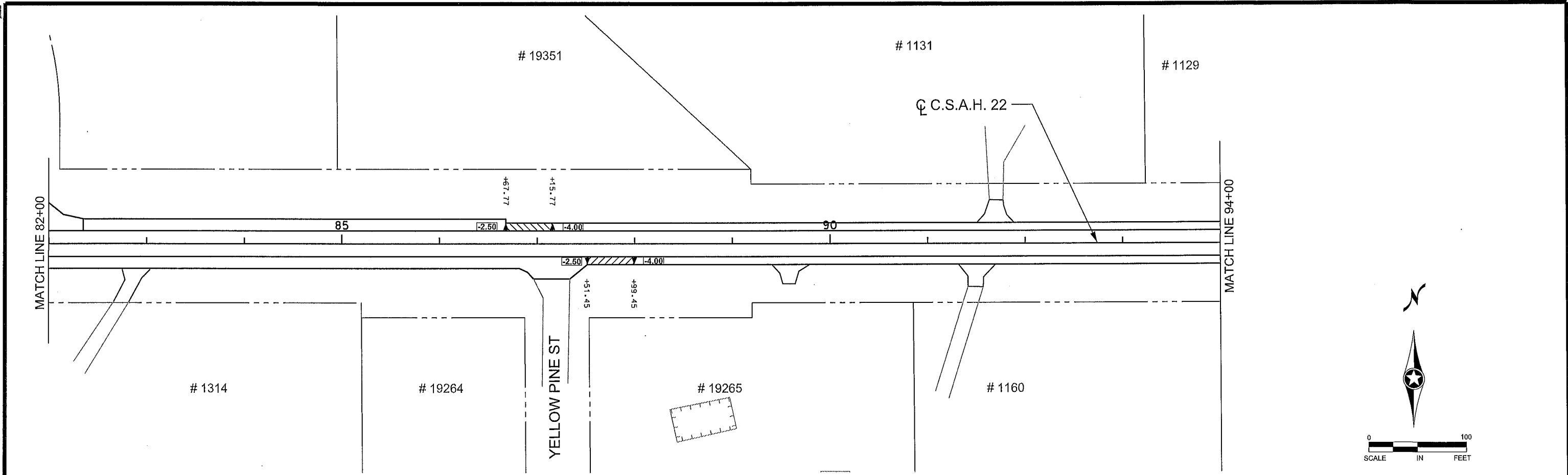
CONSTRUCTION PLAN
STA 172+00 TO 183+00
Sheet 143 of 210 Sheets





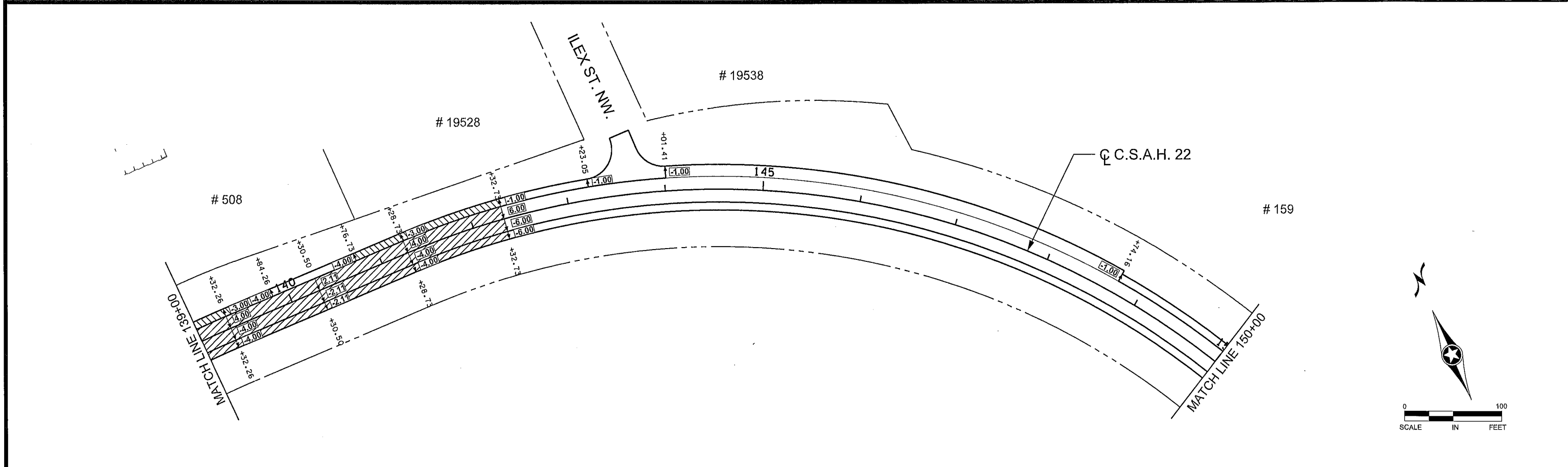
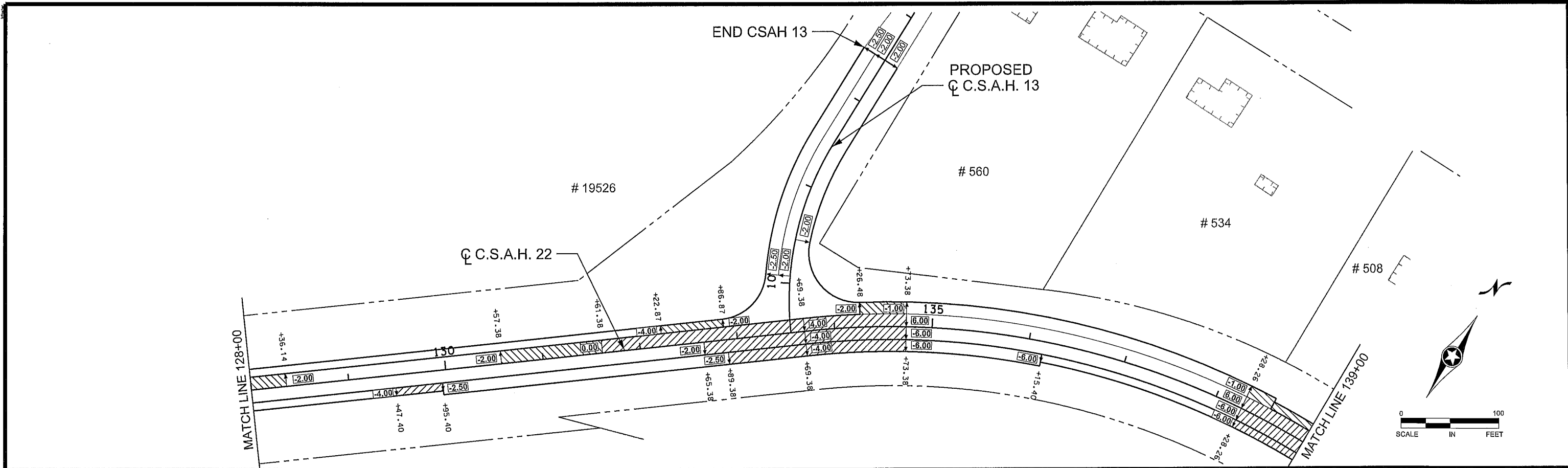
1 OF 6

NO DATE BY CKD APPR REVISION NAME: P:\02-622-34\Plan\0262234_SUPER_W1.dgn 03/02/2015 9:02:52 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY: JCF DATE: 01/09/15 DESIGN BY: NJD DATE: 01/23/15 CHECKED BY: GMP DATE: 02/08/15		 ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		SUPERELEVATION PLAN STA 56+00 TO 82+00 Sheet 145 of 210 Sheets	
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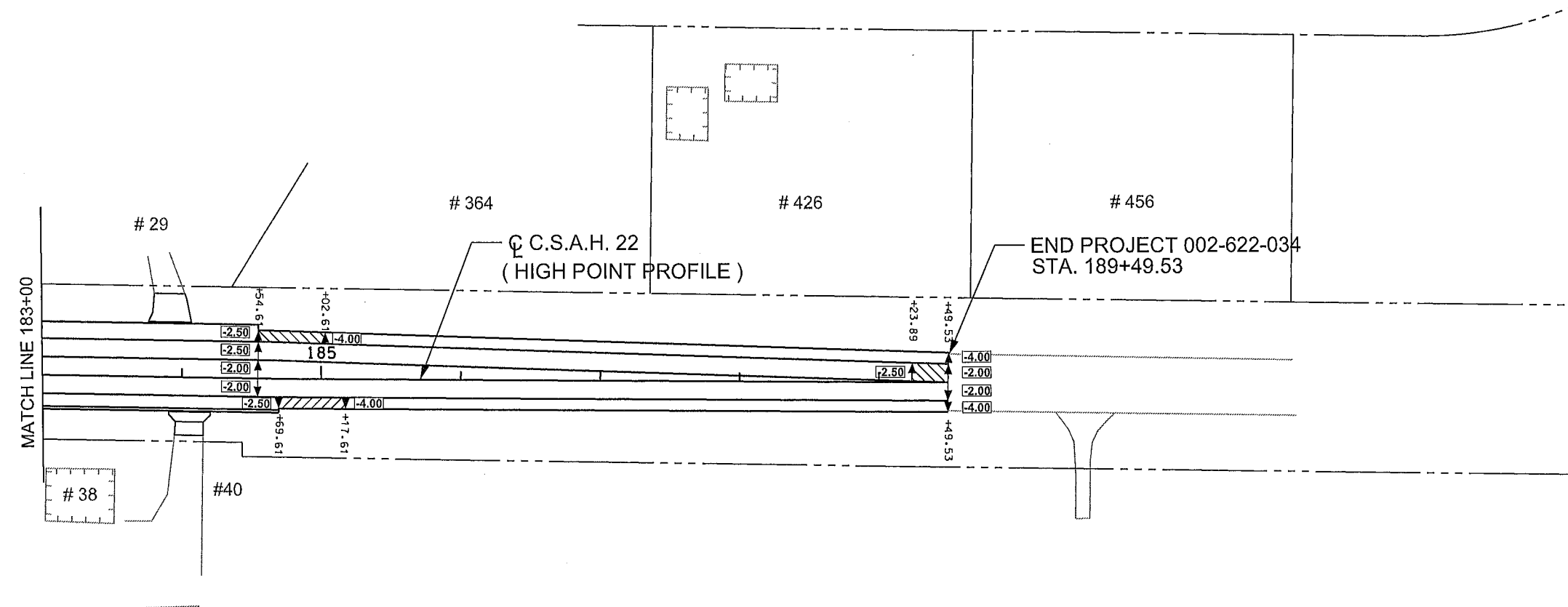
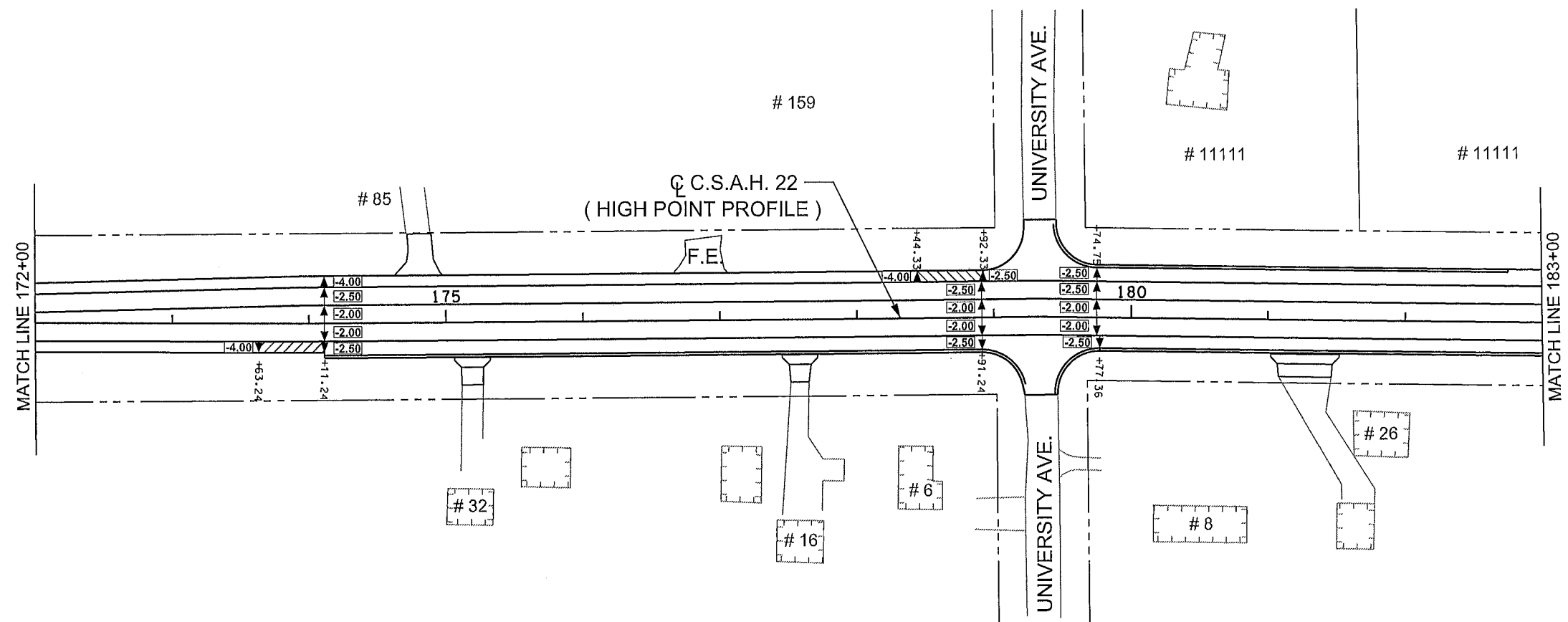


2 OF 6

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NO	DATE	BY	CKD	APPR	REVISION																						



NO DATE BY CKD APPR REVISION NAME: P:\02-622-34\Plan\0262234_SUPER2.dgn 03/02/2015 9:02:57 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY JCF DATE 01/09/15 DESIGN BY NJD DATE 01/23/15 CHECKED BY GMP DATE 02/06/15		 ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		SUPERELEVATION PLAN STA 128+00 TO 150+00 Sheet 148 of 210 Sheets	
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6 OF 6

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE: [Signature]

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/06/15

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

CITY PROJECT NO. _____

COUNTY PROJECT NO. _____

SUPERELEVATION PLAN

STA 172+00 TO 189+49.53

Sheet 150 of 210 Sheets

PERMANENT PAVEMENT MARKING PLAN
NOTES AND GUIDELINES

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

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

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

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

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

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

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

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

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

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

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

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

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

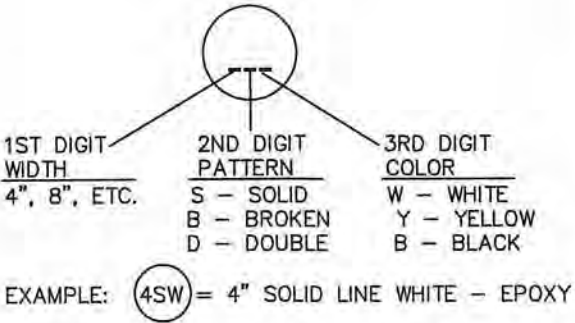
PAVEMENT MARKING TABULATION		L
ITEM	UNIT	TOTAL QUANTITY
24" YELLOW THERMO- PLASTIC	LIN FT	393
24" WHITE THERMO- PLASTIC	LIN FT	25
RAILROAD MESSAGE THERMO-PLASTIC	EACH	2
4" SOLID LINE WHITE -EPOXY PAINT	LIN FT	31915
4" BROKEN LINE WHITE -EPOXY PAINT	LIN FT	200
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	4150
4" BROKEN LINE YELLOW -EPOXY PAINT	LIN FT	1180
4" DOUBLE YELLOW -EPOXY PAINT	LIN FT	12690

SYMBOLS & MATERIALS LEGEND

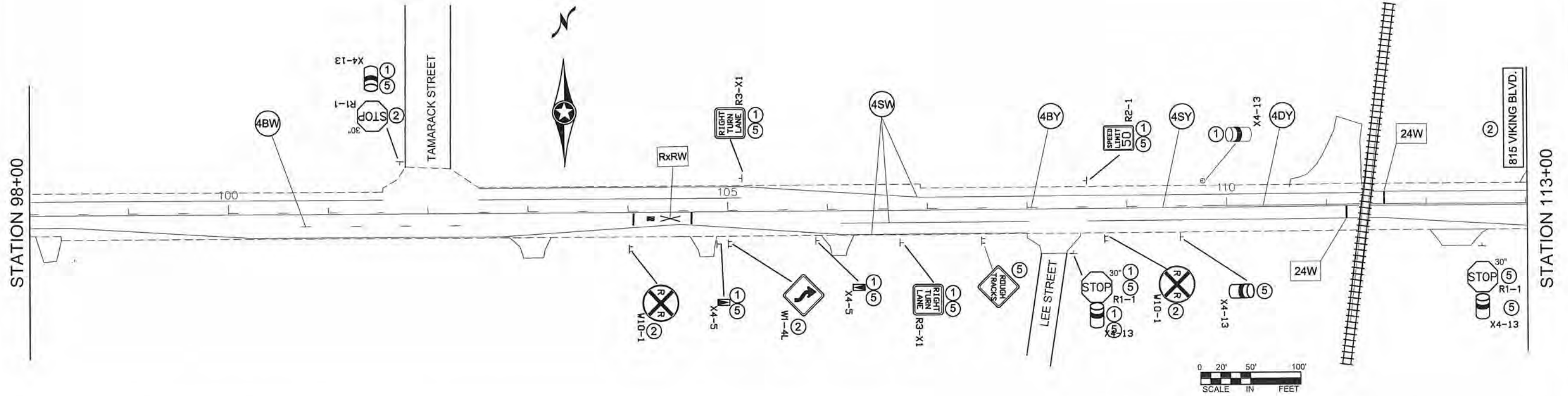
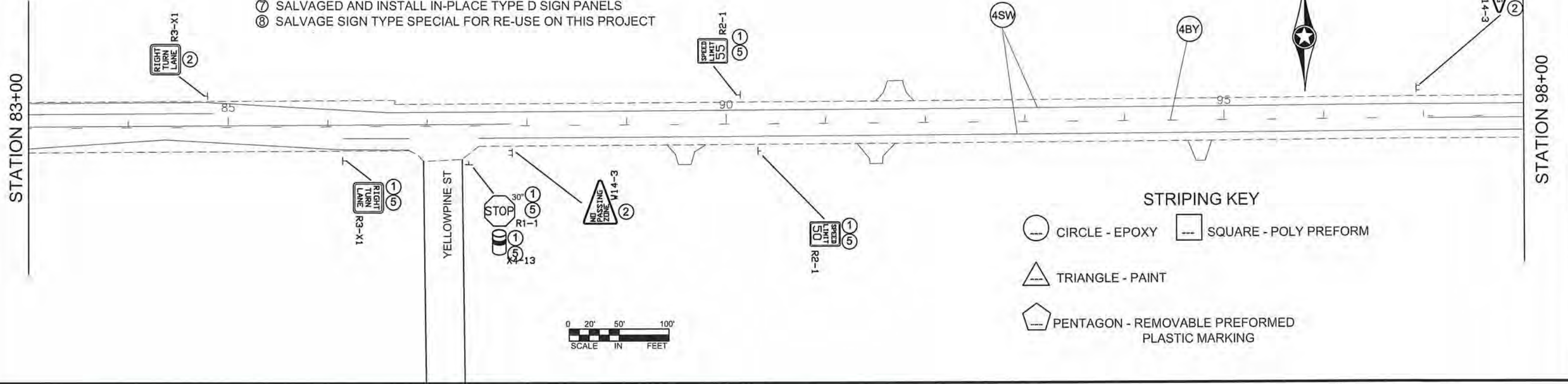
- CROSSWALK BLOCK WHITE - PREFORMED THERMOPLASTIC
- PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

STRIPING KEY

- CIRCLE - EPOXY
- SQUARE - PREFORMED THERMOPLASTIC
- TRIANGLE - PAINT
- PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

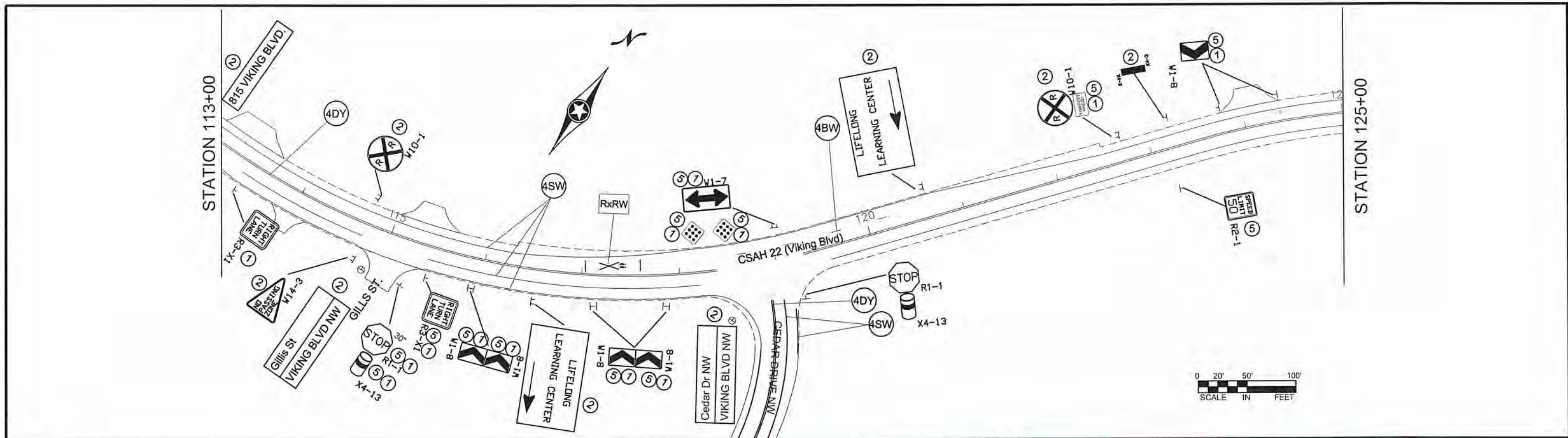


- NOTES:
- ① FURNISH & INSTALL
 - ② RETAIN INPLACE SIGN
 - ③ SALVAGE FOR RE-USE ON THIS PROJECT
 - ④ INSTALL SALVAGED SIGN
 - ⑤ SALVAGED SIGN TO ANOKA COUNTY
 - ⑥ SALVAGED SIGN TO CITY
 - ⑦ SALVAGED AND INSTALL IN-PLACE TYPE D SIGN PANELS
 - ⑧ SALVAGE SIGN TYPE SPECIAL FOR RE-USE ON THIS PROJECT



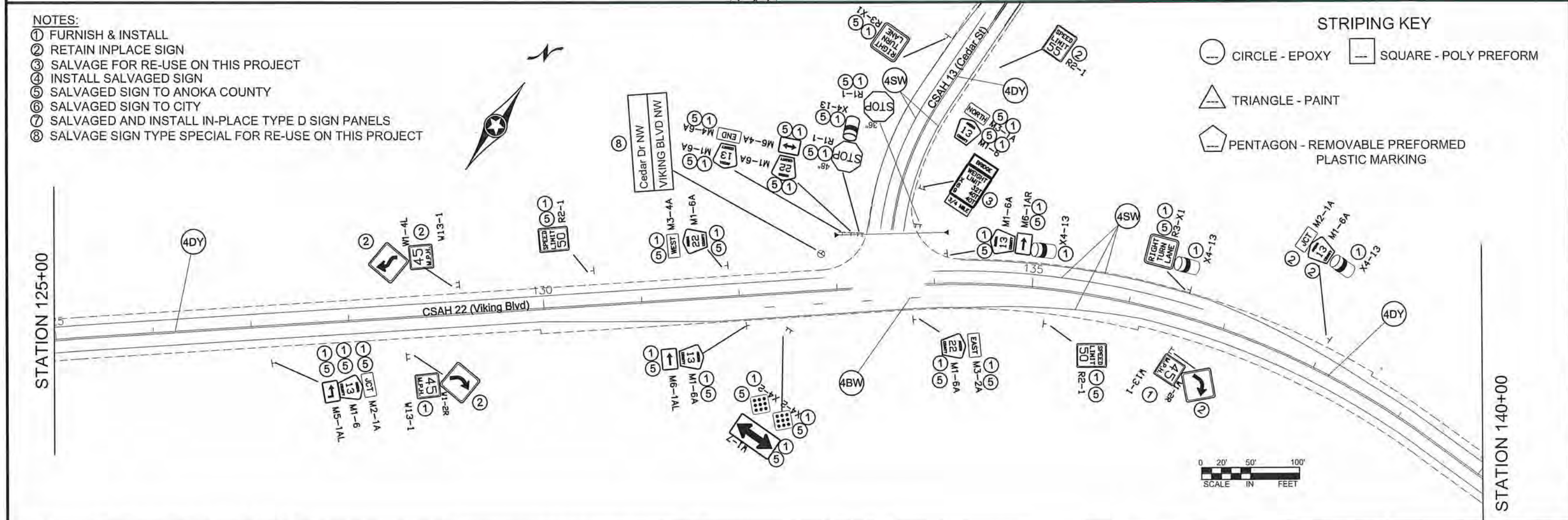
REVISED 7/9/14					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.					DRAWN BY: RLB DATE: 5/7/14					ANOKA COUNTY HIGHWAY DEPT.					STATE PROJECT NO. _____					PERMANENT SIGNING & STRIPING PLAN				
					PRINT NAME: ANDREW WITTER					DESIGN BY: RLB DATE: 5/7/14										STATE AID PROJECT NO. 002-622-034									
					SIGNATURE: [Signature]					CHECKED BY: JR DATE: 5/7/14					STATE AID PROJECT NO. _____					Sheet 153 of 210 Sheets									
					DATE: 5/7/14 REG. NO. 42757										COUNTY PROJECT NO. _____														

NAME: P:\02-622-341\BASE\TRAFFIC\PERMANENT SIGNING & STRIPING.dwg

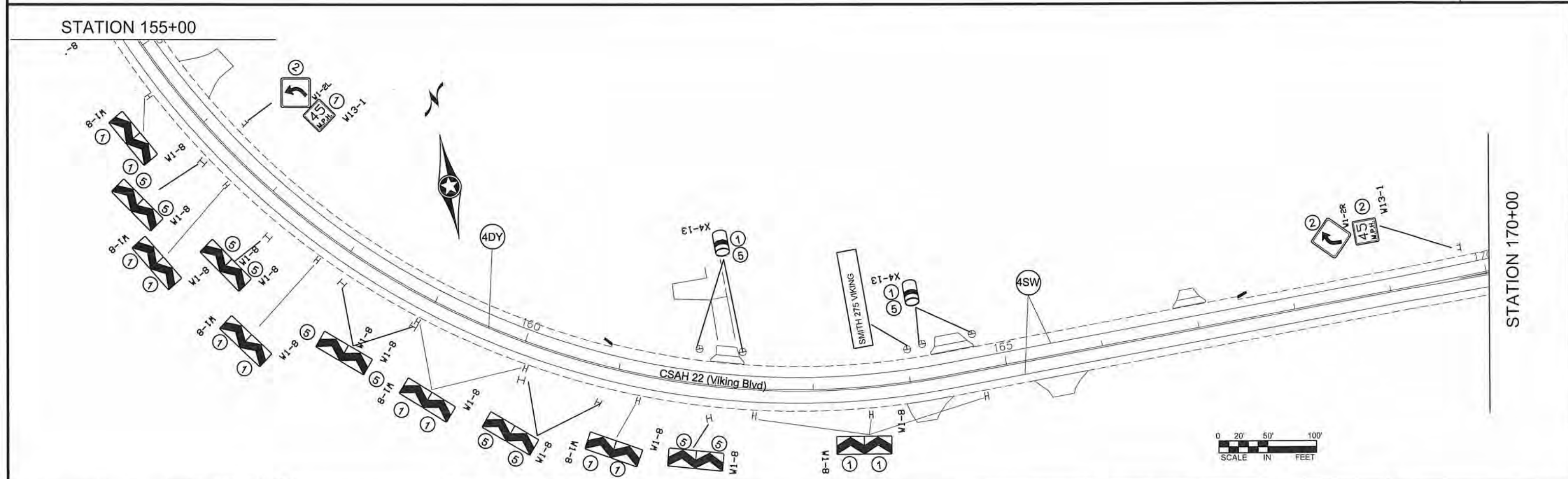
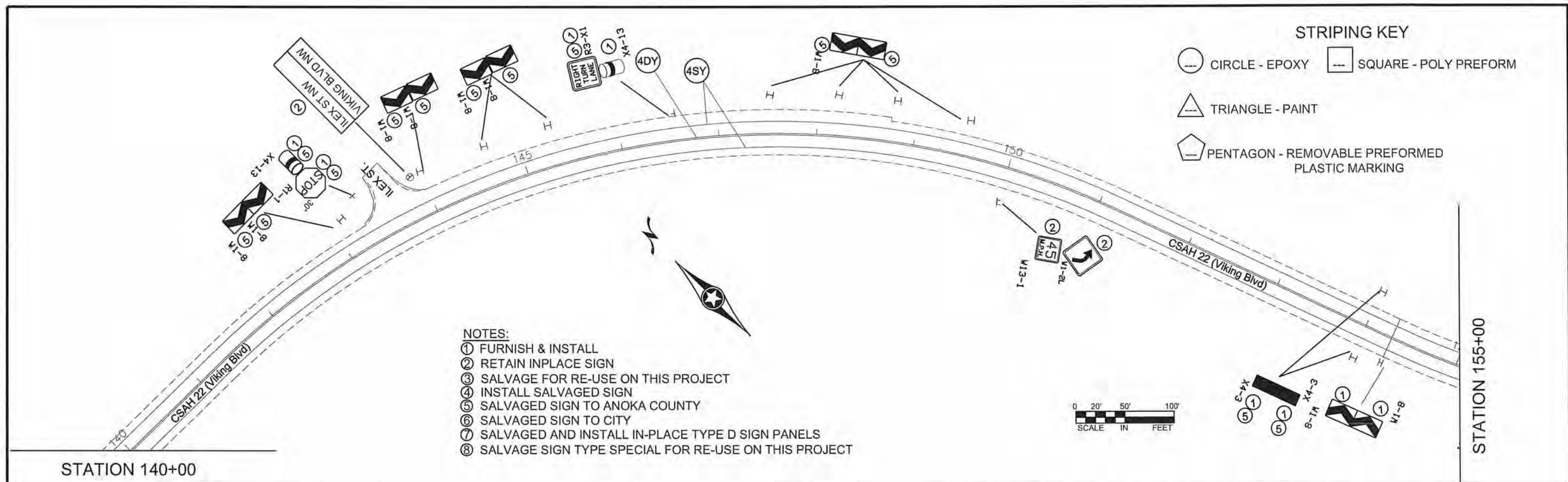


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 - ③ SALVAGE FOR RE-USE ON THIS PROJECT
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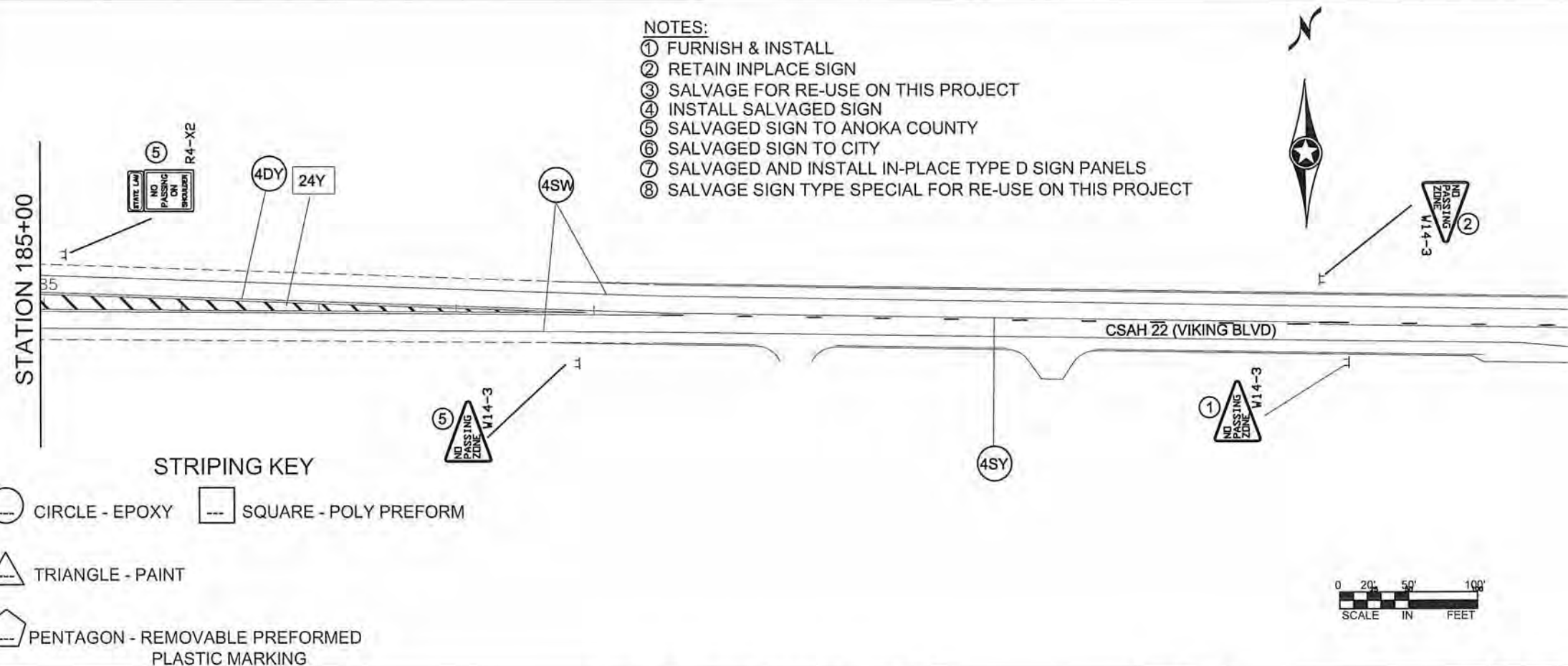
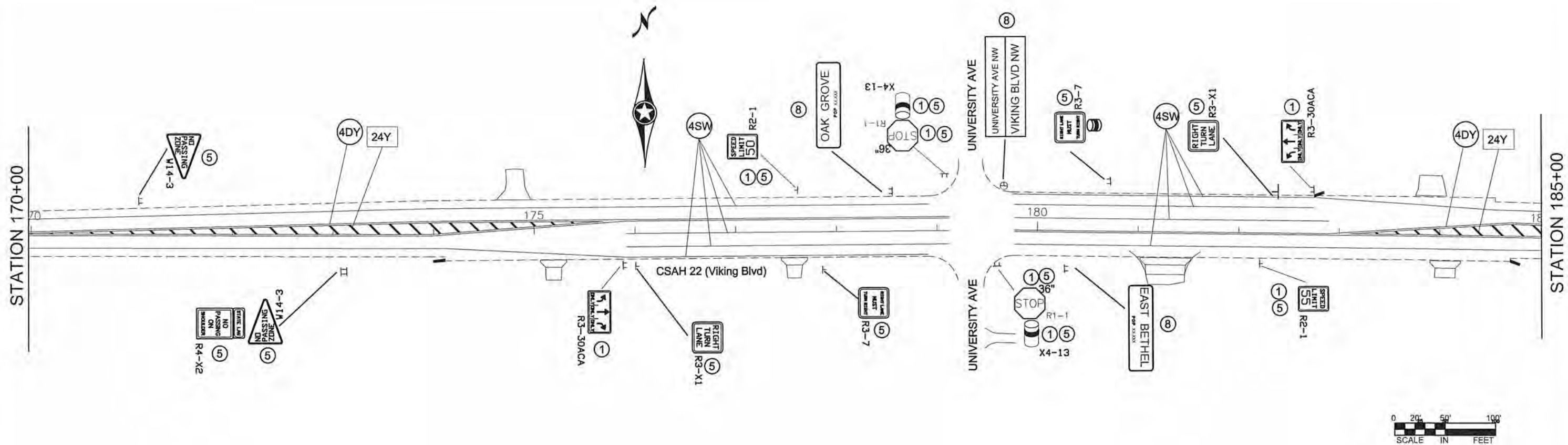
- STRIPING KEY
- CIRCLE - EPOXY
 - SQUARE - POLY PREFORM
 - TRIANGLE - PAINT
 - PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



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					PRINT NAME: ANDREW WITTER		DESIGN BY: RLB DATE: 5/7/14				STATE AID PROJECT NO. 002-622-034			
					SIGNATURE: [Signature]		CHECKED BY: JR DATE: 5/7/14		STATE AID PROJECT NO. _____		COUNTY PROJECT NO. _____		Sheet 154 of 210 Sheets	
NAME: P:\02-622-034\Basetraffic\PERMANENT SIGNING & STRIPING.dwg					DATE: 3/2/15 REG. NO. 42757									



REVISED 7/9/14					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: <u>ANDREW WITTER</u> SIGNATURE: <u>[Signature]</u> DATE: <u>5/21/15</u> REG. NO. <u>42757</u>					DRAWN BY: <u>RLB</u> DATE: <u>5/7/14</u> DESIGN BY: <u>RLB</u> DATE: <u>5/7/14</u> CHECKED BY: <u>JR</u> DATE: <u>5/7/14</u>					 ANOKA COUNTY HIGHWAY DEPT.					STATE PROJECT NO. _____ STATE AID PROJECT NO. <u>002-622-034</u> STATE AID PROJECT NO. _____ COUNTY PROJECT NO. _____					PERMANENT SIGNING & STRIPING PLAN				
NO DATE BY CKD APPR REVISION																				Sheet <u>155</u> of <u>210</u> Sheets									
NAME: P:\02-622-34\Bases\TRAFFIC\PERMANENT SIGNING & STRIPING.dwg																													



- NOTES:
- ① FURNISH & INSTALL
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>					NO	DATE	BY	CKD	APPR	REVISION																									NAME: P:\02-622-34\Bases\TRAFFIC\PERMANENT SIGNING & STRIPING.dwg						
NO	DATE	BY	CKD	APPR	REVISION																																				

SIGN PANELS TYPE C							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R1-1	30" x 30"		4	6.25	25.00	1	7.0'
R1-1	36" x 36"		3	9.00	27.00	2	
R1-1	48" x 48"		1	16.00	16.00	2	
X4-13	4" x 15"		16			0	4.0'
X4-13	4" x 15"		3			1	
R2-1	24" x 30"		3	5.00	15.00	1	7.0'
R2-1	24" x 30"		5	5.00	25.00	1	7.0'
R3-X1	30" x 30"		9	6.25	56.25	1	7.0'
R3-30ACA	54" x 30"		2	11.25	22.50	2	7.0'
M2-1A	21" x 15"		1	2.19	2.19	1	7.0'
M3-1A	24" x 12"		1	2.00	2.00		
M1-6	24" x 24"		5	4.00	20.00		
M6-1aR	21" x 15"		1	2.19	2.19		
M6-1aL	21" x 15"		1	2.19	2.19		
M5-1aL	21" x 15"		1	2.19	2.19		
M4-6A	24" x 12"		1	2.00	2.00		
M3-2A	24" x 12"		2	2.00	4.00	1	7.0'
M3-4A	24" x 12"		2	2.00	4.00		
M1-6	24" x 24"		6	4.00	24.00		
M6-4A	21" x 15"		2	2.19	4.38		
M2-1A	21" x 15"		1	2.19	2.19	1	7.0'
M4-6A	24" x 12"		1	2.00	2.00		
M1-6	24" x 24"		4	4.00	16.00		
M6-1aL	21" x 15"		1	2.19	2.19		
M6-1aR	21" x 15"		1	2.19	2.19		

SIGN PANELS TYPE C							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
W1-8	18" x 24"		28	3.00	84.00	1	7.0'
W1-7	48" x 24"		4	8.00	32.00	2	7.0'
X4-2	18" x 18"		8			0	
X4-3	6" x 12"		6	0.50	3.00	1	4.0'
X4-4R	12" x 12"		2	1.00	2.00	0	
X4-4R	12" x 36"		3	3.00	9.00	1	4.0'
X4-4L	12" x 12"		1	1.00	1.00	0	
X4-4L	12" x 36"		1	3.00	3.00	1	4.0'
X4-5U	6" x 12"		2	0.50	1.00	1	4.0'
X4-5D	6" x 12"		2	0.50	1.00	1	4.0'
W20-100p	30" x 24"		1	5.00	5.00	0	
W13-1	24" x 24"		3	4.00	12.00	0	
W14-3	48" x 48" x 36"		1	6.00	6.00	2	7.0'
TOTAL			136		439.46	87	

W1-8 SIGNS MOUNTED BACK TO BACK - 28 SIGNS REQUIRE 15 POSTS

X4-3 SIGNS MOUNTED BACK TO BACK - 6 SIGNS REQUIRE 3 POSTS

X4-4R 12"x12" SIGNS MOUNTED ON GUARDRAIL

X4-4L 12"x12" SIGN MOUNTED ON GUARDRAIL

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE FIELD MANUAL DATED JANUARY, 2014
- LOCATIONS OF ALL PERMANENT STRIPING AND PAVEMENT MESSAGES ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL MAINLINE PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- SEE PERMANENT SIGN TABULATIONS FOR ADDITIONAL INFORMATION.
- ALL SEGMENT STRIPE LINES SHALL BE EPOXY. PERMANENT MESSAGES AND ARROWS SHALL BE PREFORMED THERMOPLASTIC.
- ALL SIGNS SHALL BE FURNISHED AND INSTALLED UNLESS OTHERWISE NOTED.

REVISED 7/9/14					
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-34\Base\TRAFFIC\PERMANENT SIGNING & STRIPING.dwg					

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

PRINT NAME: ANDREW WITTER

SIGNATURE:

DATE: 9/2/15 REG. NO. 42757

DRAWN BY: RLB DATE: 5/7/14

DESIGN BY: RLB DATE: 5/7/14

CHECKED BY: JR DATE: 5/7/14



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

PERMANENT SIGNING
TABULATION

Sheet 157 of 210 Sheets

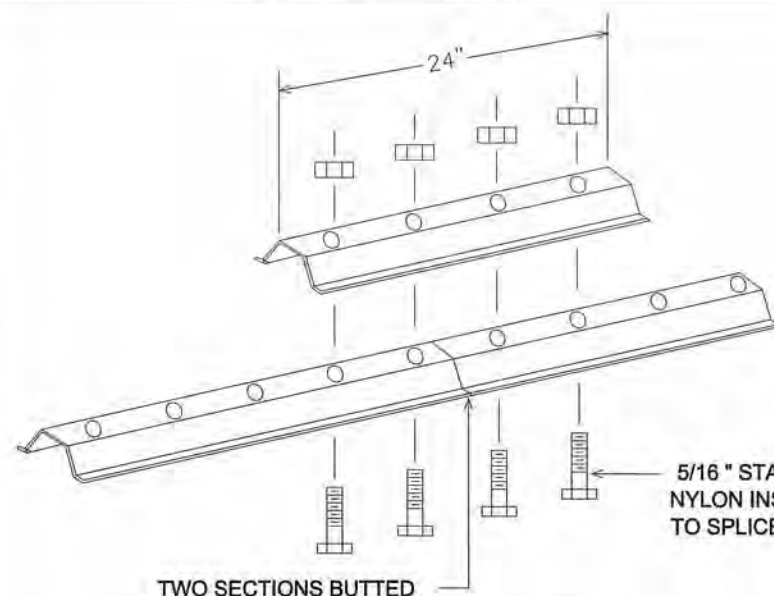
NOTES:	THIS TABLE ILLUSTRATES QUANTITIES FOR F&I NEW TYPE "C" SIGNS ONLY
A	DELINEATOR MOUNTED BELOW R1-1 SIGN POST ASSEMBLY; EXCEPT FOR 3 SINGLE POST INSTALLATIONS
B	SIGN MOUNTED ABOVE M1-6 SIGN POST ASSEMBLY
C	SIGN MOUNTED BELOW M1-6 SIGN POST ASSEMBLY
D	SIGN MOUNTED BACK TO BACK ON ONE POST ASSEMBLY
E	SIGN MOUNTED BELOW W1-7 SIGN POST ASSEMBLY
F	SIGN MOUNTED ON GUARDRAIL
G	SIGN MOUNTED BELOW W10-1 POST ASSEMBLY
H	SIGN MOUNTED BELOW W1-2 POST ASSEMBLY

EXISTING SIGN TAB									
STATION	ADDRESS/ DESCRIPTION (NOTES)	SALVAGE SIGN TYPE C	SALVAGE SIGN TYPE D	SALVAGE SIGN TYPE SPECIAL (1)	INSTALL SIGN TYPE D	TEMPORARY SIGN TYPE C RELOCATE	INSTALL SIGN TYPE SPECIAL (1)	SIGN NUMBER	SIGN LEGEND
		EACH	EACH	EACH	EACH	EACH	EACH		
CSAH 22									
131+90	Lt	1						M3-4A 22	WEST
132+10	Rt	1						M1-6 13	
								M5-1AL	LEFT ARROW
								W1-7	DBL ARROW
132+40	Rt	1						X4-2	OBJECT MARKER
								X4-2	OBJECT MARKER
132+90	Lt			1			1		CEDAR DR
133+80	Rt	1						M3-2A 22	EAST
								M1-6 13	
134+10	Lt	1						M6-1AR	RT ARROW
135+20	Rt	1						R2-1	50 MPH
136+55	Lt	1						R3-X1	RIGHT TURN LANE
143+10	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
143+40	Lt	1						R1-1	STOP
								X4-13	OBJECT MARKER
144+00	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
144+70	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
145+40	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
146+60	Lt	1						R3-X1	RIGHT TURN LANE
147+50	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
148+20	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
148+80	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
149+50	Lt	1						W1-8	CHEVRON
								W1-8	CHEVRON
154+00	Lt	1						X4-3	CULVERT DELINEATOR
								X4-3	CULVERT DELINEATOR
154+00	Rt	1						X4-3	CULVERT DELINEATOR
								X4-3	CULVERT DELINEATOR
156+30	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
157+30	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
158+10	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
159+00	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
160+00	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
161+00	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
162+00	Rt	1						W1-8	CHEVRON
								W1-8	CHEVRON
161+80	Lt	1						X4-13	OBJECT MARKER
162+30	Lt	1						X4-13	OBJECT MARKER
164+20	LT	1						X4-13	OBJECT MARKER
164+70	Lt	1						X4-13	OBJECT

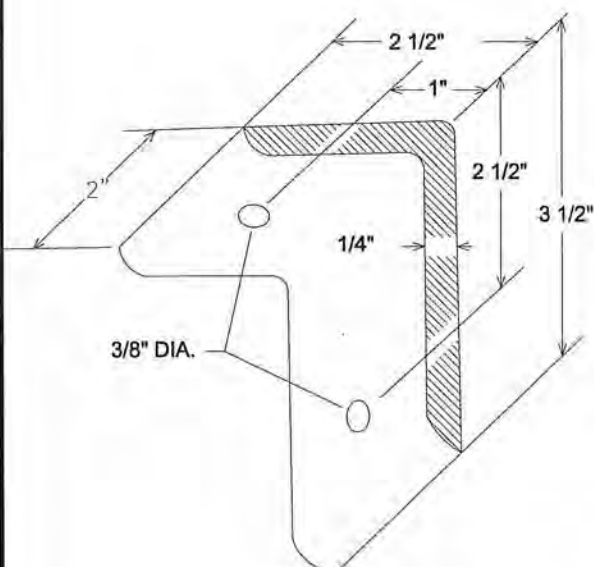
CONSTRUCTION NOTES:

1. SIGN TYPE SPECIAL ARE TO REMAIN VISIBLE AT ALL TIMES. SHALL BE PAID BY THE EACH, WHEN RELOCATION IS REQUIRED



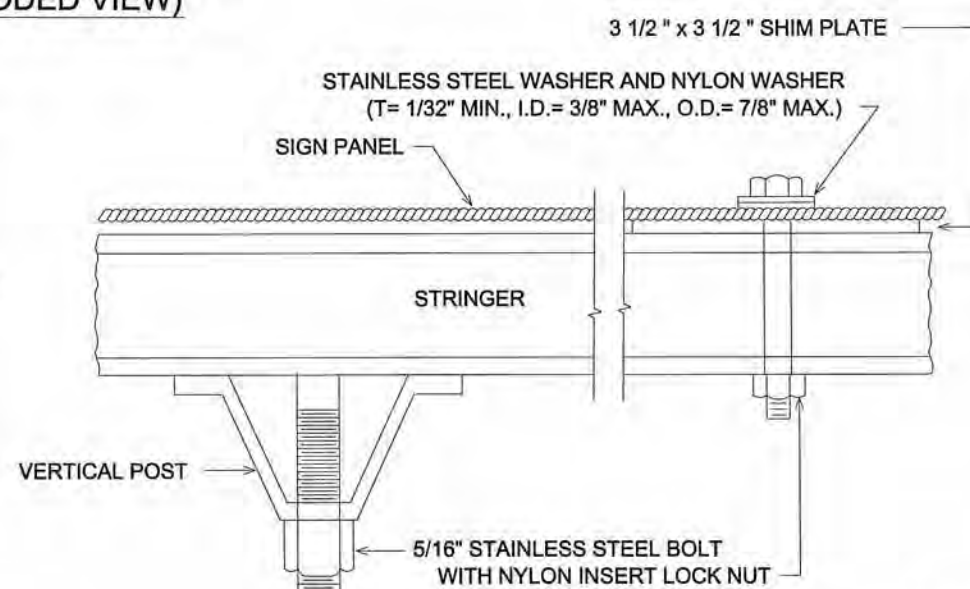


**LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)**

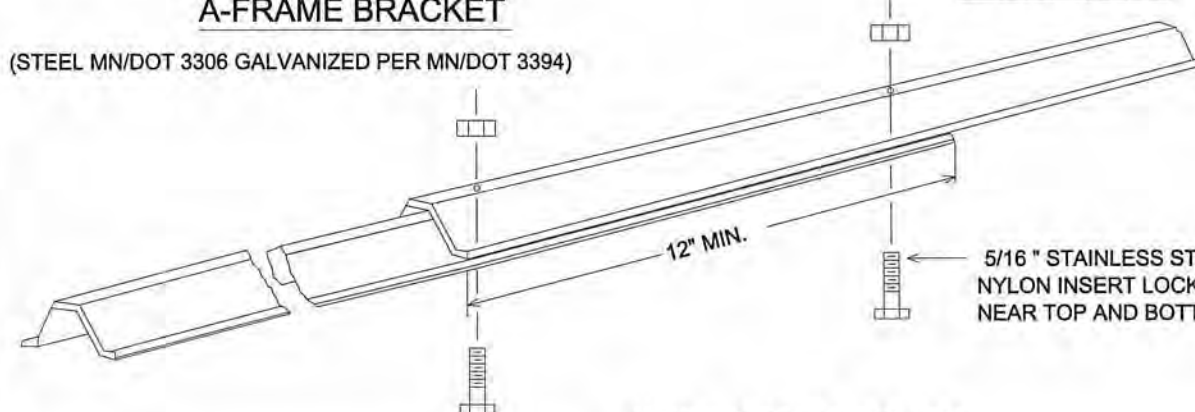


A-FRAME BRACKET

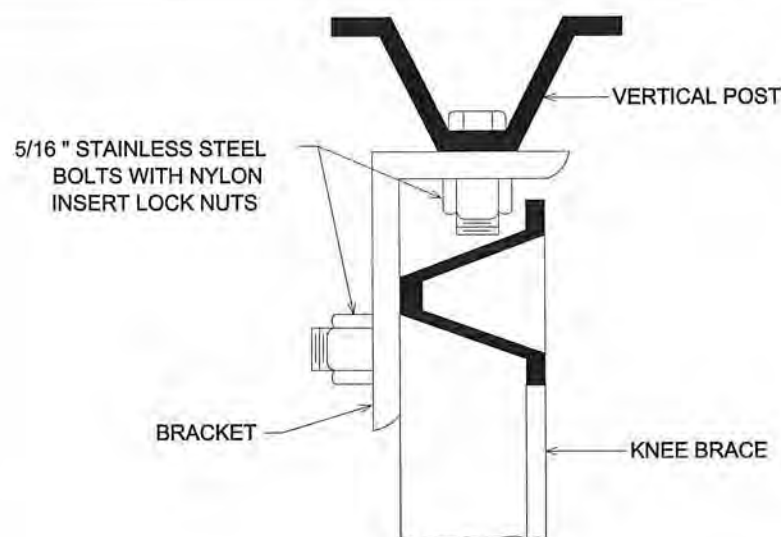
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



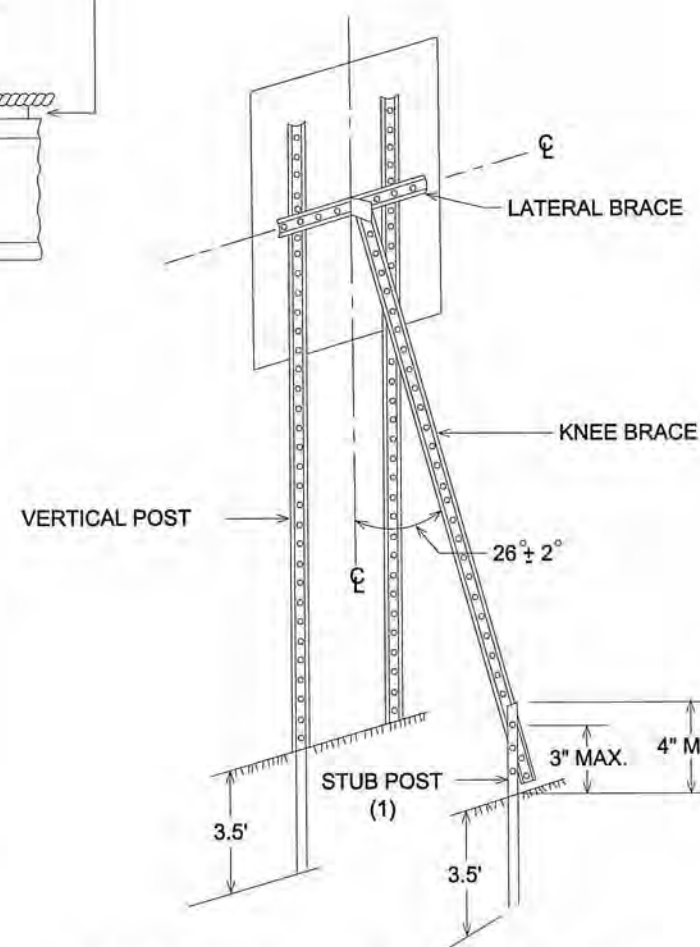
SECTION B-B



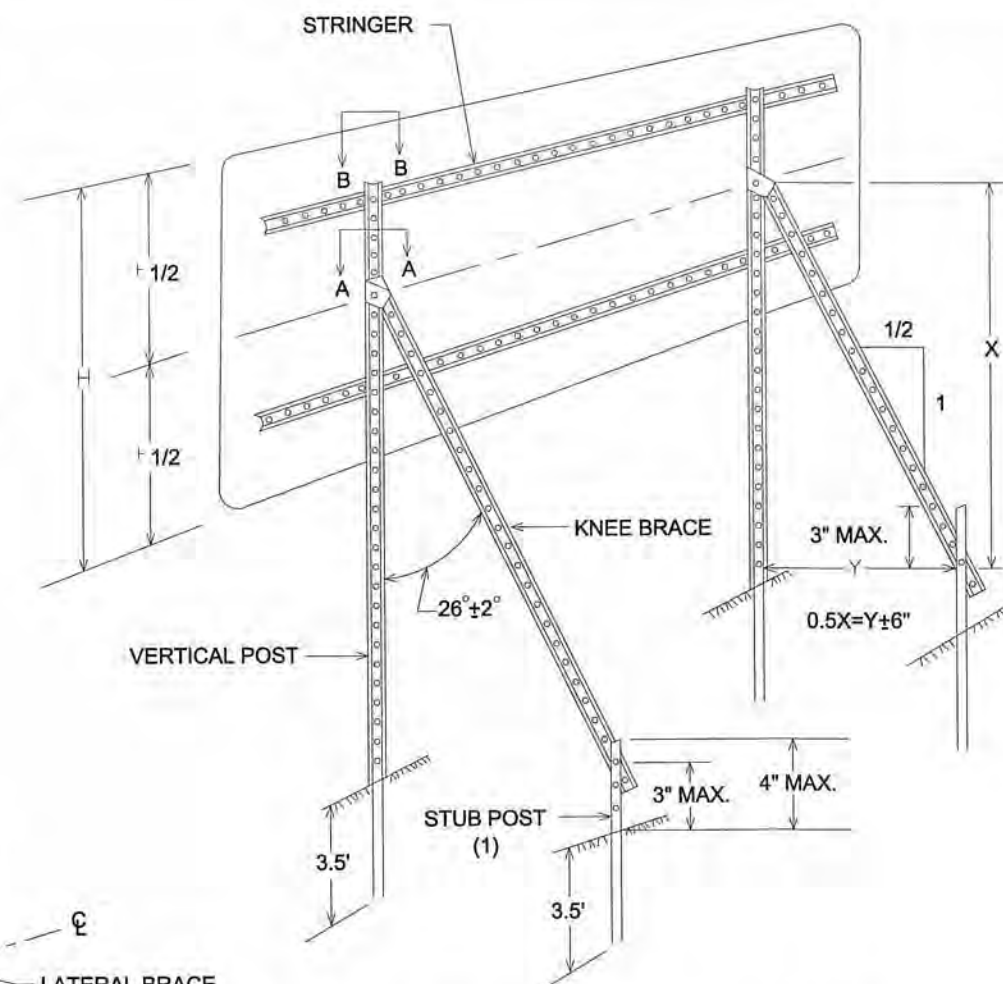
KNEE BRACE SPLICE



SECTION A-A



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



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



TYPICAL MOUNTING

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

**TYPE C & D SIGN
STRUCTURAL DETAILS**

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A
DULY REGISTERED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: **ANDREW WITTER**
SIGNATURE: *[Signature]*
DATE: **5/13/14** REG. NO. **42757**

DRAWN BY **RLB** DATE **5/13/14**
DESIGN BY **RLB** DATE **5/13/14**
CHECKED BY **JR** DATE **5/13/14**

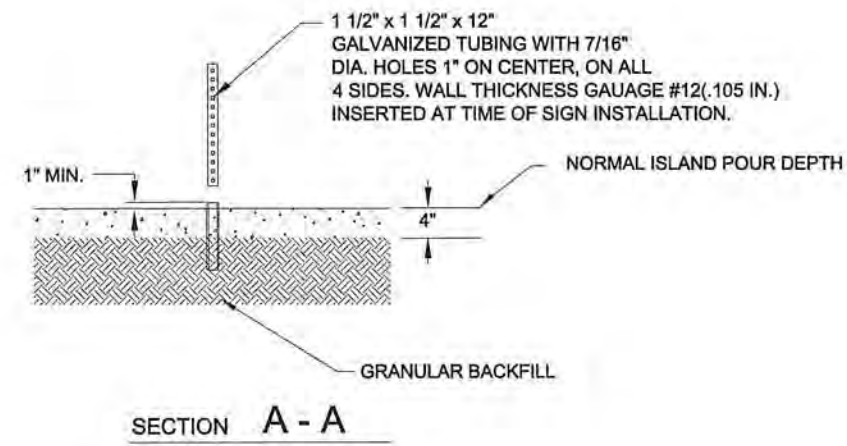
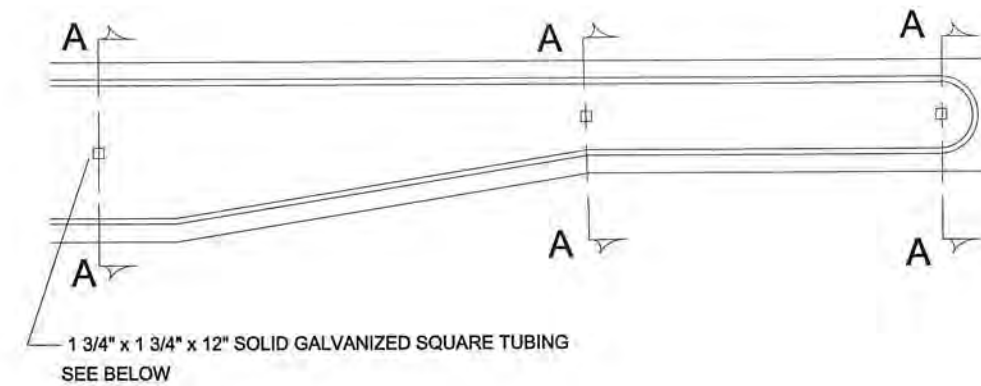


**ANOKA COUNTY
HIGHWAY DEPT.**

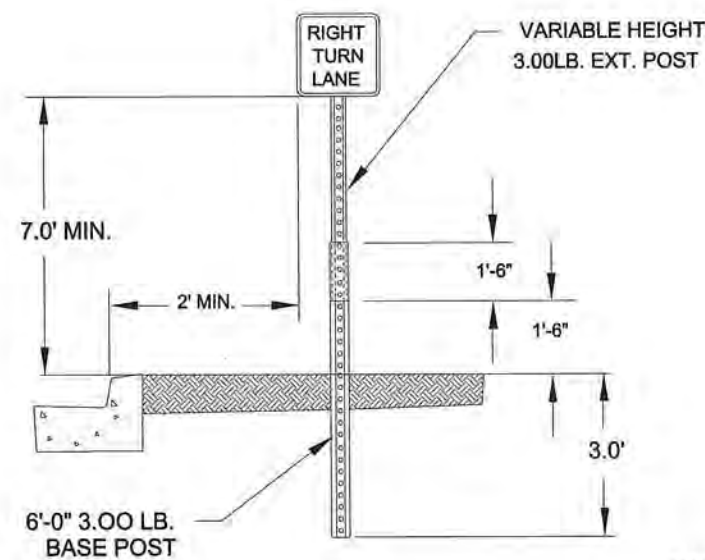
STATE PROJECT NO. **002-622-034**
STATE AID PROJECT NO. **002-622-034**
STATE AID PROJECT NO. **002-622-034**
COUNTY PROJECT NO. **002-622-034**

**SIGNING & STRIPING
DETAILS**

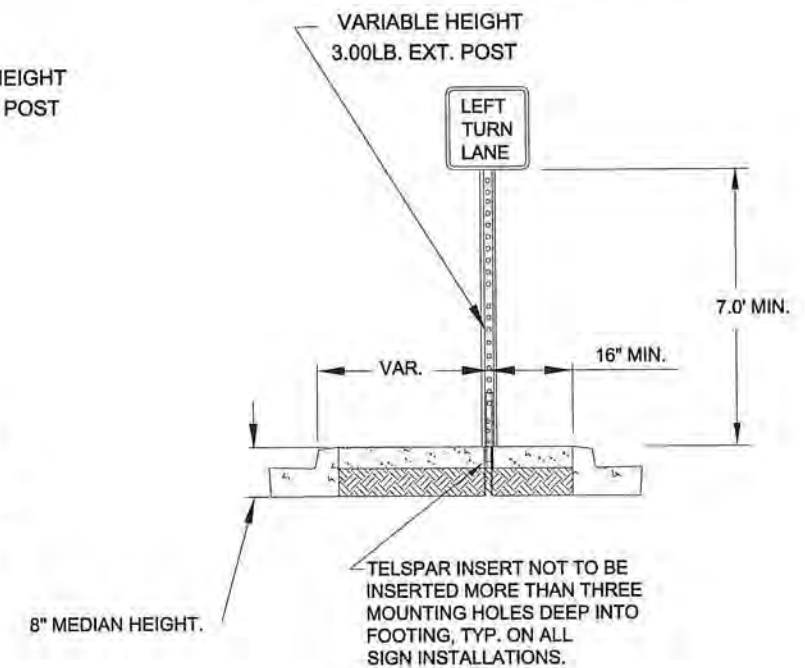
Sheet **159** of **210** Sheets



GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN
INSTALLATION TYPICAL



NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: ANDREW WITTER

SIGNATURE: [Signature]

DATE: 5/13/14 REG. NO. 42757

DRAWN BY: RLB DATE: 5/13/14

DESIGN BY: RLB DATE: 5/13/14

CHECKED BY: JR DATE: 5/13/14



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

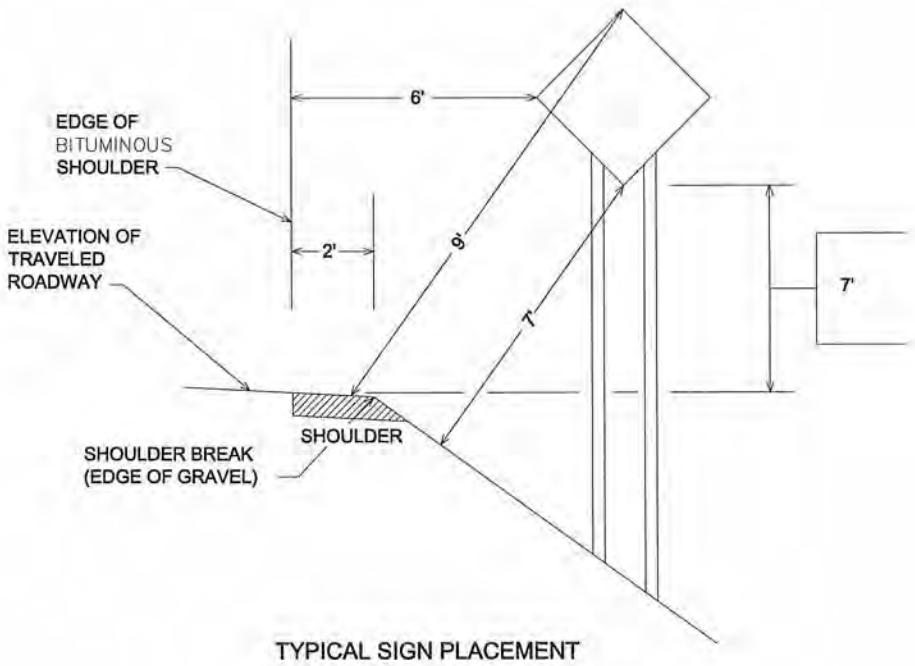
STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

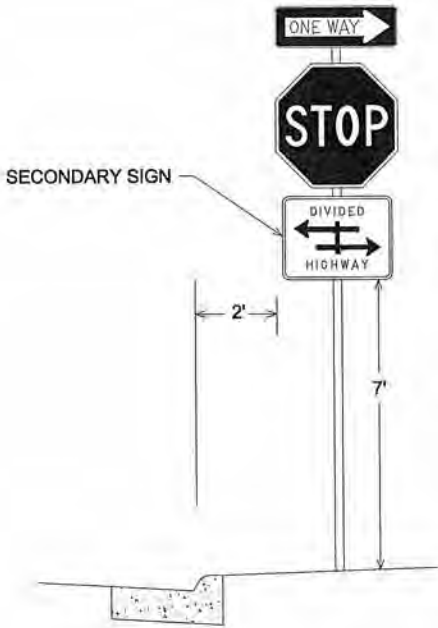
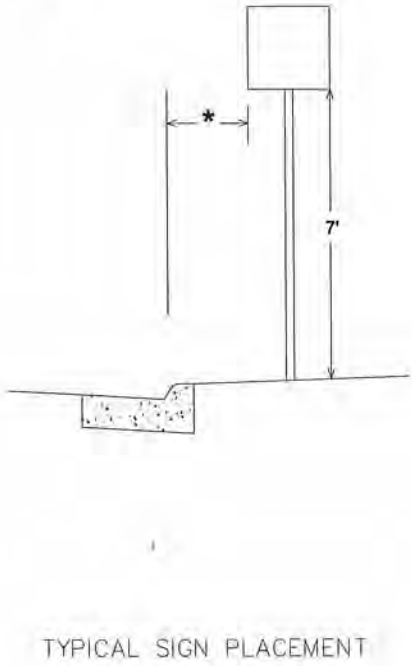
SIGNING & STRIPING
DETAILS

RURAL



URBAN

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

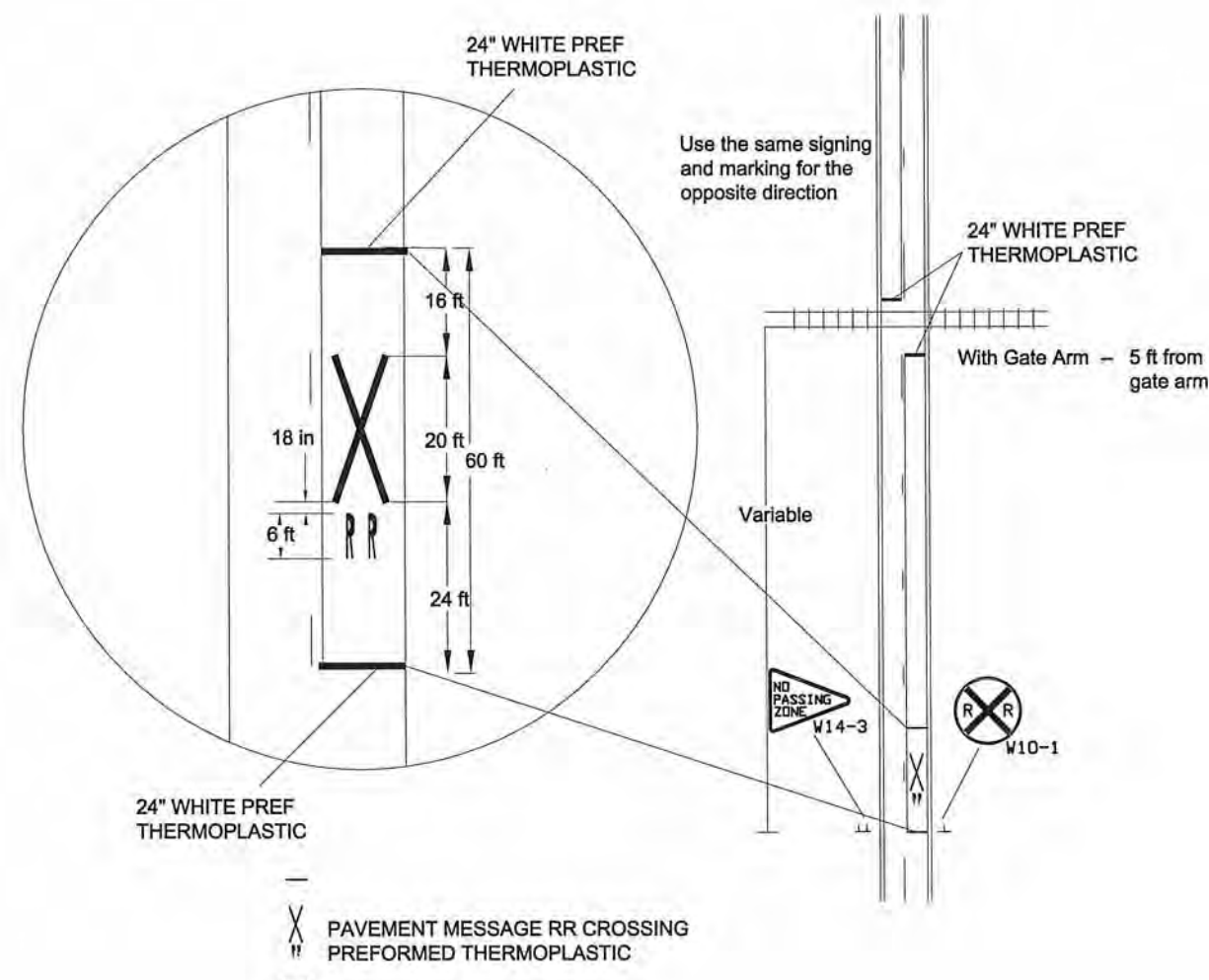


NOTE:

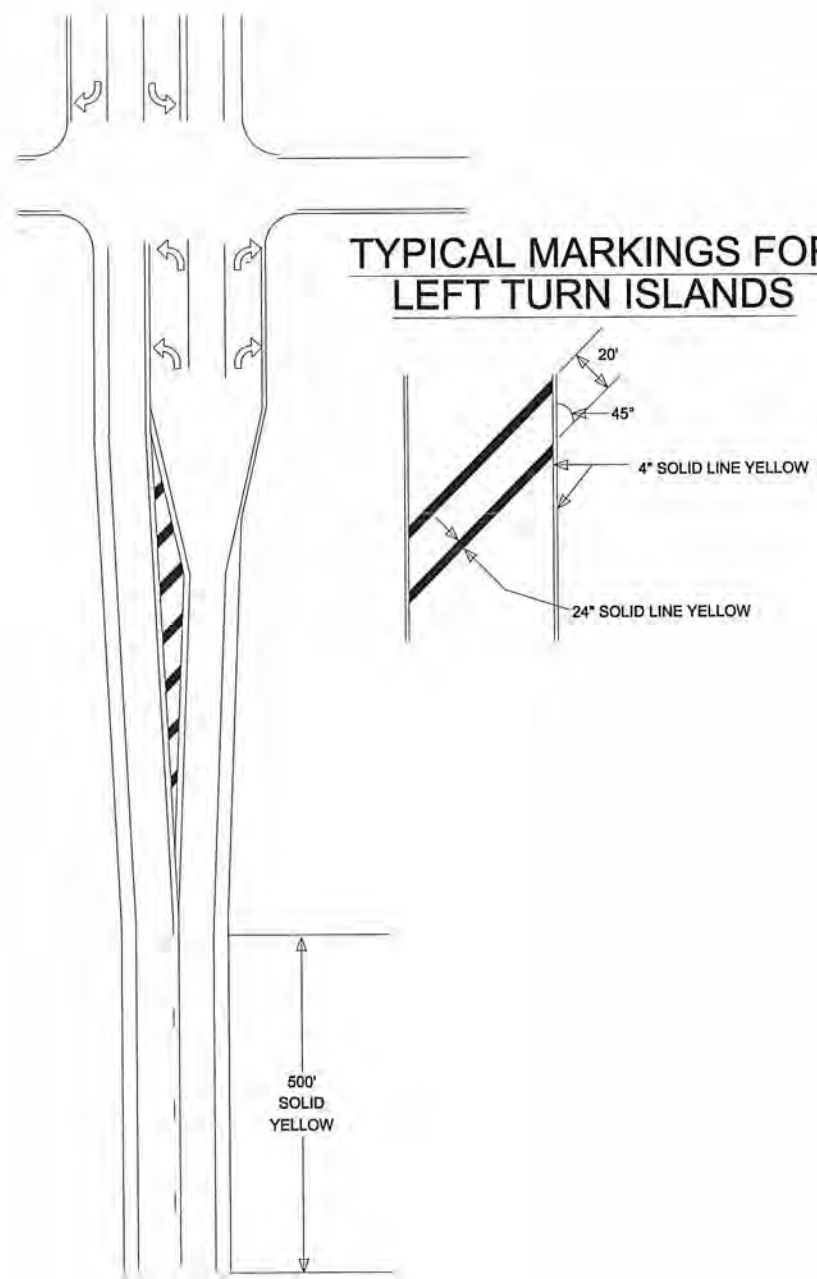
- ALL DIMENSIONS ARE MINIMUMS
- MAINTAIN 2' CLEAR FROM SIGNS TO BITUMINOUS TRAIL

NO						DATE						BY						CKD						APPR						REVISION					
NAME:																																			
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.																																			
PRINT NAME: ANDREW WITTER																																			
SIGNATURE: <i>Andrew Witter</i>																																			
DATE: 5/13/14 REG. NO. 42757																																			
DRAWN BY: RLB DATE: 5/13/14												DESIGN BY: RLB DATE: 5/13/14																							
CHECKED BY: JR DATE: 5/13/14																																			
ANOKA COUNTY HIGHWAY DEPT.												STATE PROJECT NO. 002-622-034																							
												STATE AID PROJECT NO. 002-622-034																							
												COUNTY PROJECT NO.																							
SIGNING & STRIPING DETAILS																																			
Sheet 161 of 210 Sheets																																			

RAILROAD CROSSING
PAVEMENT MARKINGS



TYPICAL MARKINGS FOR
LEFT TURN ISLANDS



NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: ANDREW WITTER

SIGNATURE: [Signature]

DATE: 5/13/14 REG. NO. 42757

DRAWN BY: RLB DATE: 5/13/14

DESIGN BY: RLB DATE: 5/13/14

CHECKED BY: JR DATE: 5/13/14



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-622-034

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

SIGNING & STRIPING
DETAILS

Sheet 162 of 210 Sheets

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Project Contacts

The Project Engineer and the Contractor are responsible for implementation of the SWPPP and the installation, inspection, and maintenance of the erosion prevention and sediment control BMP's before and during construction. Anoka County and the cities of Oak Grove and East Bethel are responsible for long term operation and maintenance of the permanent storm water management system.

Anoka County -
Harry Grams ; Construction Engineering Supervisor
1440 Bunker Lake Boulevard NW
Andover, MN 55304
(763) 862-4200

MPCA 24-HOUR EMERGENCY NOTIFICATION : 651-649-5451 / 800-422-0798

Project Description

SAP 002-622-034 consists of milling and concrete overlay of the existing roadway , Full depth concrete construction, 4' - 6' widening construction for additional right turn lane / by-pass lanes, 13' widening for new left turn lanes at University Ave. in the cities of Oak Grove and East Bethel. Construction activities include milling, excavation, grading, full depth concrete construction and concrete overlay of CSAH 22. The receiving waters for storm water from this project include Cedar Creek, County ditch #48, Crooked Brook and Swan Lake.

Site Maps

No site plan Required

Environmentally Sensitive Areas

No wetlands are impacted within the project limits. The receiving waters of Crooked Brook have been identified as impaired, this is located 2500' from construction site .thus identified as Environmentally Sensitive.

Outstanding Resource Value Waters

There are no outstanding resource value waters within the project limits.

Calcareous Fens

There are no calcareous fens within the project limits.

TMDL Implementation Plans Containing Storm Water Requirements

No TMDL Implementation Plans currently exist for the receiving waters on this project.

Land Feature Changes

Total Project Existing Area Of Impervious Surface: 13.310 Acres

Total Post Project Area Of Impervious Surface: 14.284 Acres

Total increase in Impervious Surface: 0.974 Acres

Total Project Area Disturbed: 20.394 Acres

This Road Project Has Less Than 1 Acre Of Increased Impervious surface area.

Timing of BMP Installation

The erosion prevention and sediment control BMP's shall be installed as necessary to minimize erosion from disturbed surfaces and capture sediment on site, and shall meet the NPDES Permit Part IV Construction Activity Requirements. All silt fence used for contamination shall be installed prior to grading operations.

Hazardous Materials

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.

Construction Notes

Construction shall be governed by MN/DOT Standard Specifications for Construction, 2014 edition of the Special Provisions, and this SWPPP. The Contractor shall keep the inspection and maintenance log.

Concrete Washout

A concrete wash out area shall be constructed to contain all concrete slurry and fines produced from washing out concrete trucks between loads. This area will be within the project limits. Location must be approved by the engineer. Contractor is responsible for the clean up of this area within 7 days of the conclusion of concrete construction. Washing out of trucks on the grade is not permitted.

Description	Plan Sheet Title	Location
Erosion Control Items	Statement Of Estimated Quantities	3
Erosion Control Tabs	Tabulations	4 - 6
Erosion Control Details	Standard Plans	33 - 40
Erosion Control Layout	Erosion Control Plan	165 - 170

Withholding of PaymentNoncompliance

If the Contractor fails to install erosion or sediment control measures ordered by the Engineer, the Engineer may withhold payment from related work until the control measures are undertaken by the Contractor. When the Contractor fails to conduct the quality control program, doesn't conduct the inspections required in the NPDES permit, or fails to take action ordered by the Engineer to remedy erosion or sediment control problems: The Engineer will issue a written order to the Contractor. The Contractor shall respond within 24 hours with sufficient personnel, equipment and/or materials and conduct the required work or be subject to a \$500.00 per calendar day deduction for noncompliance.

" THESE MANAGEMENT MEASURES FOR POLLUTION PREVENTION WILL BE STRICTLY ENFORCED. "

RECEIVING SURFACE WATERS, DISCHARGE TO IMPAIRED WATERS & SPECIAL WATERS

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

STORMWATER FROM A DISCHARGE POINT ON THE PROJECT THAT FLOWS TO A SURFACE WATER IDENTIFIED AS IMPAIRED AND/OR SPECIAL MUST INCLUDE THE FOLLOWING ADDITIONAL BMP REQUIREMENTS:
1) ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
2) TEMPORARY SEDIMENT BASINS MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME. THIS PROJECT AS DESIGNED DOES NOT HAVE FIVE (5) DISTURBED ACRES DRAINING TO A COMMON LOCATION AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

RECEIVING SURFACE WATERS		
NAME OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
CEDAR CREEK	NO	NO
COUNTY DITCH #48	NO	NO
SWAN LAKE	NO	NO
CROOKED BROOK	NO	YES

CONSTRUCTION PHASING

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

WHEN TOPSOIL IS DISTURBED, THE TOPSOIL WILL BE STRIPPED AND STOCKPILED IN SOIL BERMS AT THE TOE OF THE STRIPPED SLOPES ALONG THE PROJECT LIMITS. TEMPORARY VEGETATION WILL BE ESTABLISHED ON THE STOCKPILED TOPSOIL BERMS WITH SEED MIXTURE 25-141, TYPE 3 FERTILIZER, AND DISK ANCHORED TYPE 3 MULCH OR RAPID STABILIZATION METHOD 3 AS PROVIDED IN THE PLAN. STOCKPILED TOPSOIL BERMS WILL NOT BE PLACED IN ANY STORMWATER CONVEYANCES.

AFTER STRIPING THE TOPSOIL THE EXPOSED SOIL INSLOPES WILL BE STABILIZED WITH DISK ANCHORED TYPE 3 MULCH WITHIN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED.

TEMPORARY SEDIMENT BASINS

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

PERMANENT STORMWATER MANAGEMENT SYSTEM

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

EROSION PREVENTION PRACTICES

ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. FOR ALL AREAS WHERE DISTURBED SOILS DRAIN TO AN IMPAIRED OR SPECIAL WATER THE EXPOSED SOIL MUST BE STABILIZED NO LATER THEN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA CEASED. SEE THE IMPAIRED & SPECIAL WATERS SECTION OF THIS SWPPP FOR ADDITIONAL BMP REQUIREMENTS FOR DISTURBED AREAS THAT DRAIN TO A SPECIAL OR IMPAIRED WATER

THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAIN WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. STABILIZATION OF THE LAST 200 FEET MUST BE COMPLETED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER.

PIPE CULVERT OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER. THIS WILL INCLUDE DRAINAGE DITCHES THAT DRAIN WATER FROM ANY PORTION OF THE CONSTRUCTION SITE

PROJECT CONTACTS

MPCA	NPDES	LAURAL MEZNER	218-316-3889
MPCA	EMERGENCY	STATE DUTY OFFICER	800-422-0798
DNR	NOT REQUIRED		
COE	NOT REQUIRED		
ANOKA COUNTY DESIGN SWPPP PREPARATION	U OF MN SITE MANAGEMENT EXPIRES 5/15	JEFF FOSTER	763-862-4268
ANOKA COUNTY PROJECT REPRESENTATIVE	U OF MN SITE MANAGEMENT EXPIRES 5/15	HARRY GRAMS	763-862-4250
EROSION CONTROL SUPERVISOR (CONTRACTOR)			

SEDIMENT CONTROL PRACTICES

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

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

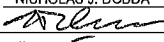
VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE MUST BE MINIMIZED. STREET SWEEPING MUST BE USED IF SEDIMENT IS BEING TRACKED OFF THE CONSTRUCTION SITE

POLLUTION PREVENTION MEASURES

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

" THESE MANAGEMENT MEASURES FOR POLLUTION PREVENTION WILL BE STRICTLY ENFORCED. "

NO	DATE	BY	CKD	APPR		REVISION			
NAME: P:\02-622-34\Plan\0262234_SWPPP.dgn									
03/02/2015 9:03:02 AM									

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: NICHOLAS J. DOBDA
SIGNATURE: 
DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

CHECKED BY GMP DATE 02/08/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

SWPPP

Sheet 163 of 210 Sheets

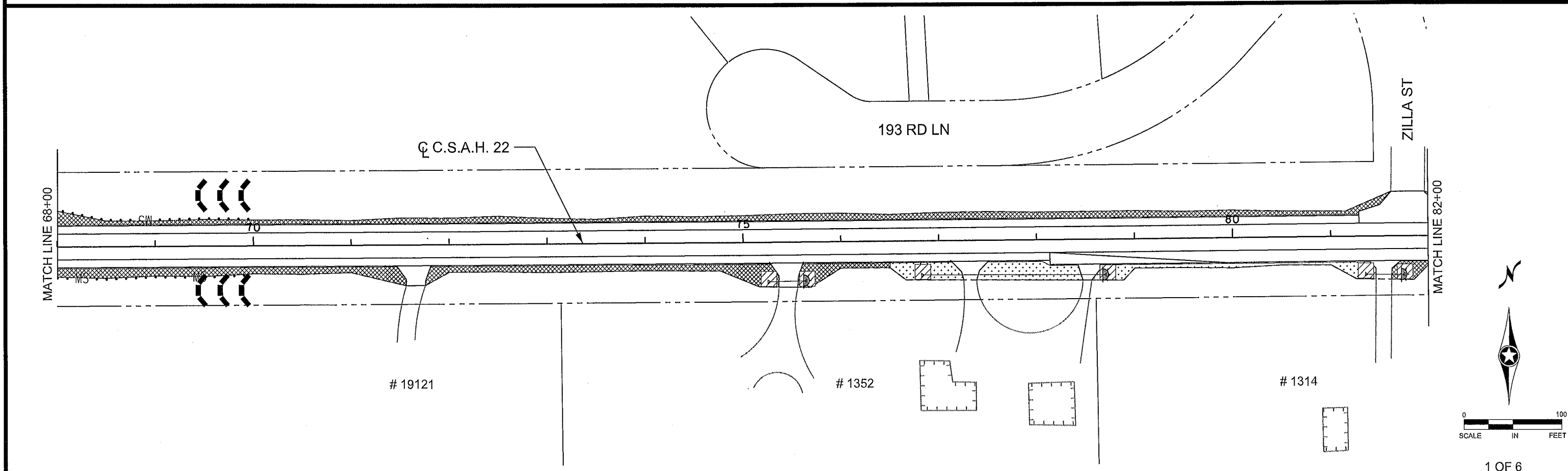
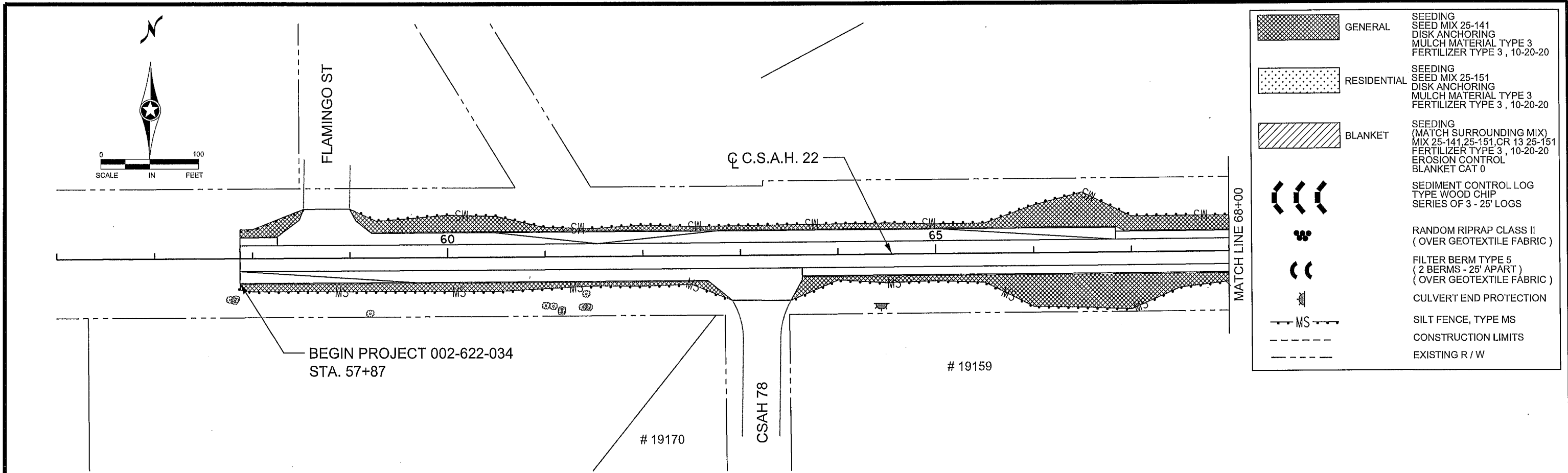
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Amending the SWPPP

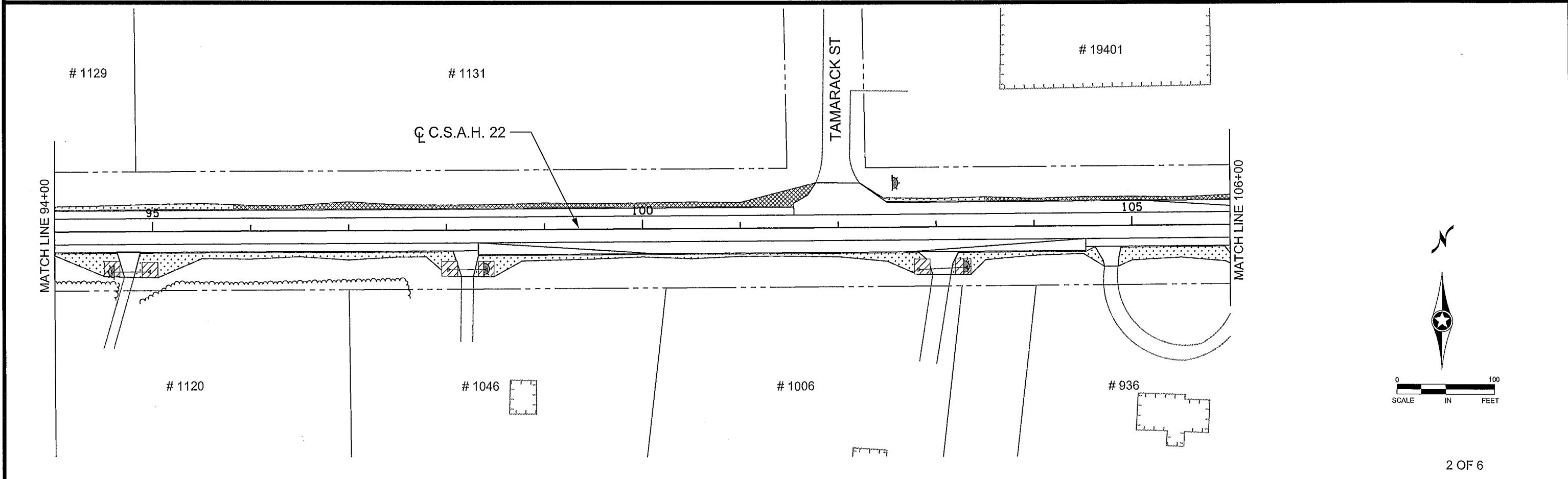
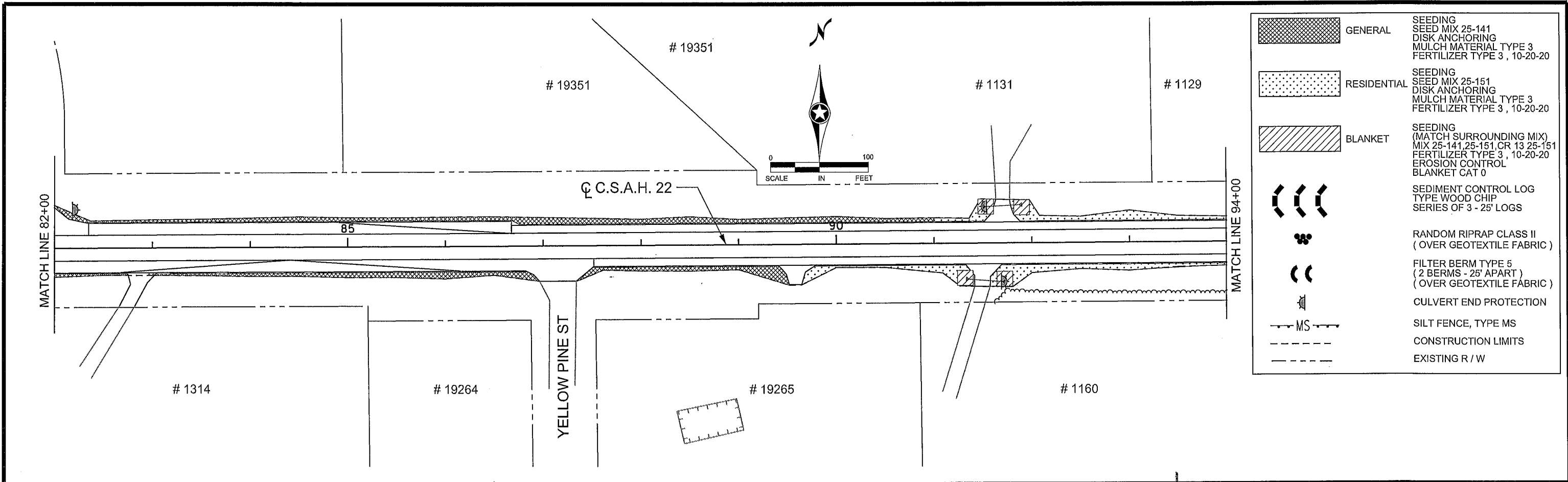
The SWPPP must be amended to record changes or modifications to permanent BMP's or other storm water treatment systems and removals of temporary BMP's. Changes to temporary BMP's may be recorded on this sheet. Include a brief description of the problem, location, nature of alteration, and comments. This record is to be retained for three years after project completion.

[illegible]

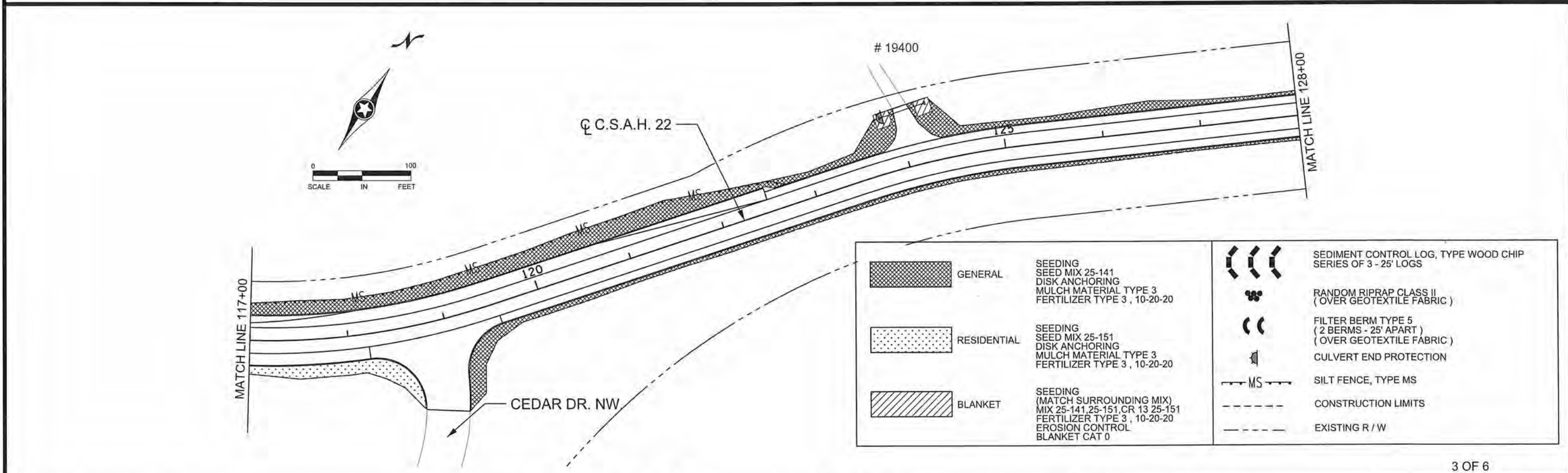
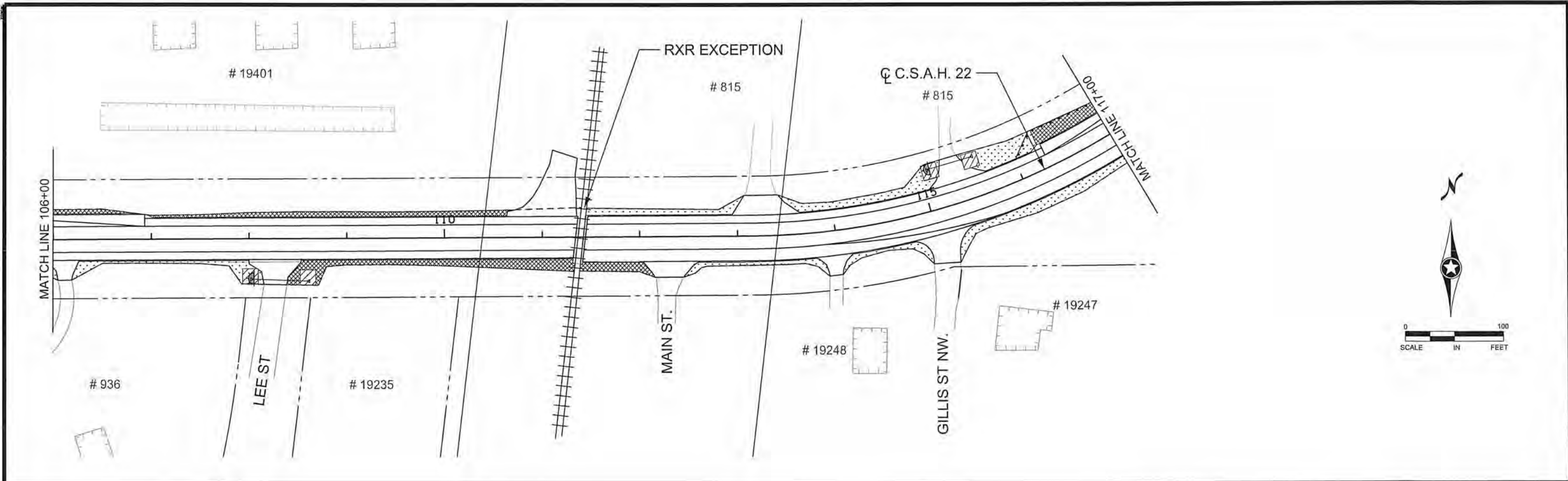
					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: <u>NICHOLAS J. DOBDA</u> SIGNATURE: <u>[Signature]</u> DATE: <u>3-2-15</u> LICENSE NO. <u>49046</u>		DRAWN BY <u>JCF</u> DATE <u>01/09/15</u> DESIGN BY <u>NJD</u> DATE <u>01/23/15</u> CHECKED BY <u>GMP</u> DATE <u>02/06/15</u>		 ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		SWPPP Sheet <u>164</u> of <u>210</u> Sheets															
<table border="1"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td colspan="6">NAME: P:\02-622-34\Plant\0262234_SWPPP.dgn</td> </tr> <tr> <td colspan="6">03/02/2015 9:03:03 AM</td> </tr> </tbody> </table>					NO	DATE	BY	CKD	APPR	REVISION	NAME: P:\02-622-34\Plant\0262234_SWPPP.dgn						03/02/2015 9:03:03 AM											
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03/02/2015 9:03:03 AM																												



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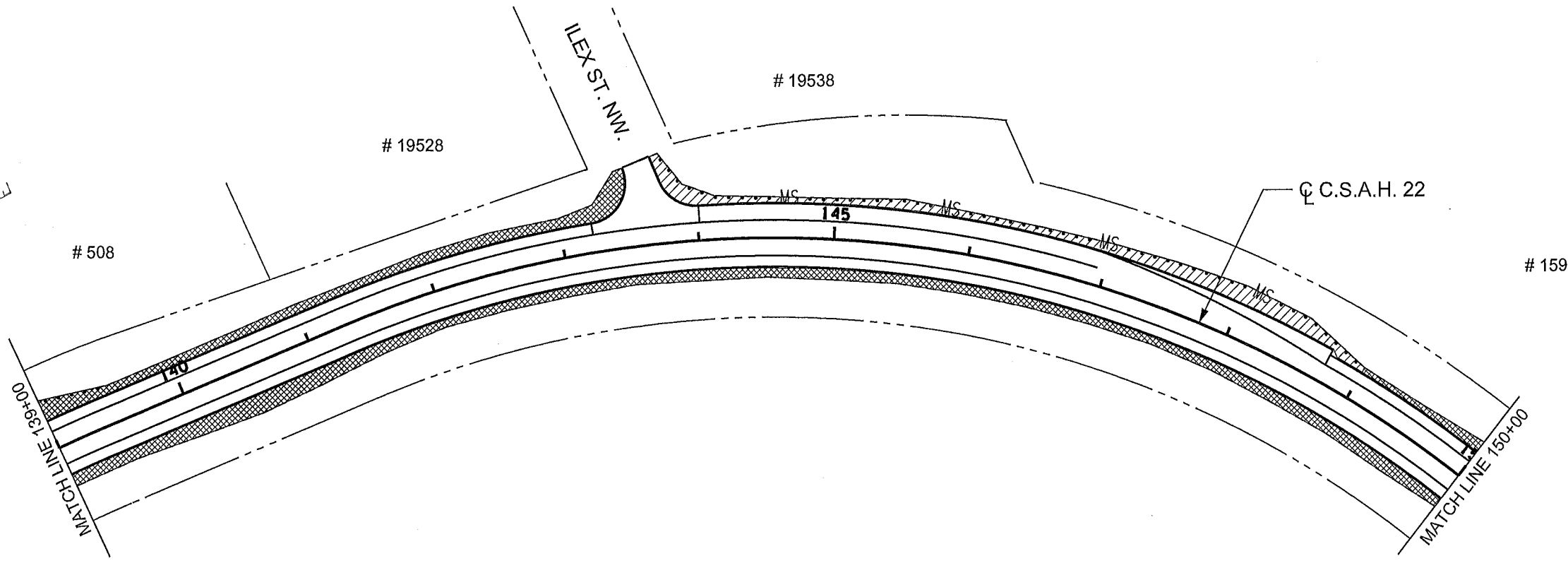
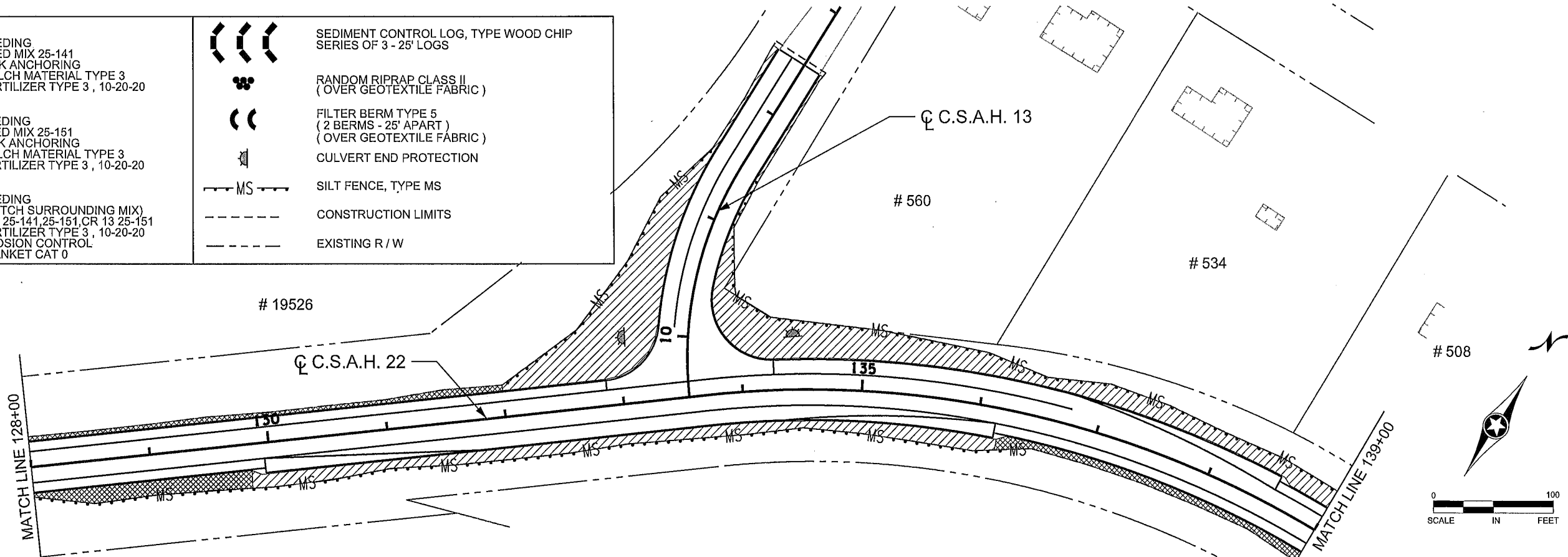
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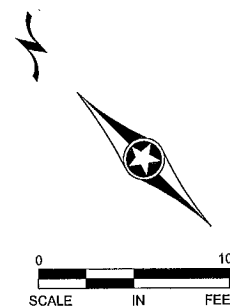
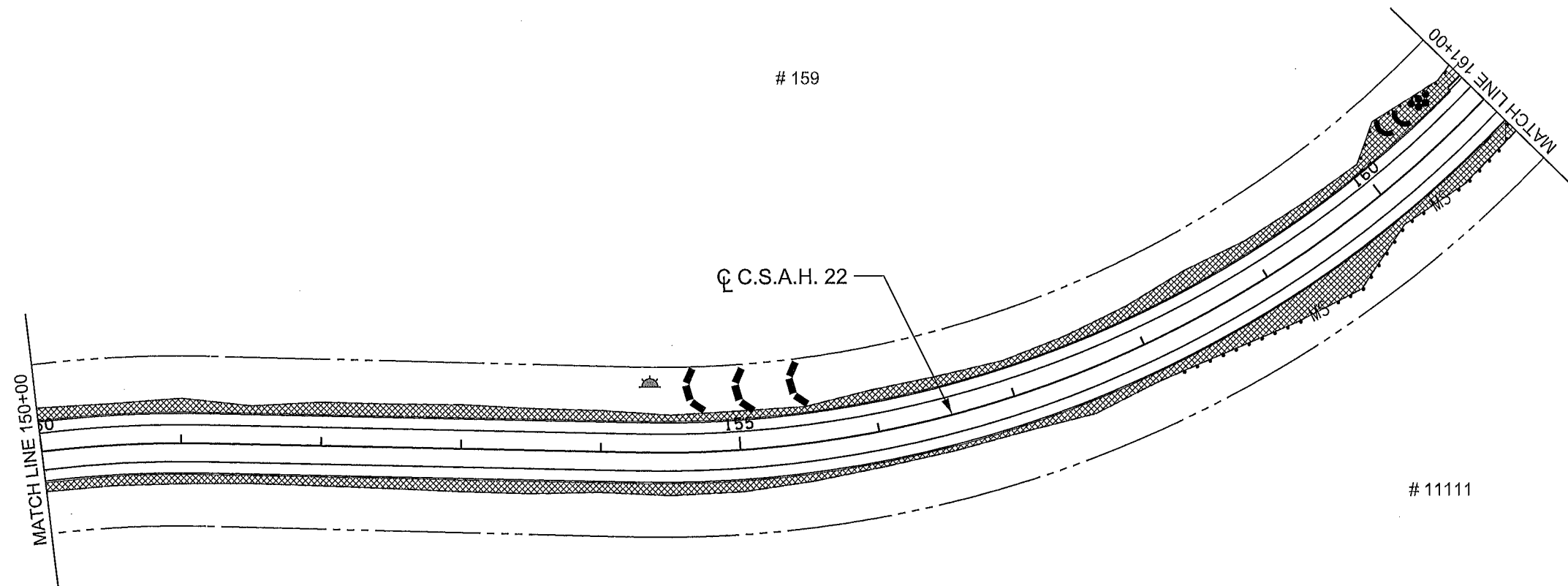


3 OF 6

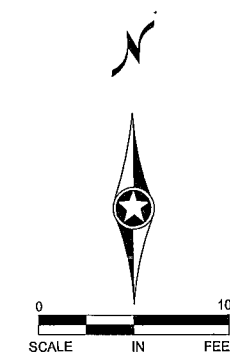
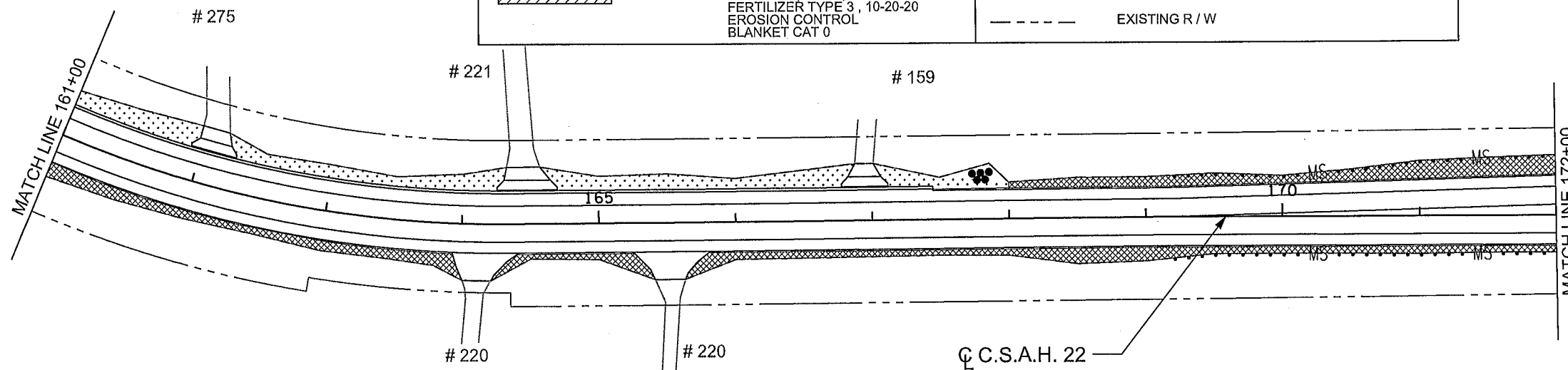
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NO	DATE	BY	CKD	APPR	REVISION																					

GENERAL RESIDENTIAL BLANKET	SEEDING SEED MIX 25-141 DISK ANCHORING MULCH MATERIAL TYPE 3 FERTILIZER TYPE 3, 10-20-20 SEEDING SEED MIX 25-151 DISK ANCHORING MULCH MATERIAL TYPE 3 FERTILIZER TYPE 3, 10-20-20 SEEDING (MATCH SURROUNDING MIX) MIX 25-141, 25-151, CR 13 25-151 FERTILIZER TYPE 3, 10-20-20 EROSION CONTROL BLANKET CAT 0	SEDIMENT CONTROL LOG, TYPE WOOD CHIP SERIES OF 3 - 25' LOGS RANDOM RIPRAP CLASS II (OVER GEOTEXTILE FABRIC) FILTER BERM TYPE 5 (2 BERMS - 25' APART) (OVER GEOTEXTILE FABRIC) CULVERT END PROTECTION SILT FENCE, TYPE MS CONSTRUCTION LIMITS EXISTING R / W
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	GENERAL	SEEDING SEED MIX 25-141 DISK ANCHORING MULCH MATERIAL TYPE 3 FERTILIZER TYPE 3, 10-20-20		SEDIMENT CONTROL LOG, TYPE WOOD CHIP SERIES OF 3 - 25' LOGS
	RESIDENTIAL	SEEDING SEED MIX 25-151 DISK ANCHORING MULCH MATERIAL TYPE 3 FERTILIZER TYPE 3, 10-20-20		RANDOM RIPRAP CLASS II (OVER GEOTEXTILE FABRIC)
	BLANKET	SEEDING (MATCH SURROUNDING MIX) MIX 25-141, 25-151, CR 13 25-151 FERTILIZER TYPE 3, 10-20-20 EROSION CONTROL BLANKET CAT 0		FILTER BERM TYPE 3 (2 BERMS - 25' APART) (OVER GEOTEXTILE FABRIC)
				CULVERT END PROTECTION
				SILT FENCE, TYPE MS
				CONSTRUCTION LIMITS
				EXISTING R / W



5 OF 6

NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: NICHOLAS J. DOBDA

SIGNATURE:

DATE: 3-2-15 LICENSE NO. 49046

DRAWN BY JCF DATE 01/09/15

DESIGN BY NJD DATE 01/23/15

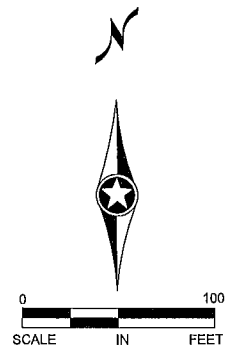
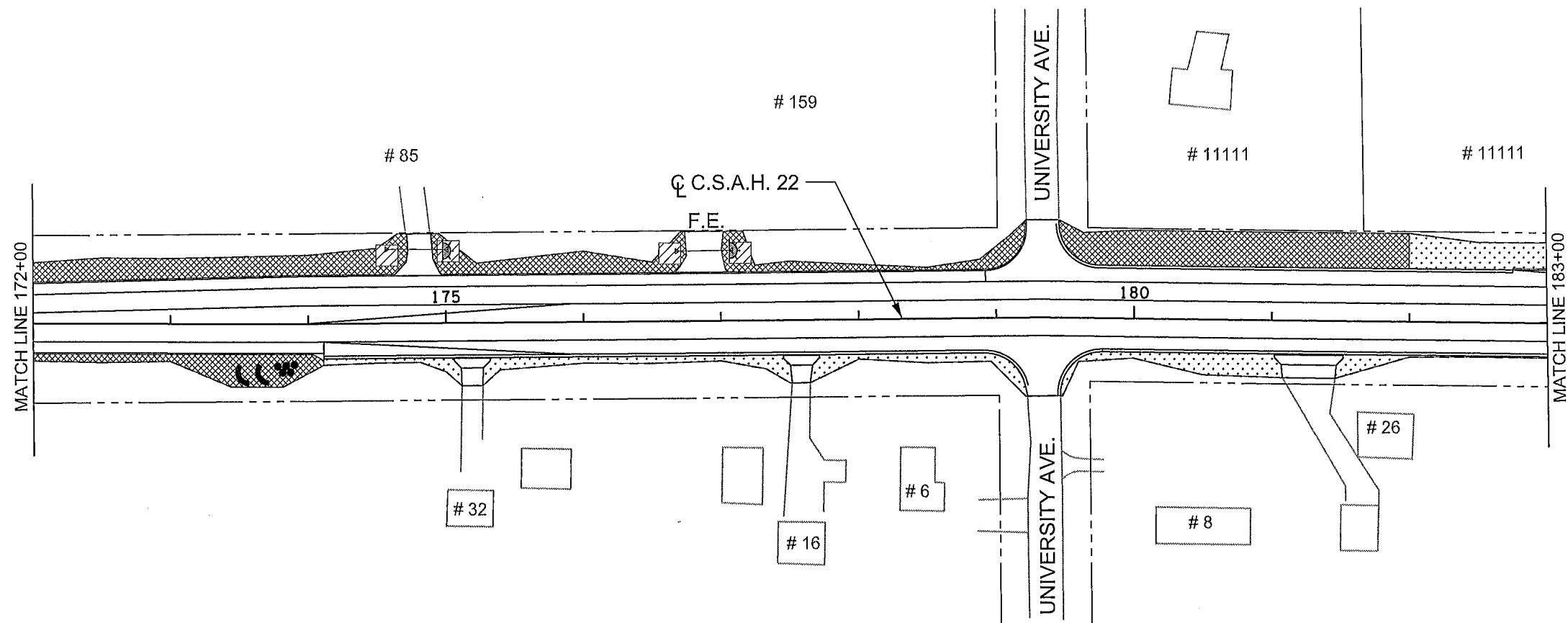
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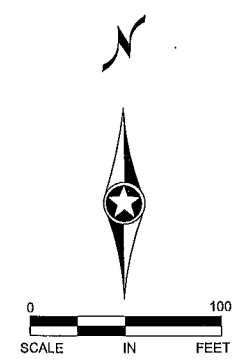
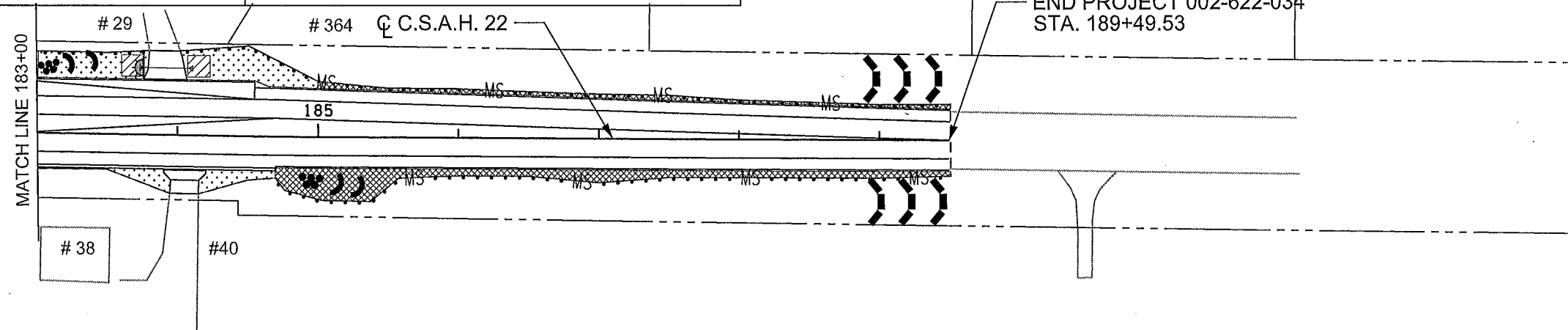
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

TURF ESTABLISHMENT /
EROSION CONTROL PLAN
STA 150+00 TO 172+00
Sheet 169 of 210 Sheets

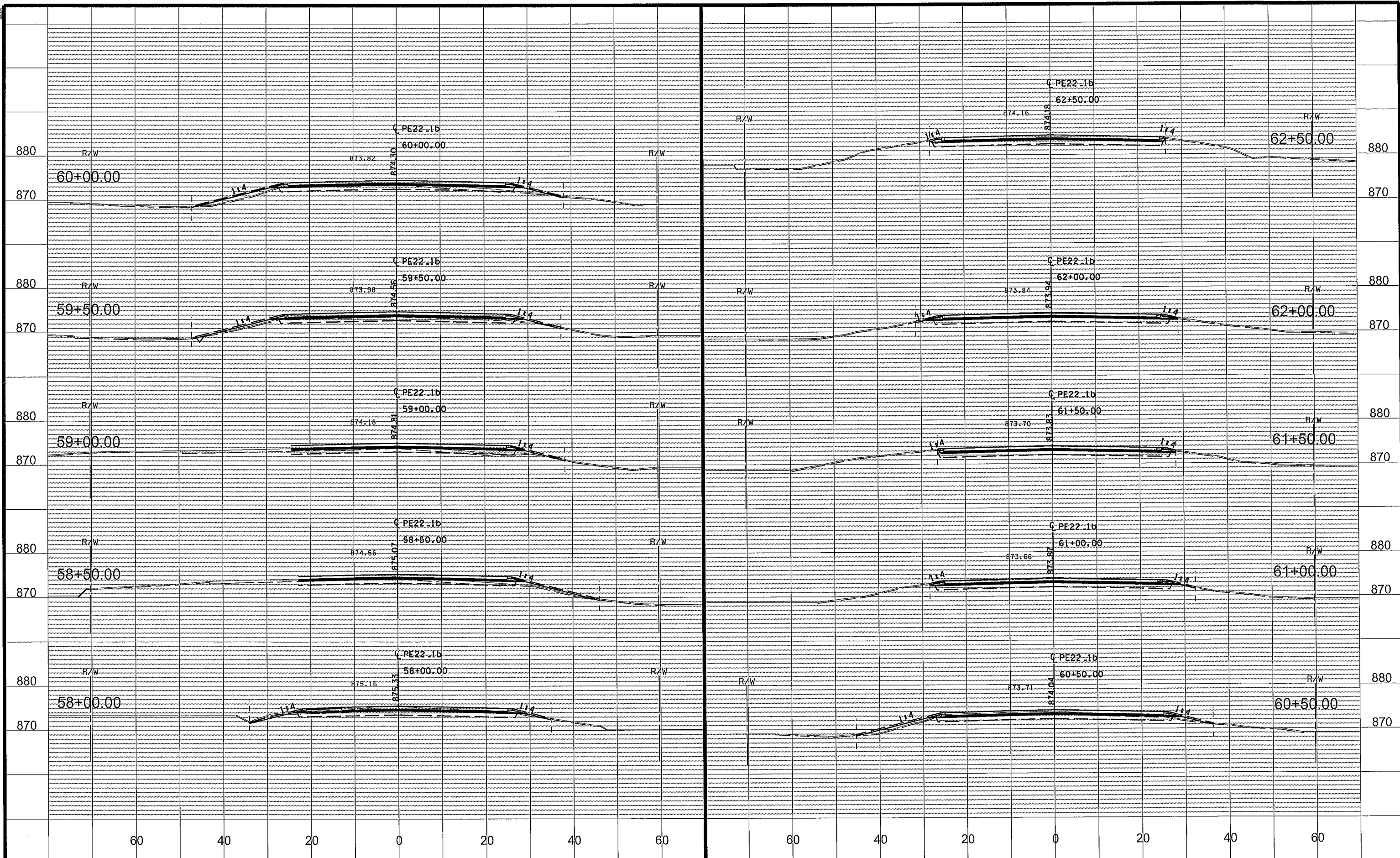


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	RESIDENTIAL	SEEDING SEED MIX 25-151 DISK ANCHORING MULCH MATERIAL TYPE 3 FERTILIZER TYPE 3, 10-20-20
	BLANKET	SEEDING (MATCH SURROUNDING MIX) MIX 25-141, 25-151, CR 13 25-151 FERTILIZER TYPE 3, 10-20-20 EROSION CONTROL BLANKET CAT 0
		SEDIMENT CONTROL LOG, TYPE WOOD CHIP SERIES OF 3 - 25' LOGS
		RANDOM RIPRAP CLASS II (OVER GEOTEXTILE FABRIC)
		FILTER BERM TYPE 3 (2 BERMS - 25' APART) (OVER GEOTEXTILE FABRIC)
		CULVERT END PROTECTION
		SILT FENCE, TYPE MS
		CONSTRUCTION LIMITS
		EXISTING R / W



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NO. DATE BY CKD APPR REVISION NAME: P:\02-622-34\Plan\0262234_EROS_4.dgn 03/02/2015 9:58:44 AM					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. PRINT NAME: NICHOLAS J. DOBDA SIGNATURE: <i>[Signature]</i> DATE: 3-2-15 LICENSE NO. 49046		DRAWN BY: JCF DATE: 01/09/15 DESIGN BY: NJD DATE: 01/23/15 CHECKED BY: GMP DATE: 02/06/15		ANOKA COUNTY HIGHWAY DEPT.		STATE PROJECT NO. STATE AID PROJECT NO. 002-622-034 CITY PROJECT NO. COUNTY PROJECT NO.		TURF ESTABLISHMENT / EROSION CONTROL PLAN STA 172+00 TO 189+49.53 Sheet 170 of 210 Sheets	
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NO	DATE	BY	CKD	APPR	REVISION
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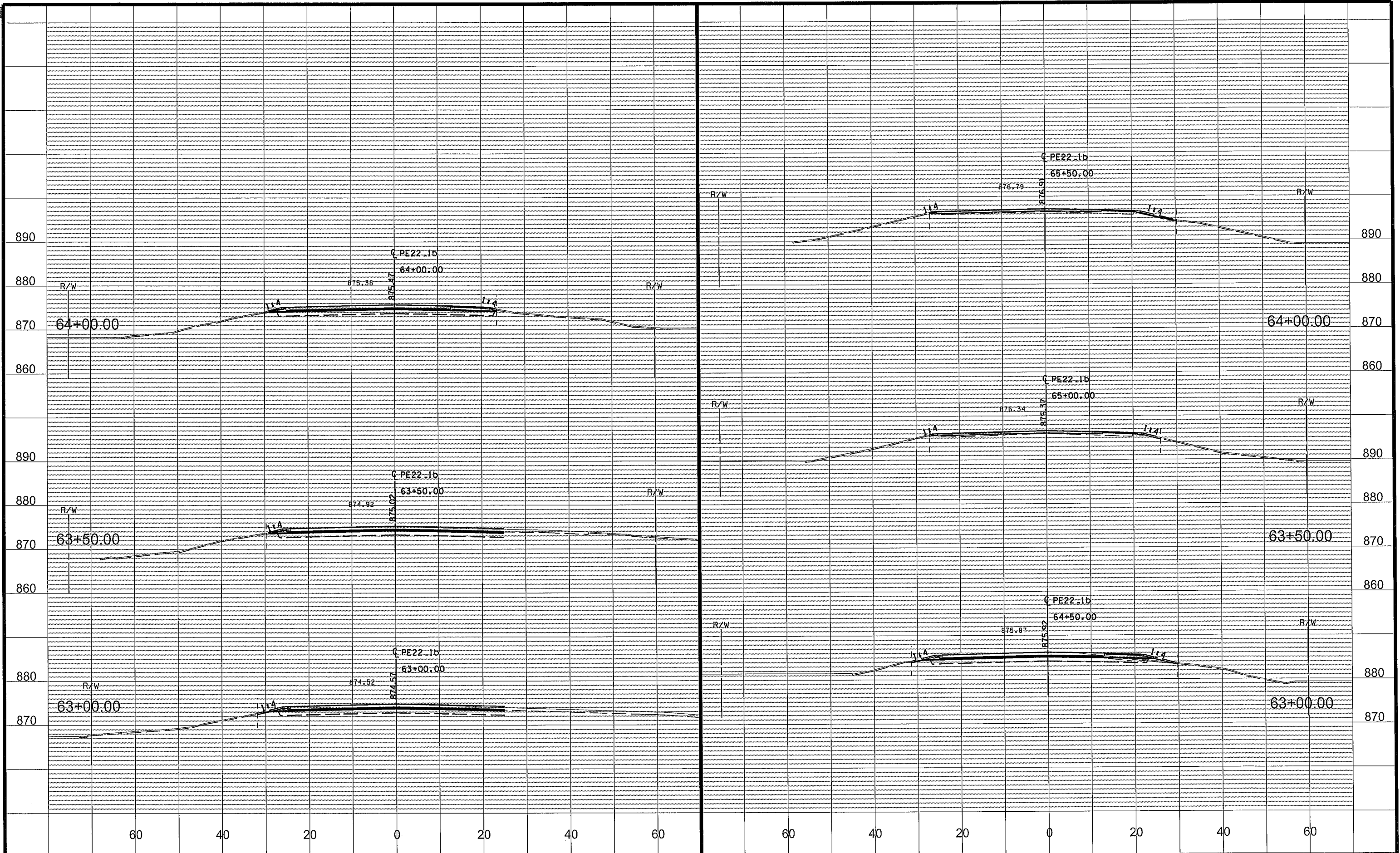
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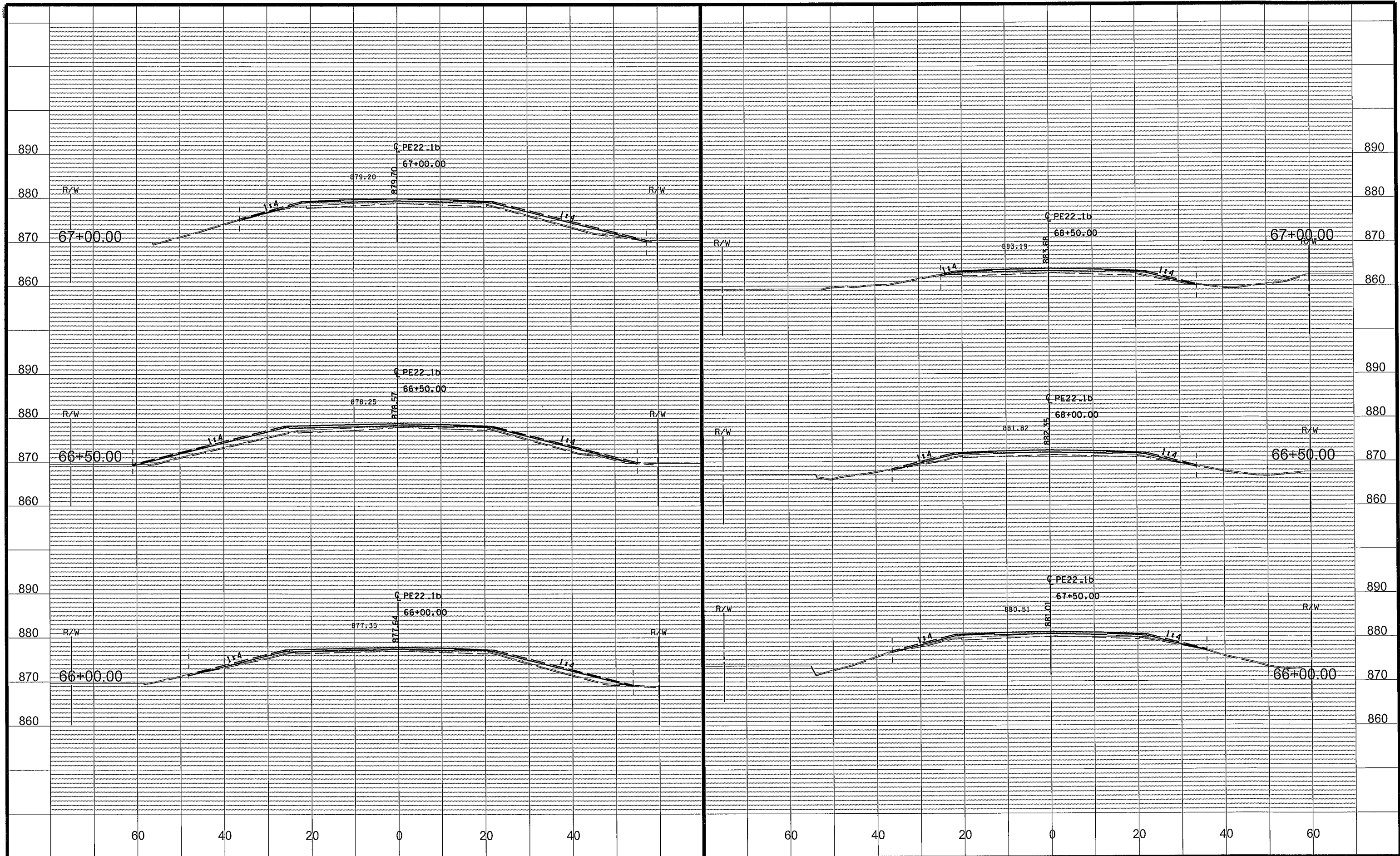


ANOKA COUNTY
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CROSS SECTIONS
STA 58+00.00 TO 62+50.00
Sheet 171 of 210 Sheets





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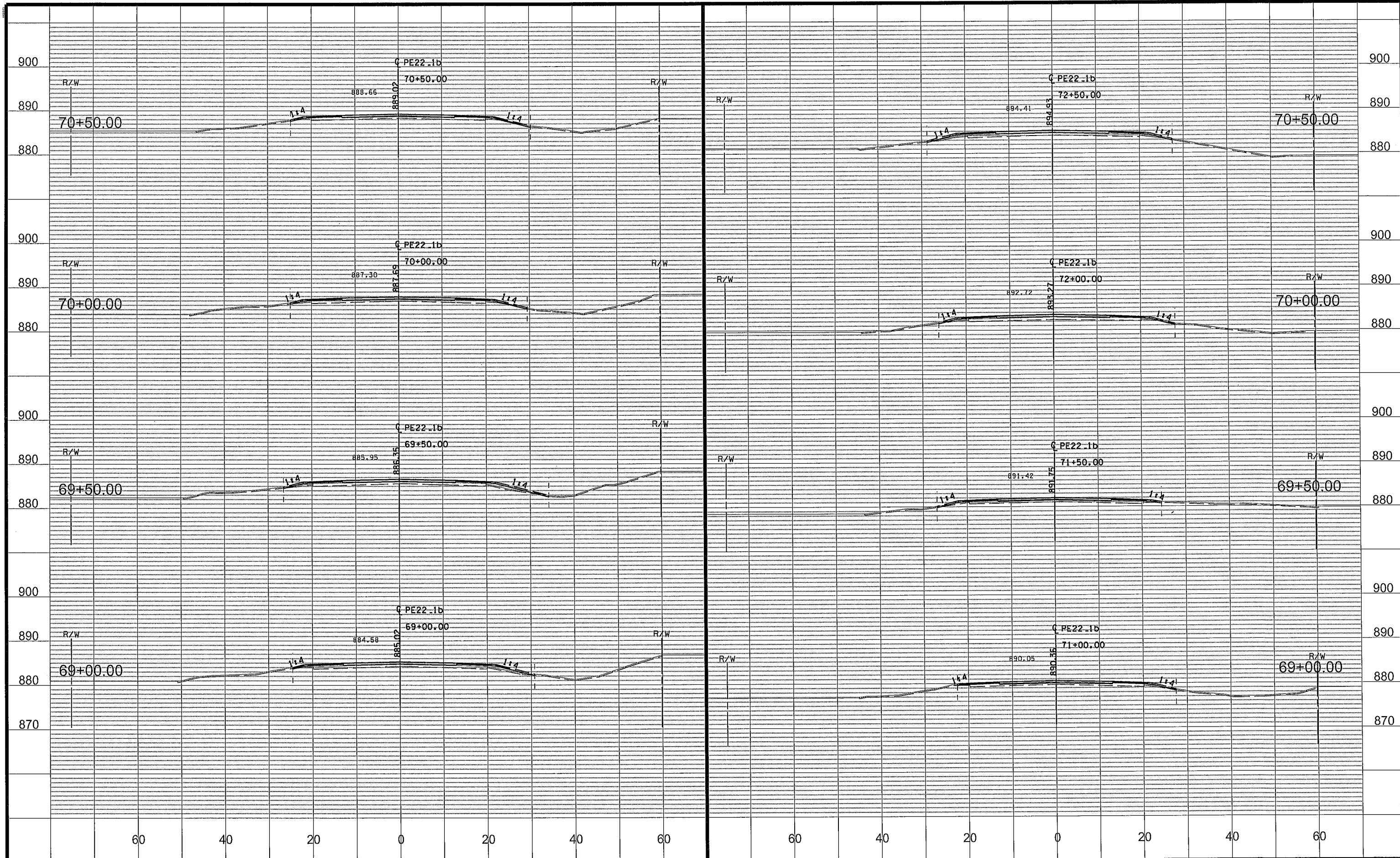
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ANOKA COUNTY
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CROSS SECTIONS
 STA 66+00.00 TO 68+50.00
 Sheet 173 of 210 Sheets



NO	DATE	BY	CKD	APPR	REVISION
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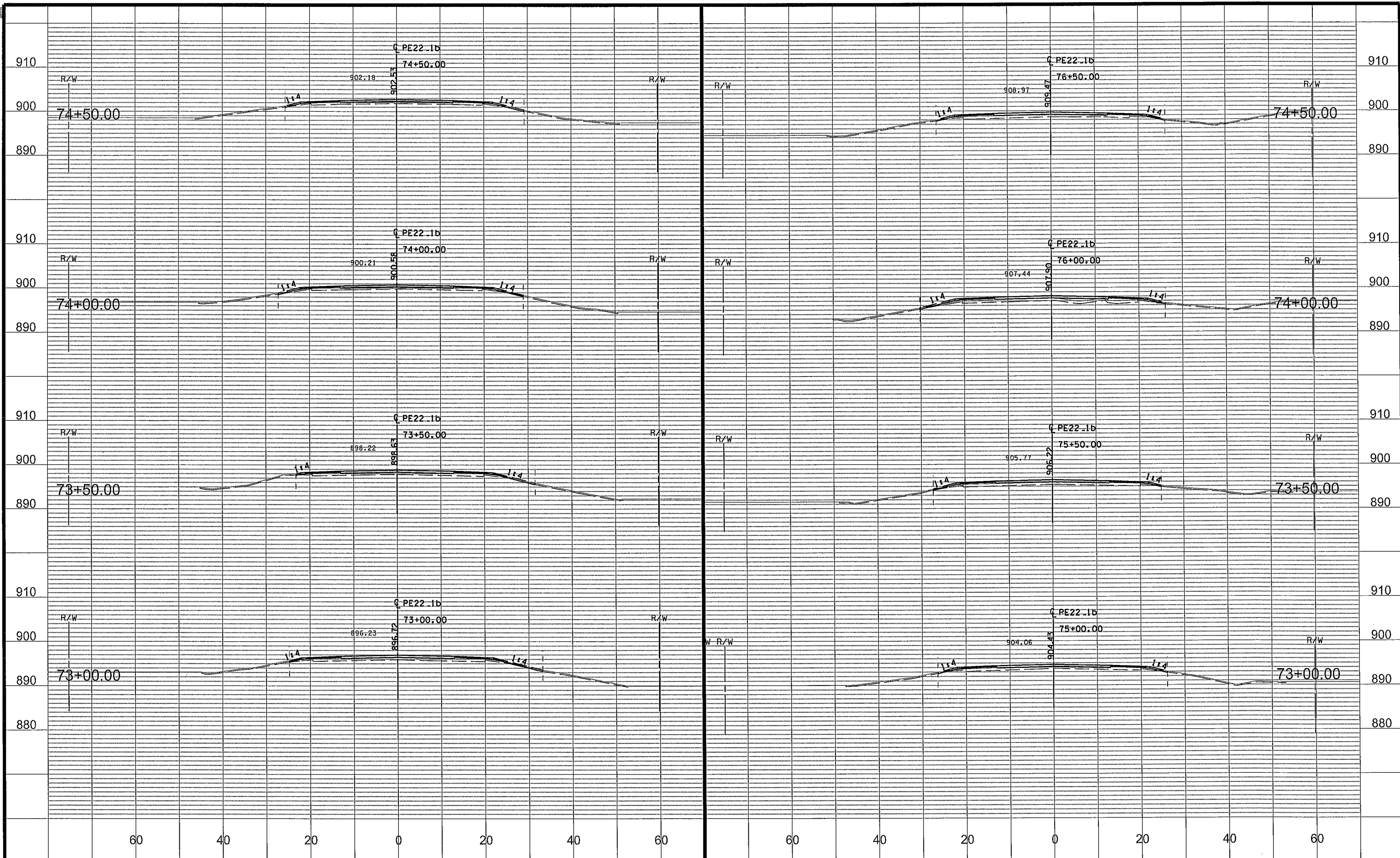
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CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

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COUNTY PROJECT NO.

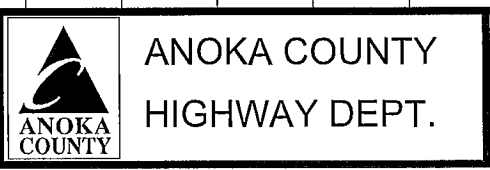
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Sheet 174 of 210 Sheets



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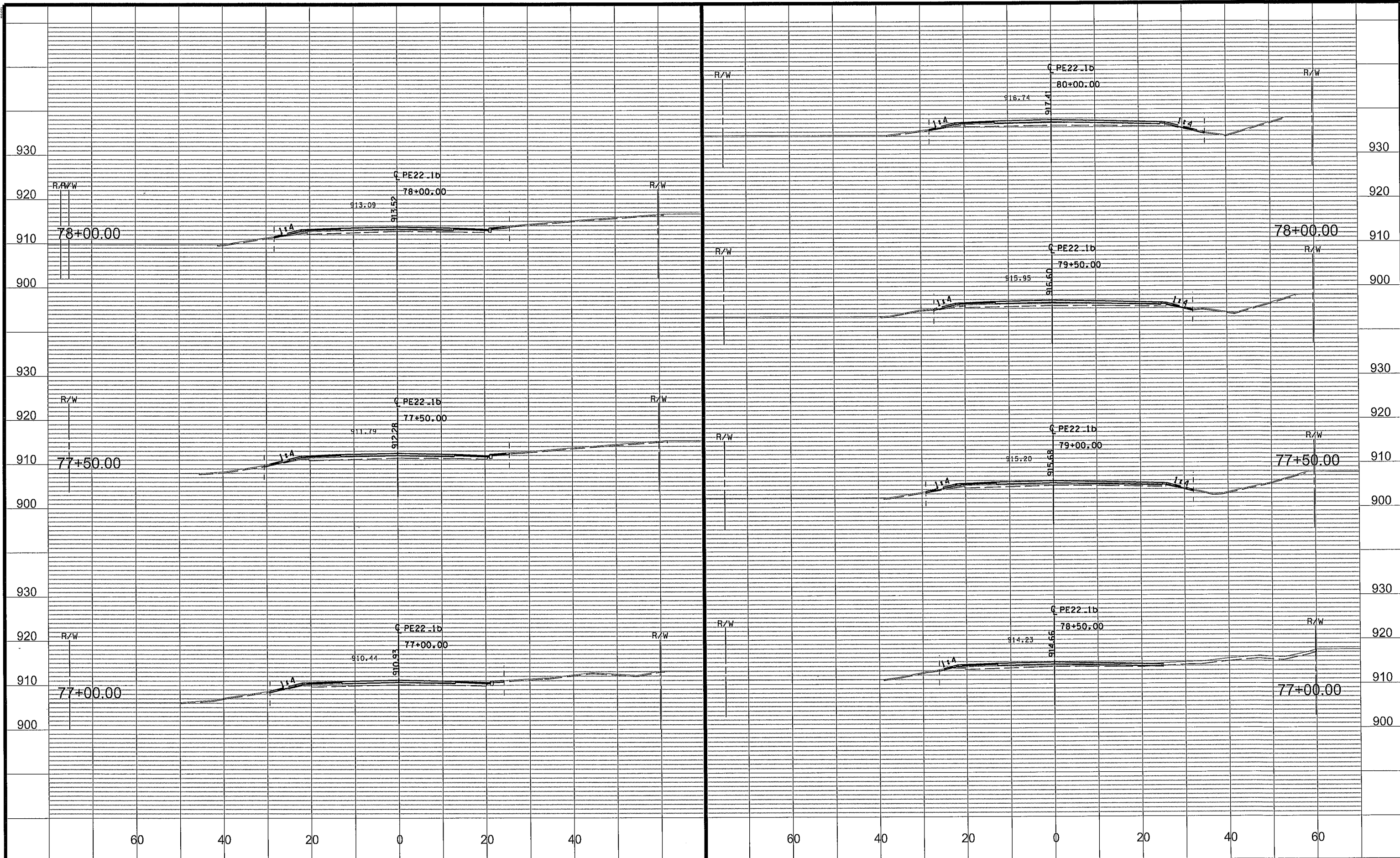
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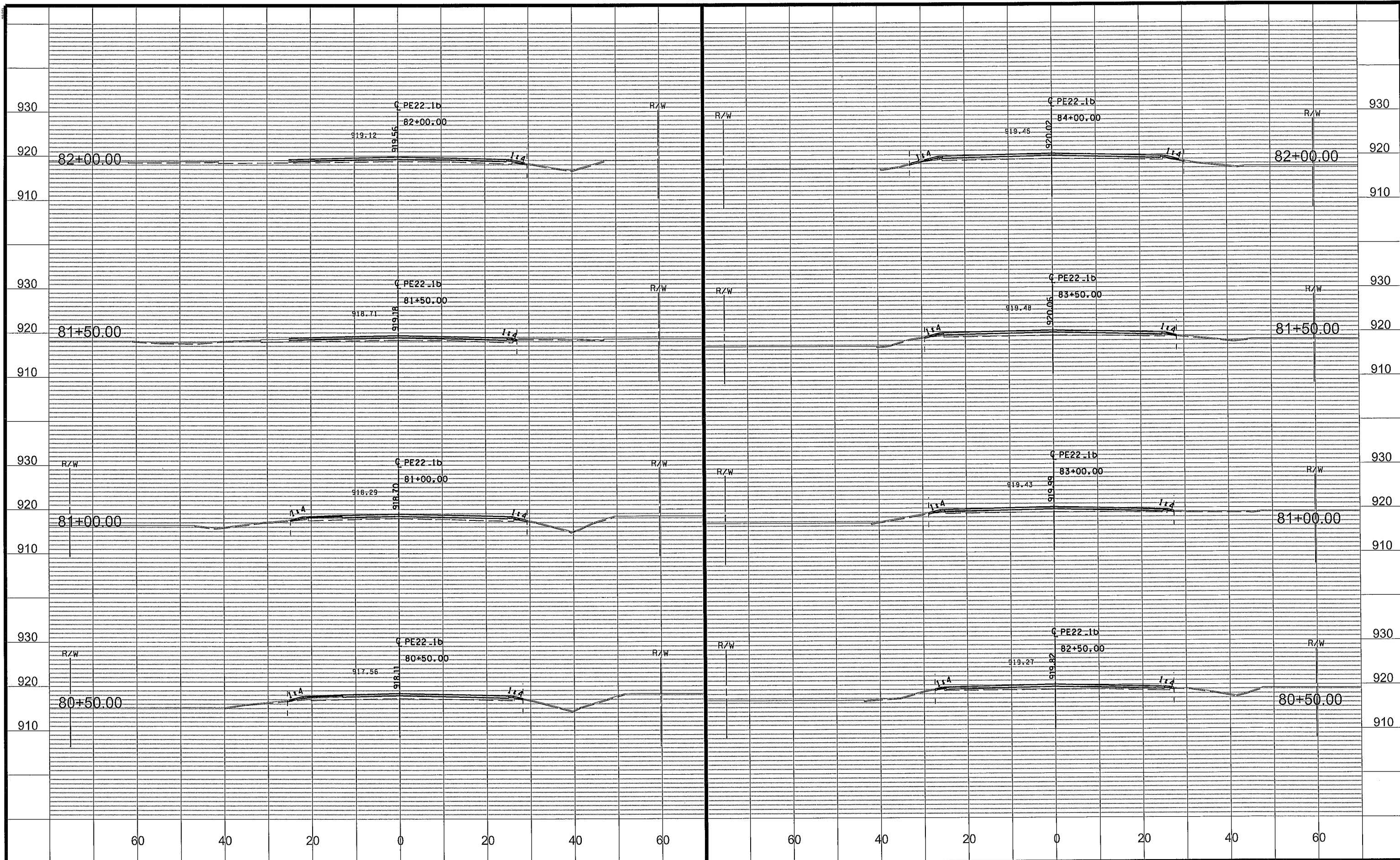
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STATE PROJECT NO.
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CITY PROJECT NO.
COUNTY PROJECT NO.

CROSS SECTIONS
STA 73+00.00 TO 76+50.00
Sheet 175 of 210 Sheets





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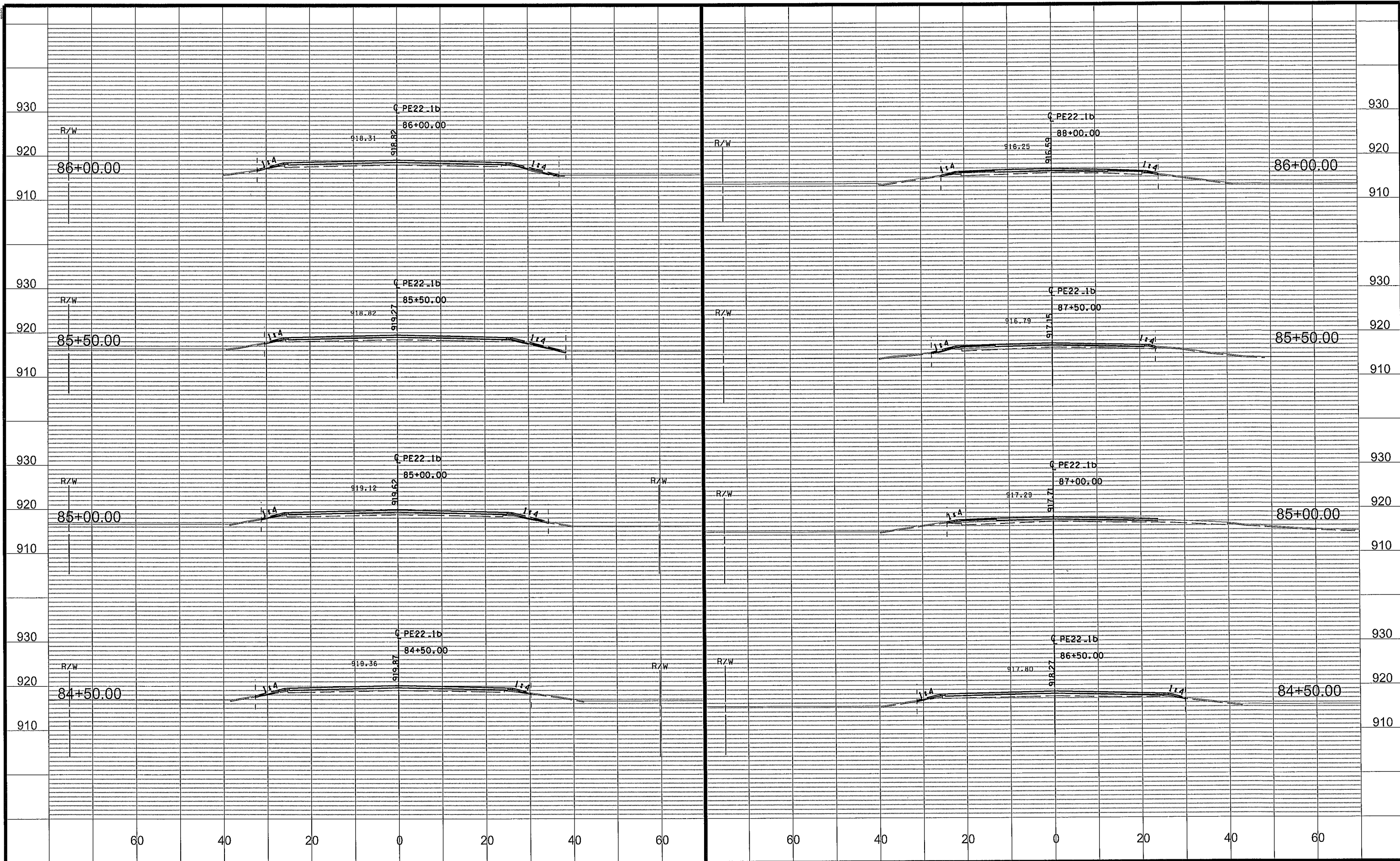
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ANOKA COUNTY
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STATE AID PROJECT NO. 002-622-034
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CROSS SECTIONS
STA 80+50.00 TO 84+00.00
Sheet 177 of 210 Sheets



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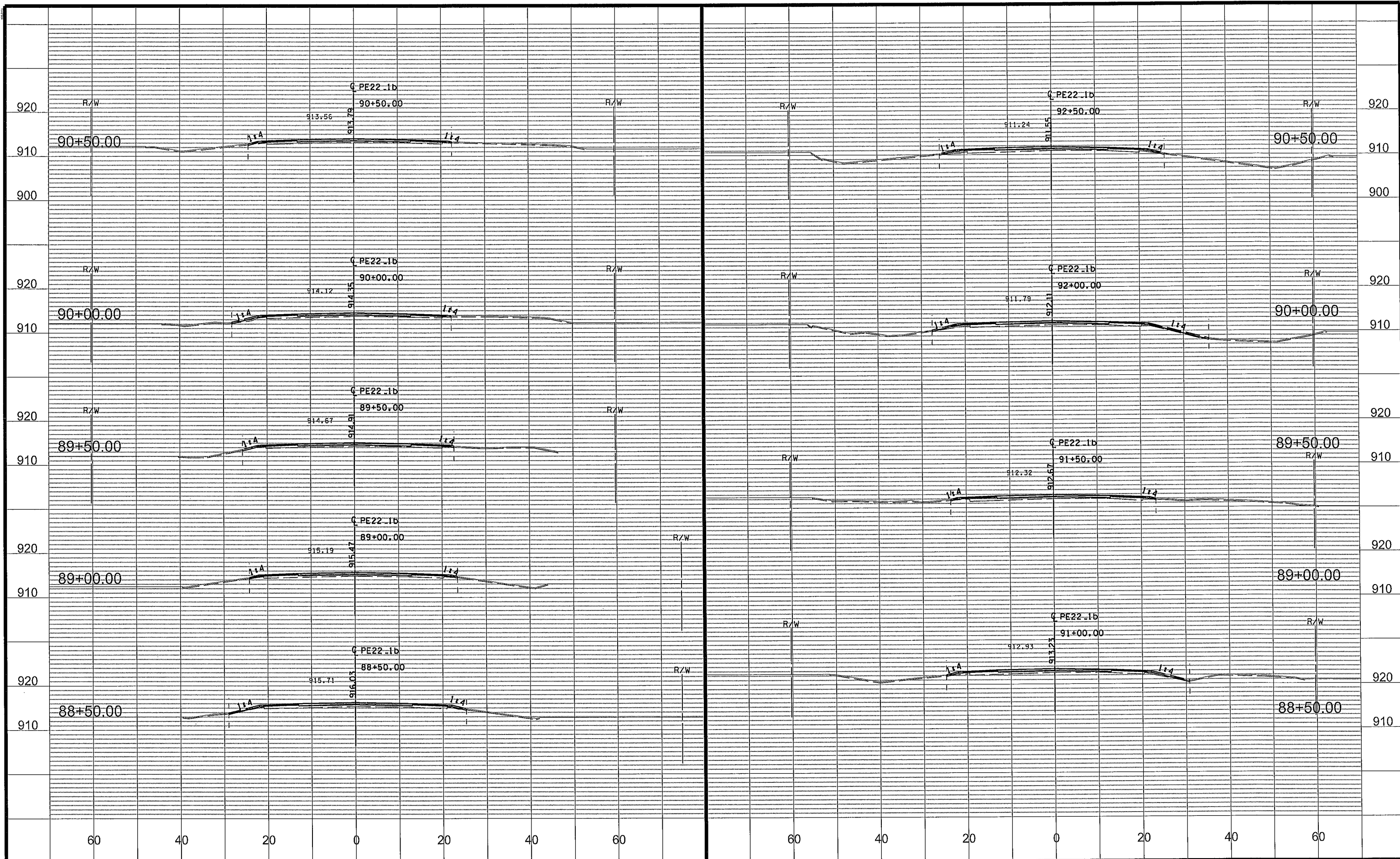
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ANOKA COUNTY
HIGHWAY DEPT.

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CROSS SECTIONS
STA 84+50.00 TO 88+00.00
Sheet 178 of 210 Sheets



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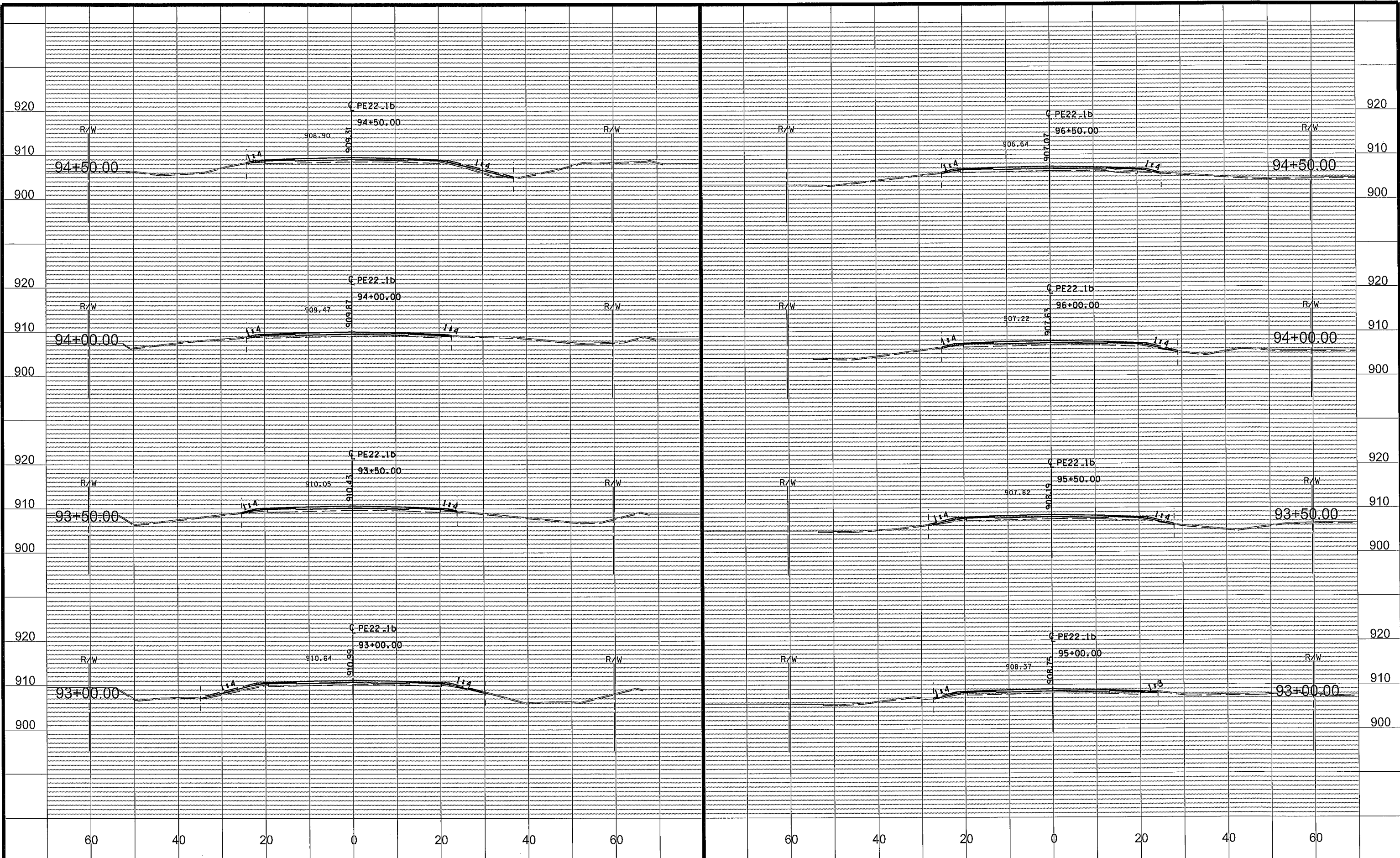
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ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
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CROSS SECTIONS
STA 88+50.00 TO 92+50.00
Sheet 179 of 210 Sheets



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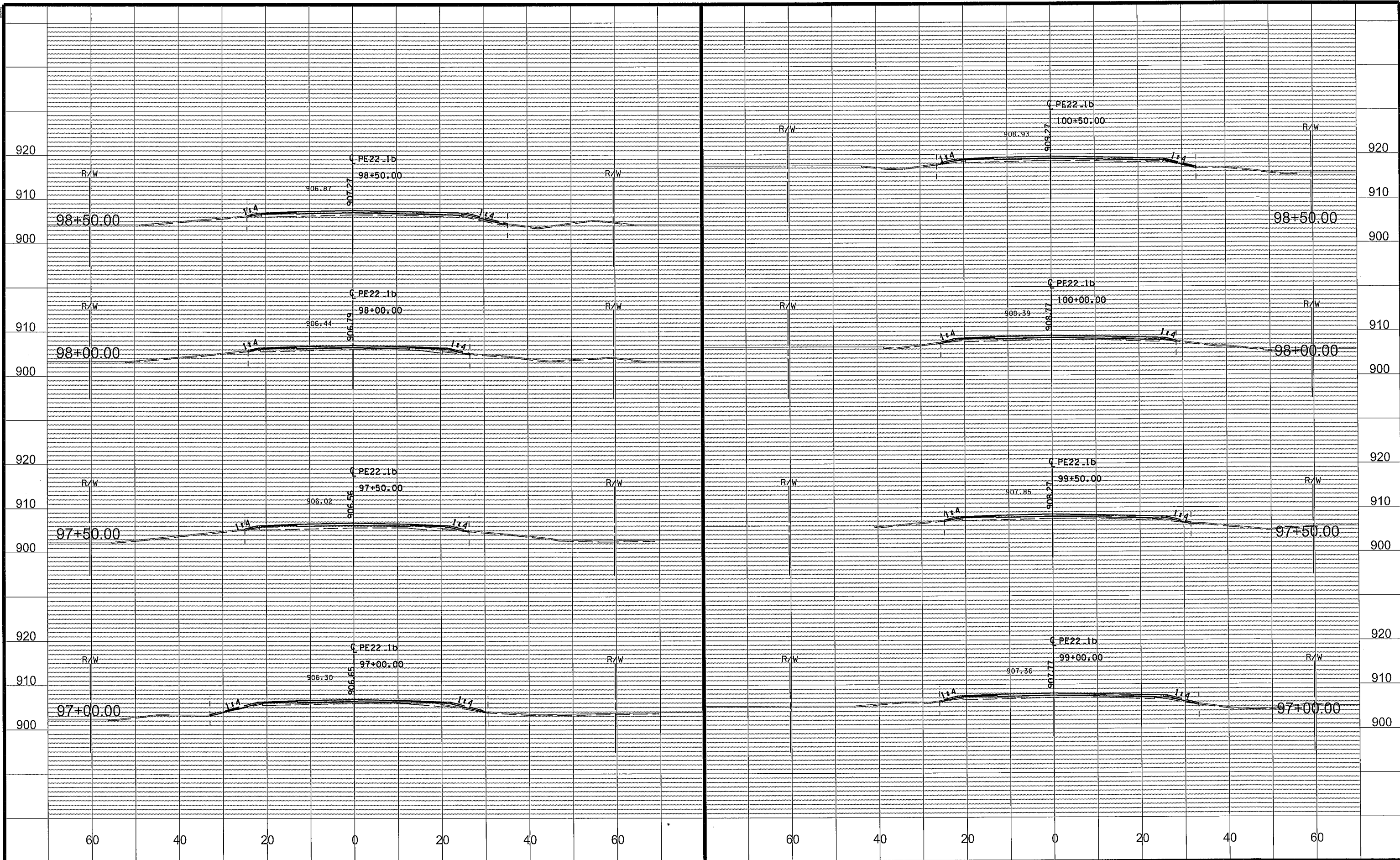
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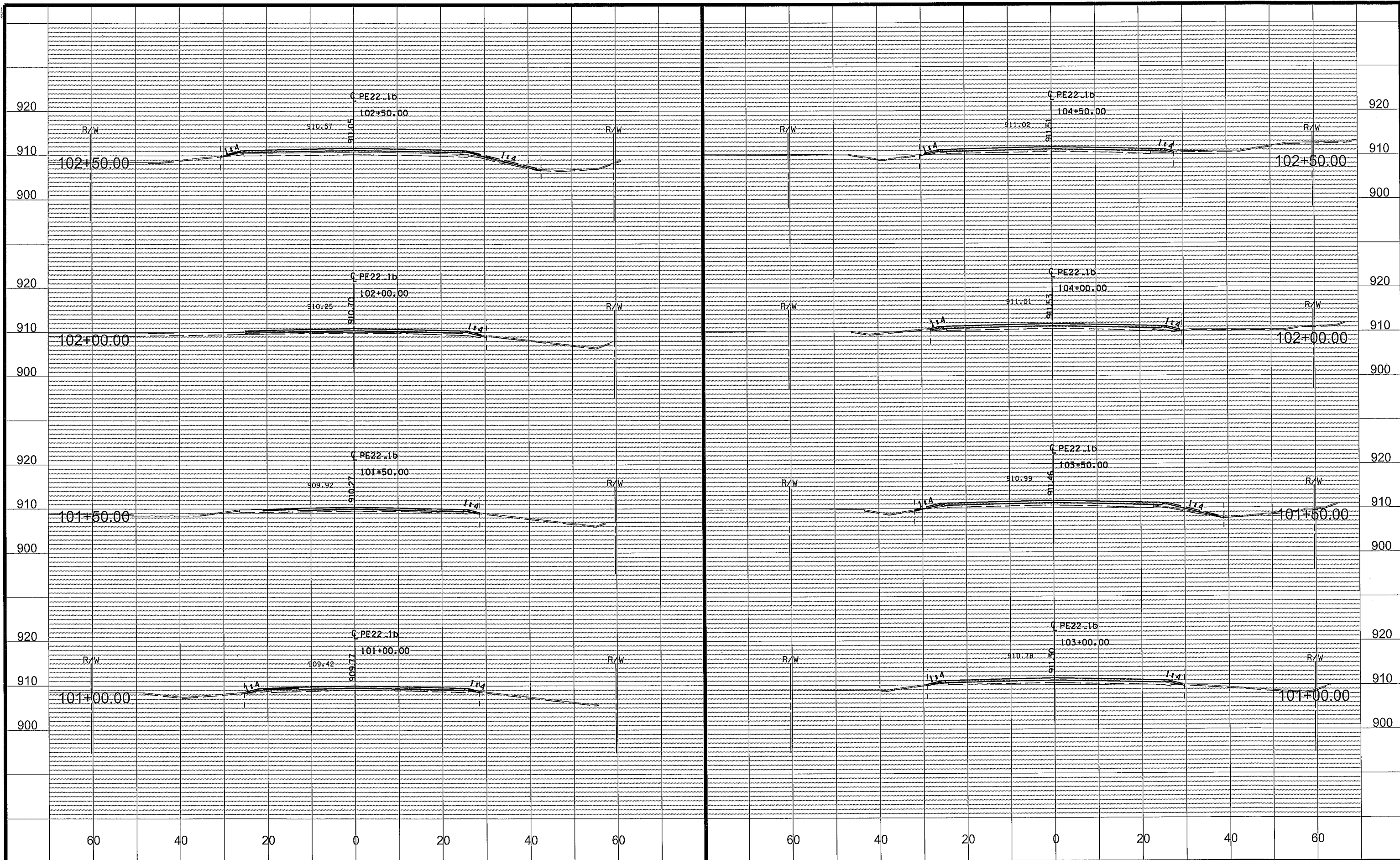


ANOKA COUNTY
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STA 93+00.00 TO 96+50.00
Sheet 180 of 210 Sheets





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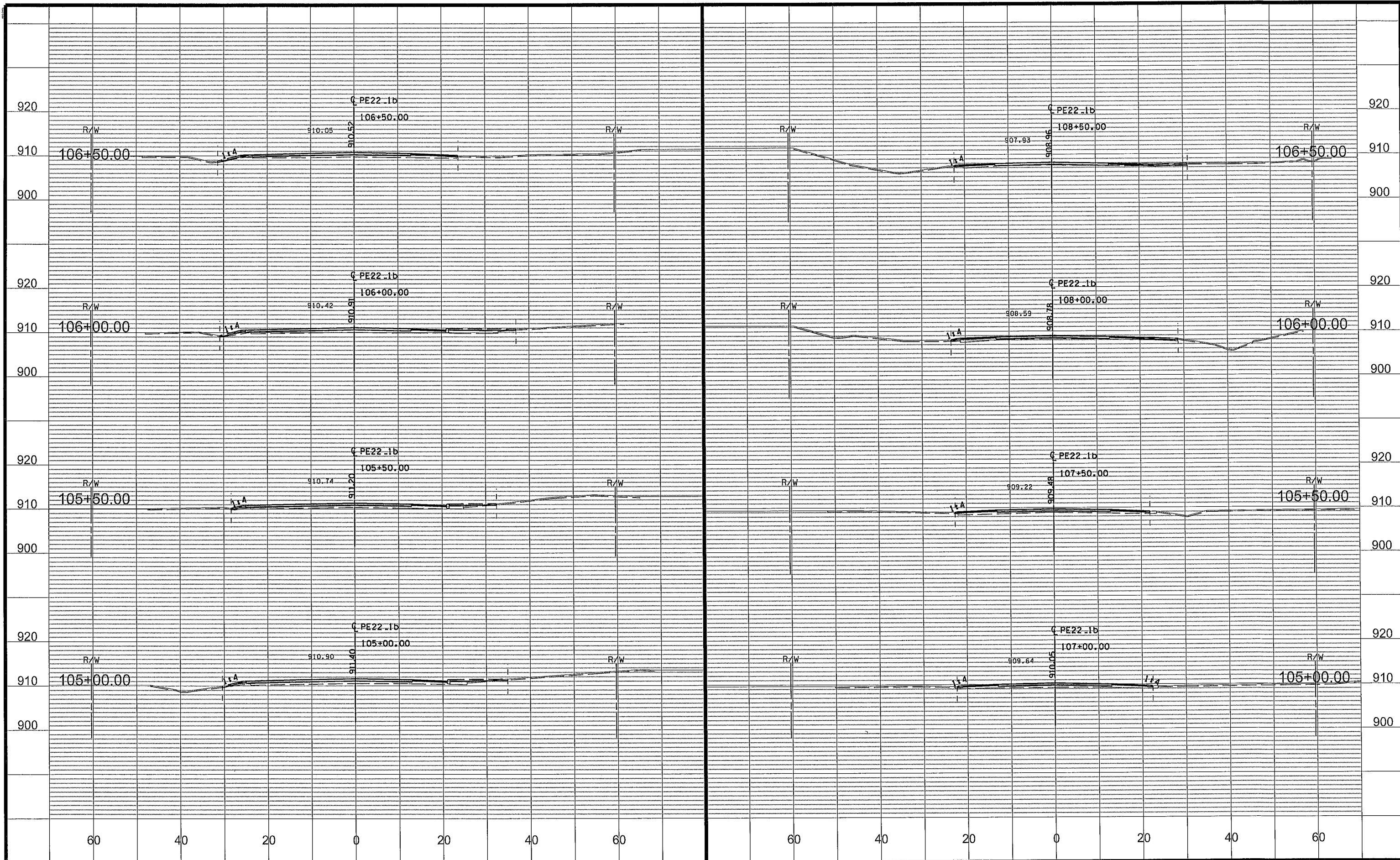
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CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
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CROSS SECTIONS
STA 101+00.00 TO 104+50.00
Sheet 182 of 210 Sheets



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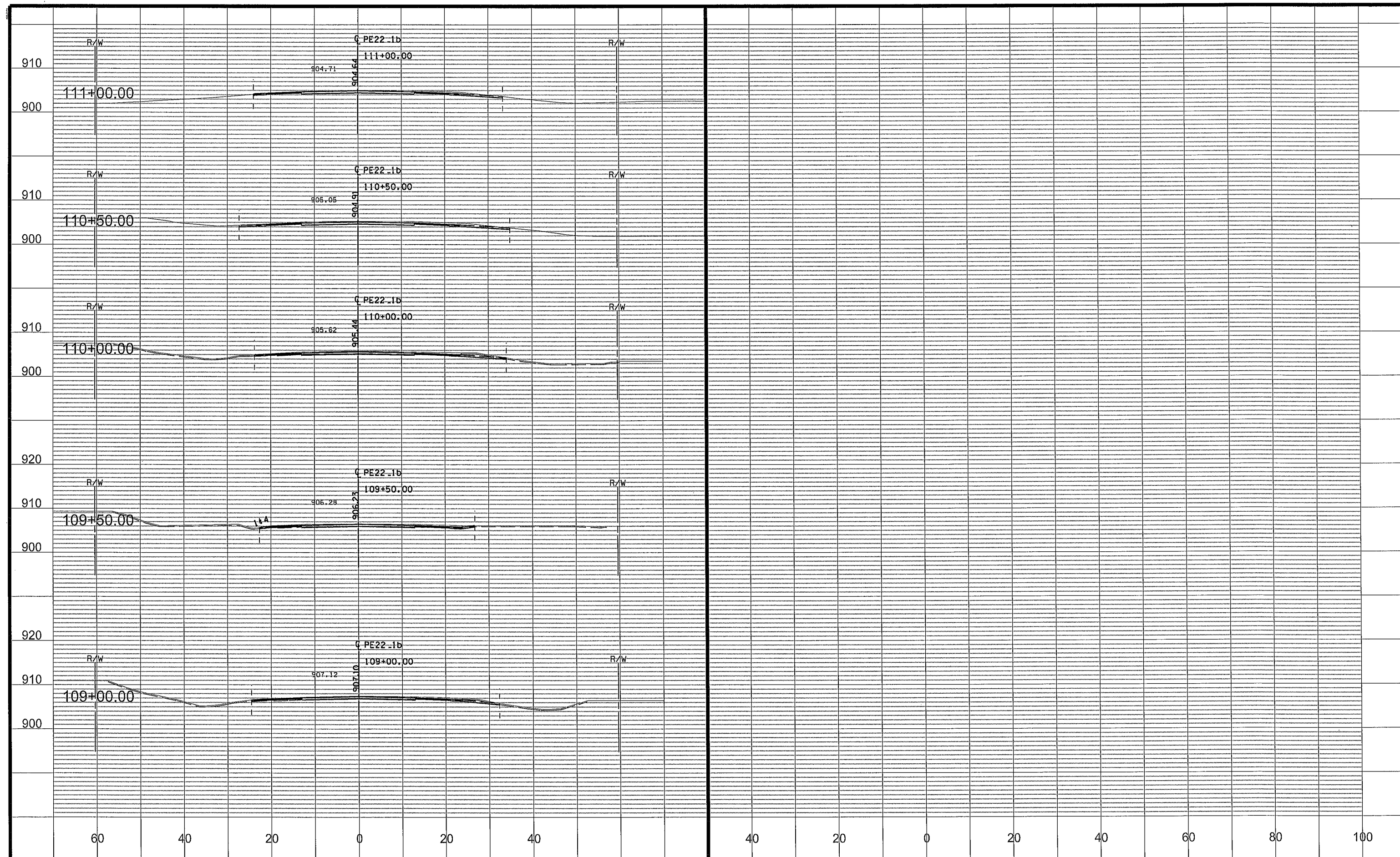
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CHECKED BY GMP DATE 02/06/15



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

CROSS SECTIONS
STA 105+00.00 TO 108+50.00
Sheet 183 of 210 Sheets

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DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



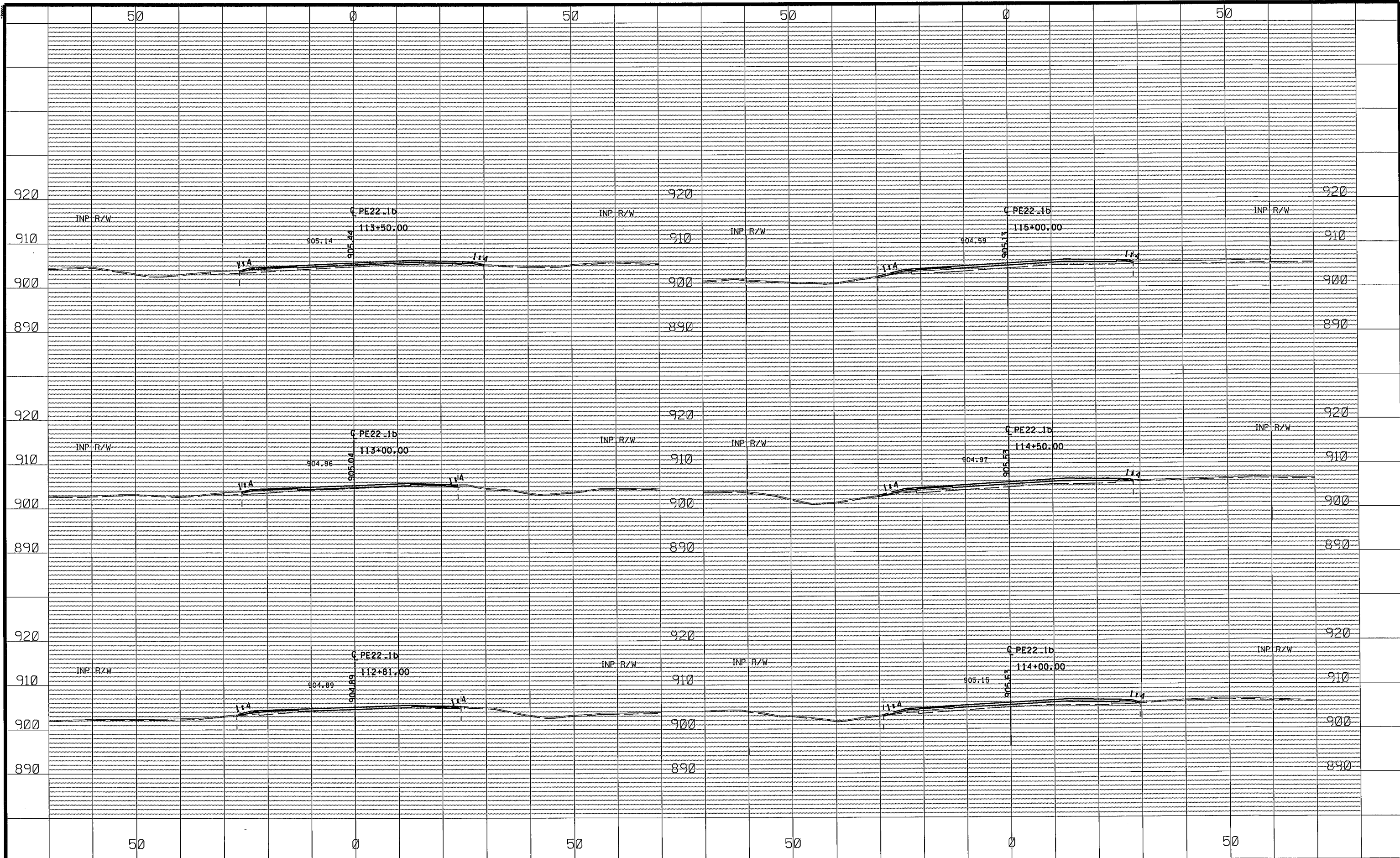
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
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CITY PROJECT NO.
COUNTY PROJECT NO.

CROSS SECTIONS

STA 109+00.00 TO 111+00.00

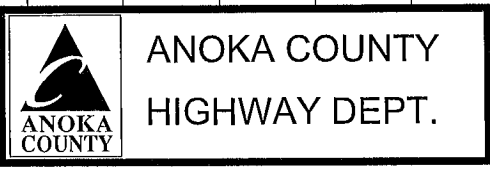
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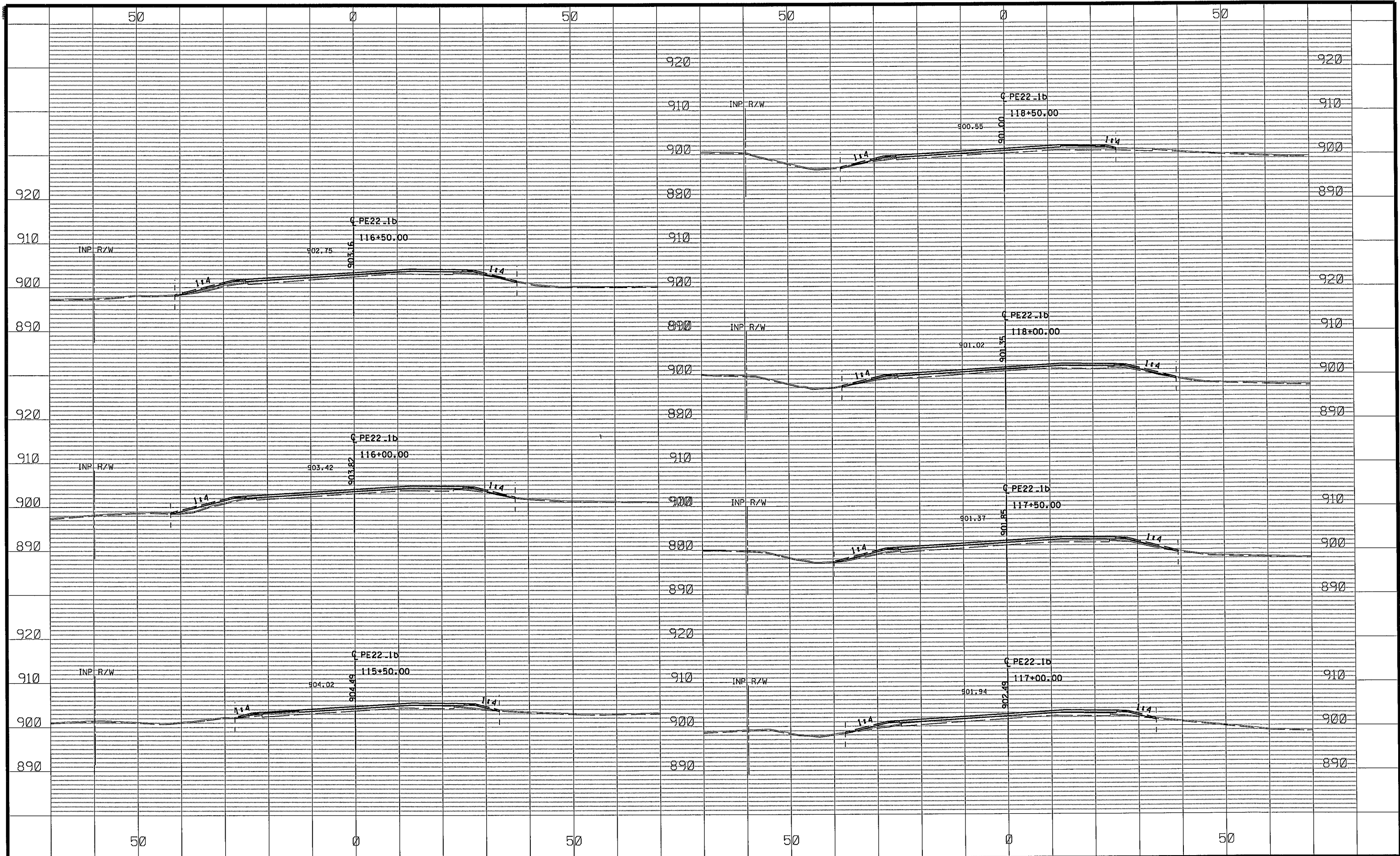
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CROSS SECTIONS
STA 112+81.00 TO 115+00.00
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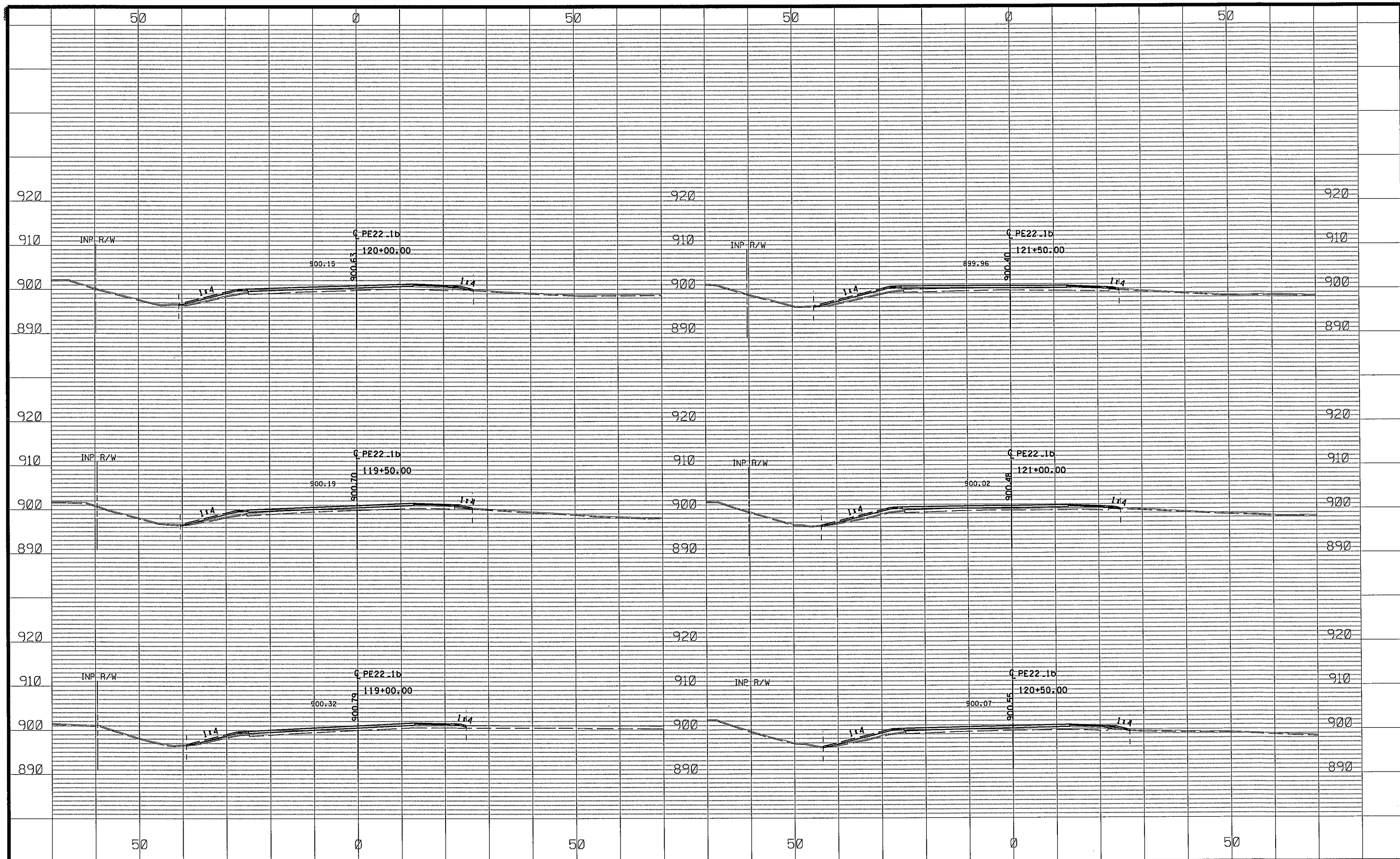
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ANOKA COUNTY
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STATE PROJECT NO.
 STATE AID PROJECT NO. 002-622-034
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 COUNTY PROJECT NO.

CROSS SECTIONS
 STA 115+50.00 TO 118+50.00
 Sheet 186 of 210 Sheets

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DESIGN BY NJD DATE 01/23/15
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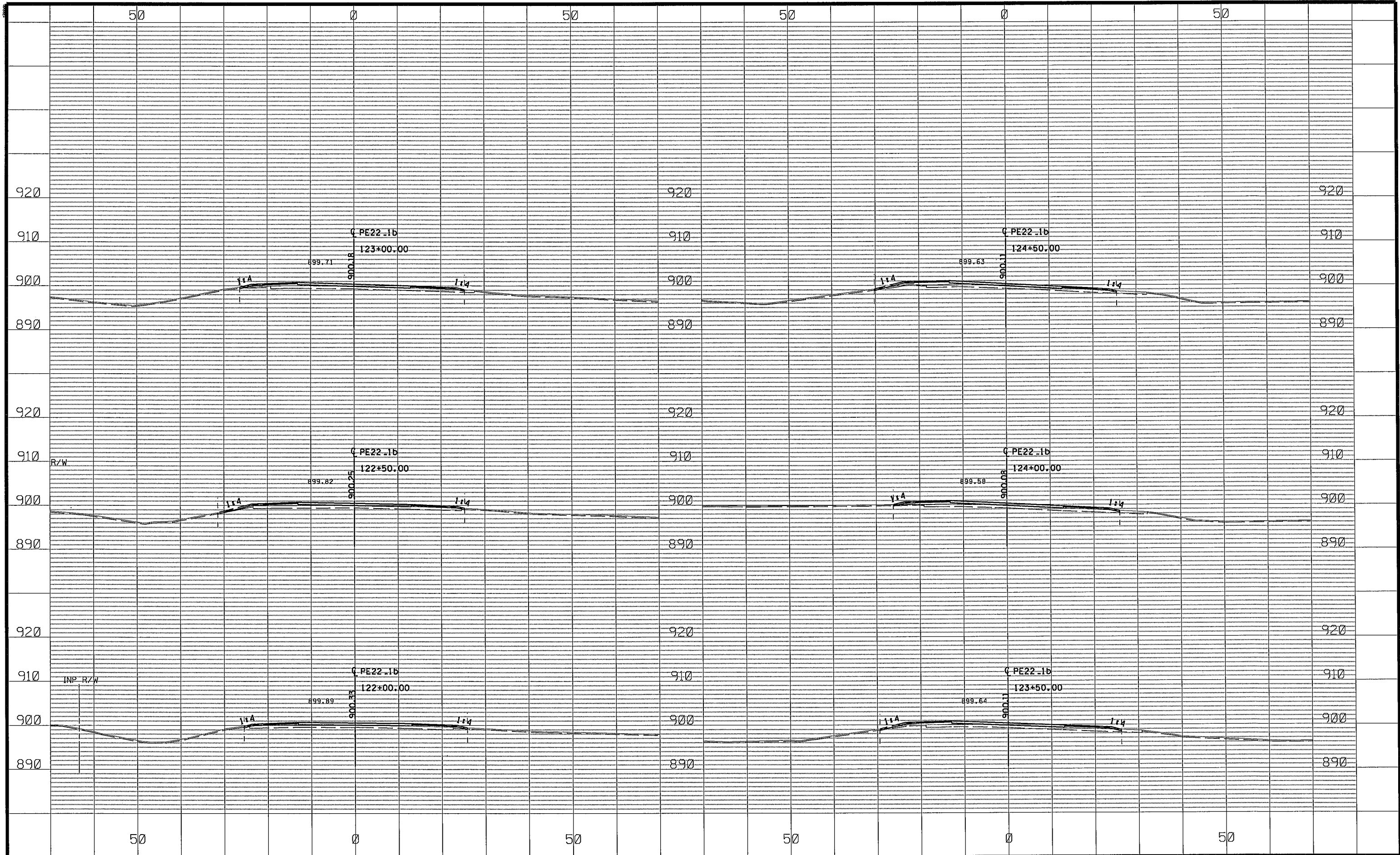
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 002-622-034
CITY PROJECT NO.
COUNTY PROJECT NO.

CROSS SECTIONS

STA 119+00.00 TO 121+50.00

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NO	DATE	BY	CKD	APPR	REVISION
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2	01/23/15	NJD			
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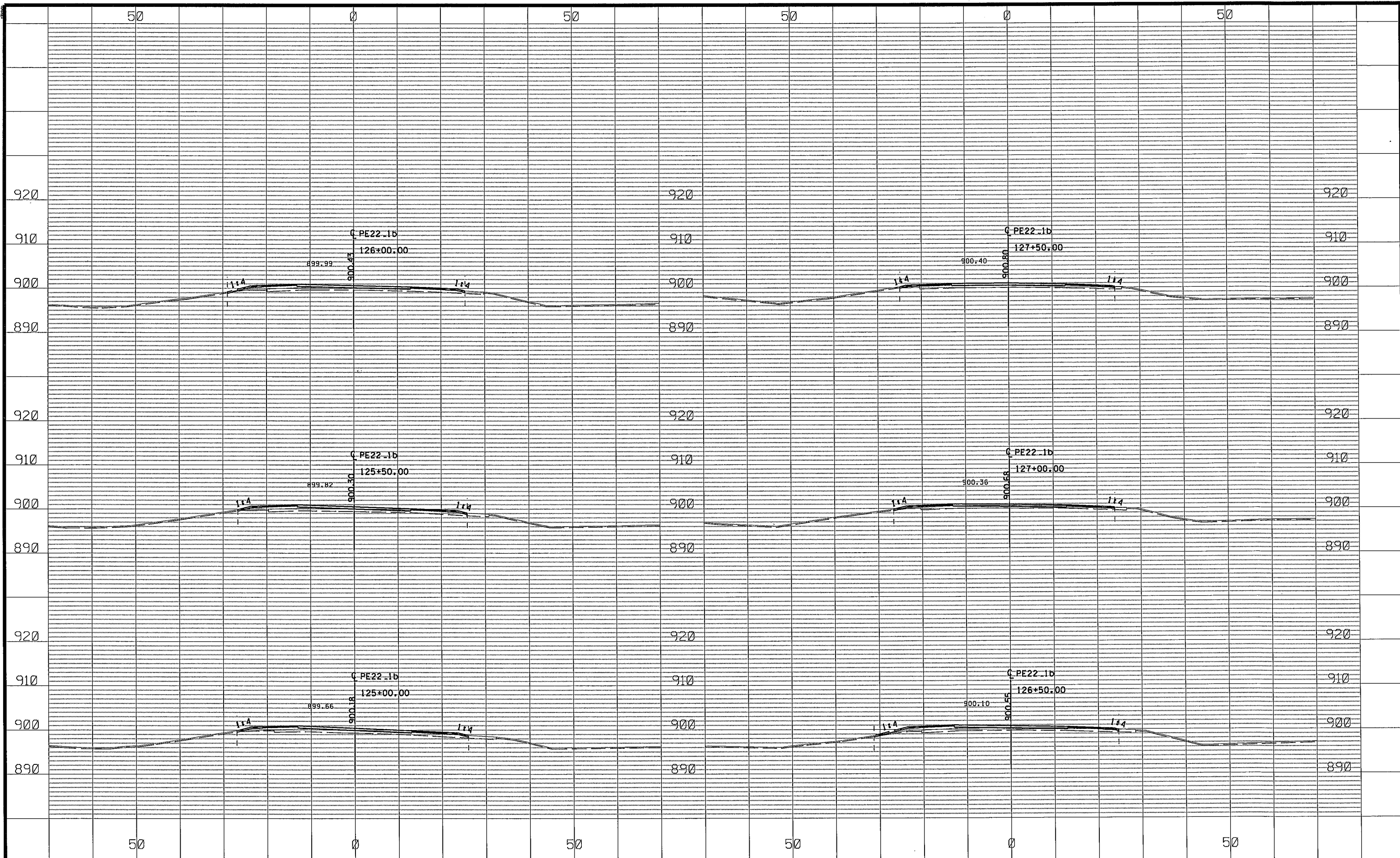
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CHECKED BY GMP DATE 02/06/15

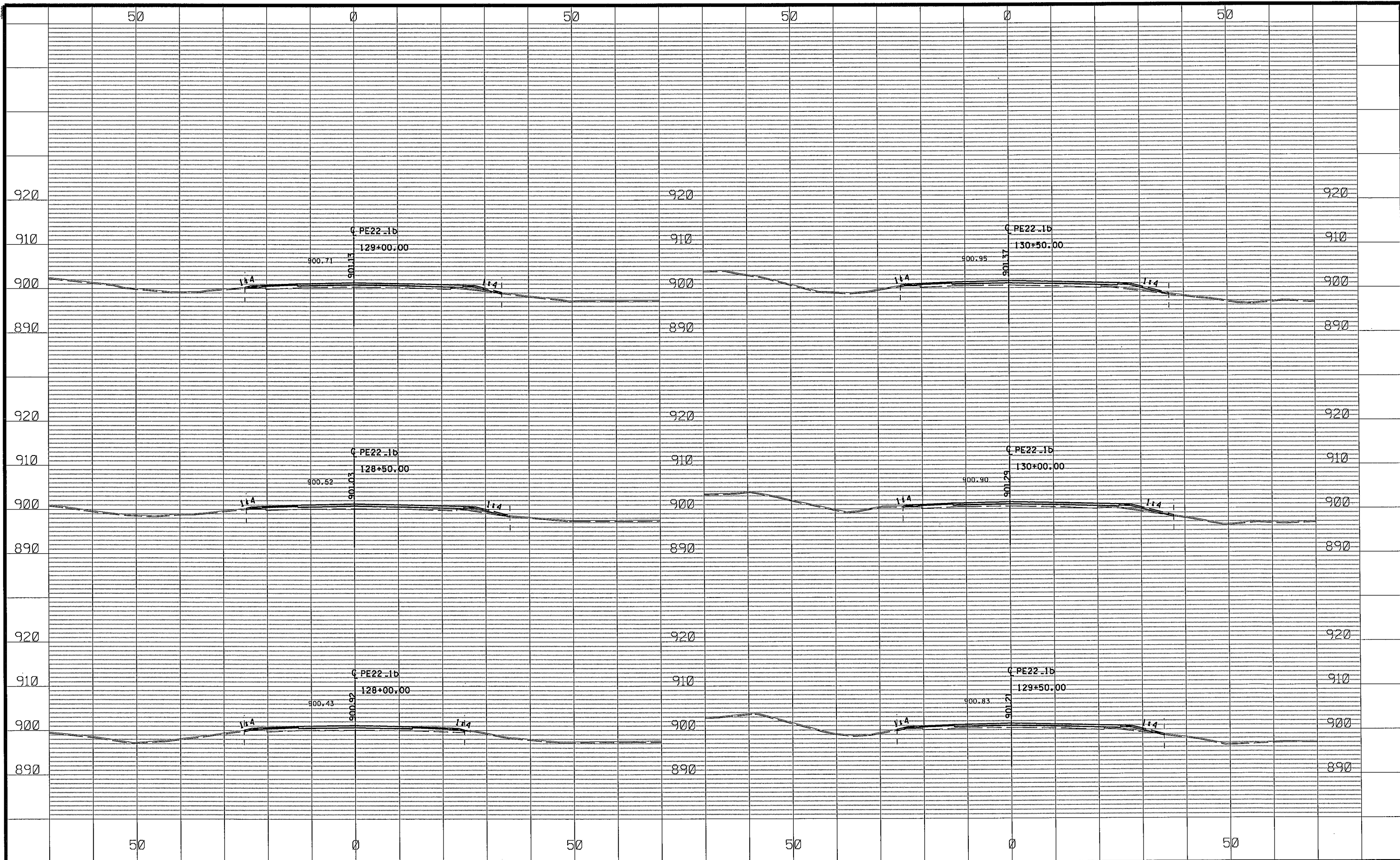


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CROSS SECTIONS
STA 122+00.00 TO 124+50.00
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NO	DATE	BY	CKD	APPR	REVISION
1	01/09/15	JCF			
2	01/23/15	NJD			
3	02/06/15	GMP			

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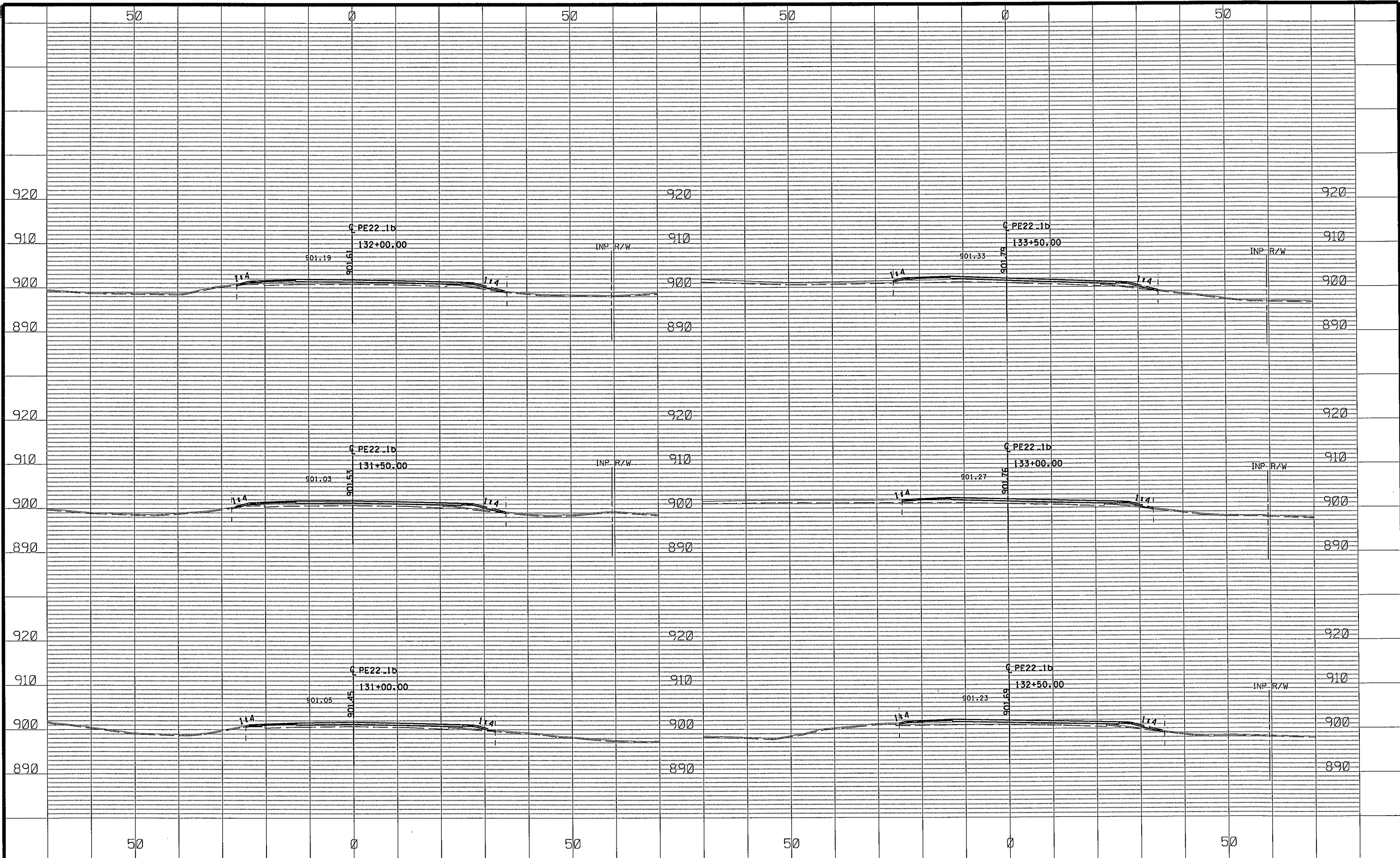
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DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



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NO	DATE	BY	CKD	APPR	REVISION
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03/02/2015 9:50:47 AM					

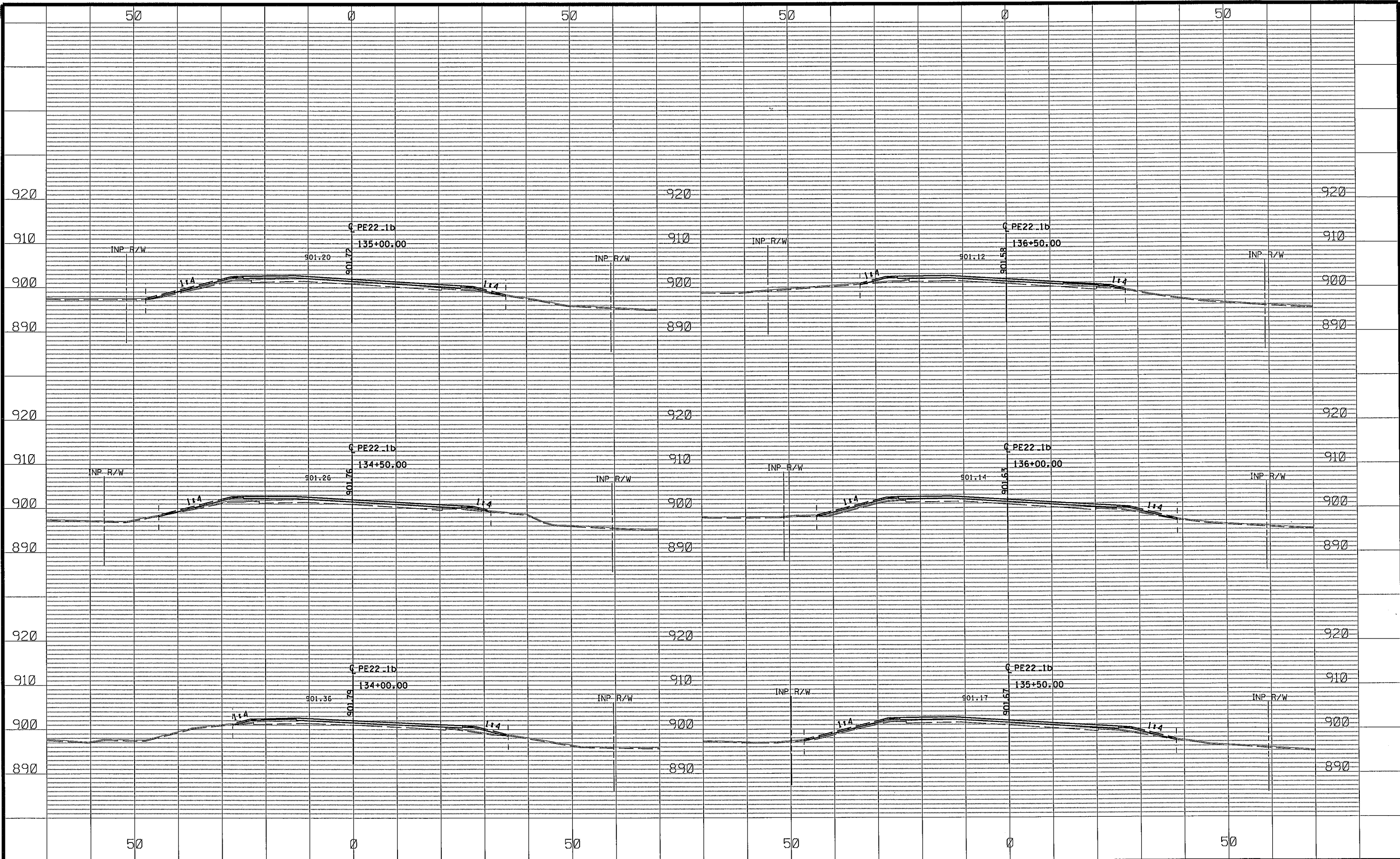
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DESIGN BY NJD DATE 01/23/15
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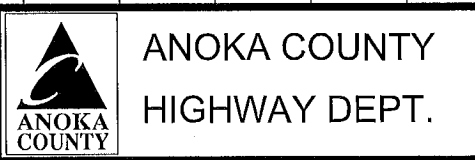
CROSS SECTIONS
STA 131+00.00 TO 133+50.00
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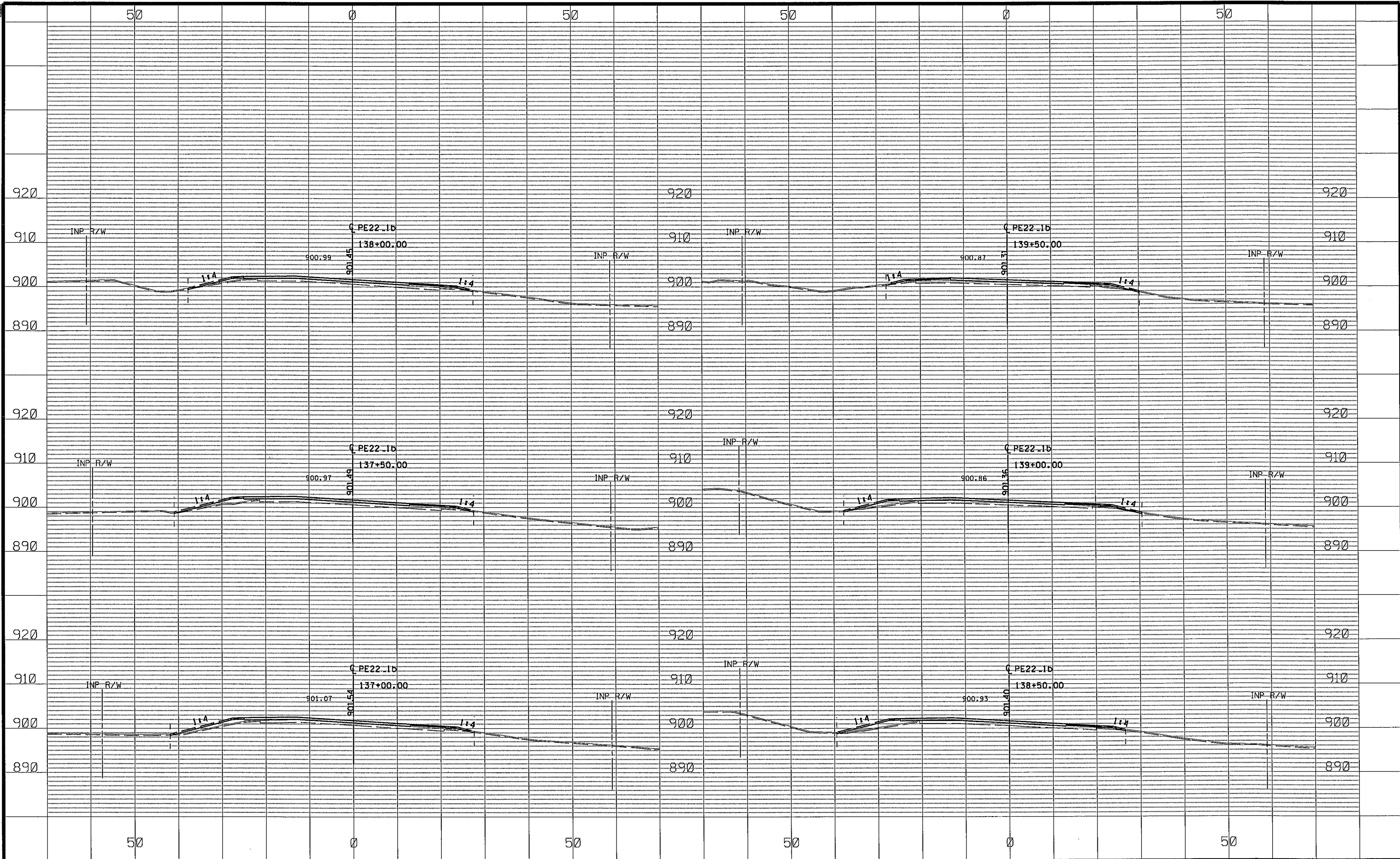
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DRAWN BY JCF DATE 01/09/15
DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



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CROSS SECTIONS
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NO	DATE	BY	CKD	APPR	REVISION
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2	01/23/15	NJD			
3	02/06/15	GMP			

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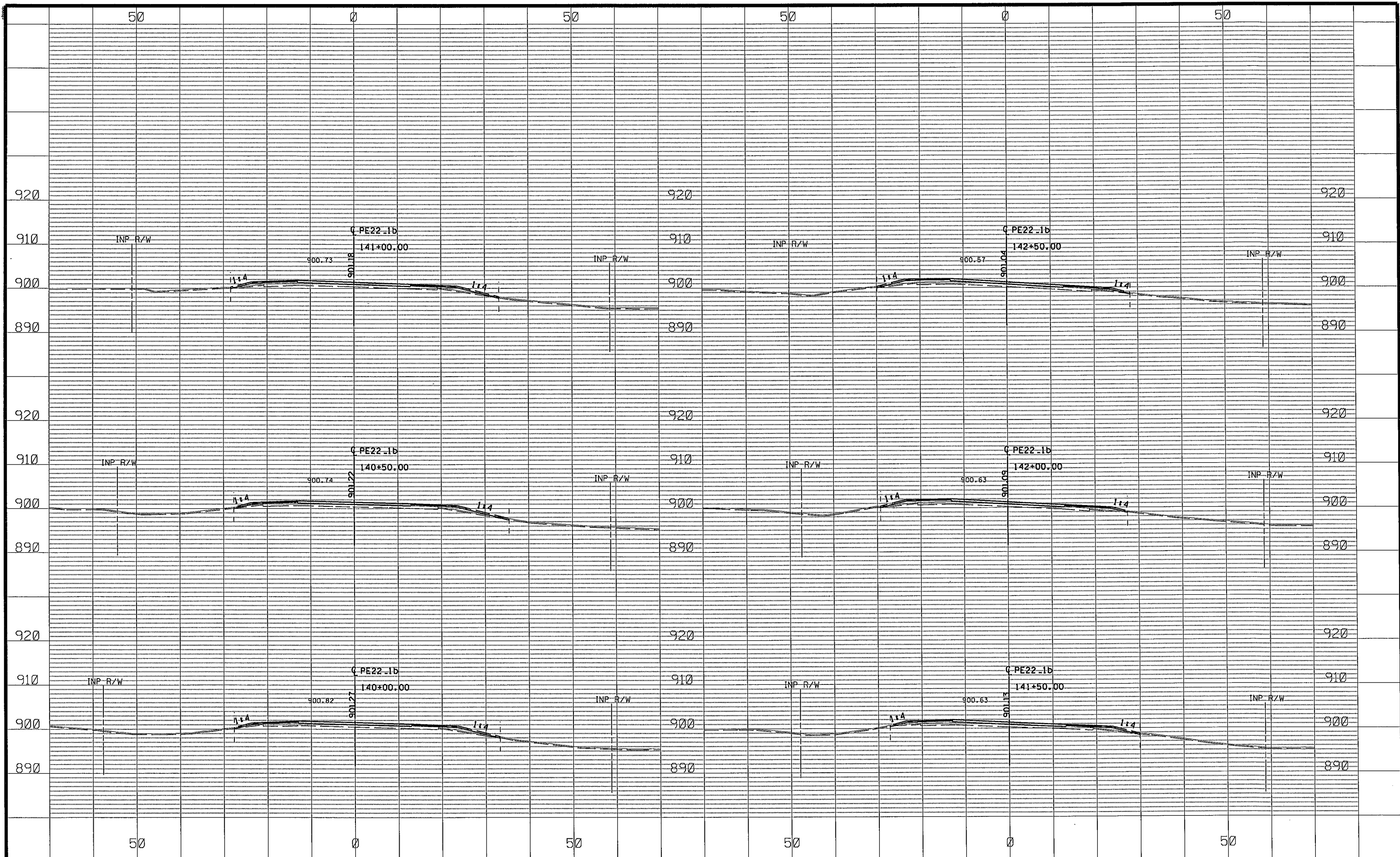
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CHECKED BY GMP DATE 02/06/15



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CROSS SECTIONS
STA 137+00.00 TO 139+50.00
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DRAWN BY JCF DATE 01/09/15
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CHECKED BY GMP DATE 02/06/15



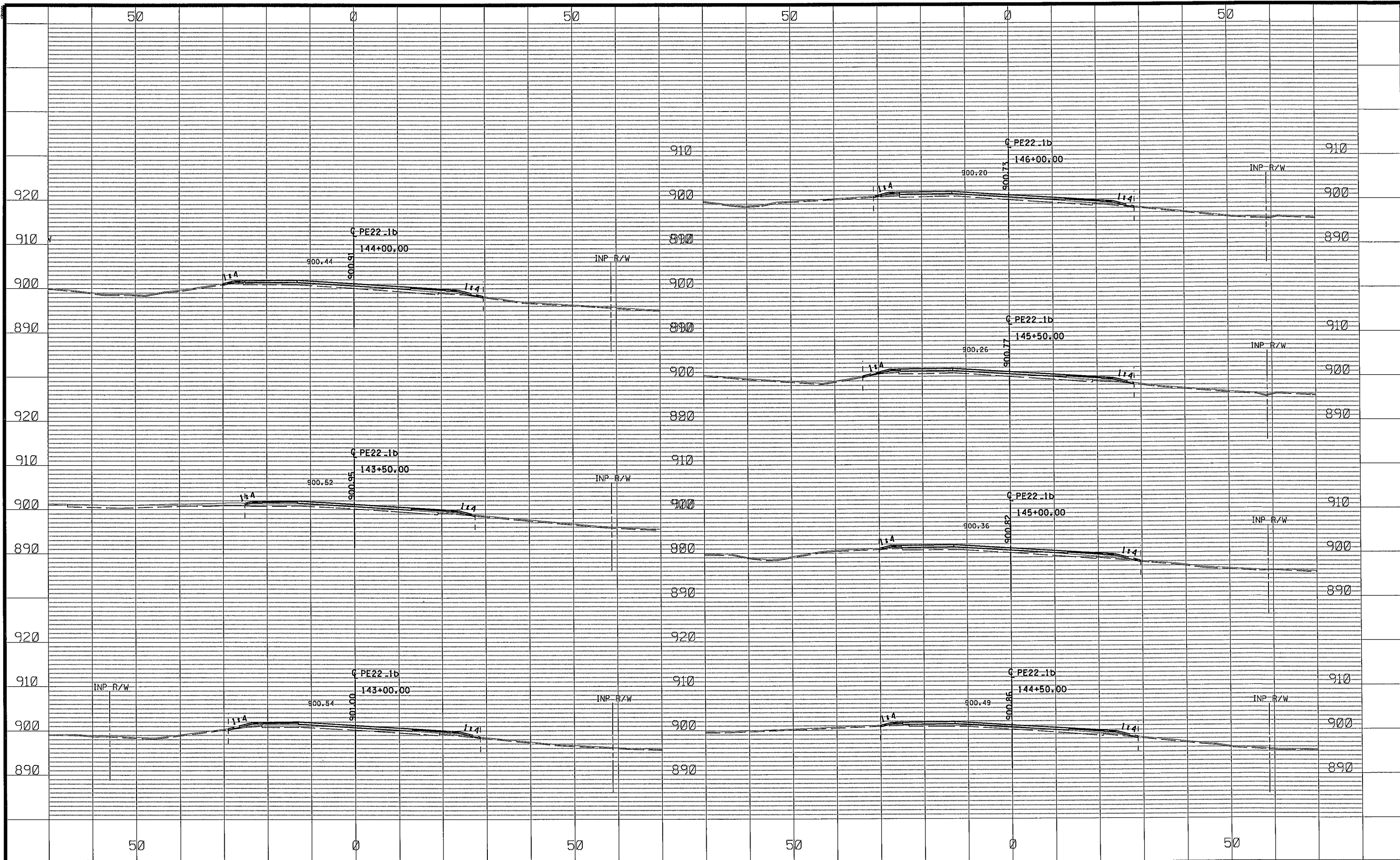
ANOKA COUNTY
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CROSS SECTIONS

STA 140+00.00 TO 142+50.00

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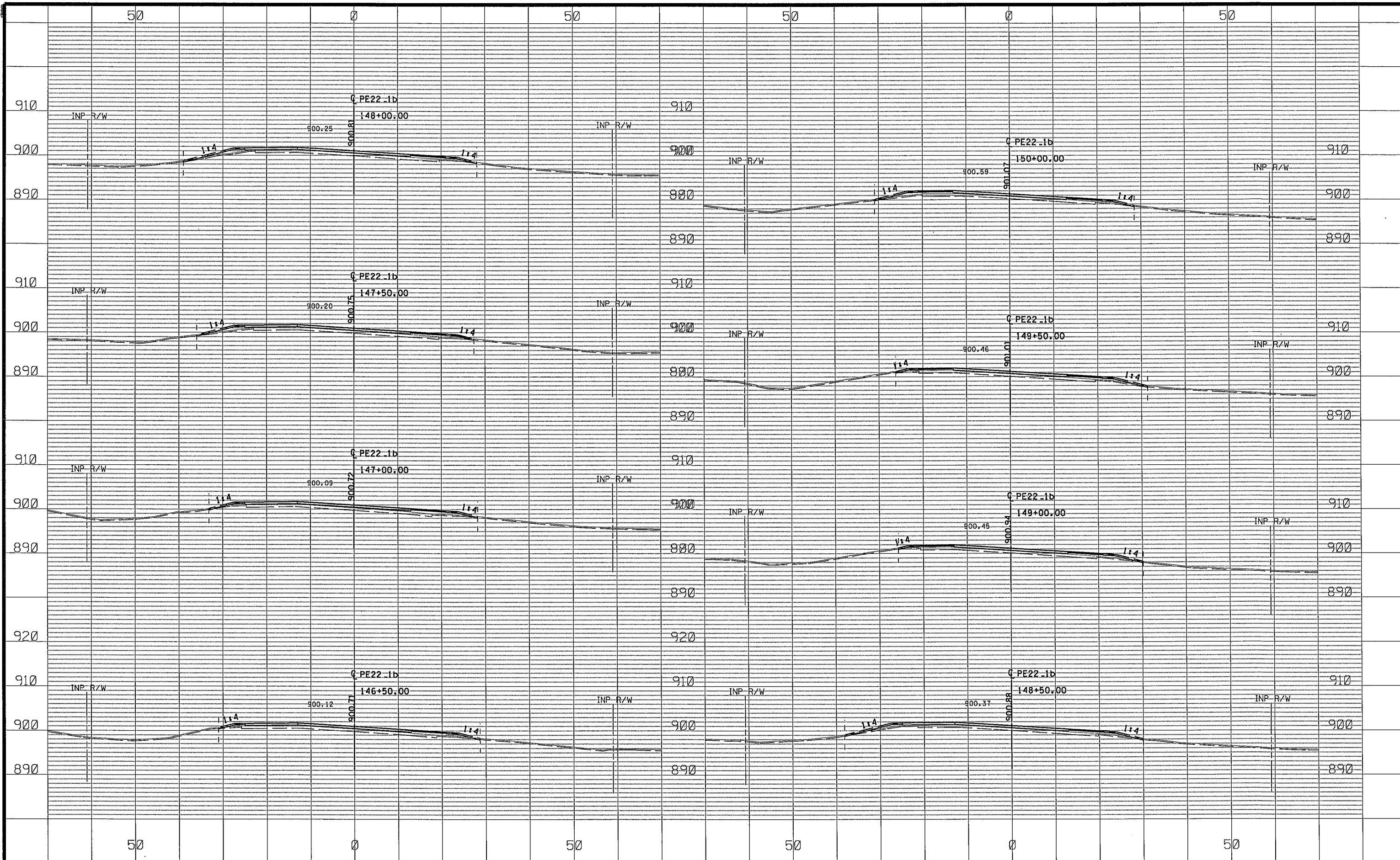
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 DESIGN BY NJD DATE 01/23/15
 CHECKED BY GMP DATE 02/08/15



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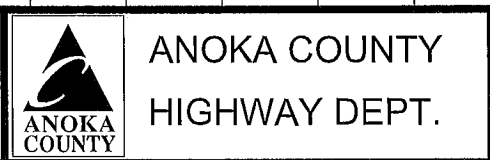
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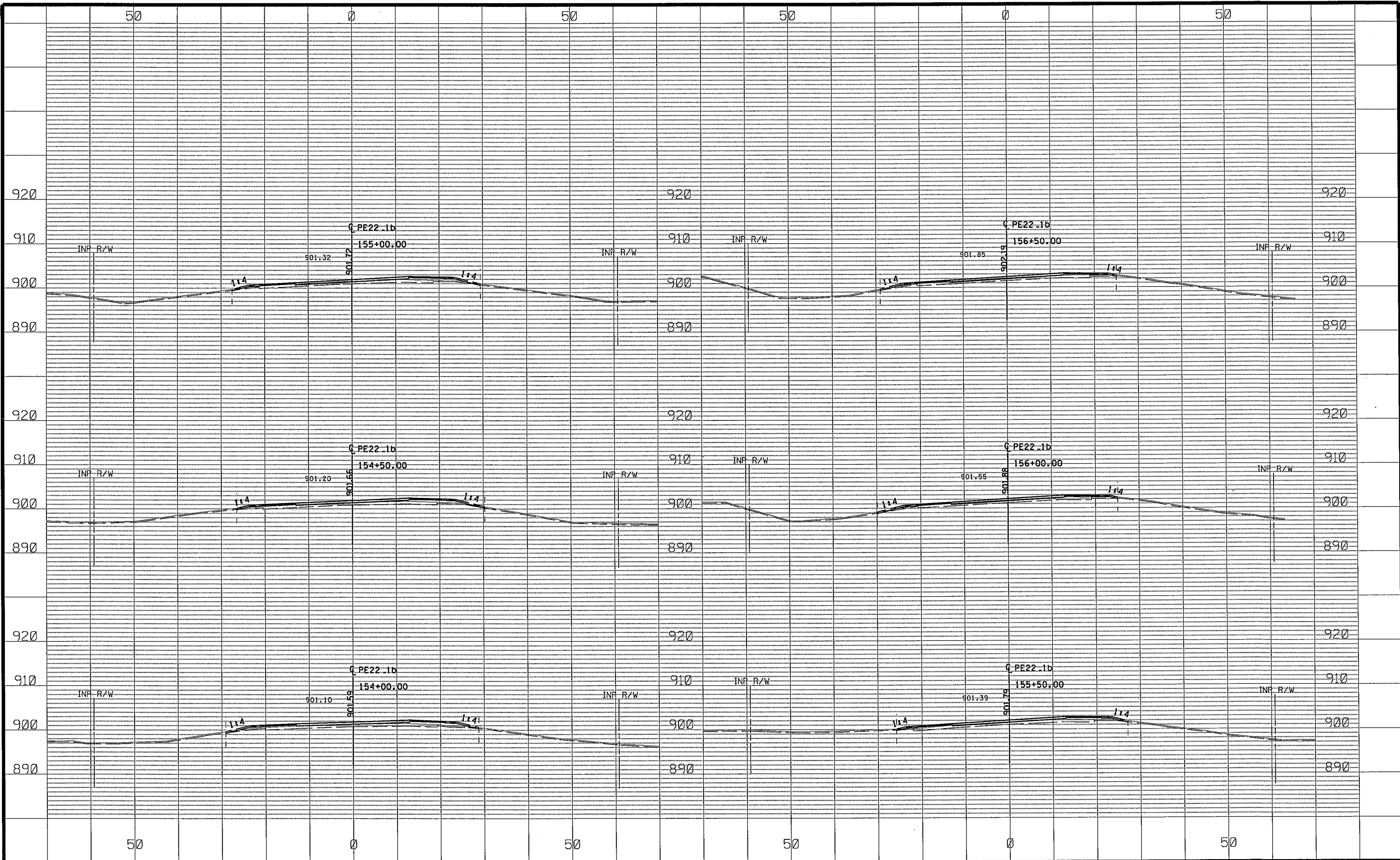
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CHECKED BY GMP DATE 02/08/15



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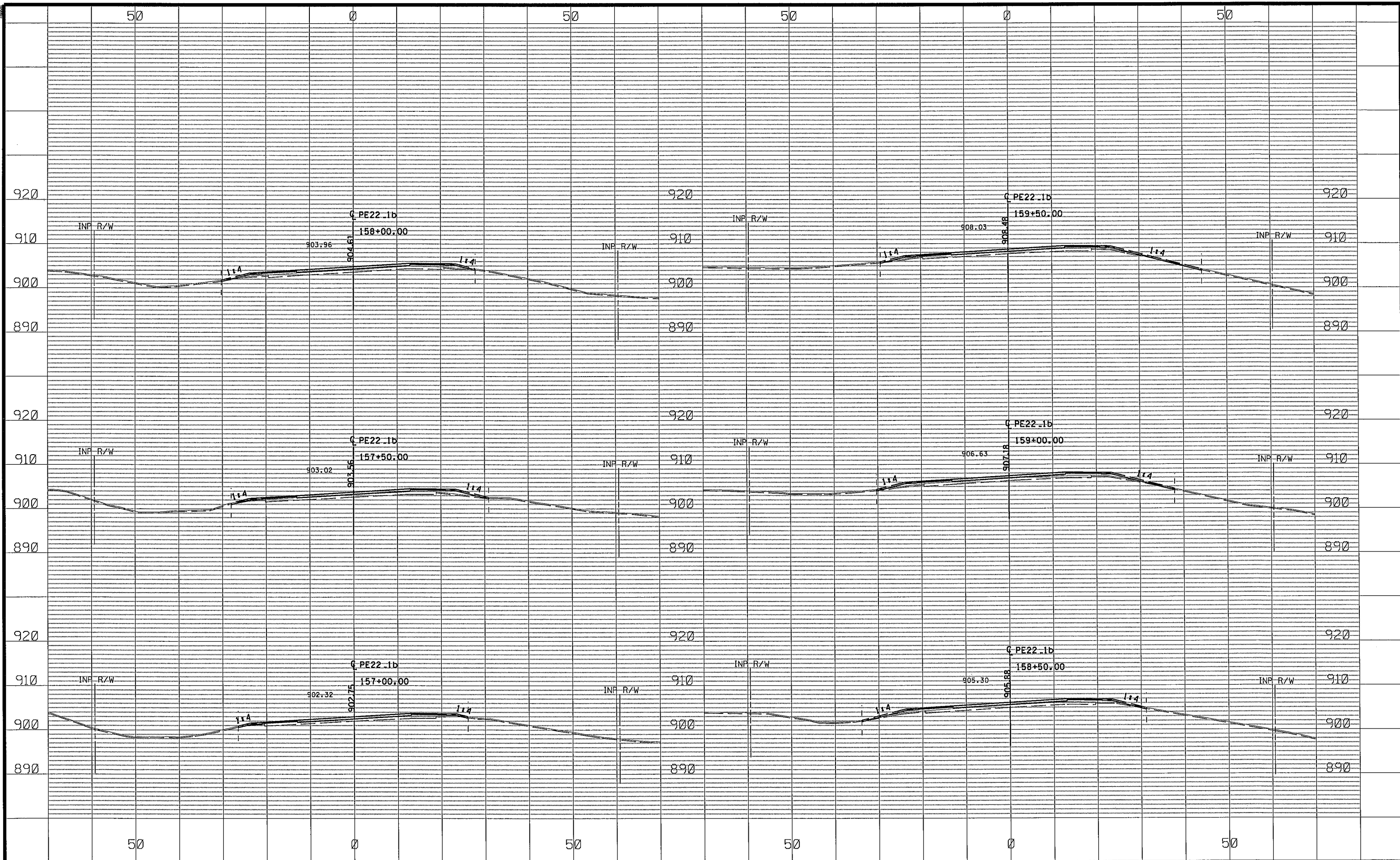
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DESIGN BY NJD DATE 01/23/15
CHECKED BY GMP DATE 02/06/15



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CROSS SECTIONS
STA 154+00.00 TO 156+50.00
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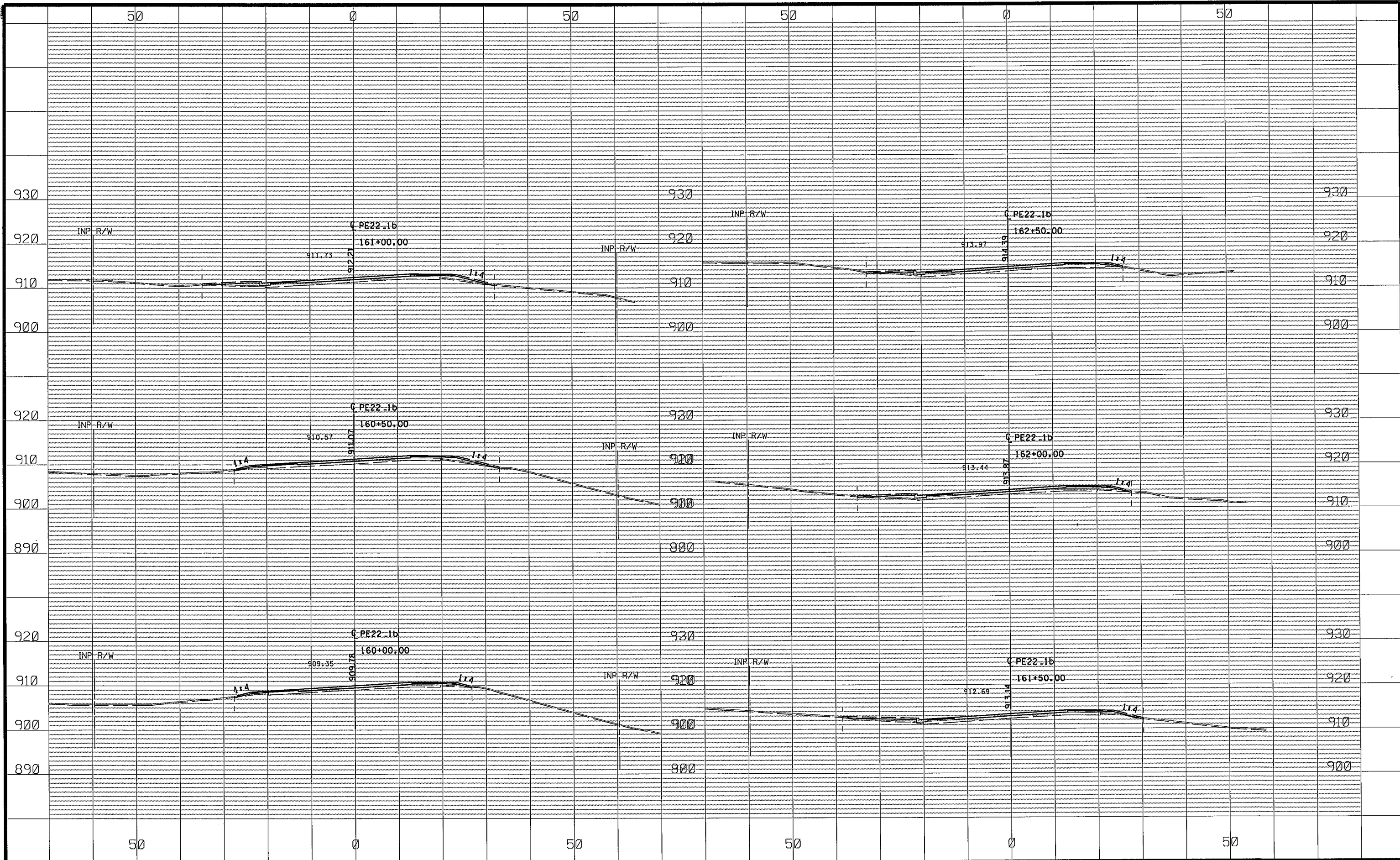
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CROSS SECTIONS
 STA 157+00.00 TO 159+50.00
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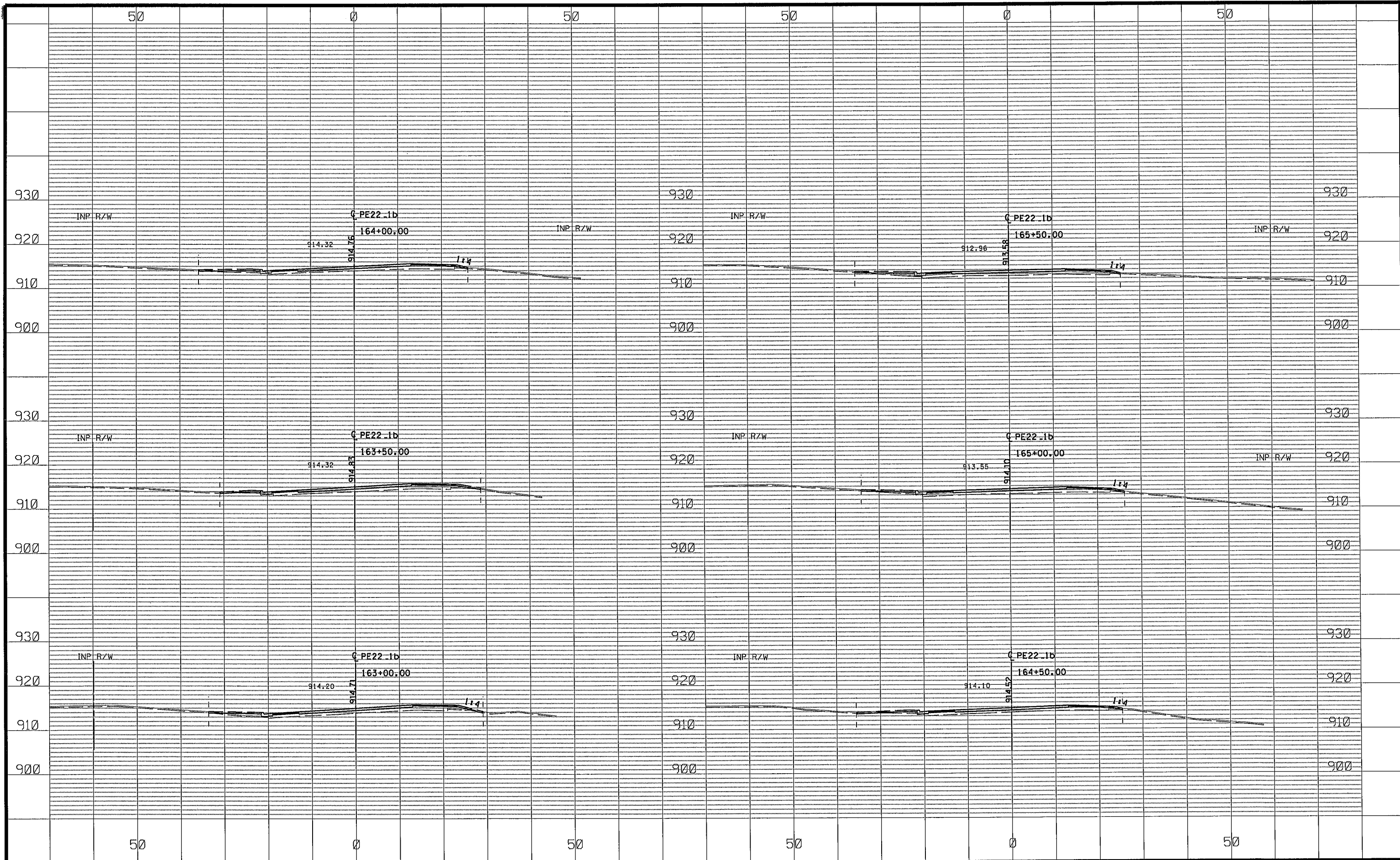
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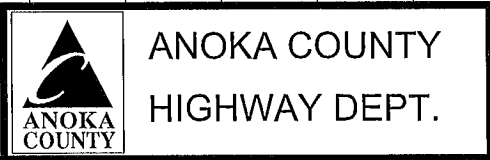
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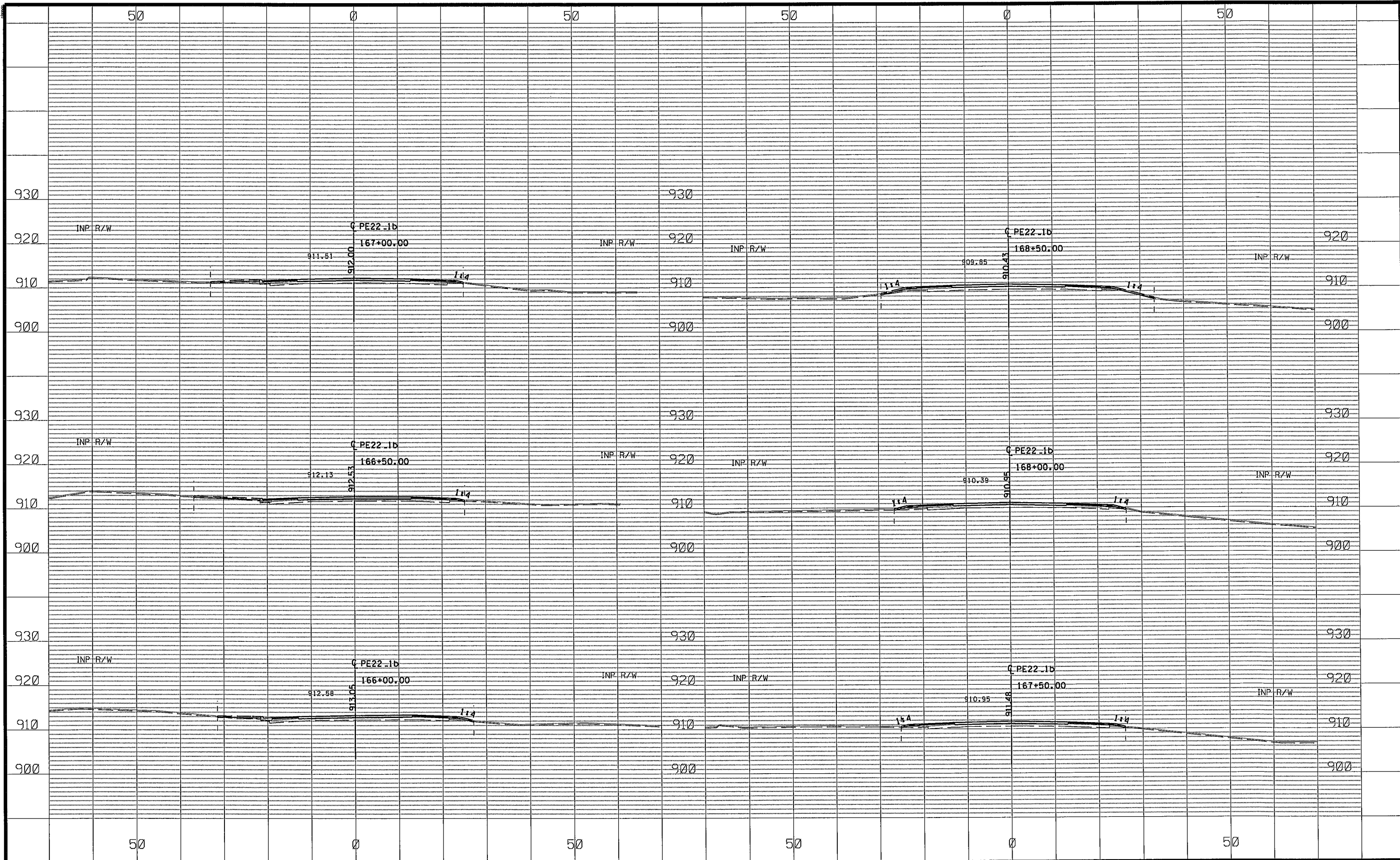
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STATE AID PROJECT NO. 002-622-034
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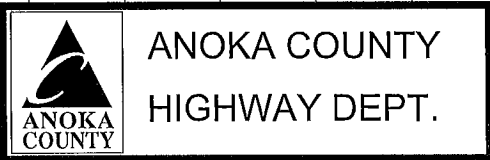
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2	01/23/15	NJD			
3	02/06/15	GMP			

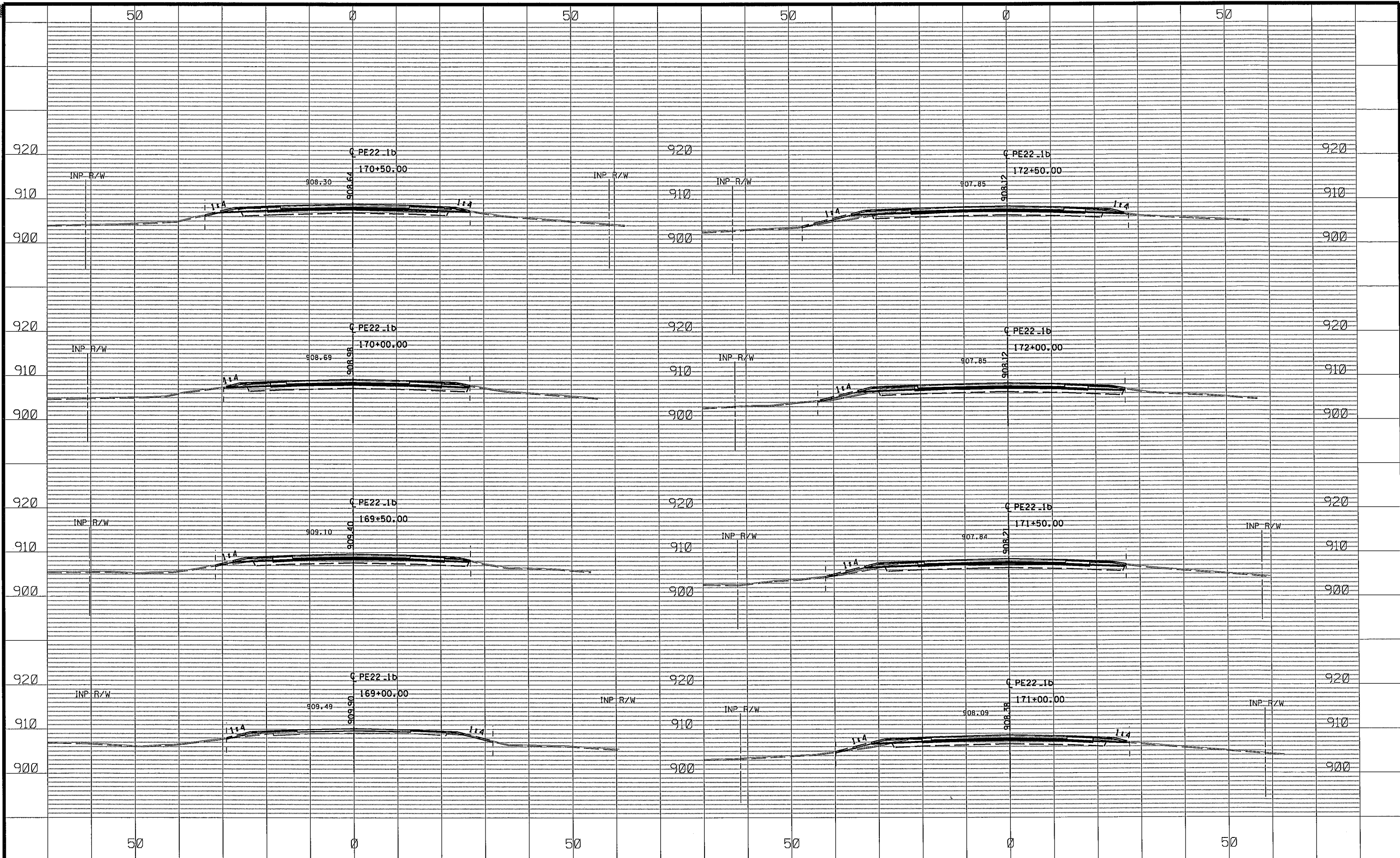
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 STA 166+00.00 TO 168+50.00
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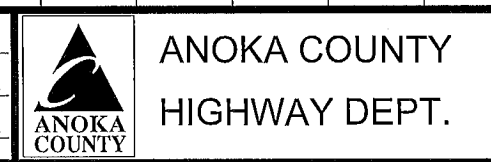


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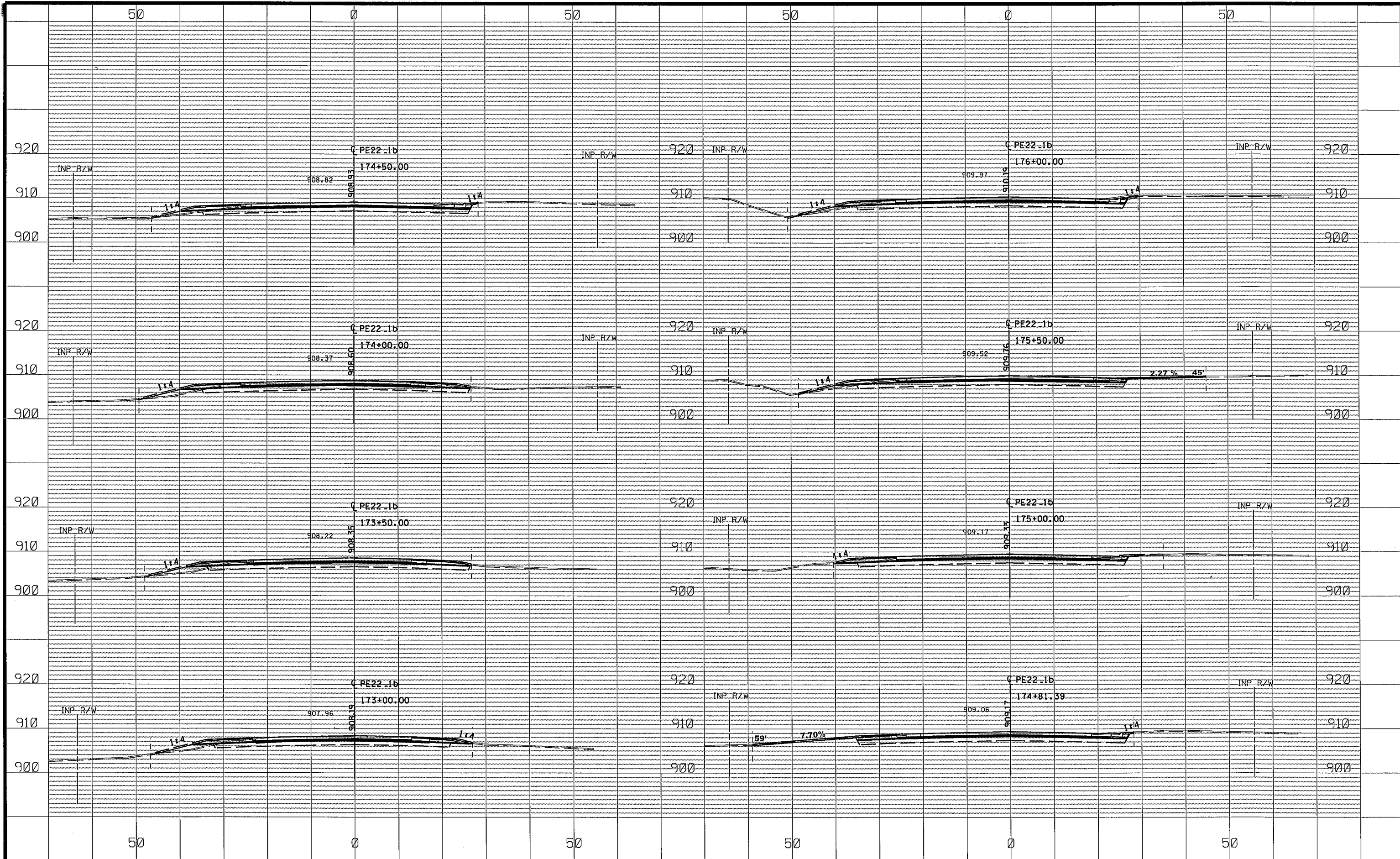
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2	01/23/15	NJD			
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DESIGN BY NJD DATE 01/23/15
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NO	DATE	BY	CKD	APPR	REVISION
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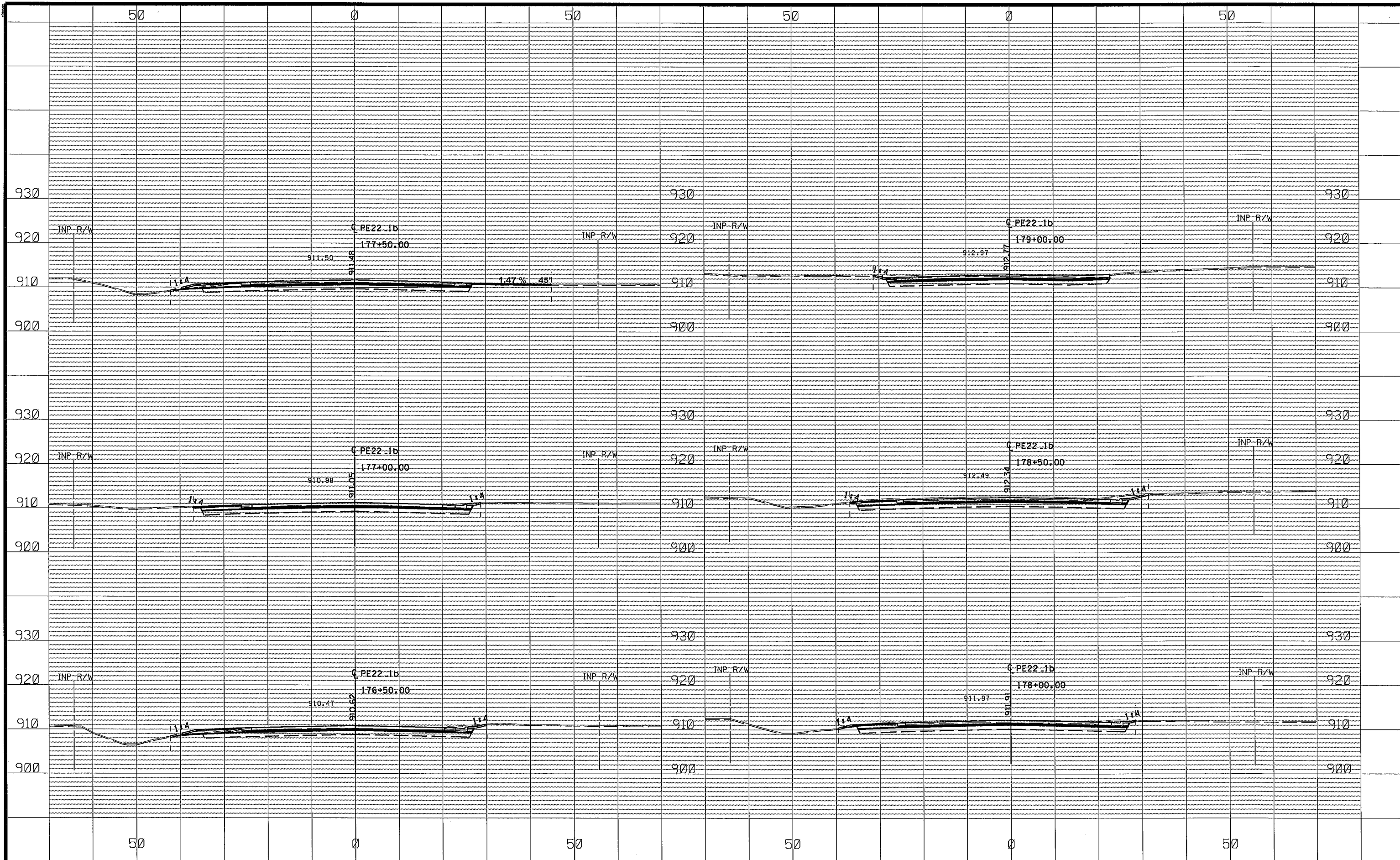
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CROSS SECTIONS
STA 173+00.00 TO 176+00.00
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NO	DATE	BY	CKD	APPR	REVISION
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NO	DATE	BY	CKD	APPR	REVISION
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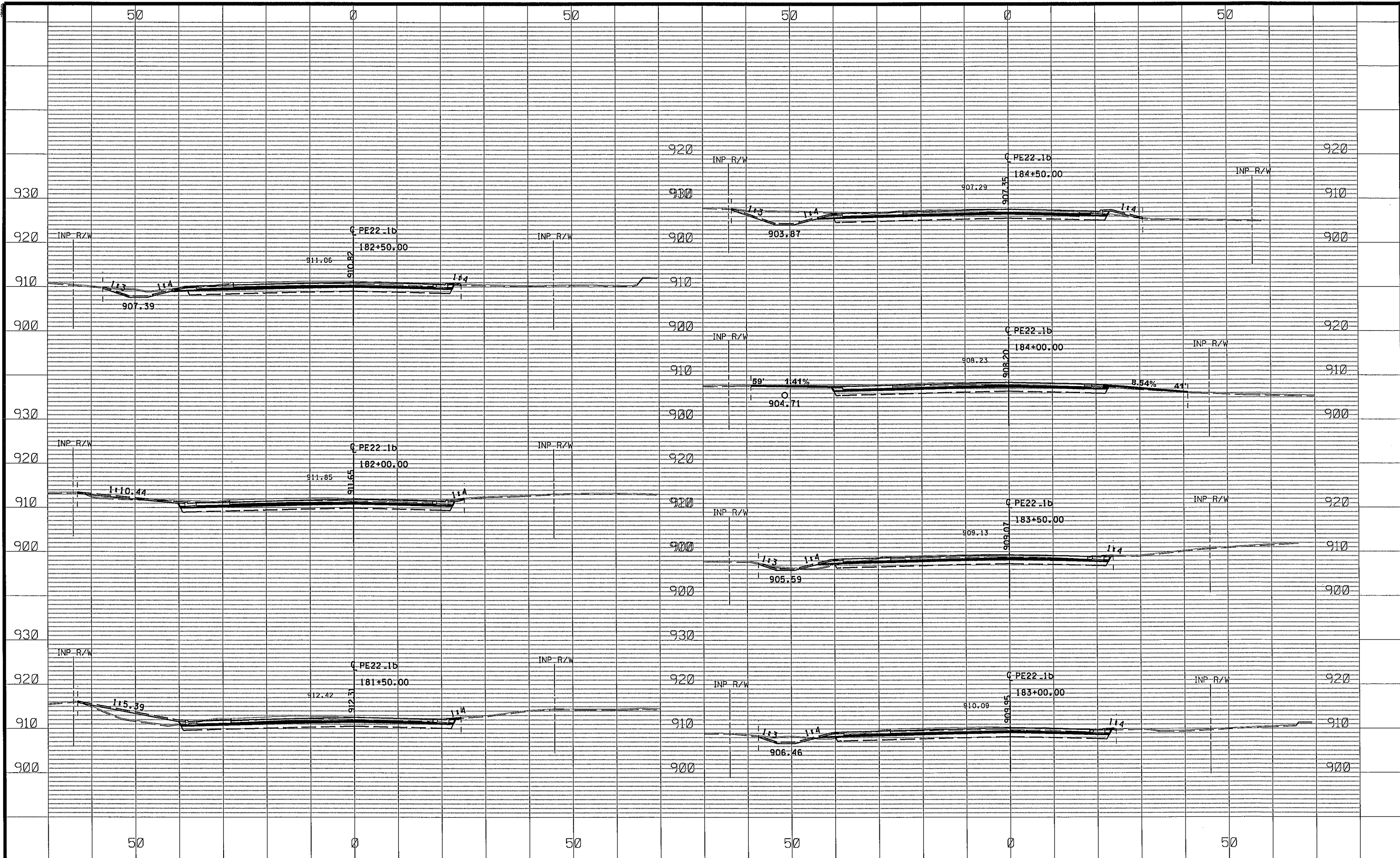
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STA 176+50.00 TO 179+00.00
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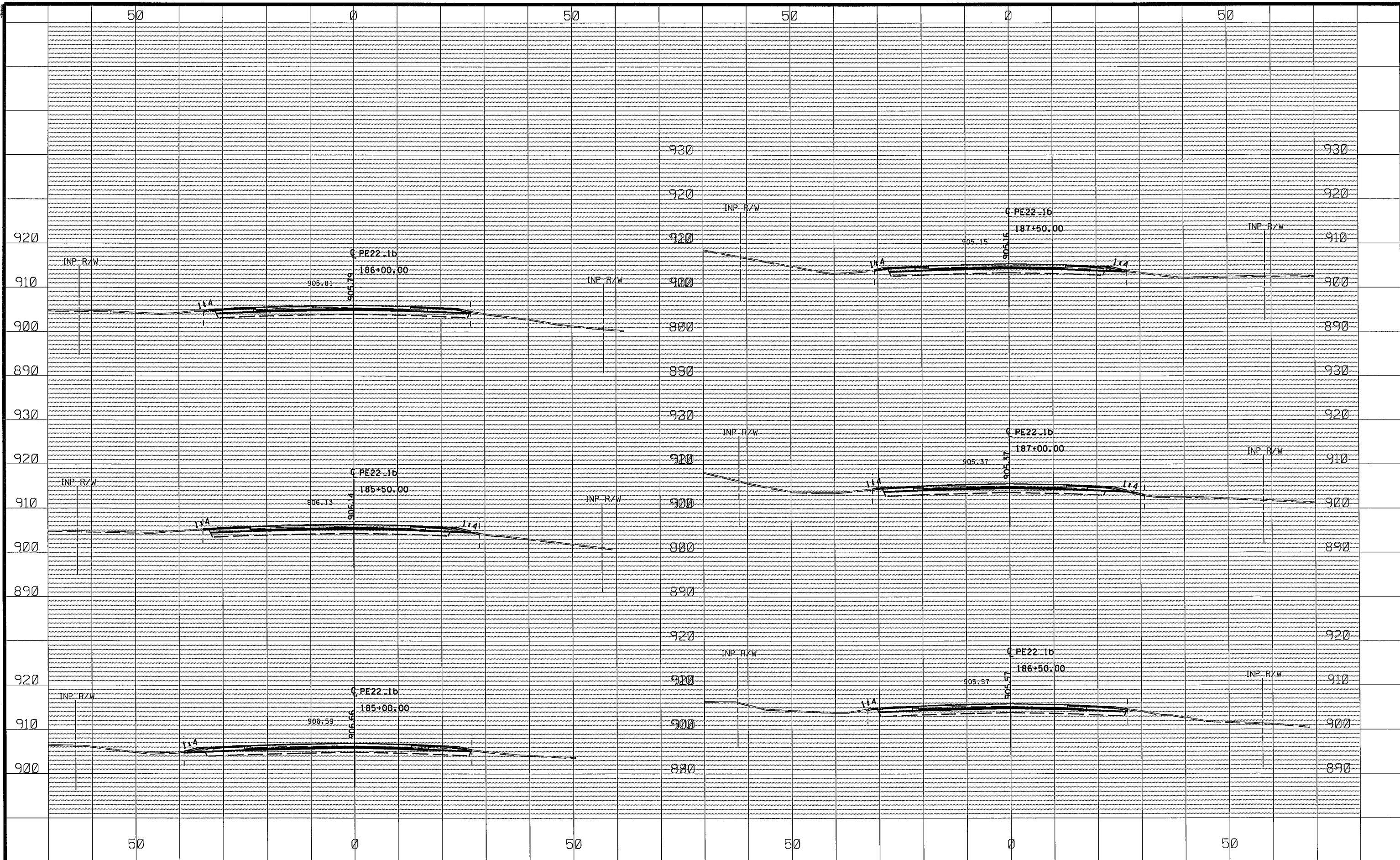
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CHECKED BY GMP DATE 02/06/15



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CROSS SECTIONS
STA 181+50.00 TO 184+50.00
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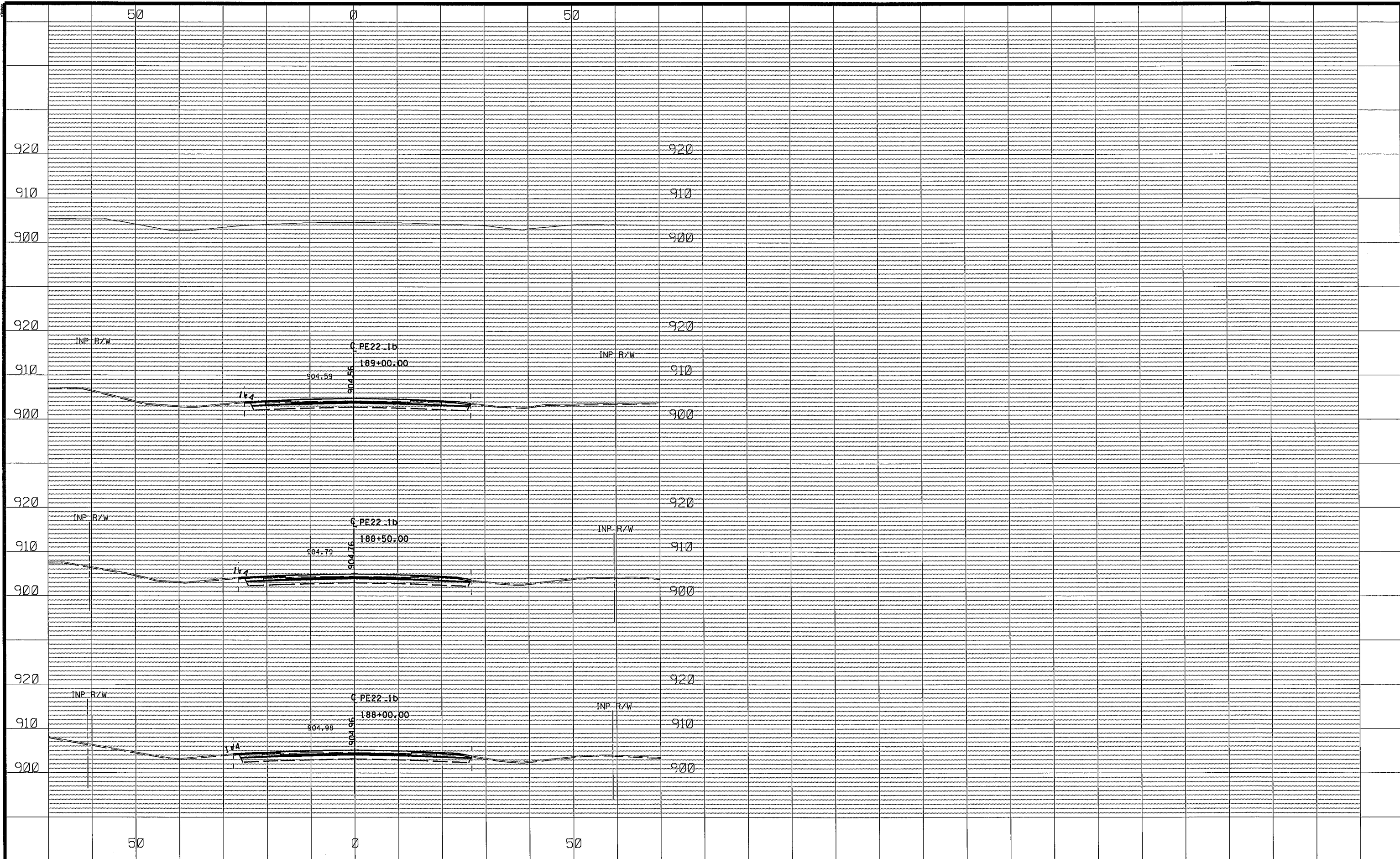
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CHECKED BY	GMP	DATE	02/06/16



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CROSS SECTIONS
STA 185+00.00 TO 187+50.00
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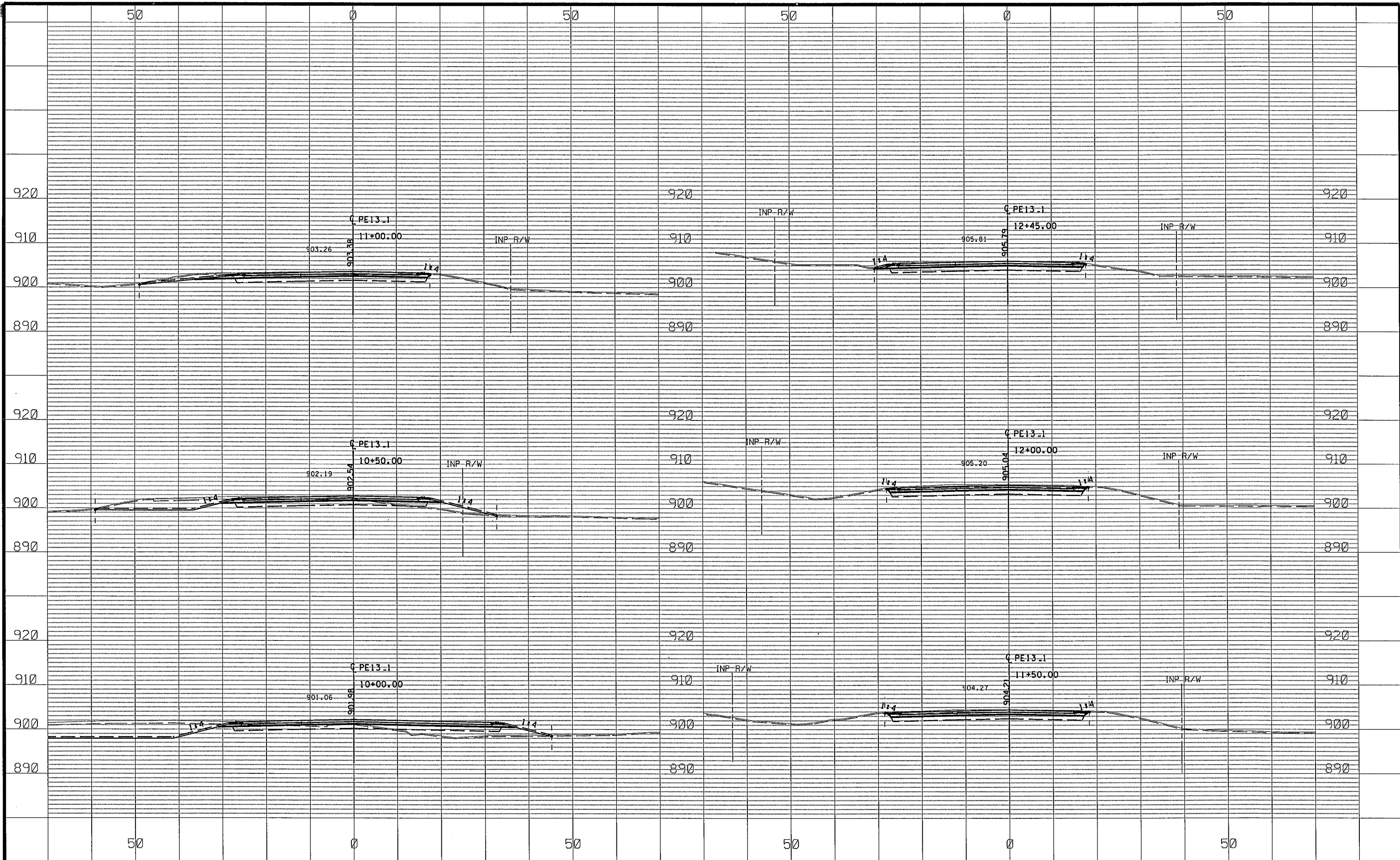
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STA 188+00.00 TO 189+49.00
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NO	DATE	BY	CKD	APPR	REVISION
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2	01/23/15	NJD			
3	02/06/15	GMP			
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CROSS SECTIONS
CSAH 13
STA 10+00.00 TO 12+45.00
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