EAU

PROJECT ID: 1020-03-76

WITH: 1020-03-77, 1020-03-78, 1020-03-79

COUNTY: ST. CROIX

NOVEMBER 2018

ORDER OF SHEETS

Section No. 1 Title
Section No. 2 Typical Sections and Details
Section No. 3 Estimate of Quantities
Section No. 3 Miscellaneous Quantities
~~Section No. 4 Right of Way Plat~~
Section No. 5 Plan and Profile
Section No. 6 Standard Detail Drawings
Section No. 7 Sign Plates
Section No. 8 Structure Plans
Section No. 9 Computer Earthwork Data
Section No. 9 Cross Sections

TOTAL SHEETS = 564

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1020-03-76	WISC 2018451	1
1020-03-77	WISC 2018452	1
1020-03-78	WISC 2018453	1
1020-03-79	WISC 2018454	1

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

HUDSON - BALDWIN

130TH STREET BRIDGE (WB) B-55-0254

IH 94

ST. CROIX COUNTY

STATE PROJECT NUMBER
1020-03-76

130TH STREET BRIDGE (EB) B-55-0255

IH 94

ST. CROIX COUNTY

STATE PROJECT NUMBER
1020-03-77

KINNICKINNIC RIVER BRG WB B-55-0256

IH 94

ST. CROIX COUNTY

STATE PROJECT NUMBER
1020-03-78

KINNICKINNIC RIVER BRG EB B-55-0257

IH 94

ST. CROIX COUNTY

STATE PROJECT NUMBER
1020-03-79



30

N

DESIGN DESIGNATION 1020-03-76, 1020-03-77, 1020-03-78, 1020-03-79

A.A.D.T.	(2019)	= 36,300
A.A.D.T.	(2039)	= 45,400
D.H.V.		= 4,860
D.D.		= 61/39
T.		= 22.8% OF A.A.D.T.
DESIGN SPEED		= 75 MPH
ESALS		= 38,000,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- SWAMP AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

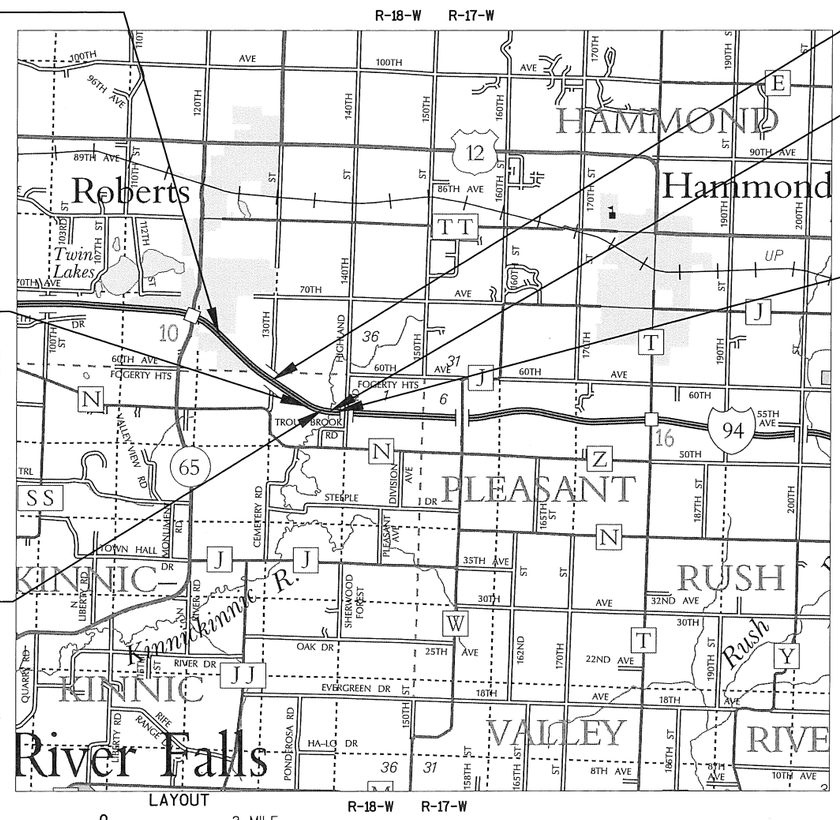
UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

BEGIN PROJECT
1020-03-76
STA. 525'WB'+42
X=564300.8728'
Y=335127.0035'
1020-03-77
STA. 525'EB'+00

END PROJECT
1020-03-77
STA. 593'EB'+33.49
T-29-N T-28-N
BEGIN PROJECT
1020-03-79
STA. 593'EB'+33.49

END PROJECT
1020-03-76
STA. 613'WB'+00
BEGIN PROJECT
1020-03-78
STA. 613'WB'+00



STRUCTURES B-55-254(WB) & 255(EB)
(IH 94 OVER 130TH STREET)

STRUCTURES B-55-256(WB) & 257(EB)
(IH 94 OVER KINNICKINNIC RIVER)

END PROJECT
1020-03-78
STA. 627'WB'+00
1020-03-79
STA. 624'EB'+75

PROJECT 1020-03-76 TOTAL NET LENGTH OF CENTERLINE = 1.659 MILES
PROJECT 1020-03-77 TOTAL NET LENGTH OF CENTERLINE = 1.294 MILES
PROJECT 1020-03-78 TOTAL NET LENGTH OF CENTERLINE = 0.265 MILES
PROJECT 1020-03-79 TOTAL NET LENGTH OF CENTERLINE = 0.595 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ST. CROIX COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NW REGION, EAU CLAIRE
Designer	K. KOPACZ
Project Manager	A. SARAUER
Regional Examiner	NW REGION, EAU CLAIRE
Regional Supervisor	T. WEISS

APPROVED FOR THE DEPARTMENT

DATE: 6/12/18 (Signature)

E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\010101_TI.DWG
LAYOUT NAME - ****

PLOT DATE : 4/9/2018 3:57 PM

PLOT BY : K. KOPACZ

PLOT NAME :

UTILITIES CONTACTS

COMMUNICATIONS

AT&T LEGACY
MR. BRAD KEMPH (LOCATOR)
PHONE: 715-254-5238
COPY ALL CORRESPONDENCE TO:
MR. BILL KOENIG (JMC ENGINEERS)
JMC ENGINEERS & ASSOCIATES
128 WEST SUNSET AVENUE
APPLETON, WI 54911
PHONE: 608-628-0575 (MOBILE)
EMAIL: WEKOENIG@ATT.NET

AT&T WISCONSIN
MR. RICK PODOLAK
304 SOUTH DEWEY STREET, 4TH FLOOR
EAU CLAIRE, WI 54701
PHONE: 715-839-5565 (OFFICE)
PHONE: 715-410-0656 (MOBILE)
EMAIL: RP4514@ATT.NET

CENTURYLINK COMMUNICATIONS
MR. BOB SAMPSON
1310 EAST MARY STREET
OTTUMWA, IA 52501
PHONE: 641-684-4106 (OFFICE)
PHONE: 636-887-5367 (MOBILE)
EMAIL: ROBERT.SAMPSON@CENTURYLINK.COM

LEVEL 3 COMMUNICATIONS LLC
MR. BOB STRONG
5480 FELTL ROAD
MINNETONKA, MN 55343
PHONE: 952-351-2353 (OFFICE)
PHONE: 612-805-6827 (MOBILE)
EMAIL: BOB.STRONG@CENTURYLINK.COM
COPY ALL CORRESPONDENCE TO:
LEVEL3.NETWORKRELOCATIONS@LEVEL3.COM

ELECTRICITY

DAIRYLAND POWER COOPERATIVE
MR. ROB MALY
3200 EAST AVENUE SOUTH
P.O. BOX 817
LA CROSSE, WI 54602-0817
PHONE: 608-788-4000 (OFFICE)
PHONE: 608-518-2633 (MOBILE)
EMAIL: ROB.MALY@DAIRYLANDPOWER.COM

ST. CROIX ELECTRIC COOPERATIVE
MR. ROB DOOLEY
1925 RIDGEWAY STREET
P.O. BOX 108
HAMMOND, WI 54015-5039
PHONE: 715-796-5637
EMAIL: ROBDOO@SCECNET.NET

XCEL ENERGY - DISTRIBUTION
MR. DARREN NORDSKOG
1201 LIVINGSTONE ROAD
HUDSON, WI 54016
PHONE: 715-386-4798 (OFFICE)
PHONE: 715-410-3755 (MOBILE)
EMAIL: DARREN.M.NORDSKOG@XCELENERGY.COM
COPY ALL CORRESPONDENCE TO:
MS. CORISSA SEELY
1414 WEST HAMILTON AVENUE
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
PHONE: 715-737-4097 (OFFICE)
EMAIL: CORISSA.E.SEELY@XCELENERGY.COM

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

WISDNR CONTACT

WISCONSIN DEPT. OF NATURAL RESOURCES
MS. AMY LESIK
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-836-6571
EMAIL: AMYL.LESIK@WISCONSIN.GOV

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE SEEDED, FERTILIZED, AND MULCHED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS ARE TO BE SEEDED, FERTILIZED, AND MULCHED AT THE CONTRACTORS' EXPENSE.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS' EROSION CONTROL IMPLEMENTATION PLAN AS APPROVED BY THE ENGINEER IN CONSULTATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.

THE LOCATIONS OF EXISTING AND/OR PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION.

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

LOCATIONS FOR PERMANENT SIGNS SHOWN ON THE PLAN ARE APPROXIMATE. ACTUAL LOCATIONS OF PERMANENT SIGNS ARE TO BE COORDINATED IN THE FIELD BY THE ENGINEER.

THE DEPARTMENT WILL FURNISH A BENCHMARK MONUMENT MARKER TO BE INSTALLED BY THE CONTRACTOR ON EACH STRUCTURE AS DIRECTED BY THE ENGINEER.

SHRINKAGE OF THE EARTHWORK IS ESTIMATED AS 25% IN THE YARDAGE SUMMARY.

THE 4" HMA PAVEMENT SHALL BE PLACED IN ONE LAYER WITH A 4" 4MT58-34H.
THE 6" HMA PAVEMENT SHALL BE PLACED IN TWO LAYERS WITH A 4.25" 3HT58-28H LOWER LAYER AND A 1.75" 4HT58-34H UPPER LAYER.
THE 9" HMA PAVEMENT SHALL BE PLACED IN FOUR LAYERS WITH A 5" (TWO-2.5" LAYERS) 3HT58-28H LOWER LAYERS AND A 4" (TWO-2" LAYERS) 4HT58-34H UPPER LAYERS.

THE PAVEMENT STRUCTURE FOR TEMPORARY MEDIAN CROSSOVERS AND TEMPORARY ROADWAY SHALL CONSIST OF 6 INCHES OF ASPHALTIC SURFACE TEMPORARY OVER 12 INCHES BASE AGGREGATE DENSE 1 1/4-INCH.
PLACE THE 6" ASPHALTIC SURFACE TEMPORARY WITH A 4.25" 3HT58-28H LOWER LAYER AND 1.75" 4HT58-34H UPPER LAYER.

PAVE ASPHALTIC SHOULDERS ADJACENT TO PERMANENT BEAMGUARD TO A WIDTH FLUSH WITH BEAMGUARD FACE.

CROSS DRAIN PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL CONCRETE PIPE SHALL HAVE THE APRON ENDWALL AND THE FIRST TWO PIPE JOINTS TIED AT THE JOINTS, (THREE JOINTS TOTAL).

INLET DEPTHS ARE APPROXIMATE AND MUST BE FIELD VERIFIED.

PIPE LENGTHS SHOWN ON THE STORM SEWER ARE TO CENTER OF STRUCTURE(S).

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE EARTHWORK AND IS NOT SHOWN ON THE CROSS SECTIONS. EBS WILL BE MEASURED AND PAID FOR UNDER COMMON EXCAVATION BID ITEM.

EXISTING RIGHT OF WAY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE LOCATIONS.

LIST OF STANDARD ABBREVIATIONS

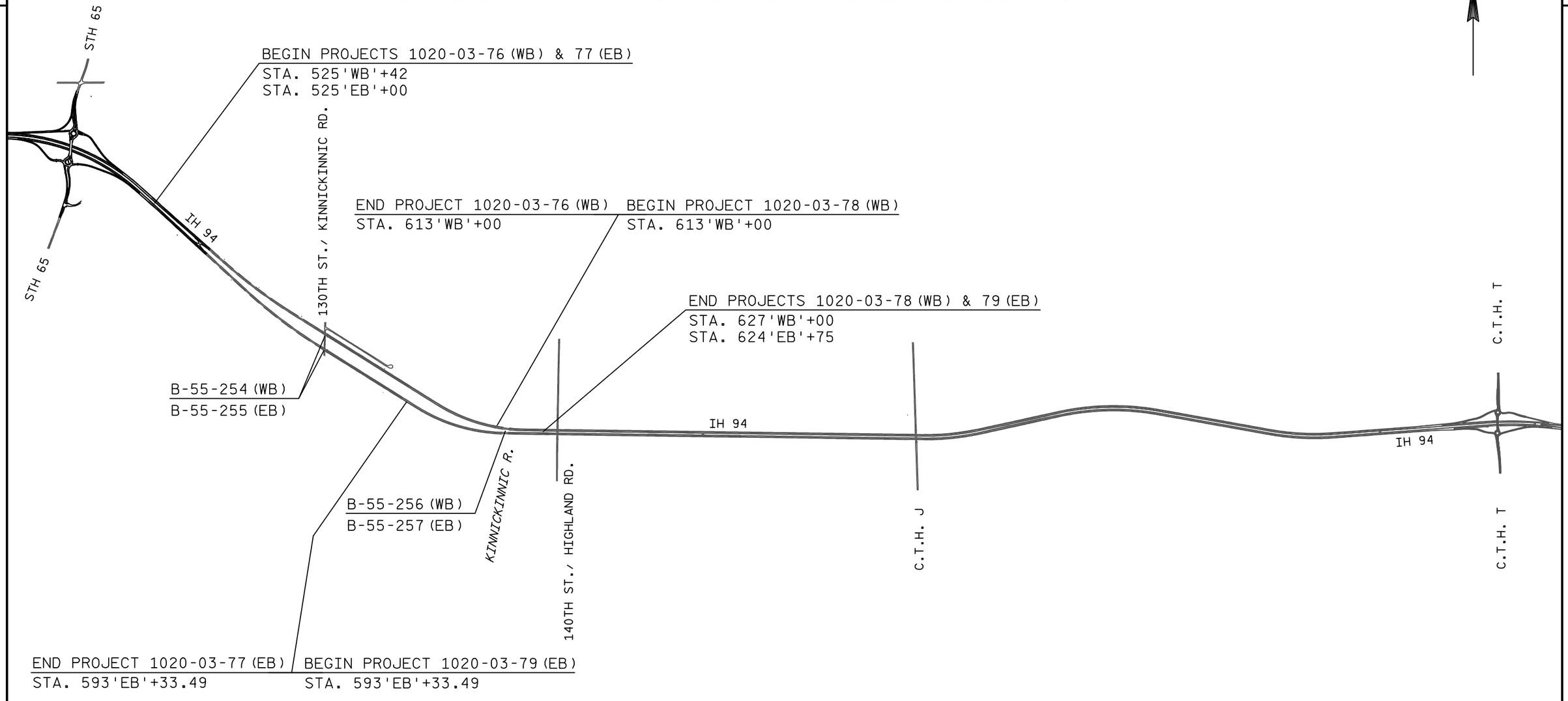
ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C.E.	COMMERCIAL ENTRANCE
C/L	CENTER LINE
CL.	CLASS
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.A.C.P.	CORRUGATED ALUMINUM CULVERT PIPE
C.M.P.A.	CORRUGATED METAL PIPE ARCH
C.P.C.P.	CORRUGATED POLYETHYLENE CULVERT PIPE
C.S.C.P.	CORRUGATED STEEL CULVERT PIPE
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
R.C.H.E.C.P.	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
R.C.P.S.S.	REINFORCED CONCRETE PIPE STORM SEWER
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE

RUNOFF COEFFICIENT TABLE

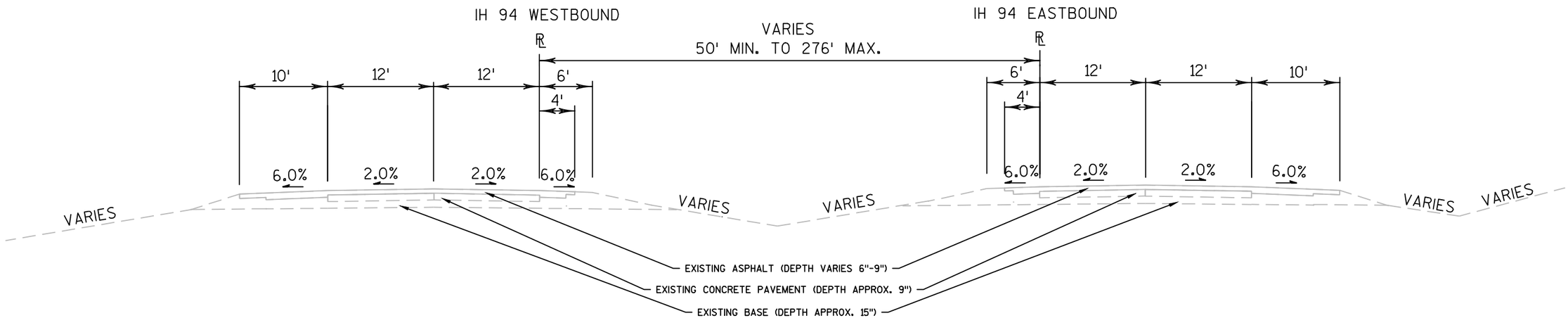
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 125 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 86 ACRES

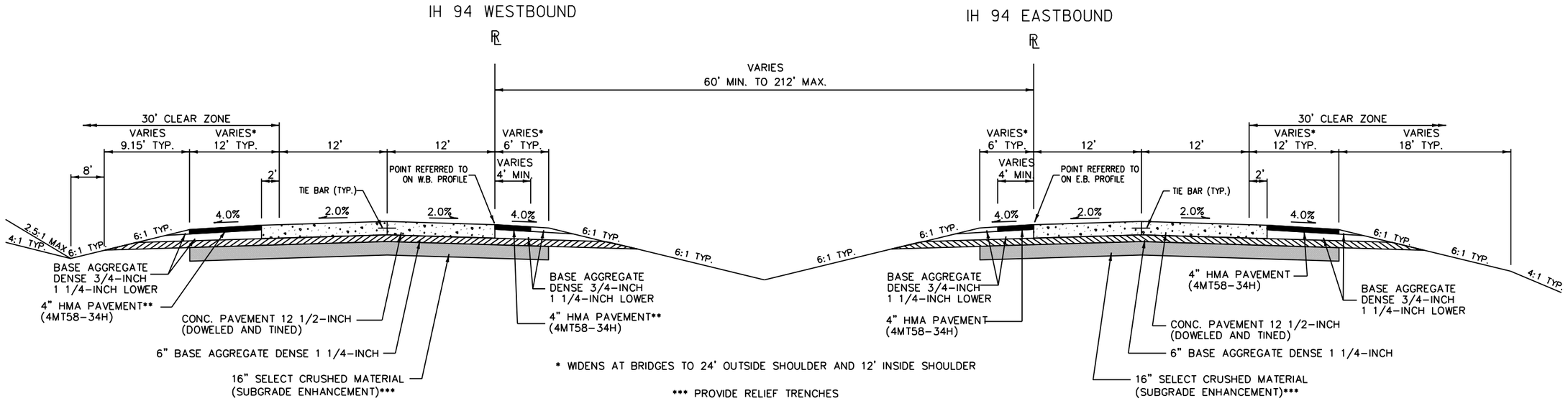
PROJECTS 1020-03-76,77,78,79 OVERVIEW
(130TH STREET & KINNICKINNIC RIVER BRIDGES)



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PROJECT OVERVIEW	SHEET 4	E



TYPICAL EXISTING SECTION
IH 94



* WIDENS AT BRIDGES TO 24' OUTSIDE SHOULDER AND 12' INSIDE SHOULDER

** PAVE 6" HMA PAVEMENT (4HT58-34H UPPER, 3HT58-28H LOWER)
ON WB SHOULDERS THAT CARRY STAGED TRAFFIC AT:
STA. 561'WB'+00 – 577'WB'+50, RT.
STA. 525'WB'+42 – 557'WB'+50, LT.

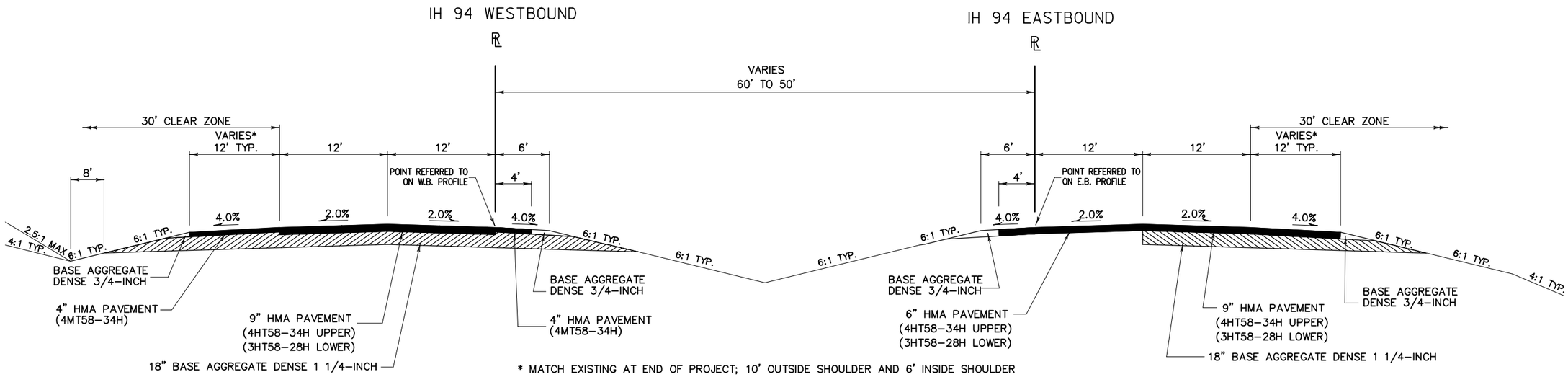
*** PROVIDE RELIEF TRENCHES FOR DRAINAGE AT PROFILE ALIGNMENT SAG POINTS AND EVERY 250 FEET. (SEE CONSTR. DETAIL)

TYPICAL FINISHED SECTION
IH 94

STA. 525'WB'+00 - 568'WB'+75
STA. 570'WB'+25 - 615'WB'+00
STA. 616'WB'+50 - 623'WB'+11.66

STA. 525'EB'+00 - 570'EB'+00
STA. 571'EB'+50 - 615'EB'+40
STA. 616'EB'+90 - 621'EB'+30.61

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTION	SHEET 5	E

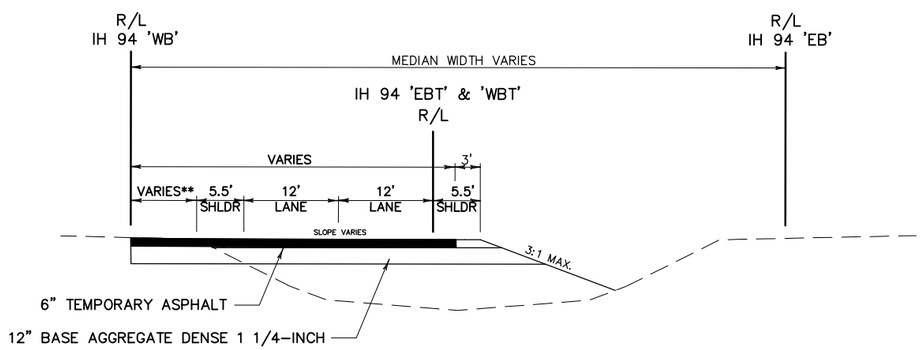


* MATCH EXISTING AT END OF PROJECT; 10' OUTSIDE SHOULDER AND 6' INSIDE SHOULDER

NOTE: ON EASTBOUND ROADWAY –
RECONSTRUCT RIGHT LANE AND SHOULDER.
MILL & OVERLAY LEFT LANE AND SHOULDER.

TYPICAL FINISHED SECTION
IH 94

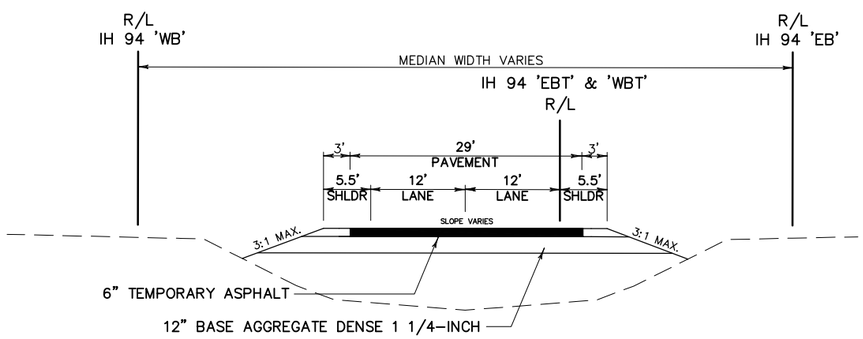
STA. 623'WB'+11.66 - 627'WB'+00 STA. 621'EB'+30.61 - 624'EB'+75



** PAVE WITH 3" TEMPORARY ASPHALT
(STA. 522'EBT'+00 TO 540'EBT'+00, LT.)

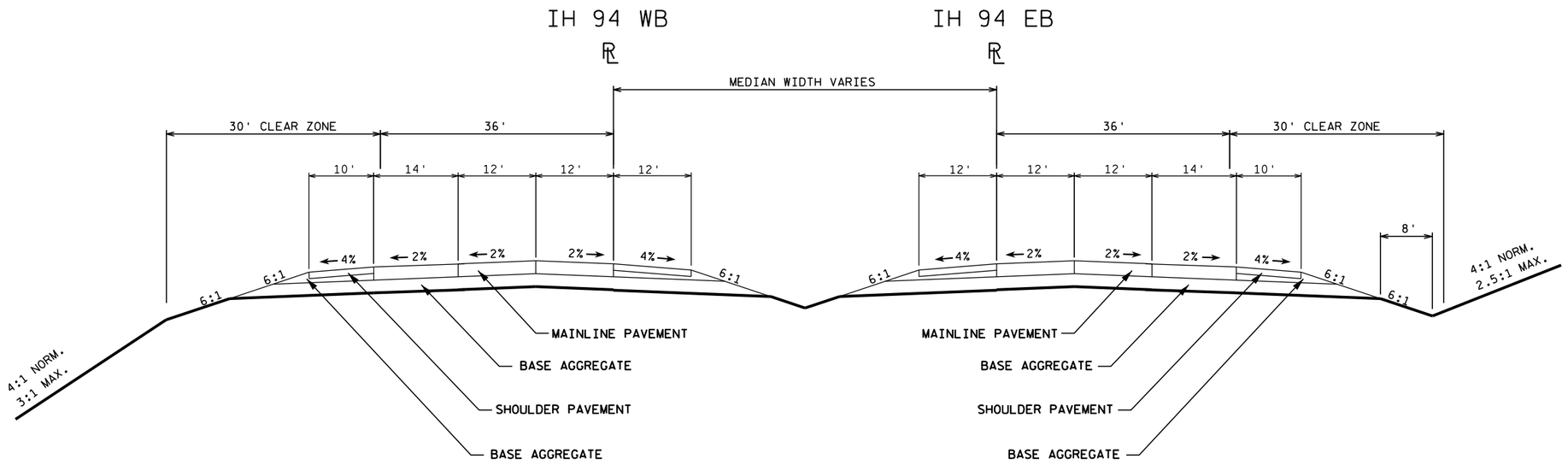
NOTE: INSTALL CONCRETE BARRIER TEMPORARY PRECAST AT THE LOCATIONS SHOWN IN THE TRAFFIC CONTROL PLANS. PLACE CONCRETE BARRIER TEMPORARY PRECAST TO PROVIDE 2.5 FEET SHY DISTANCE FROM THE EDGE OF TRAVEL LANES.

TYPICAL SECTION
TEMP. WIDENING

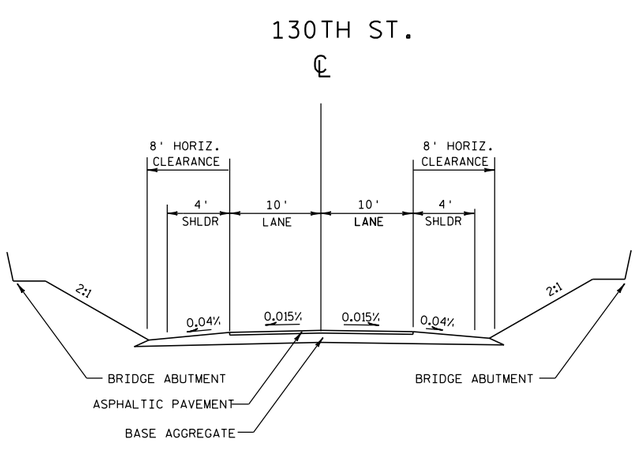


TYPICAL SECTION
TEMP. ROADWAY

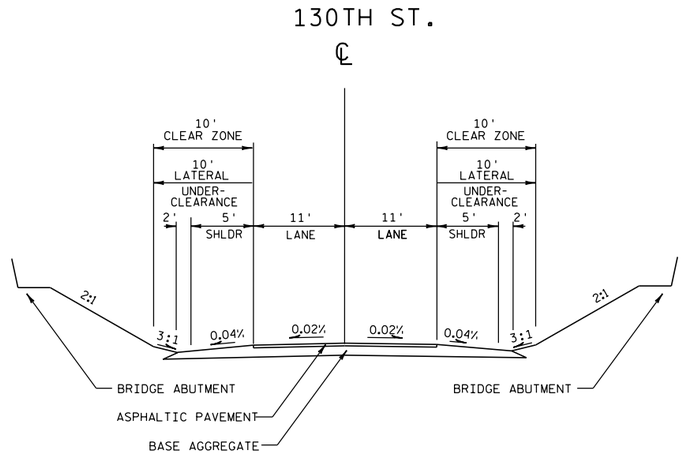
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTION	SHEET 6	E



FUTURE TYPICAL FINISHED SECTION (SIX-LANE)
IH 94

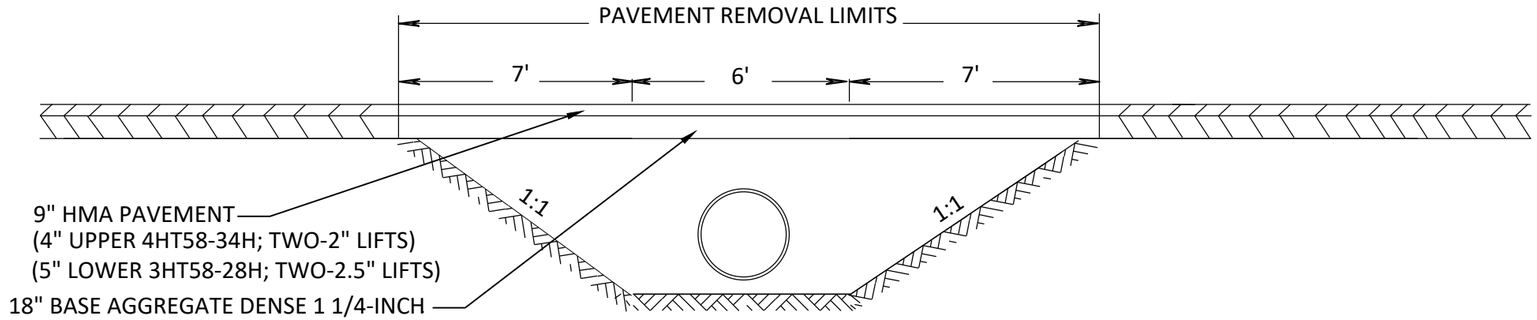


EXISTING 130TH ST. TYP. SECTION
(UNDER IH 94 BRIDGES)

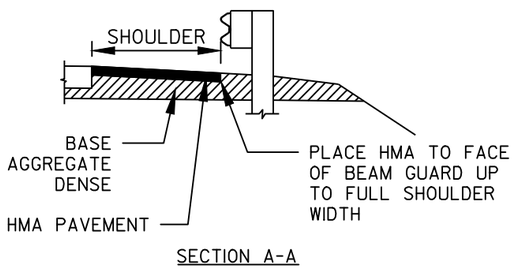


FUTURE 130TH ST. TYP. SECTION
(UNDER IH 94 BRIDGES)

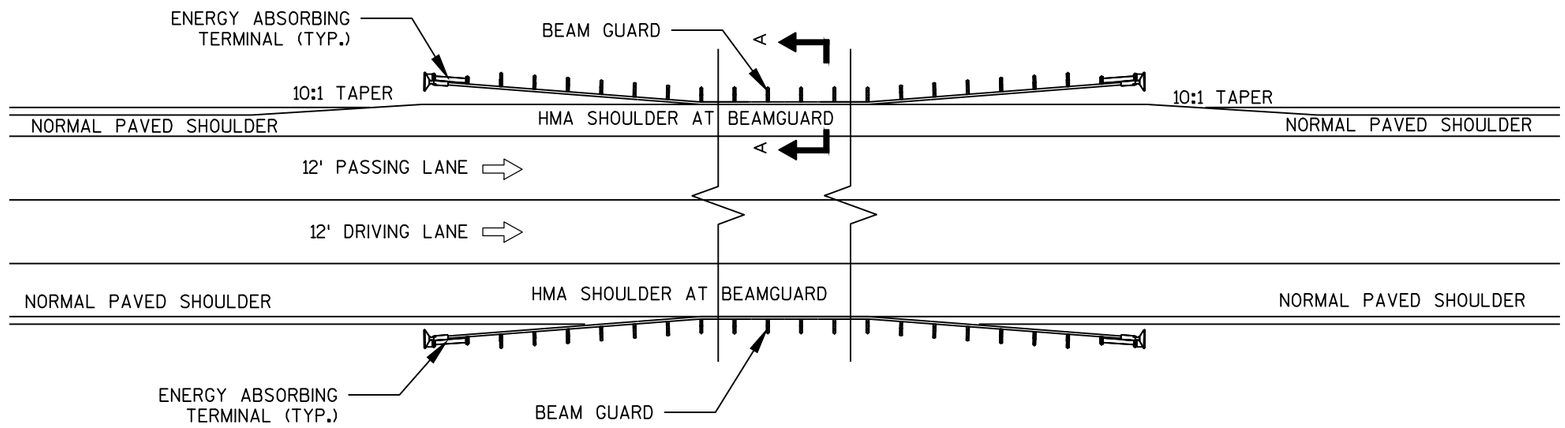
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TYPICAL SECTIONS	SHEET 7	E



DETAIL FOR PIPE REPLACEMENT AT 527'WB'+44 & AT 536'WB'+45 (NOT TO SCALE)



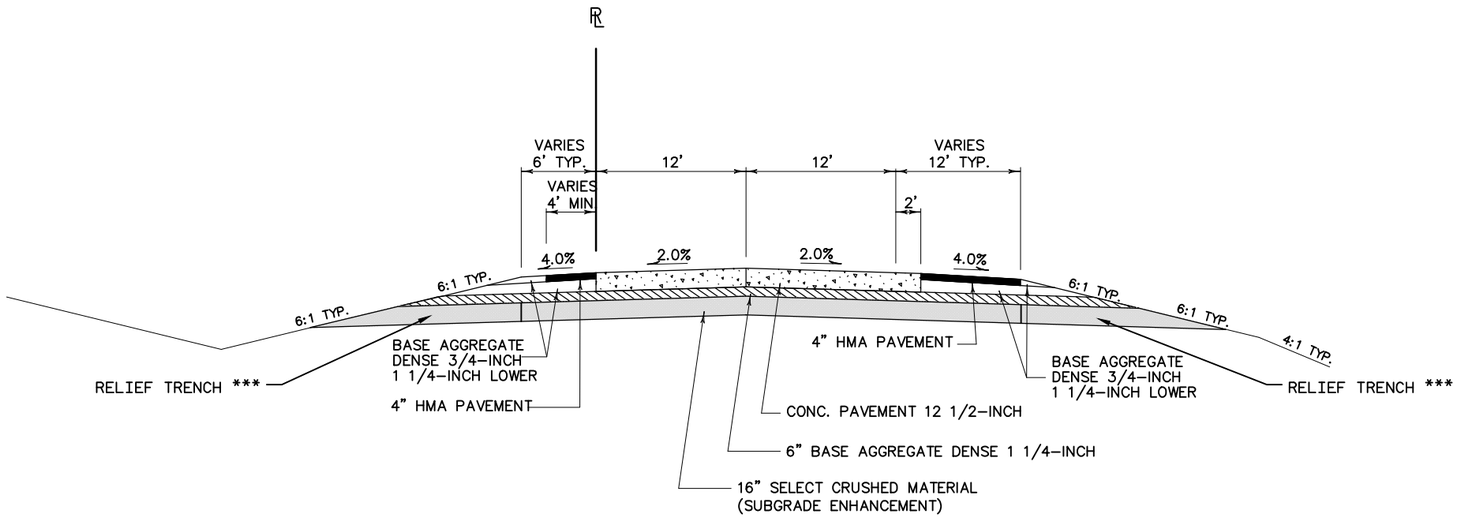
SECTION A-A



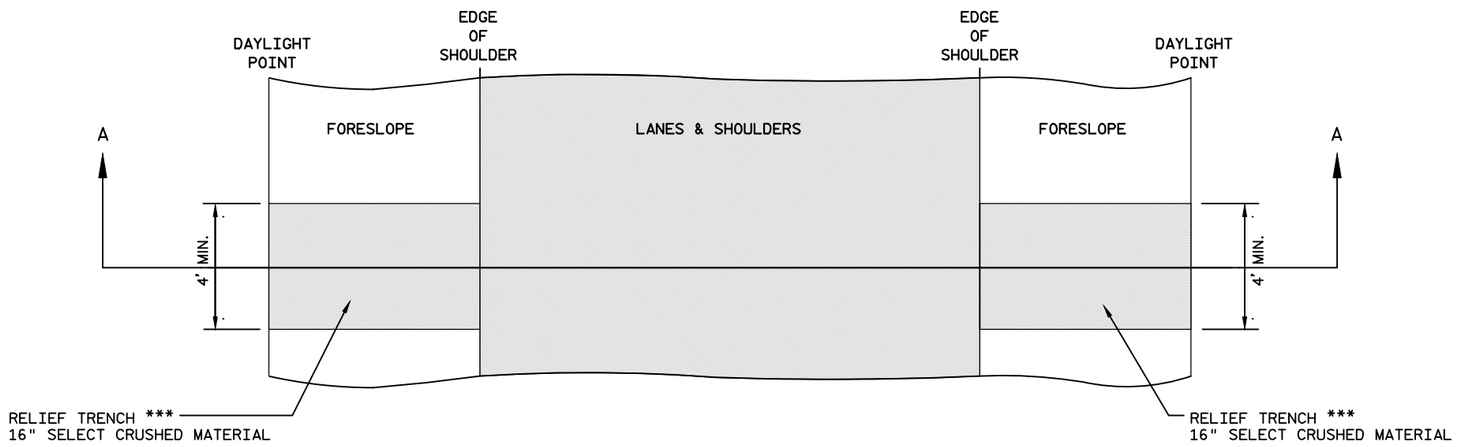
PLAN VIEW

HMA SHOULDER AT BEAM GUARD DETAIL

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	DETAILS	SHEET 8	E



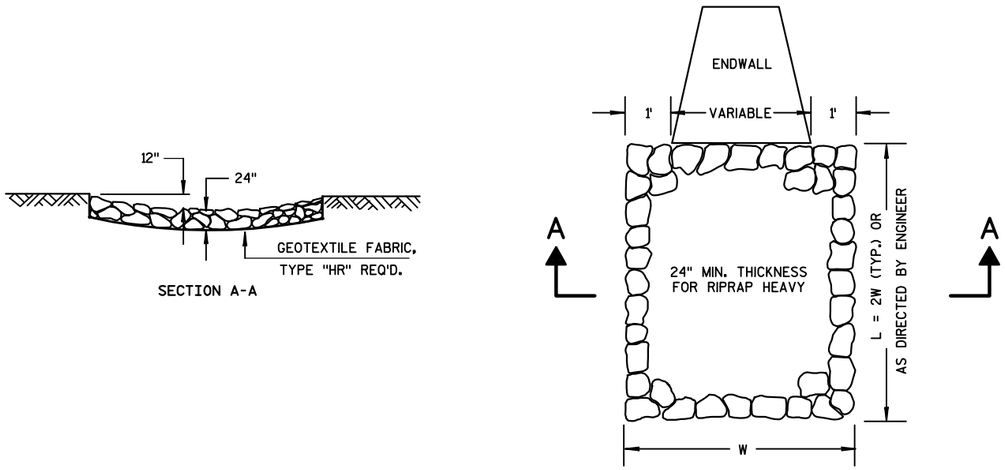
SECTION A-A VIEW AT RELIEF TRENCH LOCATIONS



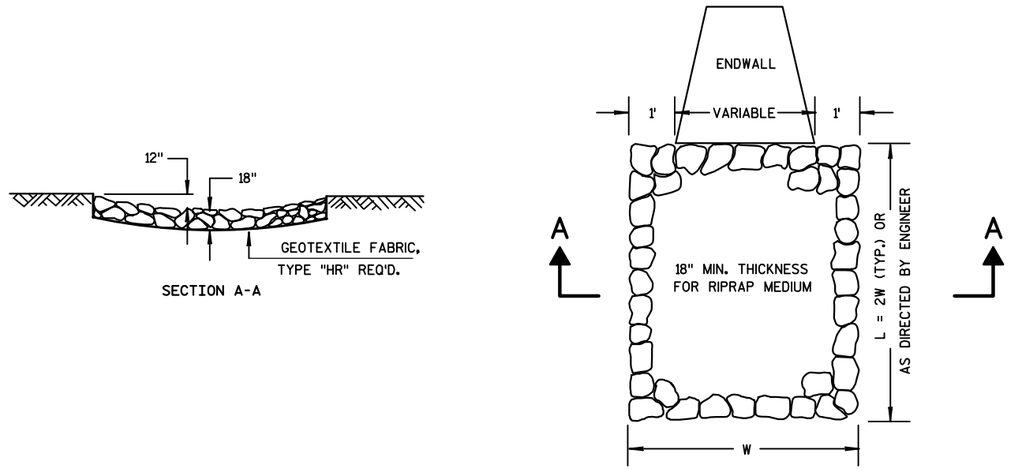
PLAN VIEW AT RELIEF TRENCH LOCATIONS
(SUBGRADE ENHANCEMENT LAYER)

RELIEF TRENCH DETAIL FOR SUBGRADE ENHANCEMENT LAYER DRAINAGE

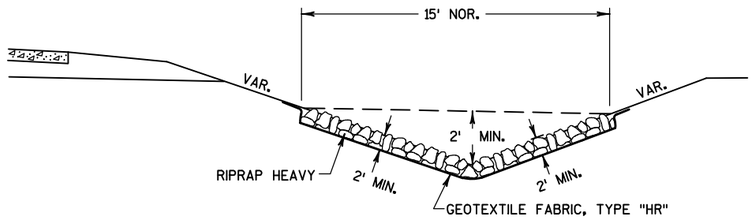
*** PROVIDE RELIEF TRENCHES FOR DRAINAGE AT PROFILE ALIGNMENT SAG POINTS AND EVERY 250 FEET.



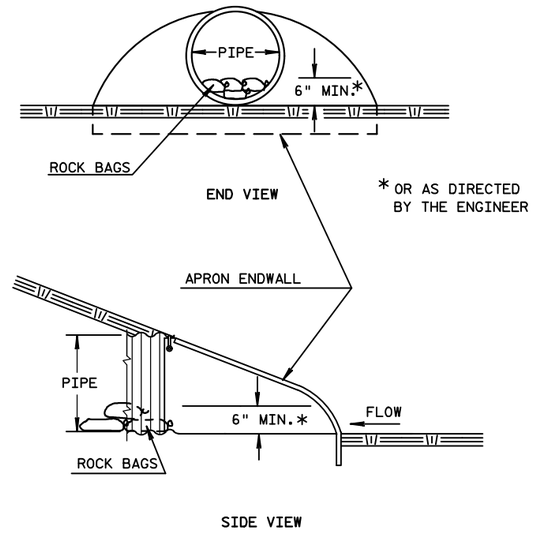
RIPRAP HEAVY TREATMENT AT CULVERTS



RIPRAP MEDIUM TREATMENT AT CULVERTS



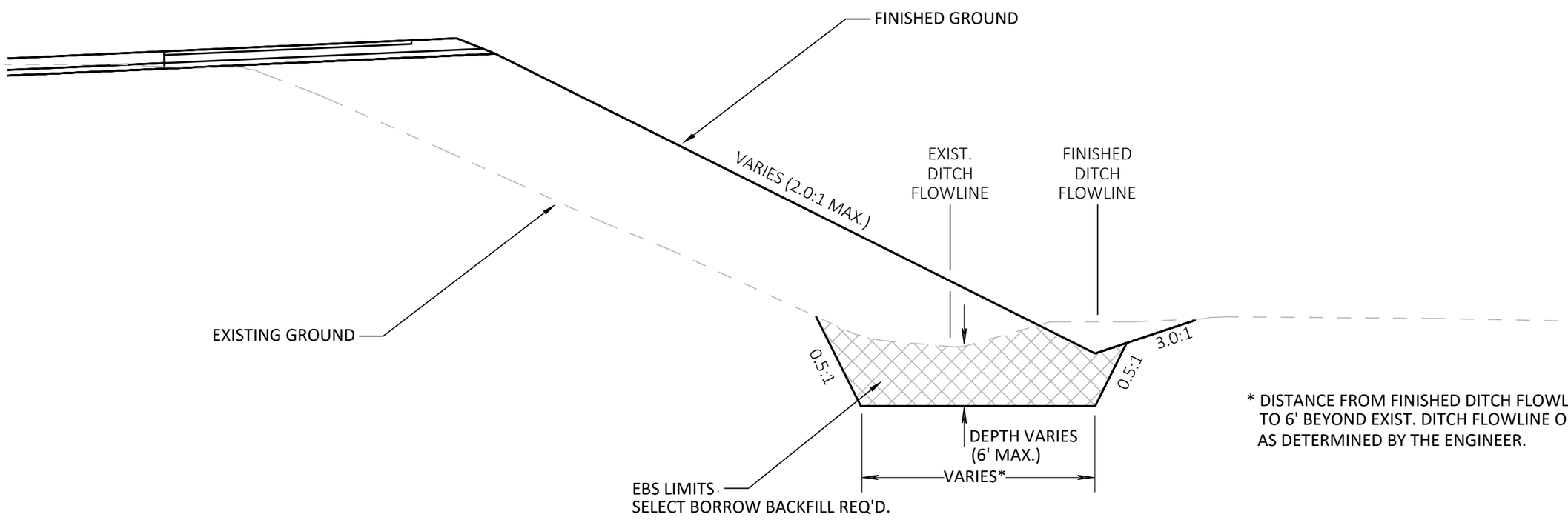
DETAIL OF RIPRAP HEAVY DITCH



CULVERT PIPE CHECK

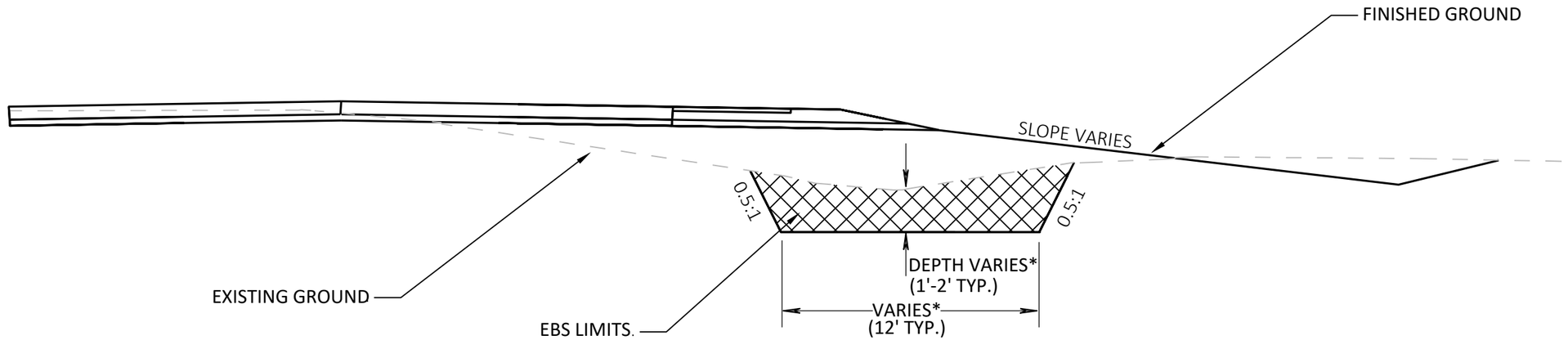
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	DETAILS	SHEET 10	E

2



* DISTANCE FROM FINISHED DITCH FLOWLINE TO 6' BEYOND EXIST. DITCH FLOWLINE OR AS DETERMINED BY THE ENGINEER.

DETAIL FOR EXCAVATION BELOW SUBGRADE (EBS) AT TOE OF SLOPE
STA. 616'EB'+50 TO 619'EB'+00
STA. 616'WB'+50 TO 619'WB'+00



* TYP. LISTED OR AS DETERMINED BY THE ENGINEER.

DETAIL FOR EXCAVATION BELOW SUBGRADE (EBS) AT EXIST. DITCH LOCATIONS

STA. 515'WB'+00 TO 613'WB'+00, RT.
STA. 613'WB'+00 TO 640'WB'+00, RT.
STA. 545'EB'+00 TO 565'EB'+00, LT.
STA. 600'EB'+00 TO 615'EB'+00, LT.
STA. 605'WB'+00 TO 613'WB'+00, RT.

ADDITIONAL LOCATIONS FOR EBS MAY BE ENCOUNTERED AND WILL BE DETERMINED BY THE ENGINEER.

IH 94 Westbound Superelevation

Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Right Outside Shoulder
525'WB'+42.00'	Begin Alignment	-4.00%	-2.00%	2.00%	-4.00%
540'WB'+87.19'	End Normal Shoulder	-4.00%	-2.00%	2.00%	-4.00%
542'WB'+14.19'	End Normal Crown	-4.00%	-2.00%	2.00%	-4.00%
543'WB'+41.19'	Level Crown	-4.00%	-2.00%	0.00%	-4.00%
544'WB'+68.19'	Begin Full Super	-4.00%	-2.00%	-2.00%	-4.00%
544'WB'+68.19'	Reverse Crown	-4.00%	-2.00%	-2.00%	-4.00%
565'WB'+13.87'	End Full Super	-4.00%	-2.00%	-2.00%	-4.00%
565'WB'+13.87'	Reverse Crown	-4.00%	-2.00%	-2.00%	-4.00%
566'WB'+40.87'	Level Crown	-4.00%	-2.00%	0.00%	-4.00%
567'WB'+67.87'	Begin Normal Crown	-4.00%	-2.00%	2.00%	-4.00%
568'WB'+94.87'	Begin Normal Shoulder	-4.00%	-2.00%	2.00%	-4.00%
592'WB'+05.24'	End Normal Shoulder	-4.00%	-2.00%	2.00%	-4.00%
593'WB'+32.24'	End Normal Crown	-4.00%	-2.00%	2.00%	-2.00%
594'WB'+59.24'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
595'WB'+86.24'	Reverse Crown	-4.00%	-2.00%	-2.00%	2.00%
597'WB'+13.24'	Low Shoulder Match	-4.00%	-4.00%	-4.00%	4.00%
597'WB'+56.24'	Begin Full Super	-4.70%	-4.70%	-4.70%	4.70%
618'WB'+87.66'	End Full Super	-4.70%	-4.70%	-4.70%	4.70%
619'WB'+30.66'	Low Shoulder Match	-4.00%	-4.00%	-4.00%	4.00%
620'WB'+57.66'	Reverse Crown	-4.00%	-2.00%	-2.00%	2.00%
621'WB'+84.66'	Level Crown	-4.00%	-2.00%	0.00%	0.00%
623'WB'+11.66'	Begin Normal Crown	-4.00%	-2.00%	2.00%	-2.00%
624'WB'+38.66'	Begin Normal Shoulder	-4.00%	-2.00%	2.00%	-4.00%
627'WB'+00.00'	End Alignment	-4.00%	-2.00%	2.00%	-4.00%

IH 94 Eastbound Superelevation

Station	Description	Left Outside Shoulder	Right Inside Lane	Right Outside Lane	Right Outside Shoulder
525'EB'+00.00'	Begin Alignment	-4.00%	2.00%	-2.00%	-4.00%
588'EB'+92.16'	End Normal Shoulder	-4.00%	2.00%	-2.00%	-4.00%
590'EB'+18.16'	End Normal Crown	-4.00%	2.00%	-2.00%	-2.00%
591'EB'+44.16'	Level Crown	-4.00%	2.00%	0.00%	0.00%
592'EB'+70.16'	Reverse Crown	-4.00%	2.00%	2.00%	2.00%
593'EB'+96.56	Low Shoulder Match	-4.00%	4.00%	4.00%	4.00%
594'EB'+28.16'	Begin Full Super	-4.50%	4.50%	4.50%	4.50%
617'EB'+20.61'	End Full Super	-4.50%	4.50%	4.50%	4.50%
617'EB'+52.21	Low Shoulder Match	-4.00%	4.00%	4.00%	4.00%
618'EB'+78.61'	Reverse Crown	-4.00%	2.00%	2.00%	2.00%
620'EB'+04.61'	Level Crown	-4.00%	2.00%	0.00%	0.00%
621'EB'+30.61'	Begin Normal Crown	-4.00%	2.00%	-2.00%	-2.00%
622'EB'+56.61'	Begin Normal Shoulder	-4.00%	2.00%	-2.00%	-4.00%
624'EB'+75.00'	End Alignment	-4.00%	2.00%	-2.00%	-4.00%

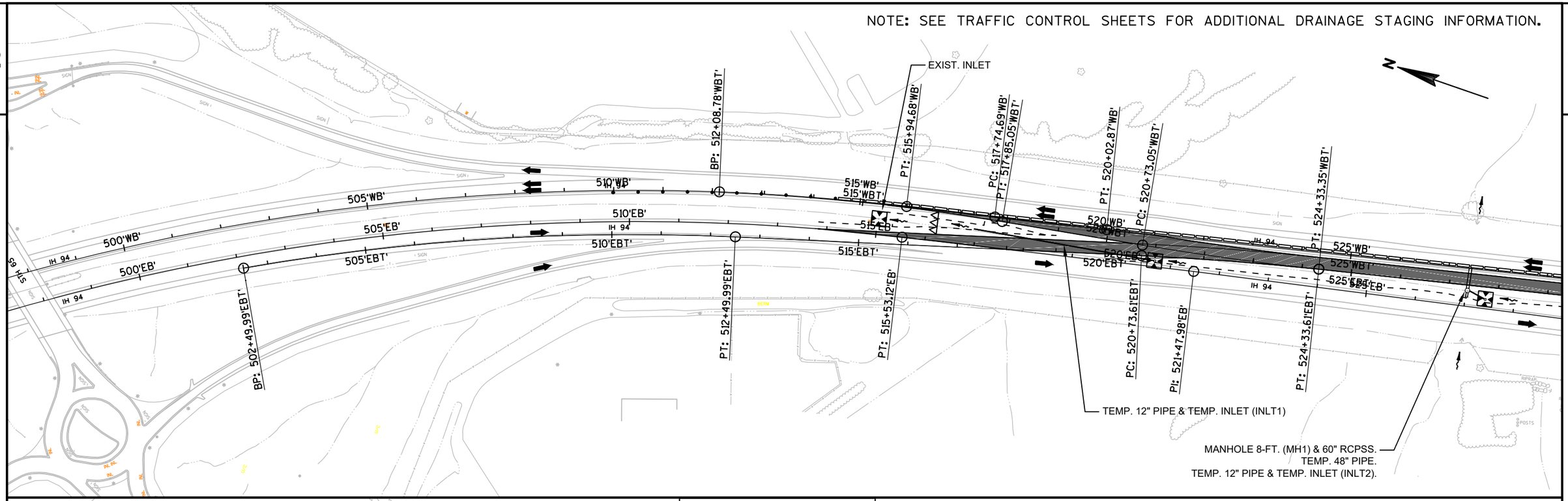
STORM SEWER DRAINAGE TABLE

DRAINAGE STRUCTURE NO.	DRAINAGE STRUCTURE TYPE	DRAINAGE STRUCTURE COVER TYPE	STATION	LOCATION	GRATE ELEV.	TOP OF BOX ELEV.	INFLOW ELEV.	INFLOW FROM	DISCH. ELEV.	DISCH. TO	BOX DEPTH (FT.)	DISCH. PIPE DIAMETER (IN.)	DISCH. PIPE LENGTH (FT.)	DISCH. PIPE CLASS	DISCH. PIPE GRADE	COMMENTS
MH1	MANHOLE 8-FT DIA.	C	527'WB'+42, 45' RT.	IH 94 WB	1019.96	1019.22	1012.64 - 60"	INL8 & 60"	1012.64	APRON ENDWALL/SLOPE	7.08	60	124	III	1.00%	STAGED PIPE INSTALL-SEE PLANS
INL8	MEDIAN 1 GRATE	MS	527'WB'+55, 46' RT.	IH 94 WB	1019.98	1019.98	-	-	1017.25	MH1	2.93	18	13	III	1.30%	CONNECT TO MH1 AT SAME TEMP. CONNECTION POINT
-	60"APRON ENDWALL	-	527'EB'+03.85, 56' RT.	IH 94 EB	-	-	-	DITCH	1015.17	MH1	-	60	88	III	2.87%	
INL1	MEDIAN 2 GRATE	MS	536'WB'+45, 52.7' RT.	IH 94 WB	1020.90	1020.90	-	-	1017.65	APRON ENDWALL/SLOPE	3.50	24	130	III	0.89%	STAGED PIPE INSTALL-SEE PLANS; GROUT/FILL TEMP. CONNECTION POINT; NO SLOPE ON INLET COVERS
INL2	2X2-FT	V	570'WB'+64.45, 12.42' RT.	IH 94 WB	1027.62	1026.87	-	-	1024.87	APRON ENDWALL/SLOPE	2.00	12	40	-	-	UNPERFORATED PIPE UNDERDRAIN DISCHARGE PIPE
INL5	2X2-FT	V	570'WB'+29.81, 48.42' LT.	IH 94 WB	1027.94	1027.19	-	-	1025.19	APRON ENDWALL/SLOPE	2.00	12	22	-	-	UNPERFORATED PIPE UNDERDRAIN DISCHARGE PIPE
INL4	2X2-FT	V	571'EB'+84.10, 48.42' RT.	IH 94 EB	1029.44	1028.69	-	-	1026.69	APRON ENDWALL/SLOPE	2.00	12	60	-	-	UNPERFORATED PIPE UNDERDRAIN DISCHARGE PIPE
INL3	2X2-FT	V	571'EB'+49.95, 12.42' LT.	IH 94 EB	1029.85	1029.10	-	-	1027.10	APRON ENDWALL/SLOPE	2.00	12	34	-	-	UNPERFORATED PIPE UNDERDRAIN DISCHARGE PIPE
INL9	MEDIAN 2 GRATE	MS	612'EB'+84.81, 45.2' LT.	IH 94 EB	965.99	965.99	-	-	962.47	APRON ENDWALL/SLOPE	3.77	24	130	III	0.46%	STAGED PIPE INSTALL-SEE PLANS; NO SLOPE ON INLET COVERS
INL6	2X2-FT	V	614'WB'+98.31, 48.42' LT.	IH 94 WB	975.91	975.16	-	-	973.16	APRON ENDWALL/SLOPE	2.00	12	44	-	-	UNPERFORATED PIPE UNDERDRAIN DISCHARGE PIPE
INL10	2X2-FT	V	615'EB'+27.11, 12.42' LT.	IH 94 EB	975.63	974.88	-	-	972.88	APRON ENDWALL/SLOPE	2.00	12	20	-	-	UNPERFORATED PIPE UNDERDRAIN DISCHARGE PIPE
INL7	MEDIAN 2 GRATE	MS	625'WB'+21.27, 29.0' RT.	IH 94 WB	996.85	996.85	-	-	994.10	APRON ENDWALL/SLOPE	3.00	24	82	IV	0.32%	SINGLE SLOPE ON INLET COVERS

CULVERT DRAINAGE TABLE

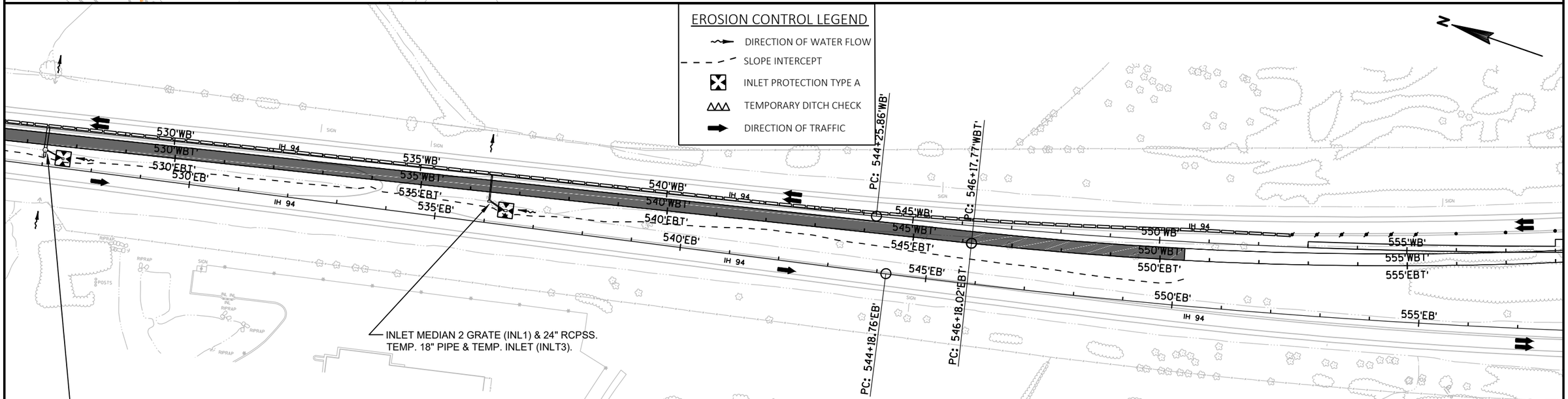
STATION	LOCATION	PIPE INVERT IN ELEV.	PIPE INVERT OUT ELEV.	PIPE DIAMETER (IN.)	PIPE LENGTH (FT.)	PIPE CLASS	PIPE GRADE	COMMENTS
564'WB'+33	IH 94 WB	1018.84	1013.98	24	170	III	2.85%	STAGED PIPE INSTALL-SEE PLANS
567'EB'+46	IH 94 EB	1014.09	1011.67	30	176	IV	1.37%	
106'K'+75, LT	130TH ST	1003.90	1003.22	24	118	III	0.58%	STAGED PIPE INSTALL-SEE PLANS
106'K'+75, RT	130TH ST	1004.37	1003.67	24	118	III	0.59%	STAGED PIPE INSTALL-SEE PLANS
572'WB'+12	IH 94 WB	1014.73	1010.16	24	144	III	3.19%	STAGED PIPE INSTALL-SEE PLANS
580'WB'+85	IH 94 WB	1009.13	1008.42	24	124	III	0.57%	STAGED PIPE INSTALL-SEE PLANS
586'WB'+68	IH 94 WB	1004.46	998.23	24	130	III	4.81%	STAGED PIPE INSTALL-SEE PLANS
589'EB'+50	IH 94 EB	991.19	989.75	48	88	III	1.63%	
591'WB'+72	IH 94 WB	993.17	989.20	24	144	III	2.75%	STAGED PIPE INSTALL-SEE PLANS
592'EB'+46	IH 94 EB	986.29	986.23	30	100	III	0.06%	
600'WB'+80	IH 94 WB	979.47	977.71	24	110	III	1.60%	STAGED PIPE INSTALL-SEE PLANS
600'EB'+96	IH 94 EB	974.33	973.36	30	98	IV	0.99%	
617'EB'+00, LT	IH 94 EB	973.61	972.33	24	26	III	5.00%	

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

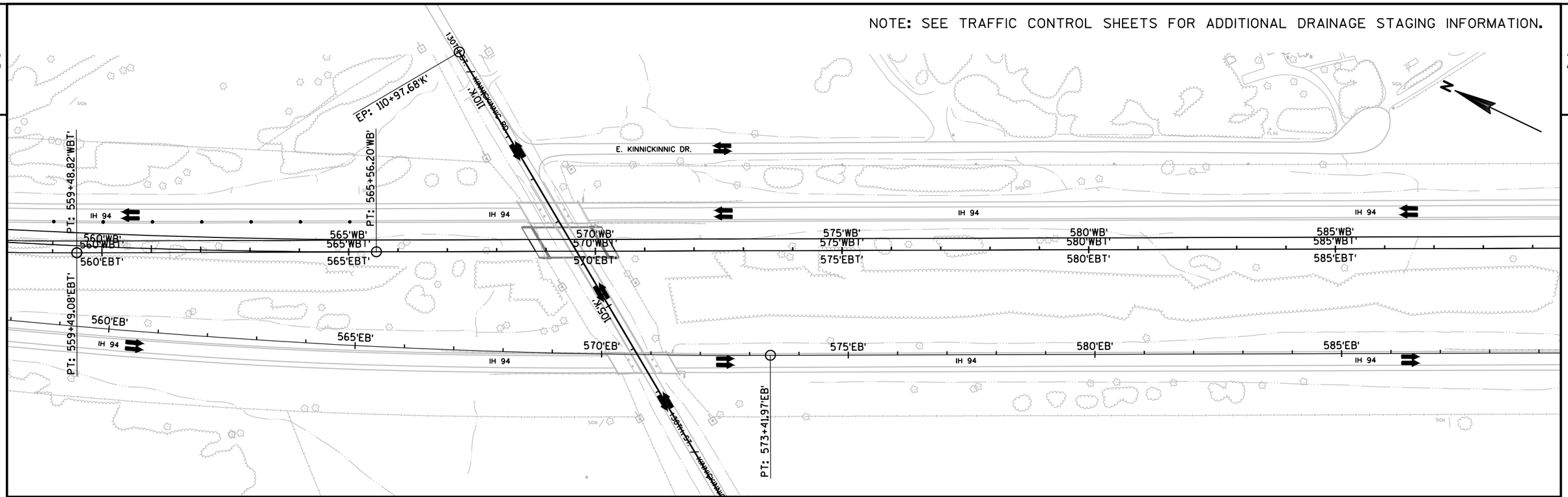
- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- DIRECTION OF TRAFFIC



NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

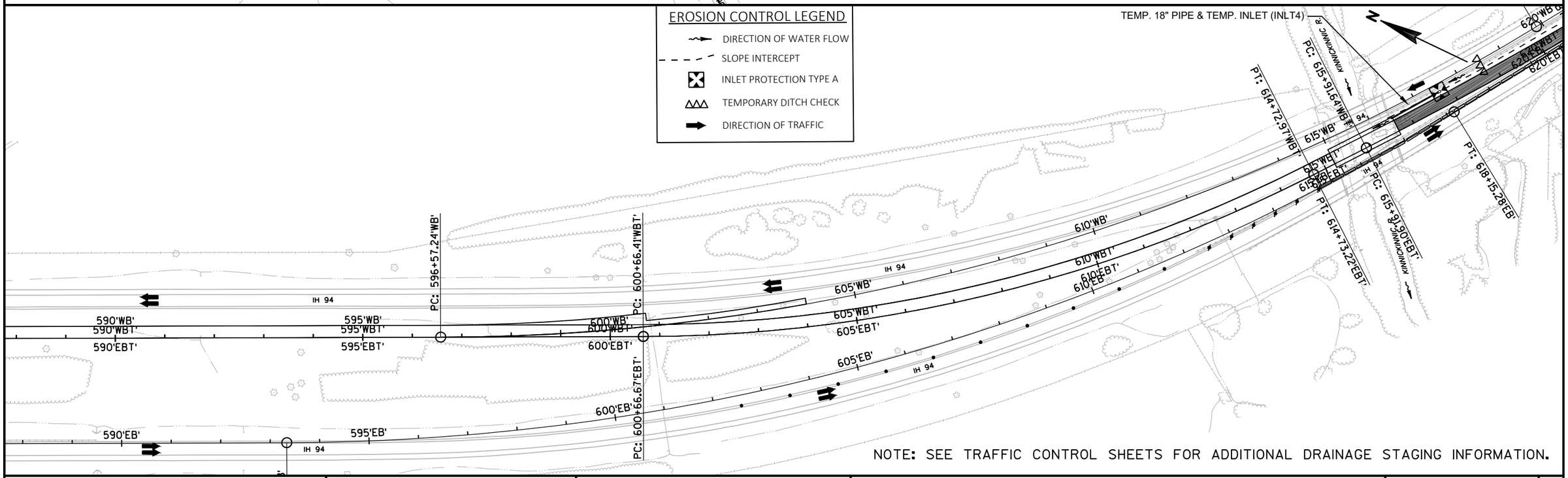
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 1A	SHEET 15	E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- DIRECTION OF TRAFFIC



NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 1A	SHEET 16 E

2

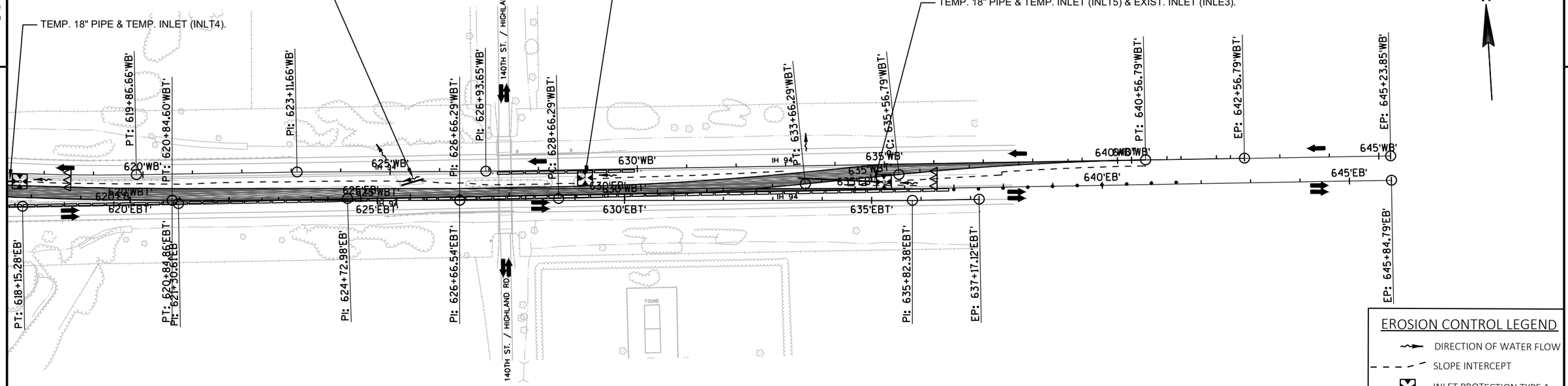
TEMP. 18" PIPE & EXIST. INLETS (INLE1 & INLE2).

EXIST. INLET

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

TEMP. 18" PIPE & TEMP. INLET (INLT5) & EXIST. INLET (INLE3).

TEMP. 18" PIPE & TEMP. INLET (INLT4).



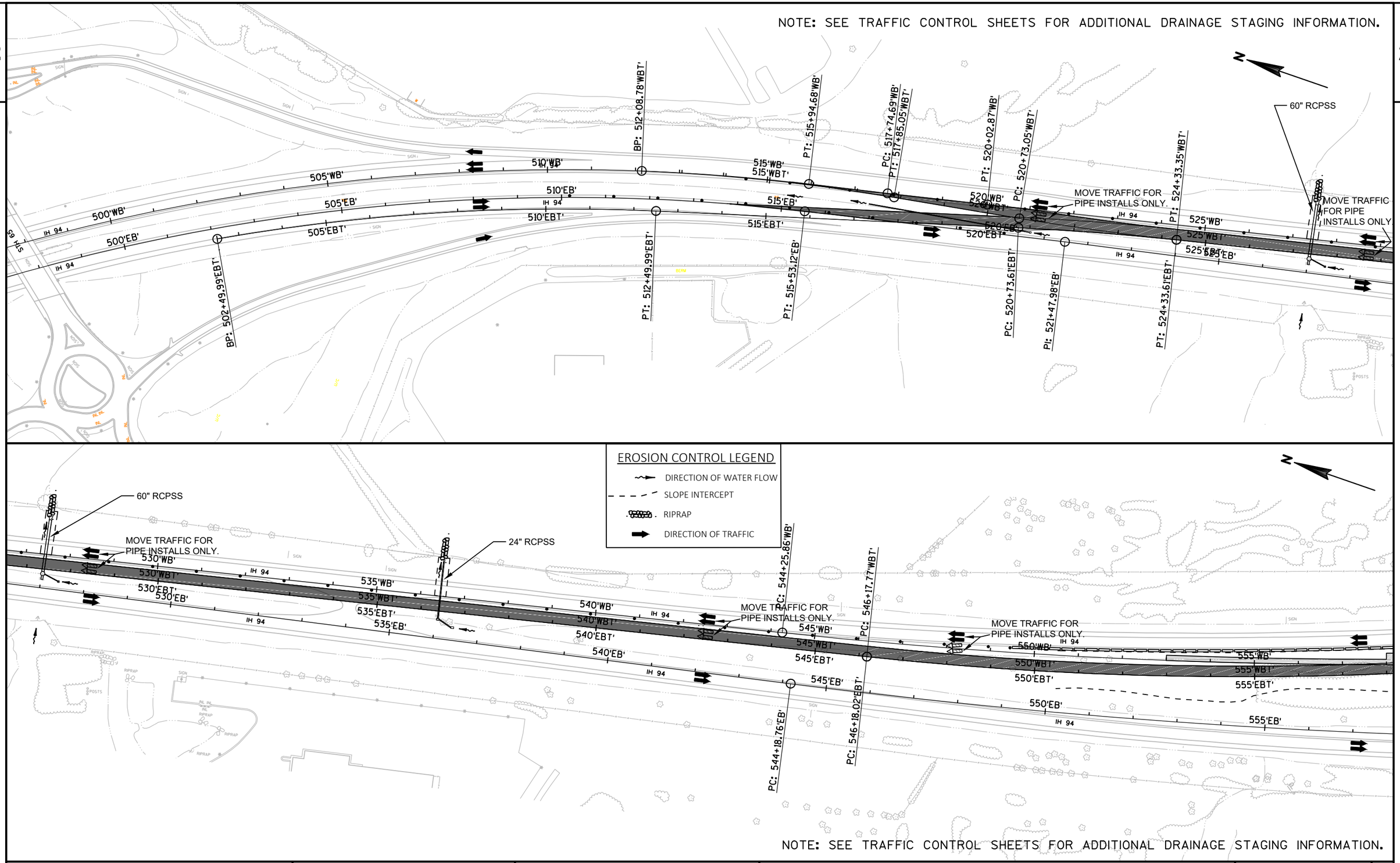
EROSION CONTROL LEGEND

- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- DIRECTION OF TRAFFIC

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 1A	SHEET 17	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\022009_EC_PRESTAGE1.DWG
LAYOUT NAME - SHEET - (5)
PLOT DATE : 3/23/2018 8:02 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

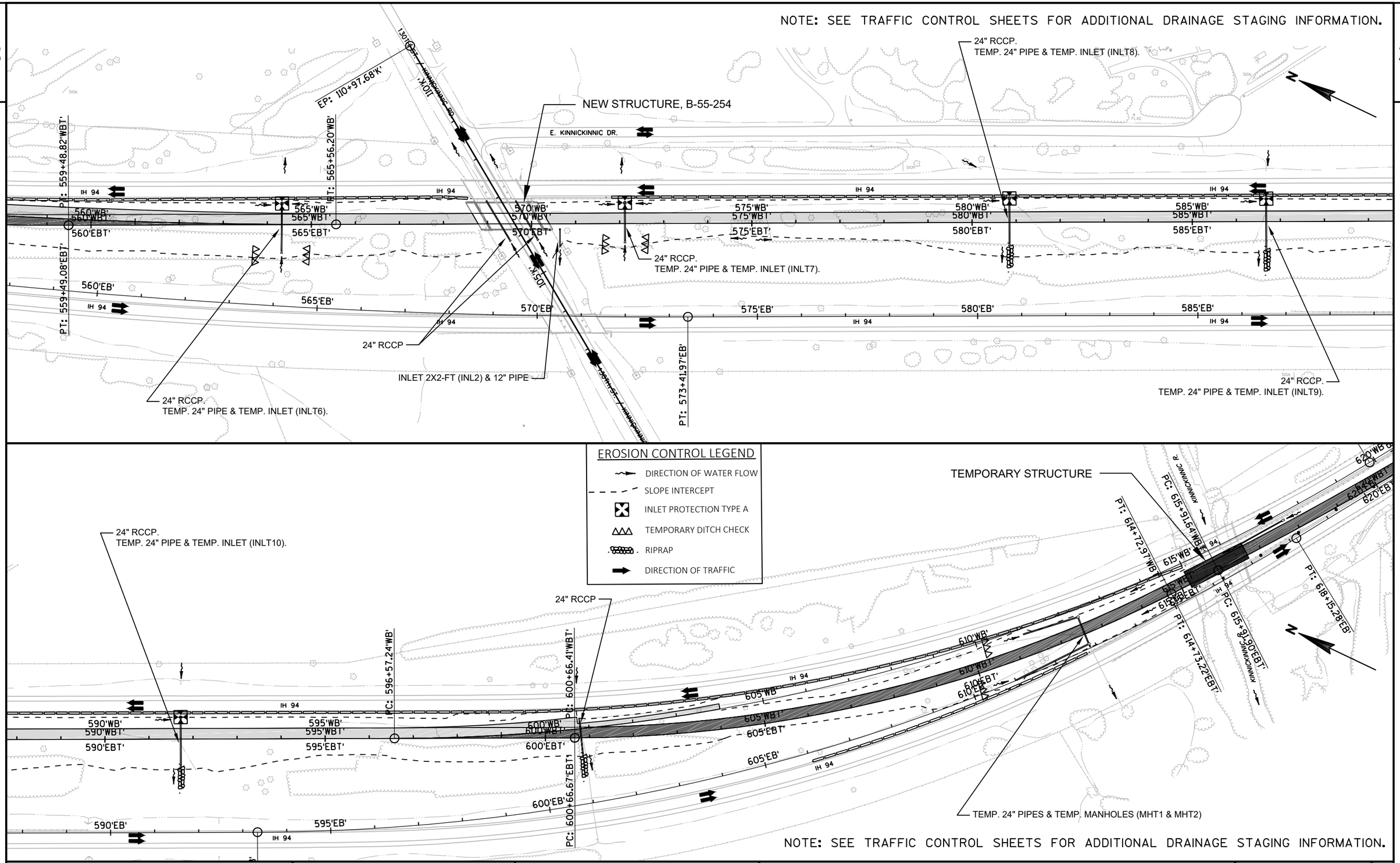
NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 1B	SHEET 18 E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

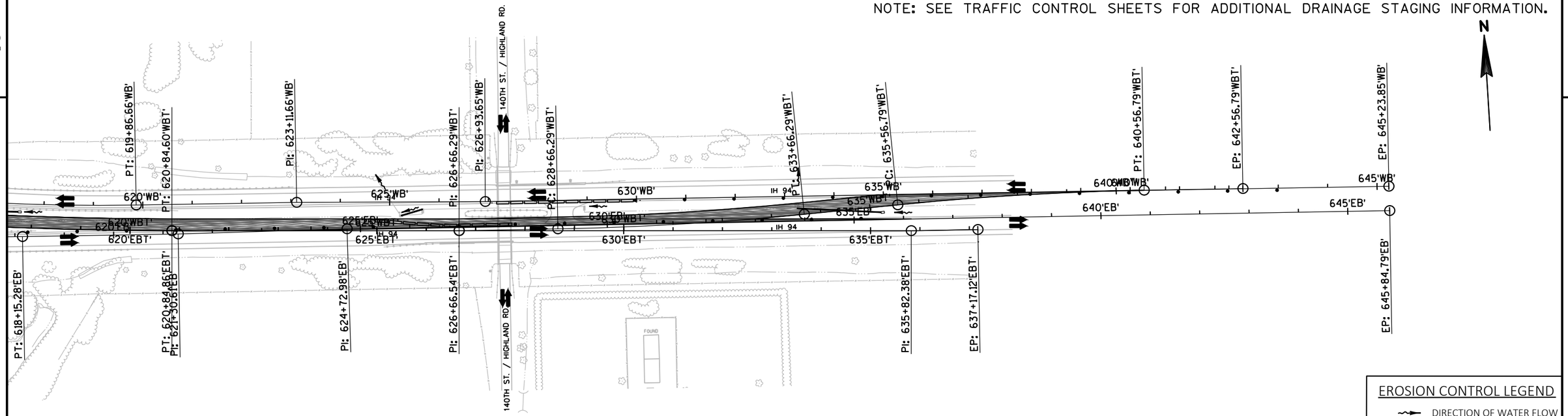
- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- RIPRAP
- DIRECTION OF TRAFFIC

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 1B	SHEET E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\022010_EC_STAGE1.DWG
LAYOUT NAME - SHEET - (3)
PLOT DATE : 3/23/2018 8:04 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

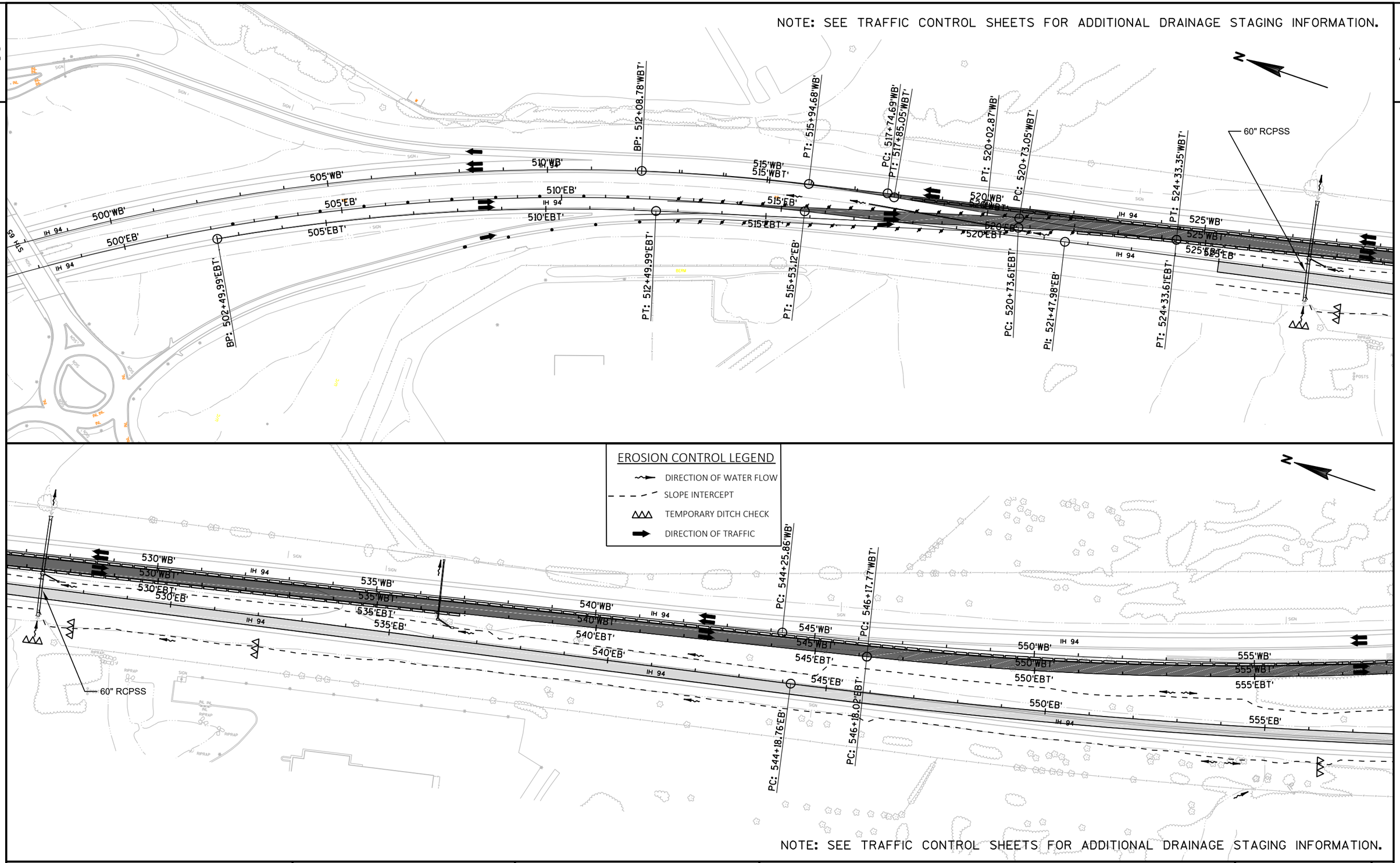


EROSION CONTROL LEGEND

- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- DIRECTION OF TRAFFIC

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 1B	SHEET 20	E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

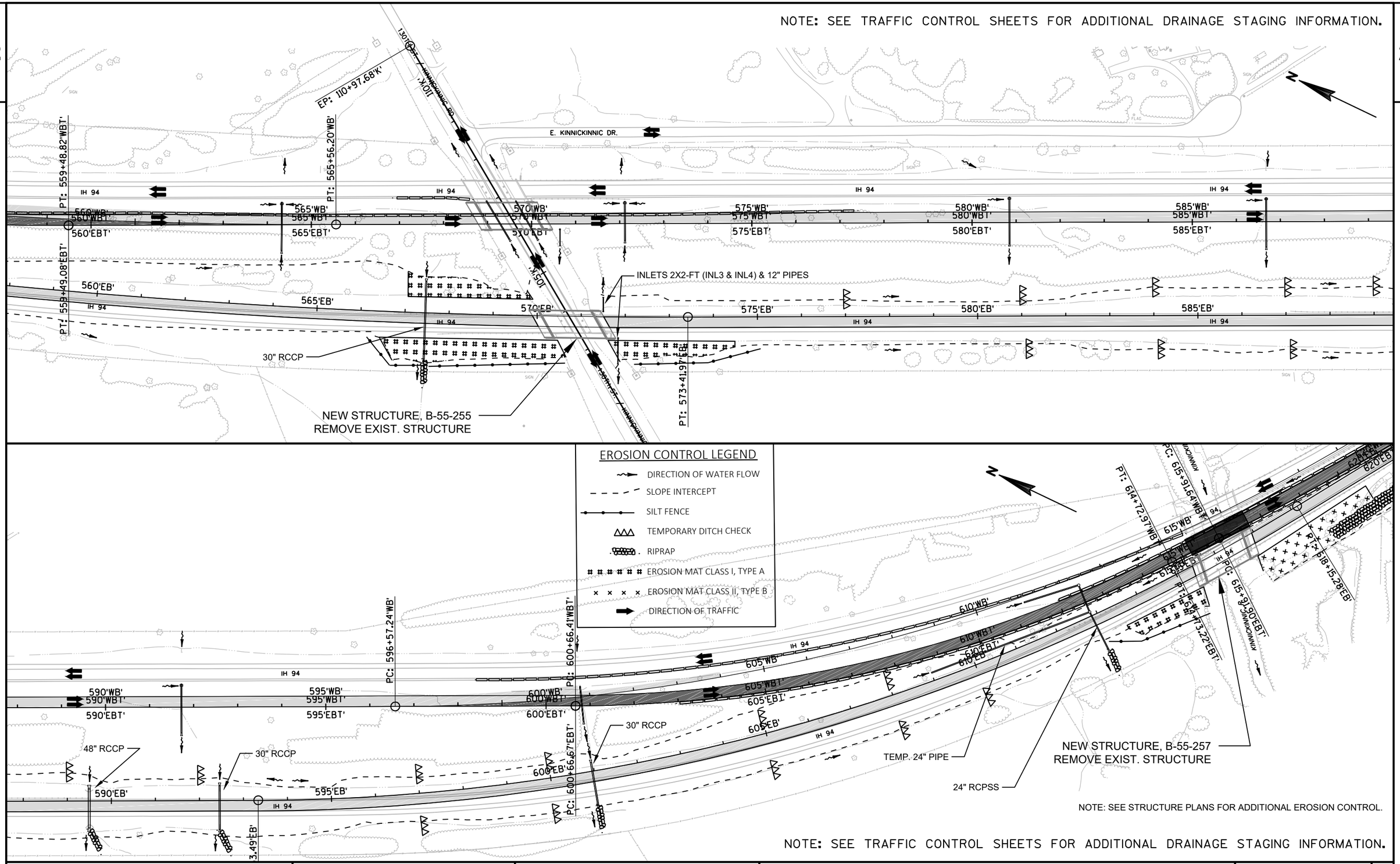
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 2	SHEET 21	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\022020_EC_STAGE2.DWG
LAYOUT NAME - SHEET - (1)

PLOT DATE : 4/10/2018 7:29 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



NOTE: SEE STRUCTURE PLANS FOR ADDITIONAL EROSION CONTROL.

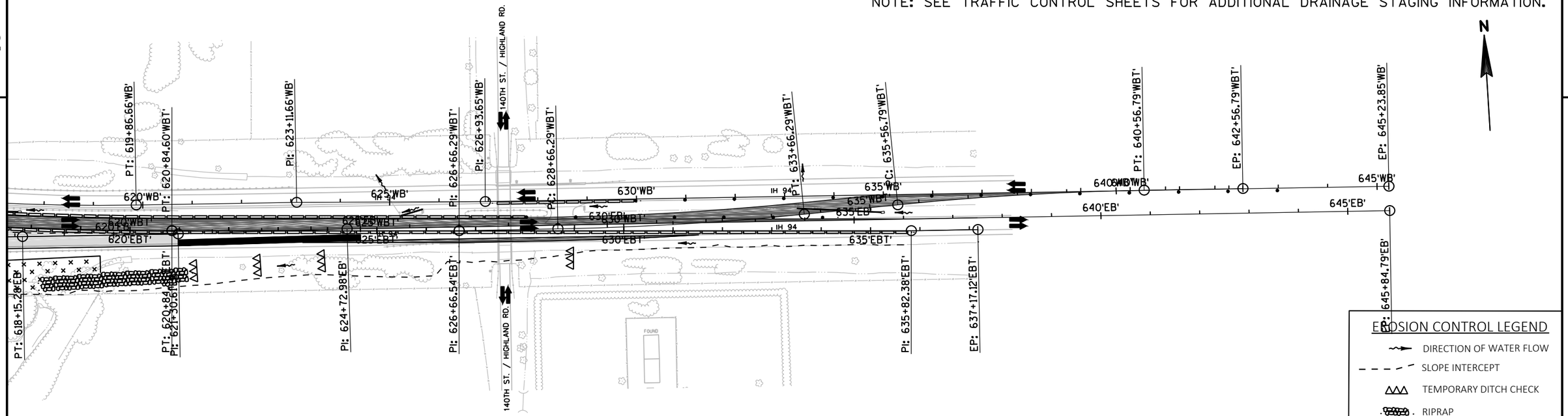
NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 2	SHEET E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\022020_EC_STAGE2.DWG
LAYOUT NAME - SHEET - (3)

PLOT DATE : 4/10/2018 7:29 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

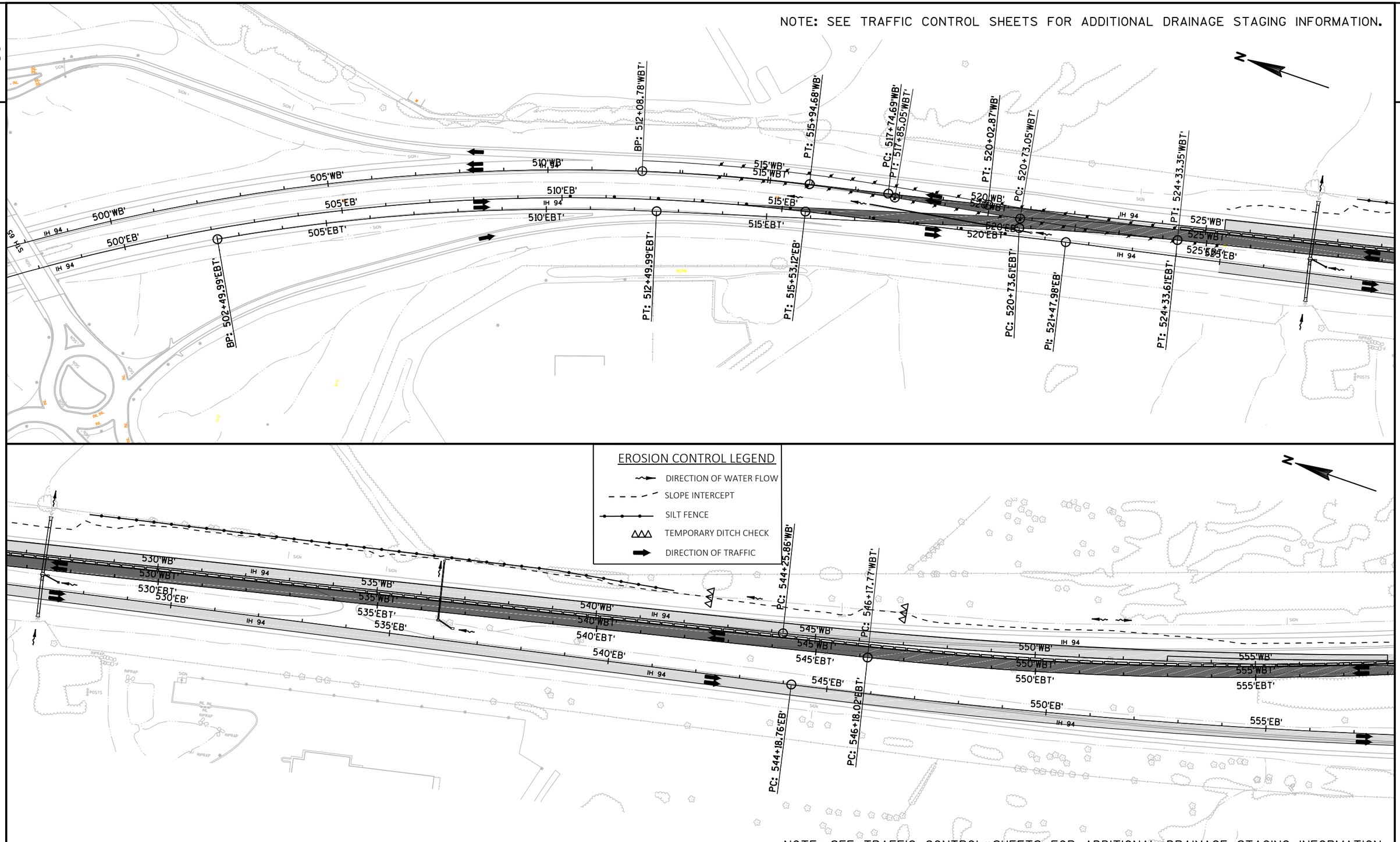
- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK
- RIPRAP
- EROSION MAT CLASS II, TYPE B
- DIRECTION OF TRAFFIC

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 2	SHEET 23	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\022020_EC_STAGE2.DWG
LAYOUT NAME - SHEET - (5)

PLOT DATE : 4/10/2018 7:29 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

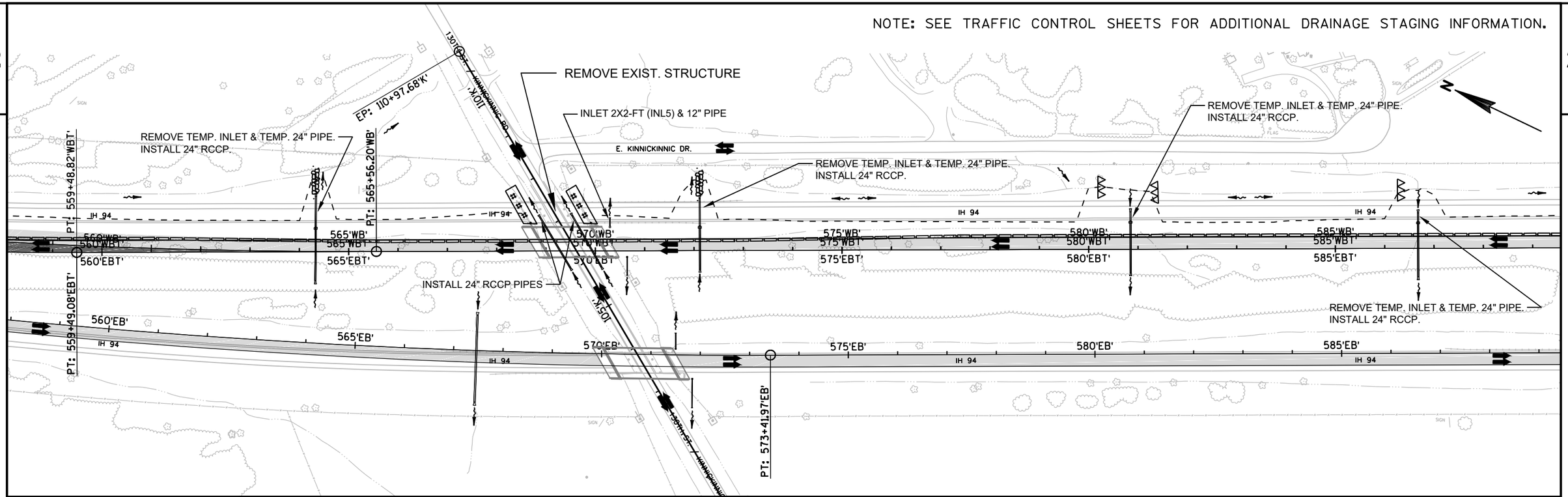
NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

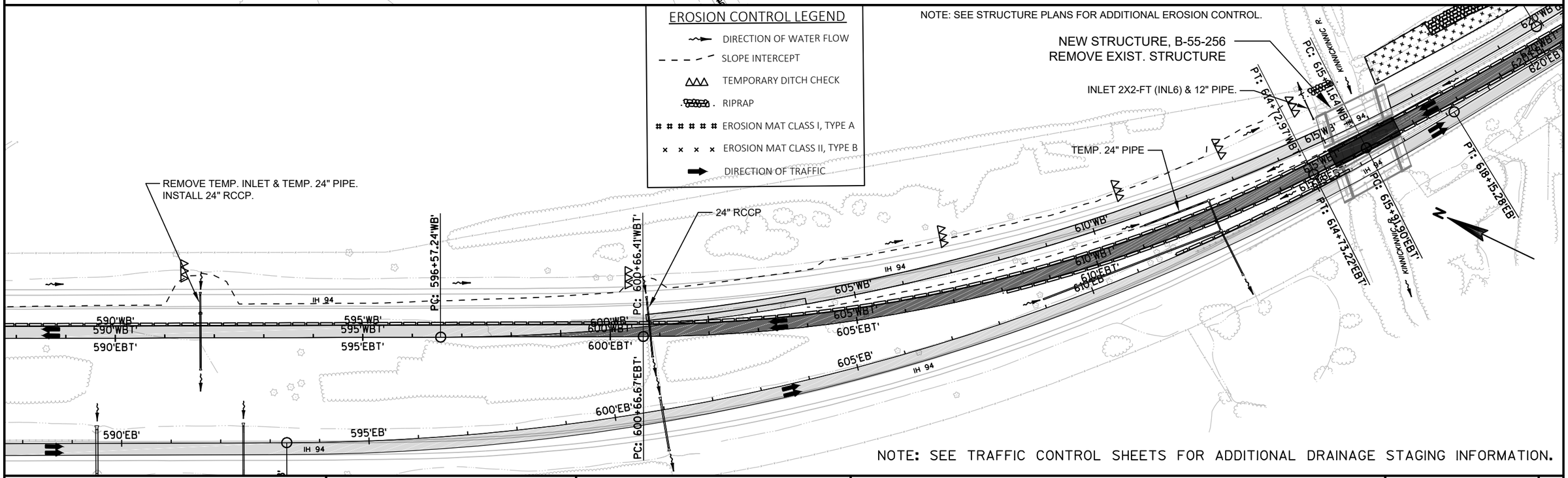


NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 3	SHEET 24	E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



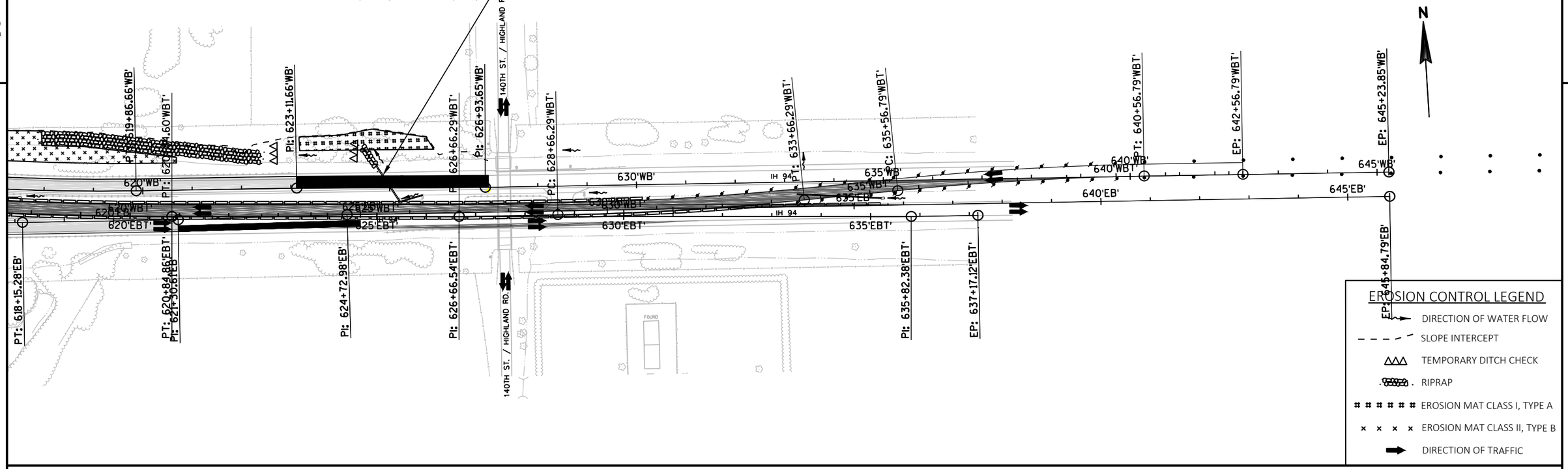


NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 3	SHEET 25 E

INLET MEDIAN 2 GRATE (INL7) & 24" RCPSS.
18" TEMP. PIPE TO EXIST. INLET (INLE2) & TO INLET (INL7).

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

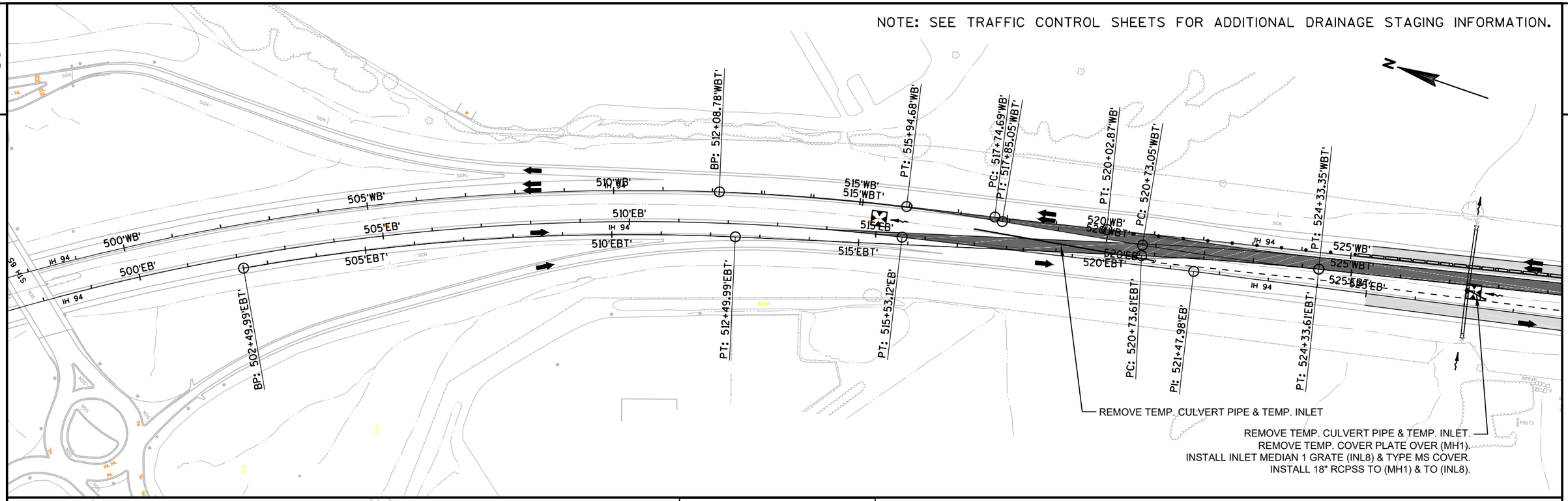


EROSION CONTROL LEGEND

- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK
- RIPRAP
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS II, TYPE B
- DIRECTION OF TRAFFIC

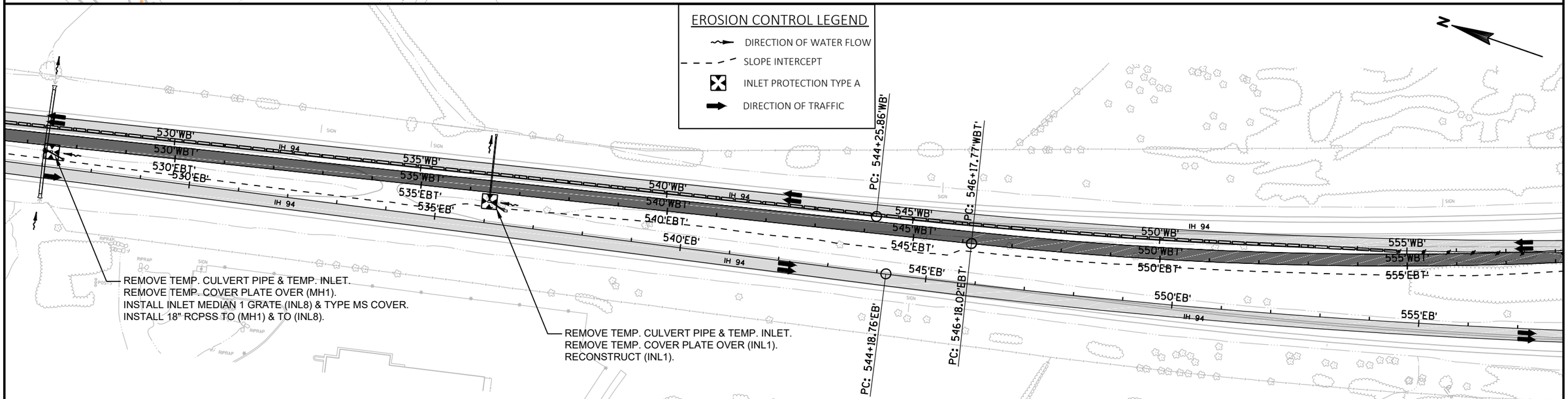
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 3	SHEET 26	E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

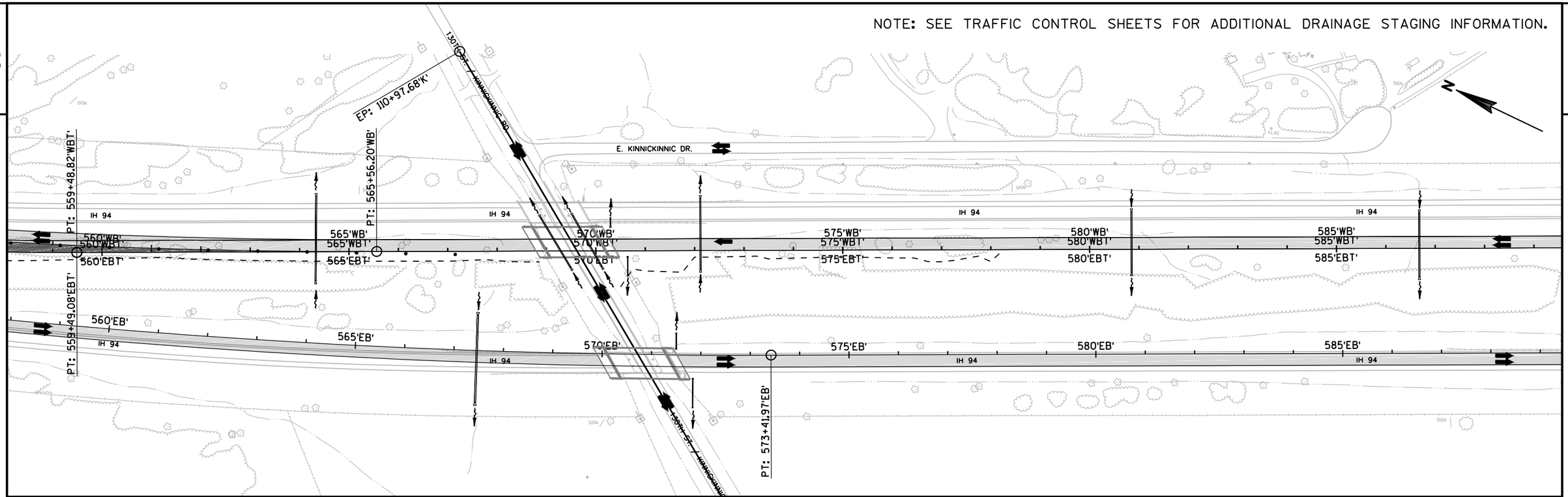
- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- DIRECTION OF TRAFFIC



NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

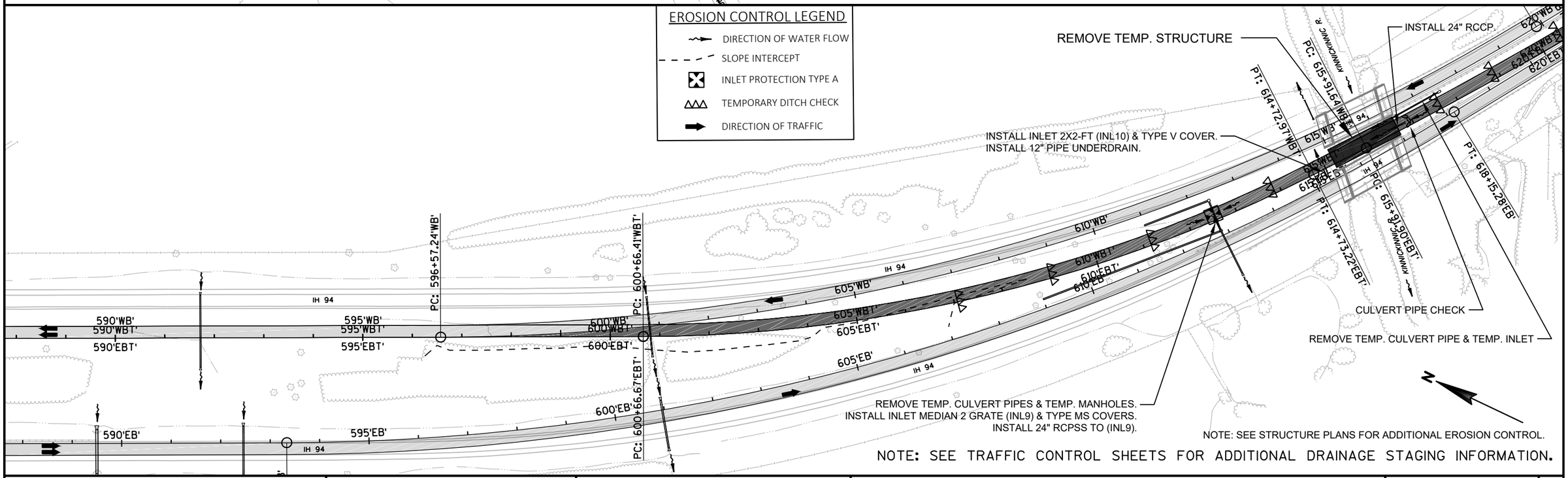
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 4	SHEET 27	E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- DIRECTION OF TRAFFIC

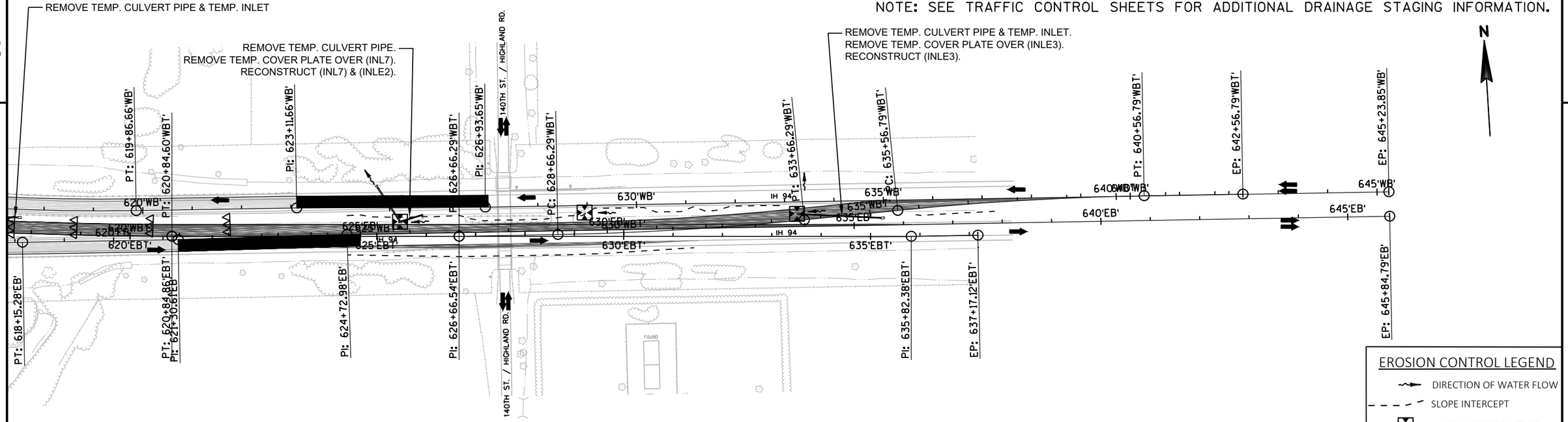


NOTE: SEE STRUCTURE PLANS FOR ADDITIONAL EROSION CONTROL.

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 4	SHEET 28	E

NOTE: SEE TRAFFIC CONTROL SHEETS FOR ADDITIONAL DRAINAGE STAGING INFORMATION.



EROSION CONTROL LEGEND

- DIRECTION OF WATER FLOW
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- DIRECTION OF TRAFFIC

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	EROSION CONTROL & DRAINAGE - STAGE 4	SHEET 29	E

2

EXIT 10

65

Roberts River Falls

REMOVE & REPLACE (SEE SIGN DETAIL)
E4-1A, E1-5P
240"X132", 96"X30"

WB-06(I)

EB-01(II)

EAST INTERSTATE 94

REMOVE

EAST INTERSTATE 94

J4-1
36"X54"

505'WB'
500'WB'
510'WB'
515'WB'
520'WB'
525'WB'
505'EB'
500'EB'
510'EB'
515'EB'
520'EB'
525'EB'
IH 94
STH 65

PT: 515+94.68'WB'
PC: 517+74.69'WB'
PT: 520+02.87'WB'
PT: 515+53.12'EB'
PT: 521+47.98'EB'

LEGEND

XX-XX(I)	TYPE I SIGN REFERENCE
XX-XX(II)	TYPE II SIGN REFERENCE
	EXIST. SIGN POSITION (APPROX. LOCATION)
	NEW SIGN POSITION (APPROX. LOCATION)

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

REMOVE

R3-4B
36"X48"

Park & Ride
EXIT 10

REMOVE & REPLACE
D4-4
144"X90"

WB-05(I)

MILE 11

REMOVE

MILE 11

D10-2
12"X36"

Chippewa Valley
Wisconsin Indianhead
Technical Colleges
EXIT 10

REMOVE

Chippewa Valley
Tech College

Wis Indianhead
Tech College
EXIT 10

E3-1
204"X138"
SEE SIGN DETAIL

WB-04(I)

UW River Falls
EXIT 10

REMOVE & REPLACE/RELOCATE (SEE SIGN DETAIL)
E3-1
180"X60"

WB-03(I)

WB-05(II)

WB-04(II)

530'WB'
535'WB'
540'WB'
545'WB'
550'WB'
555'WB'
530'EB'
535'EB'
540'EB'
545'EB'
550'EB'
555'EB'
IH 94

PC: 544+25.86'WB'
PC: 544+18.76'EB'

EB-04(II)

EB-01(I)

EB-05(II)

EB-02(II)

EB-03(II)

MILE 11

REMOVE

MILE 11

D10-2
12"X36"

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

REMOVE

R3-4B
36"X48"

SPEED LIMIT 70

REMOVE

SPEED LIMIT 70

R2-1
48"X60"

Hammond 5
Menomonie 31
Eau Claire 55

REMOVE & REPLACE (SEE SIGN DETAIL)
D2-3
192"X84"

SLOWER TRAFFIC KEEP RIGHT

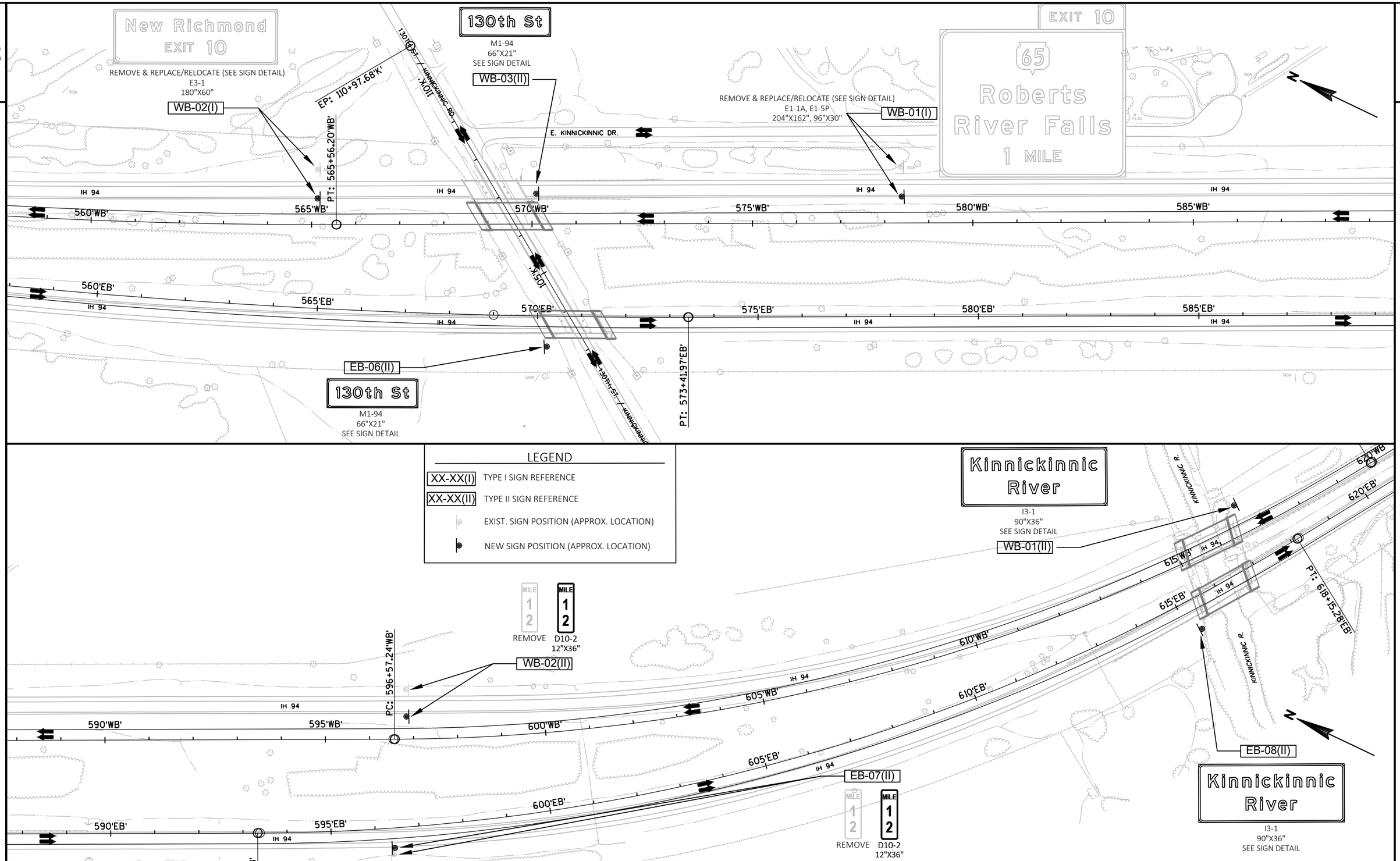
REMOVE

SLOWER TRAFFIC KEEP RIGHT

R4-3
48"X60"

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNS	SHEET 30	E

2



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PERMANENT SIGNS	SHEET 31	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\023205_PS.DWG
LAYOUT NAME - SHEET - (3)

PLOT DATE : 3/1/2018 10:57 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

LEGEND

- POST WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- DMS EXIST. DYNAMIC MESSAGE SIGN (APPROX. LOCATION)

GENERAL NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

COORDINATE LOCATIONS OF TRAFFIC CONTROL SIGNING WITH DETAILS SHOWN ON ALTERNATE ROUTE DETAIL.

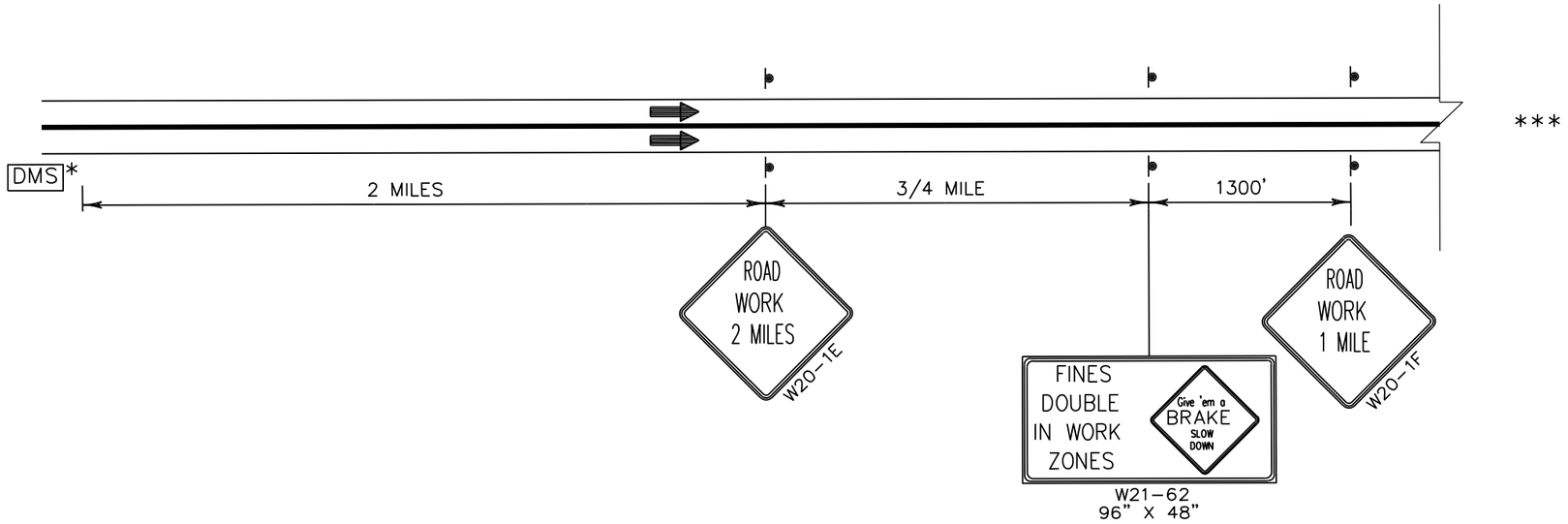
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

INCLUDE "END ROAD WORK" SIGNS 500 FEET BEYOND THE WORK AREA.



* EXIST. DYNAMIC MESSAGE SIGN IS ON WB IH 94 ONLY.

*** FOR TRAFFIC CONTROL LAYOUT BEYOND THE "ROAD WORK 1 MILE" SIGN, SEE SDD 15D12-6B TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION.

TRAFFIC CONTROL ADVANCED WARNING – LANE CLOSURE

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE	SHEET 32	E

2

LEGEND

- POST WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- DMS EXIST. DYNAMIC MESSAGE SIGN (APPROX. LOCATION)

GENERAL NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

COORDINATE LOCATIONS OF TRAFFIC CONTROL SIGNING WITH DETAILS SHOWN ON ALTERNATE ROUTE DETAIL.

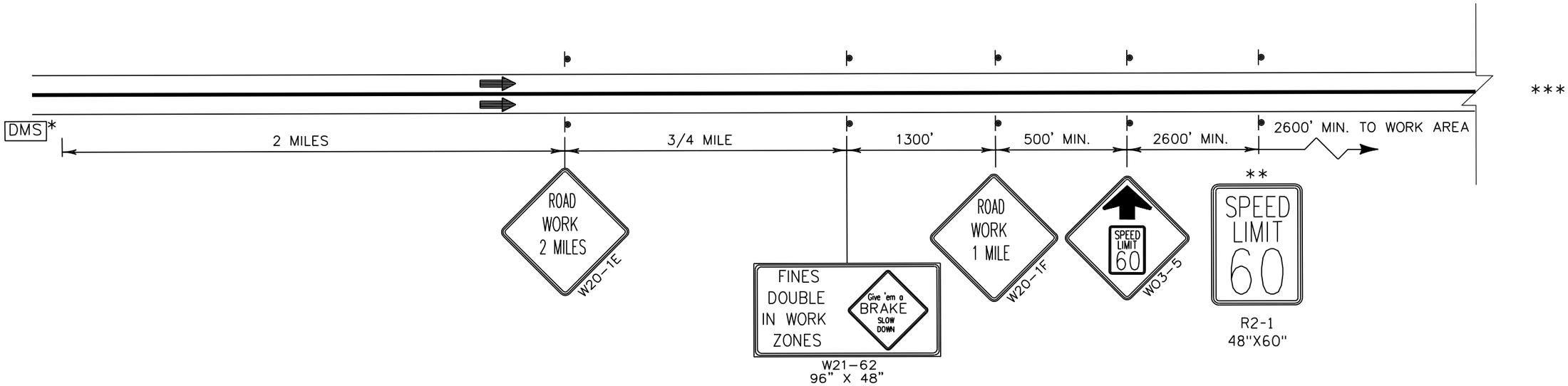
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

INCLUDE "END ROAD WORK" SIGNS 500 FEET BEYOND THE WORK AREA.



* EXIST. DYNAMIC MESSAGE SIGN IS ON WB IH 94 ONLY.

** A SPEED LIMIT SIGN SHALL ALSO BE LOCATED AT THE STH 65 EASTBOUND ENTRANCE RAMP. INCLUDE 70 MPH SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGNS.

*** FOR TRAFFIC CONTROL LAYOUT BEYOND THE "SPEED LIMIT 60" SIGN, SEE TRAFFIC CONTROL STAGE PLANS.

TRAFFIC CONTROL ADVANCED WARNING – NO LANE CLOSURE

2

2

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

SEE S.D.D. BARRICADES AND SIGNS FOR MAINLINE CLOSURES; DETAIL D

N

IH 94 EB

IH 94 WB

565'EB'

565'WB'

PT: 565+56.20'WB'

NOIS

CTH N

ROAD CLOSED 1000 FT
W20-3C
W20-3C
48" X 48"

ROAD CLOSED 500 FT
W20-3D
W20-3D
48" X 48"

R11-3
60" X 30"
ROAD CLOSED
1/4 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

130TH ST. / KINNICKINNIC RD.

570'EB'

570'WB'

PT: 573+41.97'EB'

573'EB'

573'WB'

E. KINNICKINNIC DR.

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

SEE S.D.D. BARRICADES AND SIGNS FOR MAINLINE CLOSURES; DETAIL D

R11-3
60" X 30"
ROAD CLOSED
1 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

70TH AVE.

ROAD CLOSED 500 FT
W20-3D
W20-3D
48" X 48"

ROAD CLOSED 1000 FT
W20-3C
W20-3C
48" X 48"

ROAD CLOSED 1/2 MILE
W20-3G
W20-3G
48" X 48"

TRAFFIC CONTROL LEGEND

- WORK AREA
- SIGN
- BARRICADE

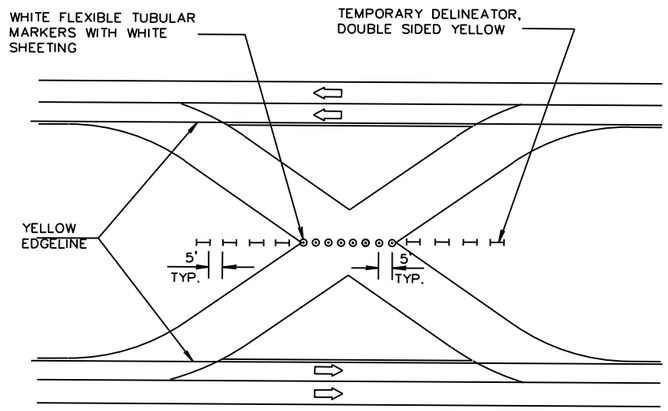
PROJECT NO: 1020-03-76,77	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - 130TH ST. OVERNIGHT CLOSURE	SHEET 34	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\023311_CLOSURE_130TH.DWG
LAYOUT NAME - 01

PLOT DATE : 1/16/2018 2:50 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



TRAFFIC CONTROL FOR TEMPORARY MEDIAN CROSSOVERS DURING INTERIM COMPLETION STAGE

STAGE 1A TRAFFIC

- IH 94 EB AND WB LEFT LANE CLOSURES DURING DESIGNATED HOURS (SEE SPECIAL PROVISIONS) AND TWO-LANE SHIFTS ONTO EXISTING OUTSIDE SHOULDER AND LANE.

STAGE 1A CONSTRUCTION

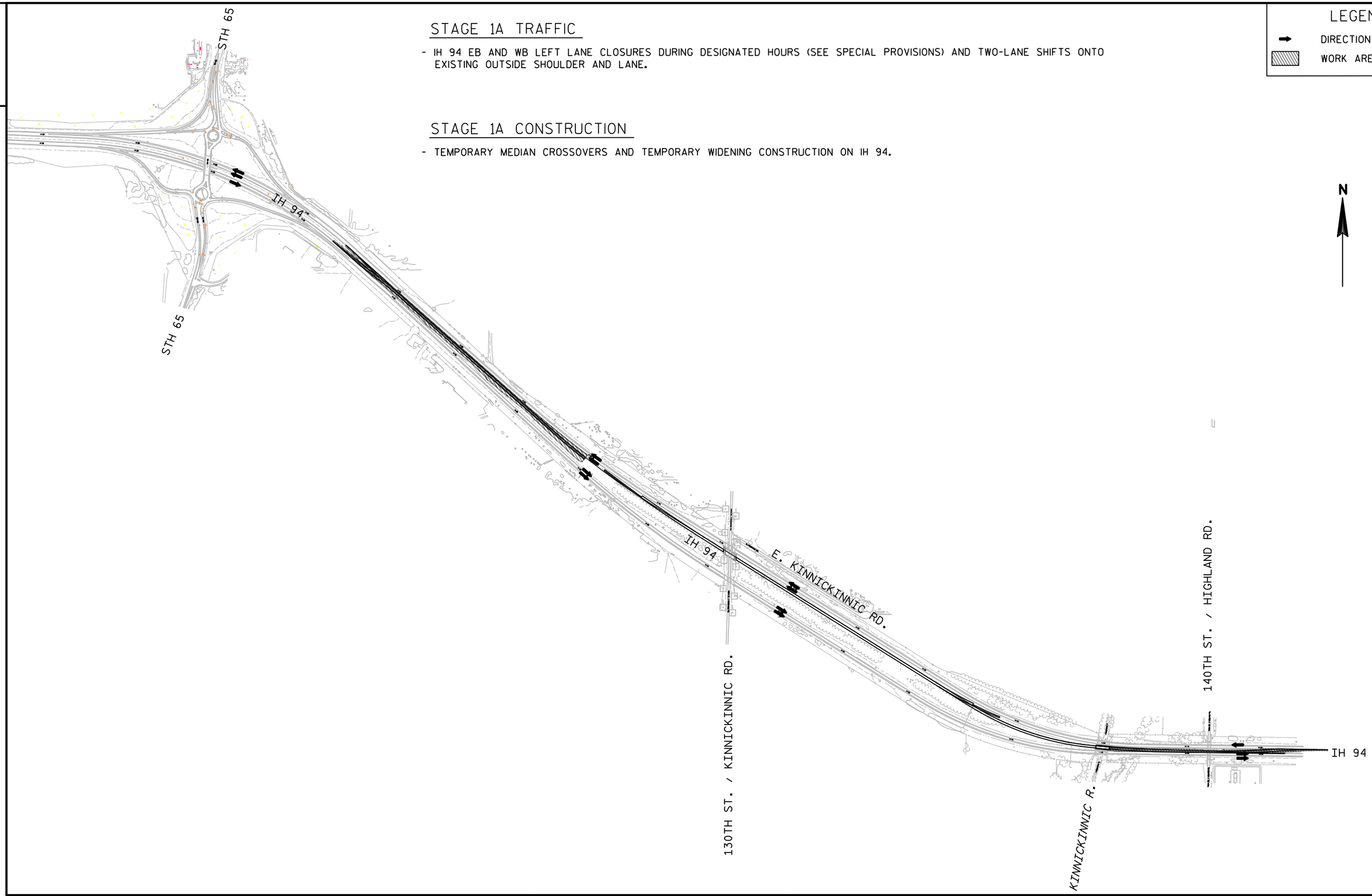
- TEMPORARY MEDIAN CROSSOVERS AND TEMPORARY WIDENING CONSTRUCTION ON IH 94.

LEGEND

DIRECTION OF TRAFFIC

WORK AREA

N



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL OVERVIEW - STAGE 1A	SHEET 36	E

END ROAD WORK
G20-2A
48"X24"

BEGIN & END LANE SHIFT TAPER
(STA. 510'WB'+00 TO 514'WB'+50)
SHIFT TRAFFIC LANES 7 FEET LEFT

MAINTAIN DRAINAGE TO EXIST. INLET

REMOVE PAVEMENT MARKINGS
(STA. 510'WB'+00 TO 555'WB'+00)
PLACE TEMP. PAVEMENT MARKINGS

INSTALL TEMPORARY DELINEATORS
STA. 514'WB'+00 TO 551'WB'+00 AT
2' OFF OUTSIDE SHOULDER EDGE,
SPACED 200' APART.

CONNECT 12" TEMP. CULVERT PIPE TO INLET (INLT1)

REMOVE EXIST. INLET & PARTS OF EXIST. 48" PIPE.
INSTALL MANHOLE 8-FT. (MH1) & TYPE C COVER; INSTALL TEMP. COVER PLATE OVER.
UPSTREAM OF (MH1), CONNECT 48" TEMP. CULVERT PIPE TO EXIST. 48" PIPE & TO (MH1).
UPSTREAM OF (MH1), CONNECT 12" TEMP. CULVERT PIPE TO TEMP. INLET (INLT2) & TO (MH1).
DOWNSTREAM OF (MH1), INSTALL 60" RCPSS TO EXIST. 48" PIPE & TO (MH1).

BP: 502+49.99'EBT'
BP: 512+08.78'WBT'
PT: 512+49.99'EBT'
PT: 515+53.12'EB'
PT: 515+94.68'WB'
PC: 517+74.69'WB'
PT: 517+85.05'WBT'
PT: 520+02.87'WB'
PC: 520+73.05'WBT'
PC: 520+73.61'EBT'
PT: 521+47.98'EB'
PT: 524+33.35'WBT'
PT: 524+33.61'EBT'

505'WB' 500'WB' 510'WB' 515'WB' 515'WBT' 520'WB' 520'WBT' 525'WB' 525'WBT'
505'EB' 500'EB' 510'EB' 515'EB' 520'EB' 525'EB'
505'EBT' 510'EBT' 515'EBT' 520'EBT' 525'EBT'
IH 94 STH 63

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

STAGE 1A - EB & WB LEFT LANE CLOSURES AND EB & WB TWO-LANE SHIFTS:

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SEE S.D.D. TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE

REMOVE PAVEMENT MARKINGS
(STA. 510'WB'+00 TO 555'WB'+00)
PLACE TEMP. PAVEMENT MARKINGS

INSTALL TEMPORARY DELINEATORS
STA. 514'WB'+00 TO 551'WB'+00 AT
2' OFF OUTSIDE SHOULDER EDGE,
SPACED 200' APART.

BEGIN & END LANE SHIFT TAPER
(STA. 550'WB'+50 TO 555'WB'+00)
SHIFT TRAFFIC LANES 7 FEET RIGHT

WO5-52L
18"X54"

REMOVE EXIST. INLET & PART OF EXIST. 24" PIPE.
INSTALL INLET MEDIAN 2 GRATE (INL1) & TYPE MS COVERS; INSTALL TEMP. COVER PLATE OVER.
UPSTREAM OF (INL1), CONNECT 18" TEMP. CULVERT PIPE TO TEMP. INLET (INLT3) & TO (INL1).
DOWNSTREAM OF (INL1), INSTALL 24" RCPSS TO EXIST. 24" PIPE & TO (INL1).

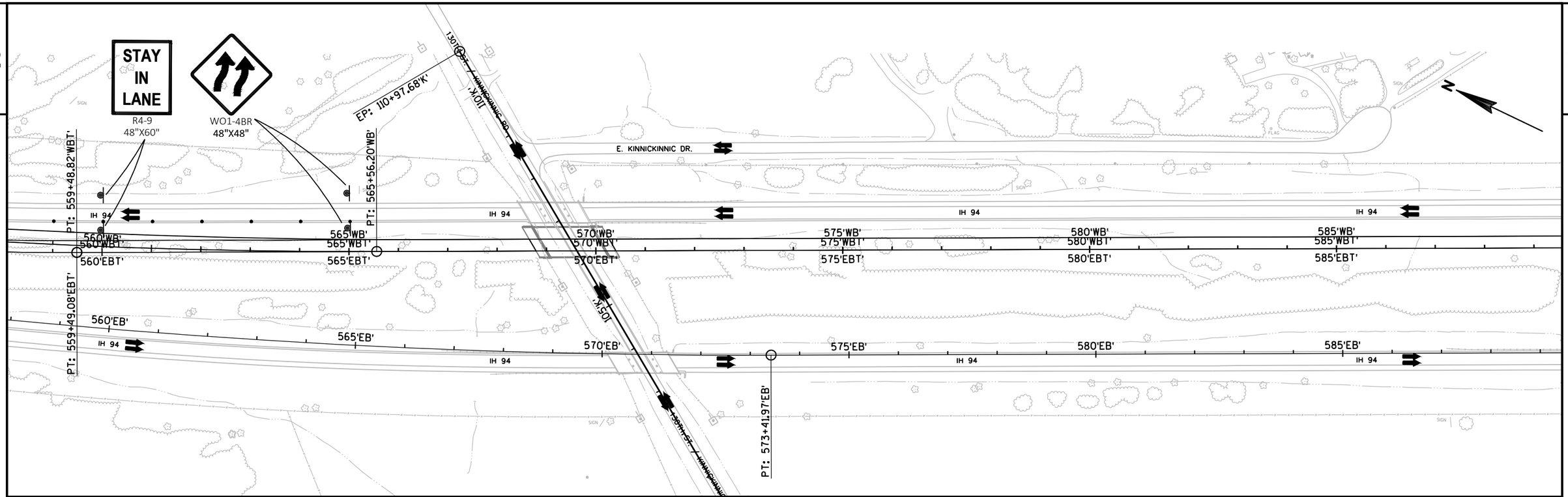
INSTALL TEMPORARY CRASH CUSHION

REMOVE EXIST. INLET & PARTS OF EXIST. 48" PIPE.
INSTALL MANHOLE 8-FT. (MH1) & TYPE C COVER; INSTALL TEMP. COVER PLATE OVER.
UPSTREAM OF (MH1), CONNECT 48" TEMP. CULVERT PIPE TO EXIST. 48" PIPE & TO (MH1).
UPSTREAM OF (MH1), CONNECT 12" TEMP. CULVERT PIPE TO TEMP. INLET (INLT2) & TO (MH1).
DOWNSTREAM OF (MH1), INSTALL 60" RCPSS TO EXIST. 48" PIPE & TO (MH1).

PC: 544+25.86'WB'
PC: 544+18.76'EB'
PC: 546+17.77'WBT'
PC: 546+18.02'EBT'

530'WB' 535'WB' 540'WB' 545'WB' 550'WB' 555'WB'
530'WBT' 535'WBT' 540'WBT' 545'WBT' 550'WBT' 555'WBT'
530'EBT' 535'EBT' 540'EBT' 545'EBT' 550'EBT' 555'EBT'
530'EB' 535'EB' 540'EB' 545'EB' 550'EB' 555'EB'
IH 94

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 1A	SHEET 37	E

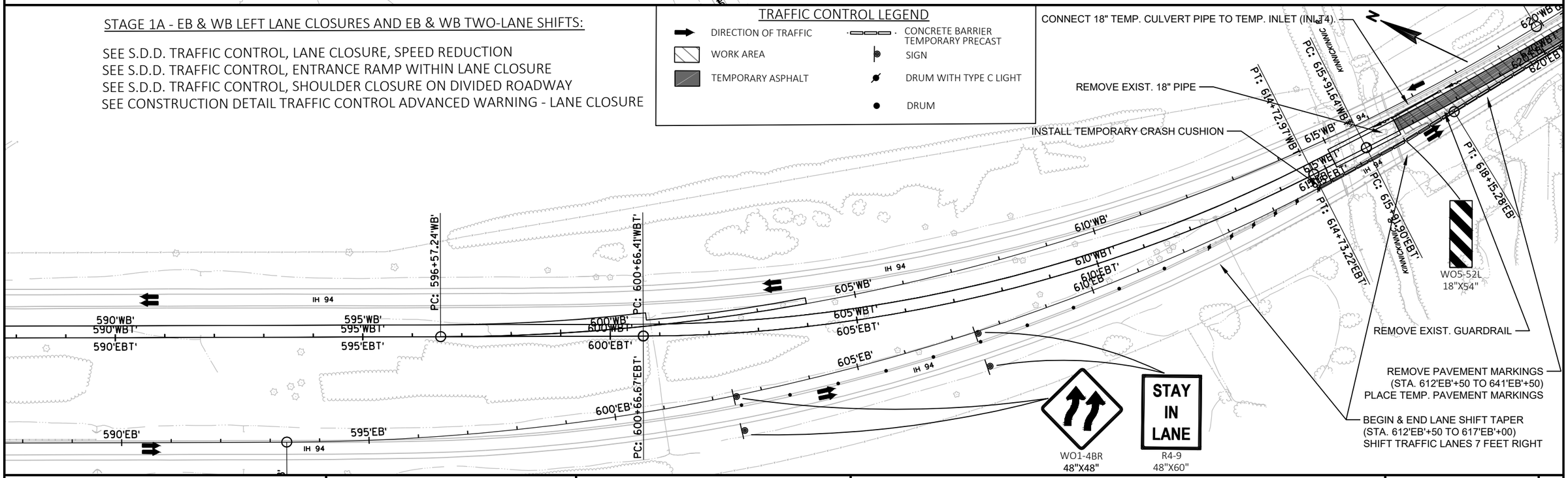


STAGE 1A - EB & WB LEFT LANE CLOSURES AND EB & WB TWO-LANE SHIFTS:

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SEE S.D.D. TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE

TRAFFIC CONTROL LEGEND

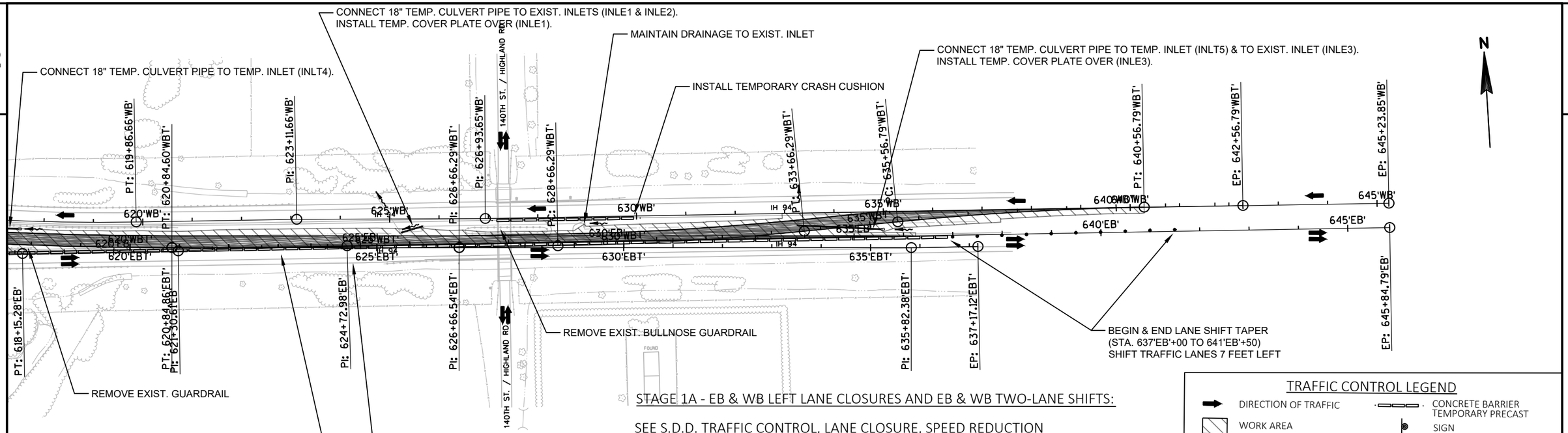
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 1A	SHEET 38 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025090_TC_PRESTAGE1.DWG
LAYOUT NAME - SHEET - (3)

PLOT DATE : 5/30/2018 8:58 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT



STAGE 1A - EB & WB LEFT LANE CLOSURES AND EB & WB TWO-LANE SHIFTS:

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SEE S.D.D. TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

STAGE 1B TRAFFIC

- IH 94 EB AND WB TWO LANES OPEN TO TRAFFIC IN EACH DIRECTION.
- IH 94 WB TWO-LANE SHIFT FOR PIPE INSTALLS.
- 130TH ST. OPEN TO TRAFFIC WITH SHOULDER CLOSURES AND FLAGGING OPERATIONS AS NEEDED; OVERNIGHT CLOSURES ALLOWED ON LIMITED BASIS FOR CRITICAL BRIDGE WORK.

STAGE 1B CONSTRUCTION

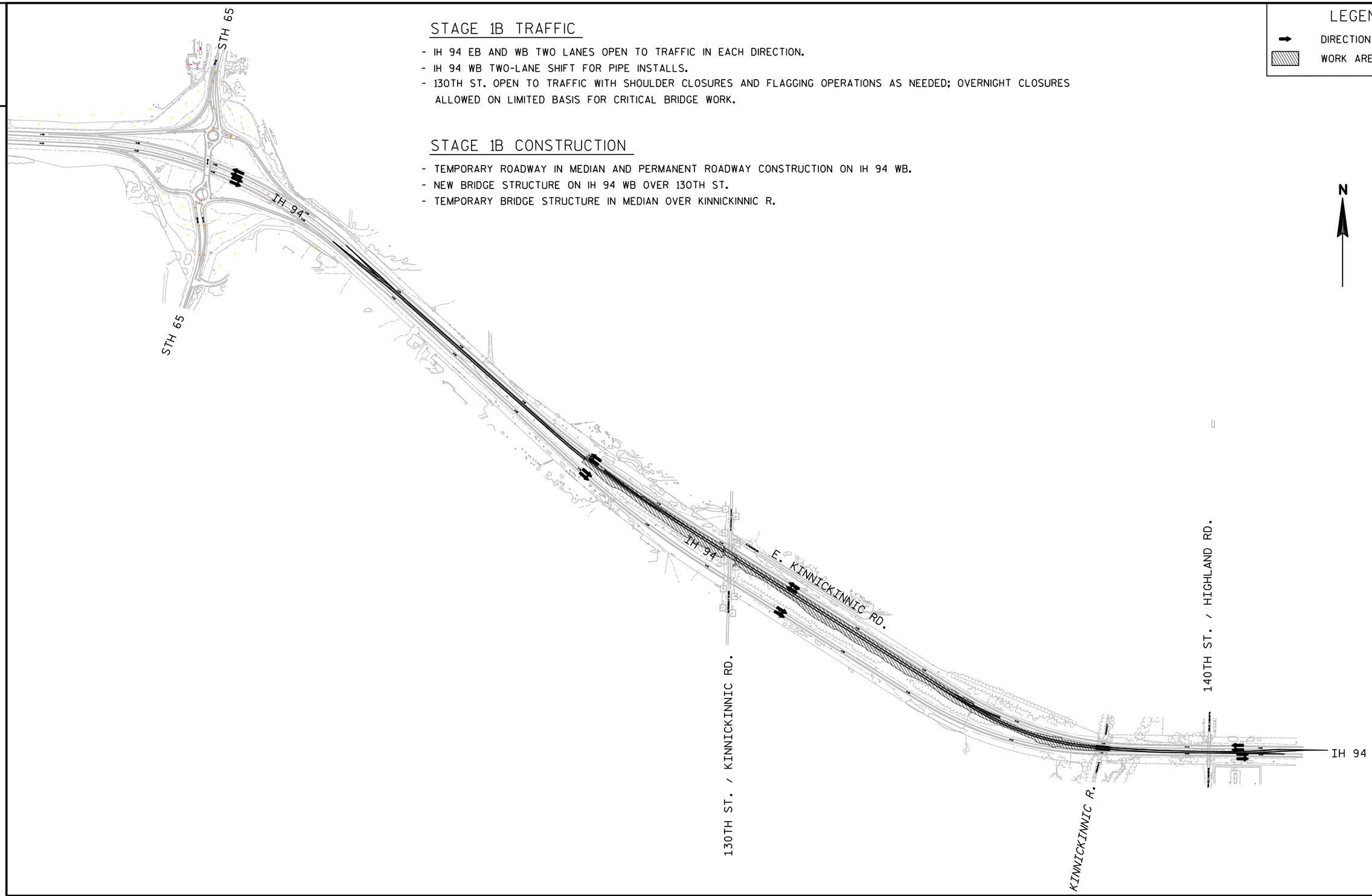
- TEMPORARY ROADWAY IN MEDIAN AND PERMANENT ROADWAY CONSTRUCTION ON IH 94 WB.
- NEW BRIDGE STRUCTURE ON IH 94 WB OVER 130TH ST.
- TEMPORARY BRIDGE STRUCTURE IN MEDIAN OVER KINNICKINNIC R.

LEGEND

DIRECTION OF TRAFFIC

WORK AREA

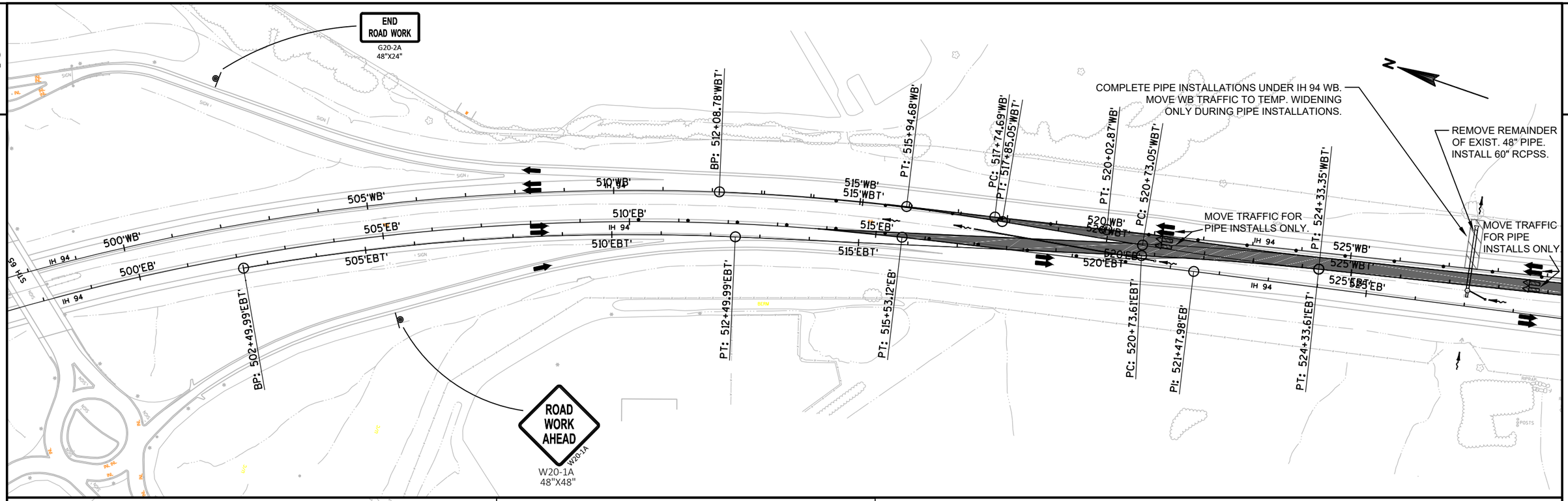
N



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL OVERVIEW - STAGE 1B	SHEET 40	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025099_TC_OVERVIEW_STAGE1.DWG
LAYOUT NAME - overviewSheet - (1)

PLOT DATE : 3/20/2018 1:46 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:1000 FT



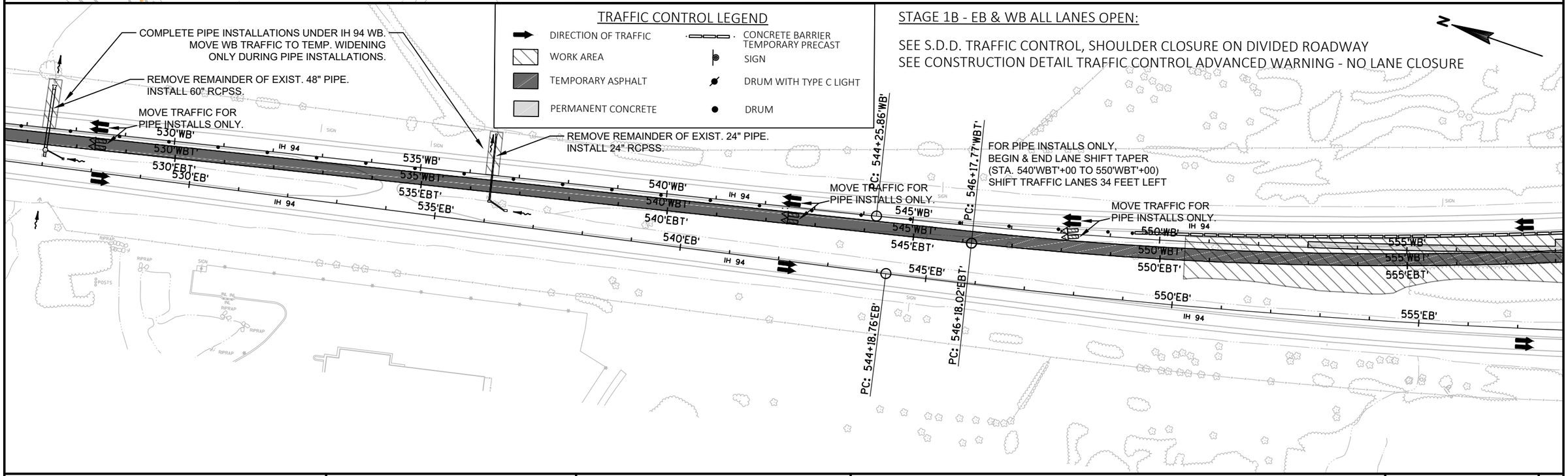
2

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

STAGE 1B - EB & WB ALL LANES OPEN:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 1B	SHEET 41	E

SEE SDD 15D28-3 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY FOR LAYOUT ON 130TH ST. AS NEEDED.
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL OVERNIGHT 130TH ST. CLOSURES FOR CRITICAL BRIDGE WORK.

ROAD WORK AHEAD W20-1A
W20-1A
48"X48"

END ROAD WORK
G20-2A
48"X24"

130TH ST / KINNICKINNIC RD

EP: 110+97.68'K'

NEW STRUCTURE, B-55-254

E. KINNICKINNIC DR.

PT: 559+48.82'WBT'

PT: 565+56.20'WB'

IH 94

560'WB'
560'WBT'
560'EBT'
565'WB'
565'WBT'
565'EBT'
570'WB'
570'WBT'
570'EBT'
575'WB'
575'WBT'
575'EBT'
580'WB'
580'WBT'
580'EBT'
585'WB'
585'WBT'
585'EBT'

105'K'

INSTALL TEMPORARY MGS GUARDRAIL

INSTALL TEMPORARY MGS GUARDRAIL

REMOVE PART OF EXIST. 24" PIPE.
INSTALL TEMP. INLET (INLT7) & TYPE MS COVER.
UPSTREAM OF (INLT7), INSTALL 24" RCCP TO (INLT7).
DOWNSTREAM OF (INLT7), CONNECT 24" TEMP. CULVERT PIPE TO EXIST. 24" PIPE & TO (INLT7).

REMOVE PART OF EXIST. 24" PIPE.
INSTALL TEMP. INLET (INLT8) & TYPE MS COVERS.
UPSTREAM OF (INLT8), CONNECT 24" TEMP. CULVERT PIPE TO EXIST. 24" PIPE & TO (INLT8).
DOWNSTREAM OF (INLT8), INSTALL 24" RCCP TO (INLT8).

PT: 559+49.08'EBT'

560'EB'
565'EB'
570'EB'
575'EB'
580'EB'
585'EB'

REMOVE PARTS OF EXIST. 24" PIPES.
INSTALL 24" RCCP TO EXIST. 24" PIPES.

INSTALL INLET 2X2-FT (INL2) & TYPE V COVER.
INSTALL 12" PIPE UNDERDRAIN.

REMOVE PART OF EXIST. 24" PIPE.
INSTALL TEMP. INLET (INLT6) & TYPE MS COVER.
UPSTREAM OF (INLT6), INSTALL 24" RCCP TO (INLT6).
DOWNSTREAM OF (INLT6), CONNECT 24" TEMP. CULVERT PIPE TO EXIST. 24" PIPE & TO (INLT6).

END ROAD WORK
G20-2A
48"X24"

130TH ST / KINNICKINNIC RD

PT: 573+41.97'EB'

ROAD WORK AHEAD W20-1A
W20-1A
48"X48"

REMOVE PART OF EXIST. 24" PIPE.
INSTALL TEMP. INLET (INLT9) & TYPE MS COVER.
UPSTREAM OF (INLT9), CONNECT 24" TEMP. CULVERT PIPE TO EXIST. 24" PIPE & TO (INLT9).
DOWNSTREAM OF (INLT9), INSTALL 24" RCCP TO (INLT9).

STAGE 1B - EB & WB ALL LANES OPEN:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

TRAFFIC CONTROL LEGEND

DIRECTION OF TRAFFIC	CONCRETE BARRIER TEMPORARY PRECAST
WORK AREA	SIGN
TEMPORARY ASPHALT	DRUM WITH TYPE C LIGHT
PERMANENT CONCRETE	DRUM

REMOVE PART OF EXIST. 24" PIPE.
INSTALL TEMP. INLET (INLT10) & TYPE MS COVER.
UPSTREAM OF (INLT10), CONNECT 24" TEMP. CULVERT PIPE TO EXIST. 24" PIPE & TO (INLT10).
DOWNSTREAM OF (INLT10), INSTALL 24" RCCP TO (INLT10).

INSTALL 24" RCCP TO END OF EXIST. 24" PIPE.

PC: 596+57.24'WB'

PC: 600+66.41'WBT'

PC: 600+66.67'EBT'

IH 94

590'WB'
590'WBT'
590'EBT'
595'WB'
595'WBT'
595'EBT'
600'WB'
600'WBT'
600'EBT'
605'WB'
605'WBT'
605'EBT'
610'WB'
610'WBT'
610'EBT'

590'EB'
595'EB'
600'EB'
605'EB'

INSTALL TEMPORARY CRASH CUSHION

TEMPORARY STRUCTURE

PT: 614+72.97'WB

PC: 615+91.64'WBT'

PC: 615+91.90'EBT'

PT: 614+73.22'EBT'

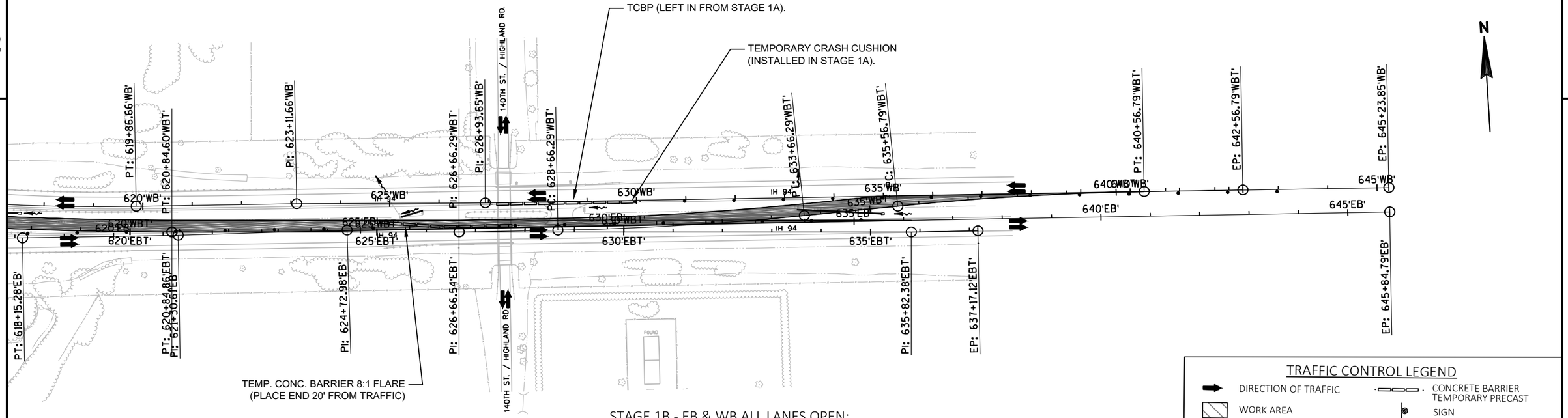
PT: 618+15.28'EB'

620'WB
620'WBT'
620'EBT'

KINNICKINNIC R.

REMOVE PART OF EXIST. 24" PIPE AND EXIST. INLET.
INSTALL TEMP. MANHOLES (MHT1 & MHT2) & TYPE L COVERS.
CONNECT 24" TEMP. CULVERT PIPES TO (MHT1 & MHT2).
CONNECT 24" TEMP. CULVERT PIPE TO EXIST. 24" PIPE.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 1B	SHEET 42	E



STAGE 1B - EB & WB ALL LANES OPEN:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 1B	SHEET 43	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025100_TC_STAGE1.DWG
LAYOUT NAME - SHEET - (5)
PLOT DATE : 5/14/2018 1:49 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

STAGE 2 TRAFFIC

- IH 94 EB AND WB TWO LANES OPEN TO TRAFFIC IN EACH DIRECTION.
- IH 94 WB ON EXISTING ROADWAY AND IH 94 EB TRAFFIC CROSSED OVER TO WESTBOUND TEMPORARY/PERMANENT ROADWAY.
- IH 94 EB TWO-LANE SHIFT AT 130TH ST. BRIDGE STRUCTURE.
- 130TH ST. OPEN TO TRAFFIC WITH SHOULDER CLOSURES AND FLAGGING OPERATIONS AS NEEDED; OVERNIGHT CLOSURES ALLOWED ON LIMITED BASIS FOR CRITICAL BRIDGE WORK.

STAGE 2 CONSTRUCTION

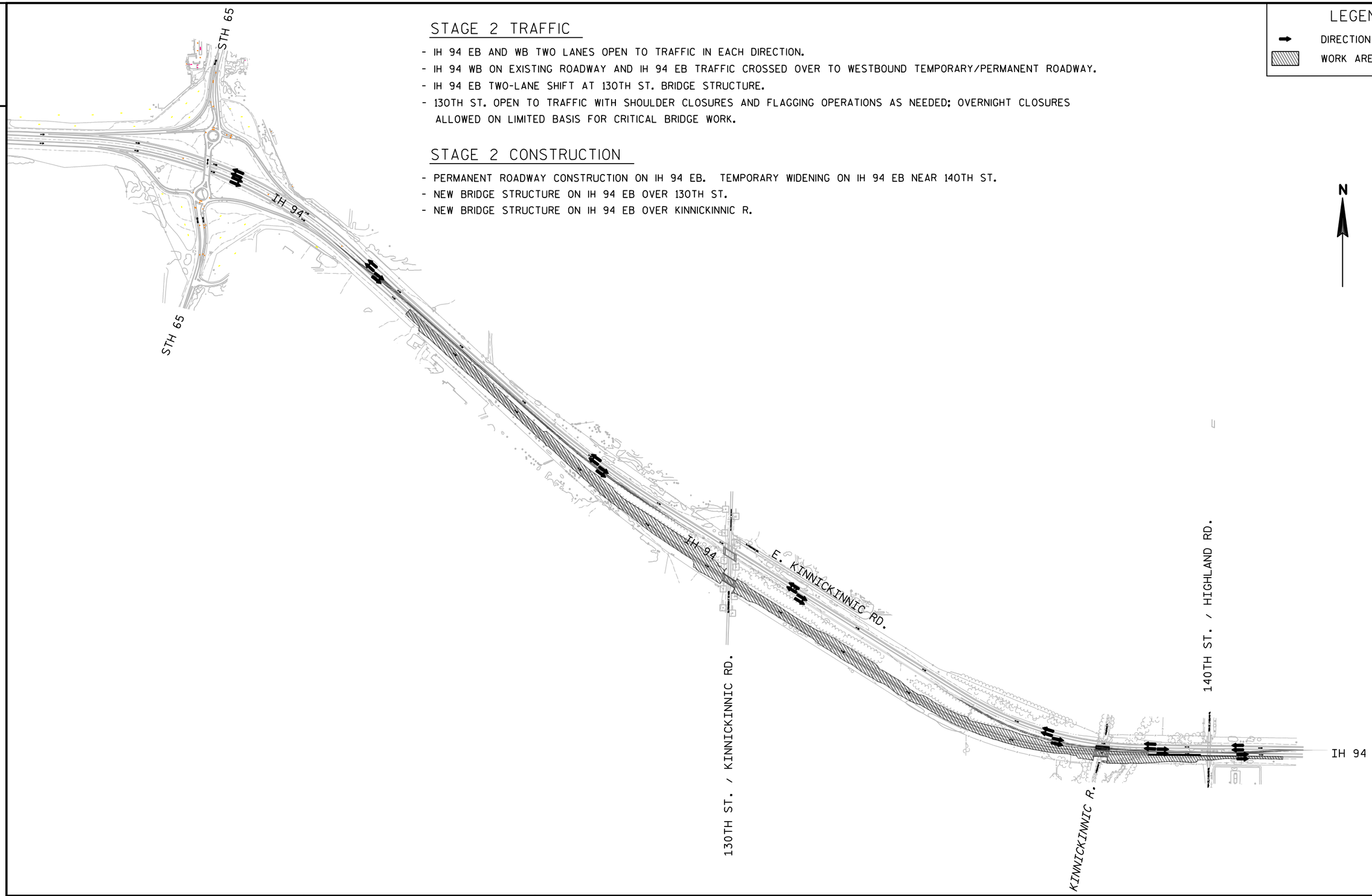
- PERMANENT ROADWAY CONSTRUCTION ON IH 94 EB. TEMPORARY WIDENING ON IH 94 EB NEAR 140TH ST.
- NEW BRIDGE STRUCTURE ON IH 94 EB OVER 130TH ST.
- NEW BRIDGE STRUCTURE ON IH 94 EB OVER KINNICKINNIC R.

LEGEND

DIRECTION OF TRAFFIC

WORK AREA

N



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL OVERVIEW - STAGE 2	SHEET 44	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025199_TC_OVERVIEW_STAGE2.DWG
LAYOUT NAME - overviewSheet - (1)

PLOT DATE : 2/12/2018 8:09 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:1000 FT

2

END ROAD WORK
G20-2A
48"X24"

REMOVE PAVEMENT MARKINGS
(STA. 513'EB'+00 TO 520'EB'+00)
PLACE TEMP. PAVEMENT MARKINGS

TEMP. CONC. BARRIER
(PLACE END 20' FROM EB TRAFFIC)

REMOVE TEMP. 48" PIPE TO (MH1)
REMOVE EXIST. 48" PIPE.
INSTALL 60" RCPSS TO (MH1).

INSTALL TEMPORARY CRASH CUSHION

STAY IN LANE
R4-9
48"X60"

WO1-4BL
48"X48"

55 MPH
WO13-1
36"X36"

ROAD WORK AHEAD
W20-1A
W20-1A
48"X48"

WO1-6
48" X 24"

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

TYPE III BARRICADE

TYPE III BARRICADE

TYPE III BARRICADE

BP: 502+49.99'EBT'
BP: 512+08.78'WBT'
PT: 512+49.99'EBT'
PT: 515+53.12'EB'
PT: 515+94.68'WB'
PC: 517+74.69'WB'
PT: 517+85.05'WBT'
PT: 520+02.87'WB'
PC: 520+73.05'WBT'
PC: 520+73.61'EBT'
PC: 521+47.98'EB'
PT: 524+33.35'WBT'
PT: 524+33.61'EBT'

505'WB'
500'WB'
505'EB'
500'EB'
505'EBT'
510'WB'
510'EB'
510'EBT'
515'WB'
515'WBT'
515'EB'
515'EBT'
520'WB'
520'WBT'
520'EB'
520'EBT'
525'WB'
525'WBT'
525'EB'
525'EBT'

IH 94
STH 63

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

STAGE 2 - EB & WB ALL LANES OPEN AND EB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

REMOVE TEMP. 48" PIPE TO (MH1).
REMOVE EXIST. 48" PIPE.
INSTALL 60" RCPSS TO (MH1).

WO1-4BR
48"X48"

STAY IN LANE
R4-9
48"X60"

PC: 544+25.86'WB'
PC: 544+18.76'EB'
PC: 546+17.77'WBT'
PC: 546+18.02'EBT'

530'WB'
530'WBT'
530'EBT'
530'EB'
535'WB'
535'WBT'
535'EBT'
535'EB'
540'WB'
540'WBT'
540'EBT'
540'EB'
545'WB'
545'WBT'
545'EBT'
545'EB'
550'WB'
550'WBT'
550'EBT'
550'EB'
555'WB'
555'WBT'
555'EBT'
555'EB'

IH 94

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 2	SHEET 45	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025200_TC_STAGE2.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 6/5/2018 7:52 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

SEE SDD 15D28-3 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY FOR LAYOUT ON 130TH ST. AS NEEDED.
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL OVERNIGHT 130TH ST. CLOSURES FOR CRITICAL BRIDGE WORK.

ROAD WORK AHEAD
W20-1A
48"X48"

END ROAD WORK
G20-2A
48"X24"

TCBP (LEFT IN FROM STAGE 1B).

W05-52L
18"X54"

E. KINNICKINNIC DR.

IH 94

PT: 559+48.82'WBT'
PT: 559+49.08'EBT'
PT: 565+56.20'WB'

560'WB'
560'WBT'
560'EBT'
565'WB'
565'WBT'
565'EBT'
570'WB'
570'WBT'
570'EBT'
575'WB'
575'WBT'
575'EBT'
580'WB'
580'WBT'
580'EBT'
585'WB'
585'WBT'
585'EBT'
560'EB'
565'EB'
570'EB'
575'EB'
580'EB'
585'EB'

BEGIN & END LANE SHIFT TAPER
(STA. 561'EBT'+00 TO 565'EBT'+50)
SHIFT TRAFFIC LANES 7 FEET RIGHT

TEMPORARY MGS GUARDRAIL
(INSTALLED IN STAGE 1B).

BEGIN & END LANE SHIFT TAPER
(STA. 573'EBT'+00 TO 577'EBT'+50)
SHIFT TRAFFIC LANES 7 FEET LEFT

INSTALL INLETS 2X2-FT (INL3 & INL4) & TYPE V COVERS.
INSTALL 12" PIPES UNDERDRAIN.

REMOVE EXIST. GUARDRAIL

REMOVE EXIST. 30" PIPE.
INSTALL 30" RCCP.

REMOVE EXIST. GUARDRAIL

NEW STRUCTURE, B-55-255
REMOVE EXIST. STRUCTURE

PT: 573+41.97'EB'

ROAD WORK AHEAD
W20-1A
48"X48"

END ROAD WORK
G20-2A
48"X24"

130TH ST. / KINNICKINNIC RD.

105TH ST. / KINNICKINNIC RD.

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

STAGE 2 - EB & WB ALL LANES OPEN AND EB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

TCBP (LEFT IN FROM STAGE 1B).

INSTALL TEMPORARY CRASH CUSHION

PC: 596+57.24'WB'
PC: 600+66.41'WBT'
PC: 600+66.67'EBT'

590'WB'
590'WBT'
590'EBT'
595'WB'
595'WBT'
595'EBT'
600'WB'
600'WBT'
600'EBT'
605'WB'
605'WBT'
605'EBT'
610'WB'
610'WBT'
610'EBT'
615'WB'
615'WBT'
615'EBT'
620'WB'
620'WBT'
620'EBT'
590'EB'
595'EB'
600'EB'
605'EB'
610'EB'

PT: 614+72.97'WB'
PC: 615+91.64'WB'
PT: 614+73.22'EBT'
PC: 615+91.90'EBT'
PT: 618+15.28'EB'

REMOVE EXIST. 24" PIPE.
INSTALL 30" RCCP.

REMOVE EXIST. 48" PIPE.
INSTALL 48" RCCP.

REMOVE EXIST. 30" PIPE.
INSTALL 30" RCCP.

REMOVE EXIST. GUARDRAIL

REMOVE TEMP. 24" PIPE.
CONNECT 24" TEMP. CULVERT PIPE TO (MHT2).

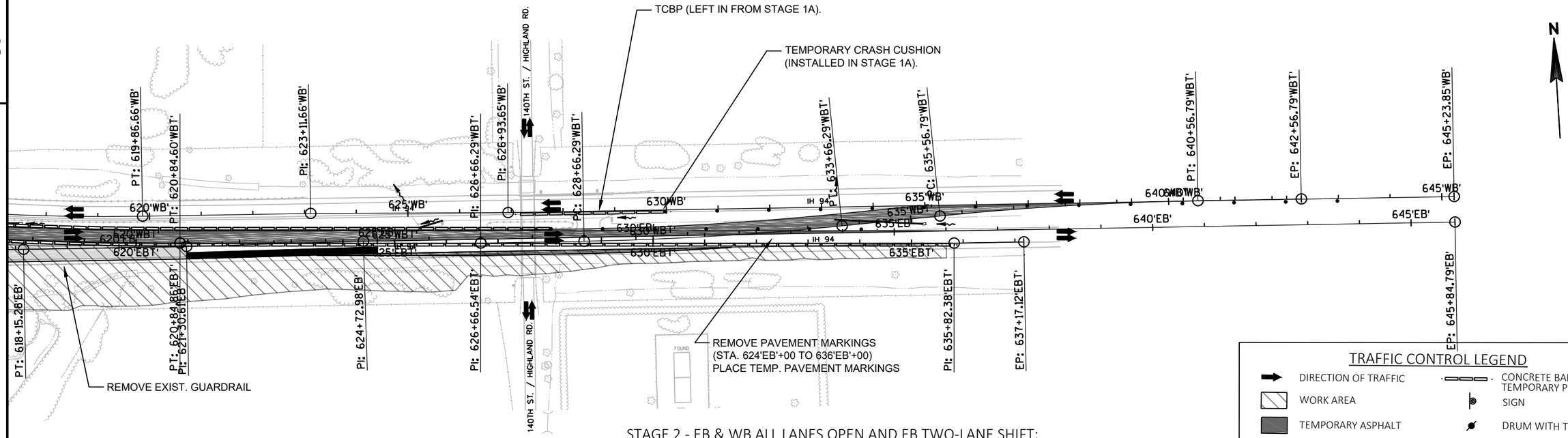
REMOVE REMAINDER OF EXIST. 24" PIPE.
DOWNSTREAM OF (MHT2), INSTALL 24" RCPSS TO (MHT2).

NEW STRUCTURE, B-55-257
REMOVE EXIST. STRUCTURE

REMOVE EXIST. GUARDRAIL

KINNICKINNIC R.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 2	SHEET 46	E



STAGE 2 - EB & WB ALL LANES OPEN AND EB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- PERMANENT ASPHALT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 2	SHEET 47	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025200_TC_STAGE2.DWG
LAYOUT NAME - SHEET - (5)
PLOT DATE : 6/5/2018 7:52 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

INTERIM COMPLETION STAGE TRAFFIC

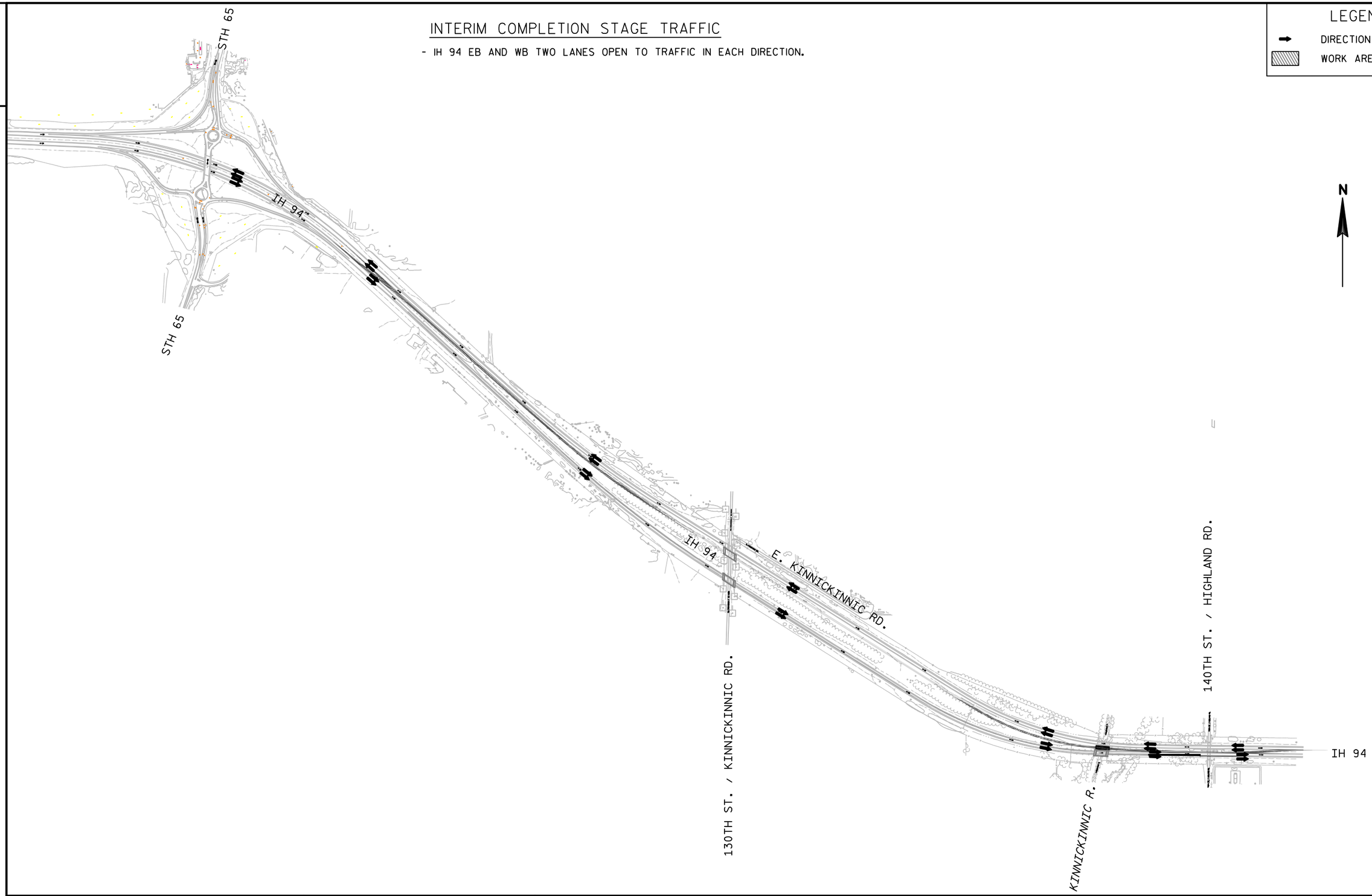
- IH 94 EB AND WB TWO LANES OPEN TO TRAFFIC IN EACH DIRECTION.

LEGEND

DIRECTION OF TRAFFIC

WORK AREA

N



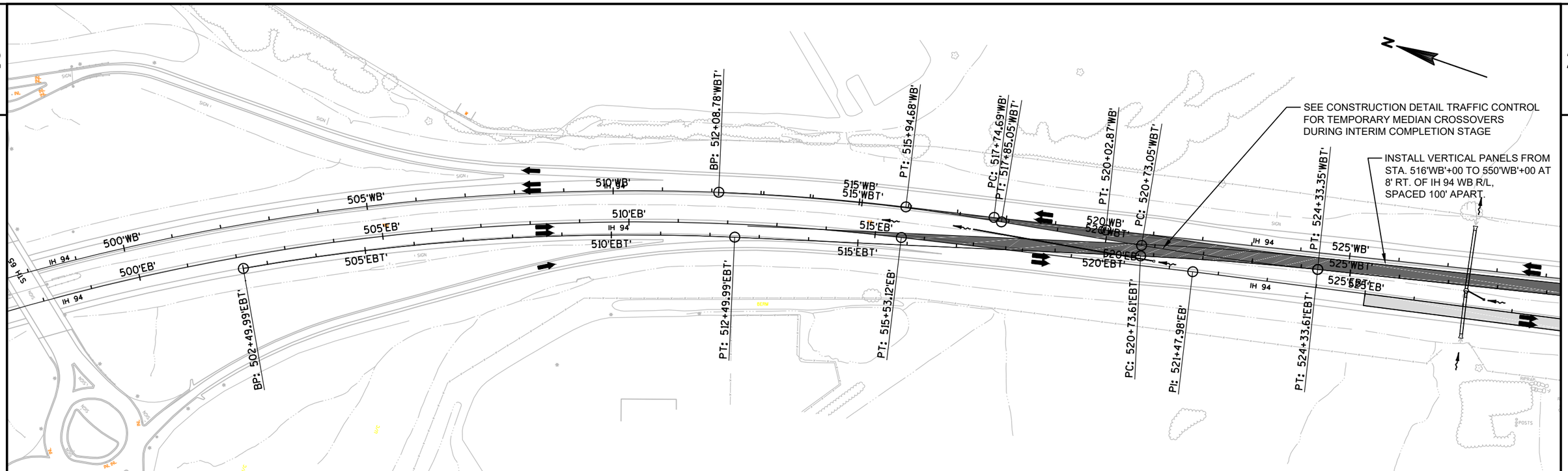
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL OVERVIEW - INTERIM COMPLETION STAGE	SHEET 48	E

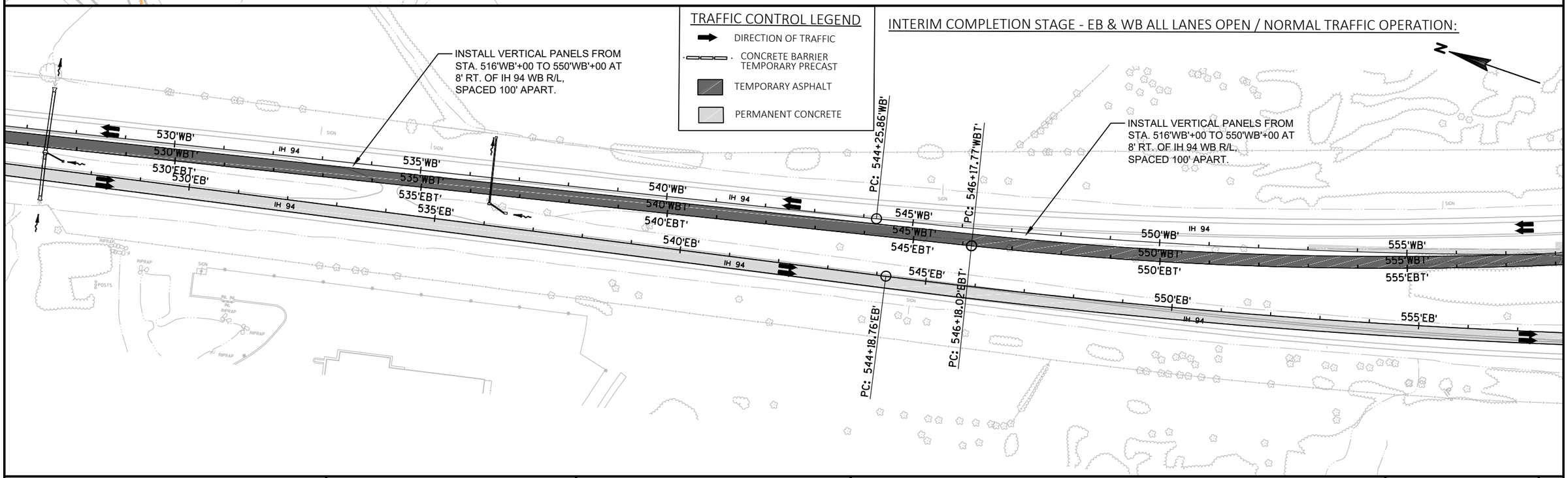
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025249_TC_OVERVIEW_ENDOFSTAGE2.DWG
LAYOUT NAME - overviewSheet - (1)

PLOT DATE : 2/12/2018 8:35 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

2





PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - INTERIM COMPLETION STAGE	SHEET 49 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025250_TC_ENDOFSTAGE2.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 3/16/2018 3:35 PM
PLOT BY : K. KOPACZ
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

2

2

INTERIM COMPLETION STAGE - EB & WB ALL LANES OPEN / NORMAL TRAFFIC OPERATION:

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY ASPHALT
- PERMANENT CONCRETE

TCBP (LEFT IN FROM STAGE 1B).

EP: 110+97.68'K'

PT: 559+48.82'WBT'

PT: 559+49.08'EBT'

PT: 565+56.20'WB'

PT: 573+41.97'EB'

E. KINNICKINNIC DR.

IH 94

560'WB' 560'WBT' 560'EBT'

565'WB' 565'WBT' 565'EBT'

570'WB' 570'WBT' 570'EBT'

575'WB' 575'WBT' 575'EBT'

580'WB' 580'WBT' 580'EBT'

585'WB' 585'WBT' 585'EBT'

560'EB' 565'EB' 570'EB' 575'EB' 580'EB' 585'EB'

105'K'

130'K' — KINNICKINNIC RD.

KINNICKINNIC R.

PC: 596+57.24'WB'

PC: 600+66.41'WBT'

PC: 600+66.67'EBT'

PC: 615+91.64'WB'

PC: 615+91.90'EBT'

PT: 614+72.97'WB'

PT: 614+73.22'EBT'

PT: 618+15.28'EB'

590'WB' 590'WBT' 590'EBT'

595'WB' 595'WBT' 595'EBT'

600'WB' 600'WBT' 600'EBT'

605'WB' 605'WBT' 605'EBT'

610'WB' 610'WBT' 610'EBT'

615'WB' 615'WBT' 615'EBT'

620'WB' 620'WBT' 620'EBT'

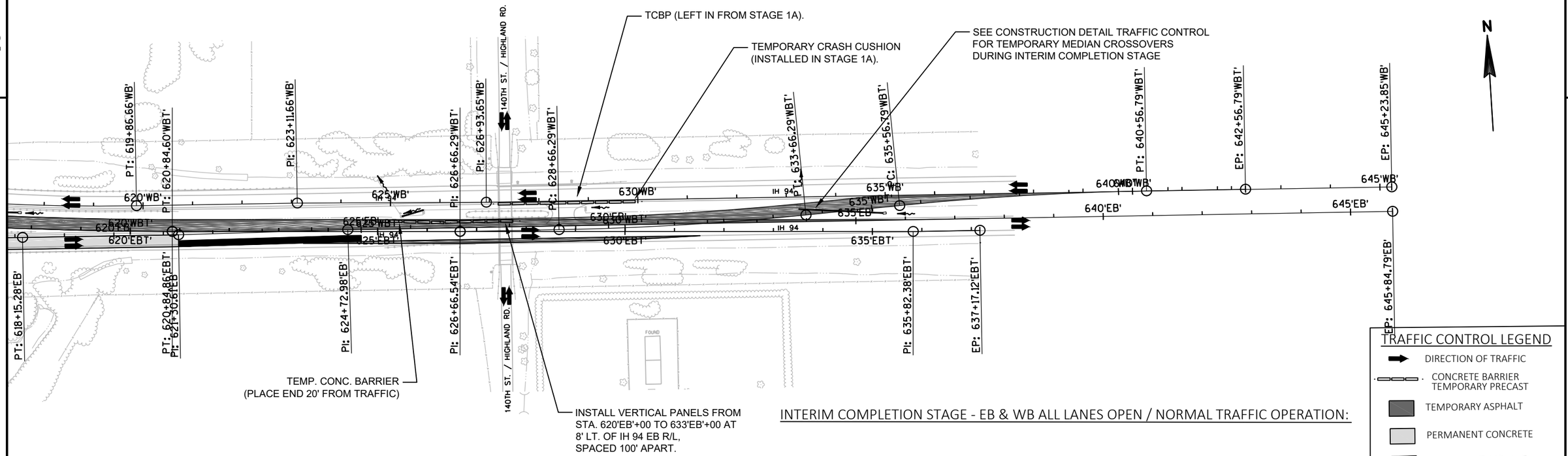
590'EB' 595'EB' 600'EB' 605'EB' 610'EB'

INSTALL TEMPORARY CRASH CUSHION

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - INTERIM COMPLETION STAGE	SHEET 50	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025250_TC_ENDOFSTAGE2.DWG
LAYOUT NAME - SHEET - (3)

PLOT DATE : 3/16/2018 3:35 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT



2

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - INTERIM COMPLETION STAGE	SHEET 51	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025250_TC_ENDOFSTAGE2.DWG
LAYOUT NAME - SHEET - (5)
PLOT DATE : 3/16/2018 3:35 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

STAGE 3 TRAFFIC

- IH 94 EB AND WB TWO LANES OPEN TO TRAFFIC IN EACH DIRECTION.
- IH 94 EB ON EB ROADWAY AND IH 94 WB TRAFFIC CROSSED OVER TO WESTBOUND TEMPORARY/PERMANENT ROADWAY.
- IH 94 WB TWO-LANE SHIFT AT 130TH ST. BRIDGE STRUCTURE.
- 130TH ST. OPEN TO TRAFFIC WITH SHOULDER CLOSURES AND FLAGGING OPERATIONS AS NEEDED; OVERNIGHT CLOSURES ALLOWED ON LIMITED BASIS FOR CRITICAL BRIDGE WORK.

STAGE 3 CONSTRUCTION

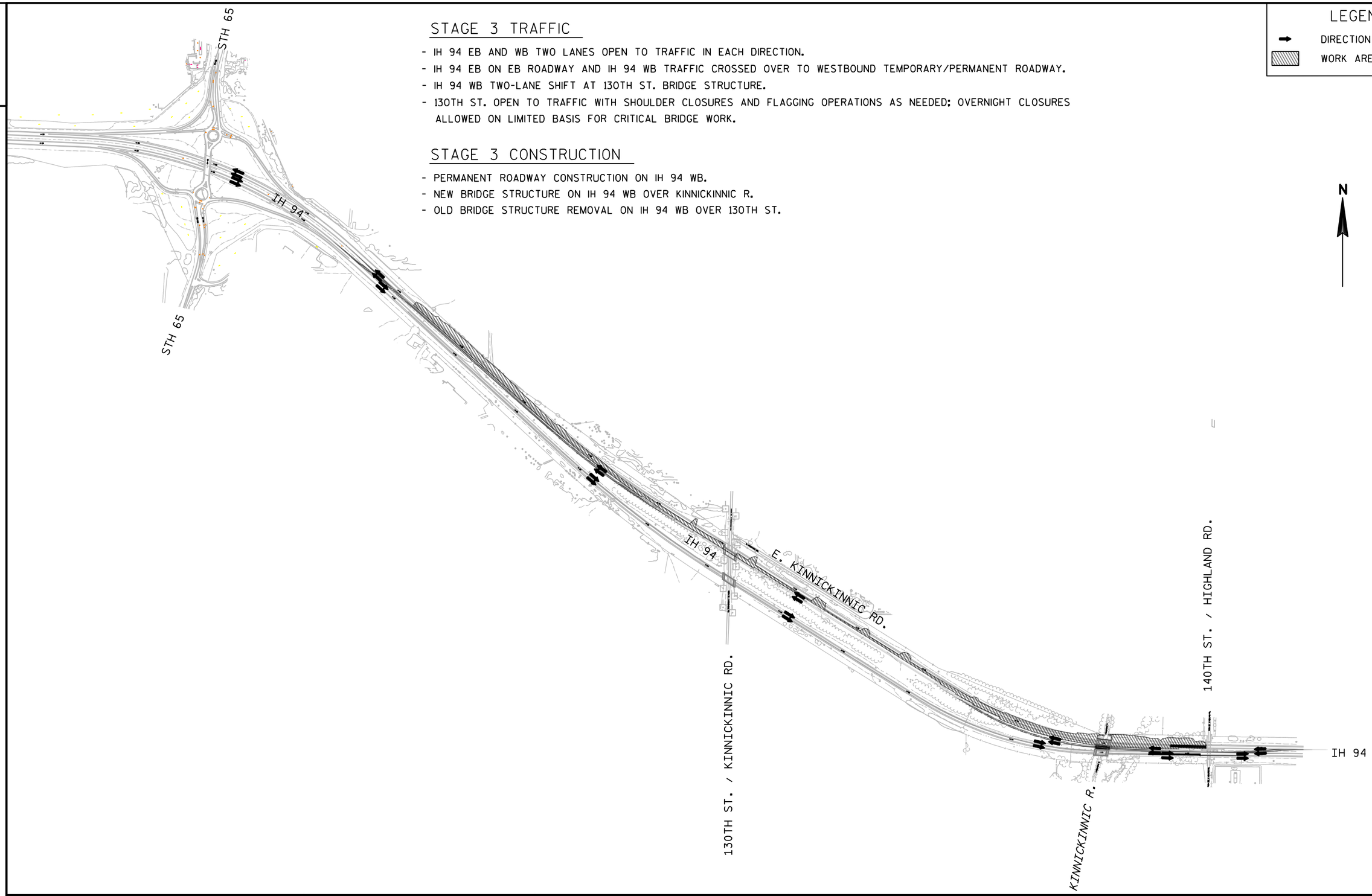
- PERMANENT ROADWAY CONSTRUCTION ON IH 94 WB.
- NEW BRIDGE STRUCTURE ON IH 94 WB OVER KINNICKINNIC R.
- OLD BRIDGE STRUCTURE REMOVAL ON IH 94 WB OVER 130TH ST.

LEGEND

DIRECTION OF TRAFFIC

WORK AREA

N

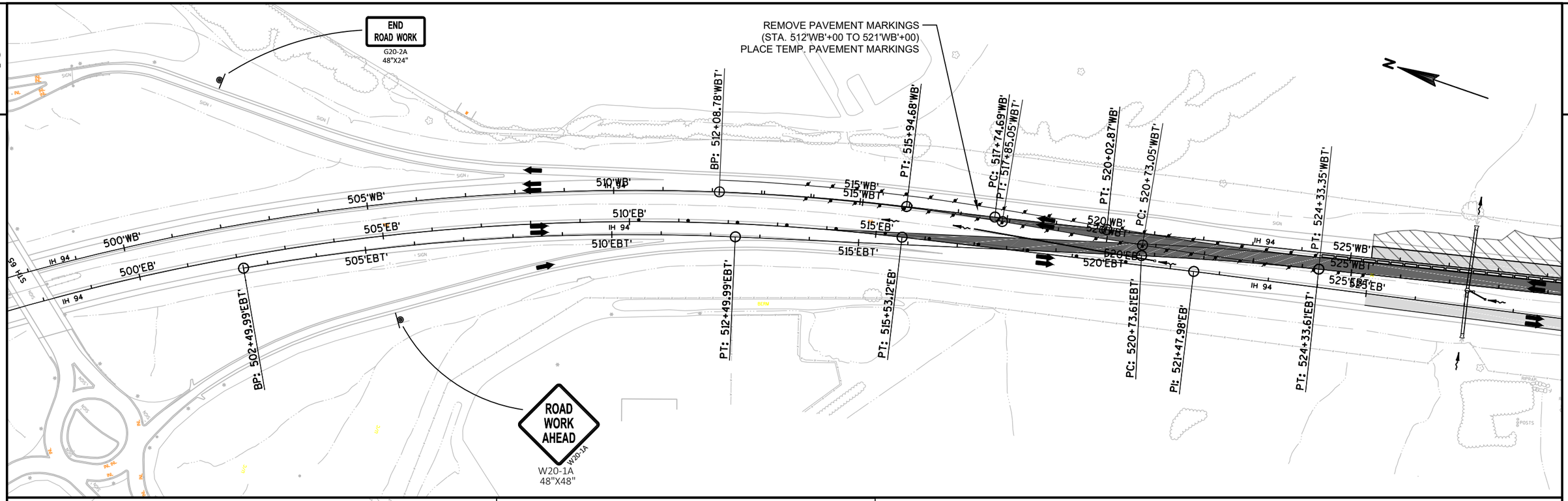


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL OVERVIEW - STAGE 3	SHEET 52	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025299_TC_OVERVIEW_STAGE3.DWG
LAYOUT NAME - overviewSheet - (1)

PLOT DATE : 2/12/2018 8:13 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

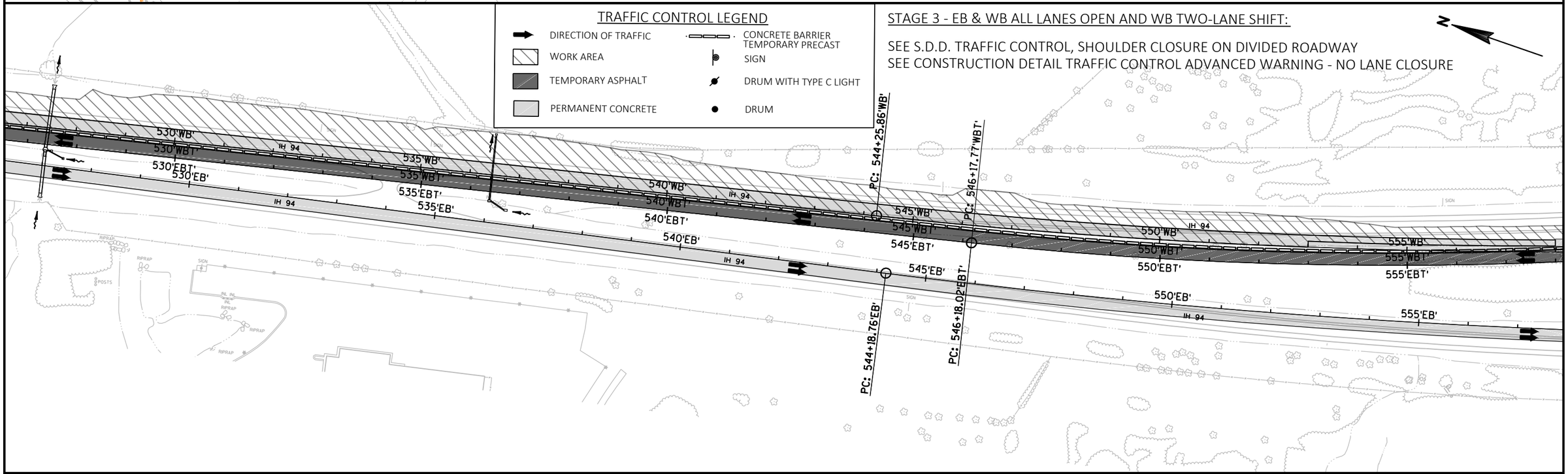


TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

STAGE 3 - EB & WB ALL LANES OPEN AND WB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 3	SHEET 53 E

SEE SDD 15D28-3 TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY FOR LAYOUT ON 130TH ST. AS NEEDED.
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL OVERNIGHT 130TH ST. CLOSURES FOR CRITICAL BRIDGE WORK.

ROAD WORK AHEAD
W20-1A
48"X48"

130TH ST / KINNICKINNIC RD

EP: 110+97.68'K'

END ROAD WORK
G20-2A
48"X24"

REMOVE EXIST. STRUCTURE
INSTALL INLET 2X2-FT (INL5) & TYPE V COVER.
INSTALL 12" PIPE UNDERDRAIN.

WO5-52R
18"X54"

E. KINNICKINNIC DR.

REMOVE EXIST. GUARDRAIL

REMOVE TEMP. INLET (INLT8) & TEMP. 24" PIPE.
REMOVE REMAINDER OF EXIST. 24" PIPE.
INSTALL 24" RCCP.

STAY IN LANE
R4-9
48"X60"

WO1-4BL
48"X48"

REMOVE TEMP. INLET (INLT7) & TEMP. 24" PIPE.
REMOVE REMAINDER OF EXIST. 24" PIPE.
INSTALL 24" RCCP.

REMOVE TEMP. INLET (INLT6) & TEMP. 24" PIPE.
REMOVE REMAINDER OF EXIST. 24" PIPE.
INSTALL 24" RCCP.

PT: 559+48.82'WBT'
PT: 565+56.20'WB'
PT: 559+49.08'EBT'

IH 94

560'WB'
560'WBT'
560'EBT'
565'WB'
565'WBT'
565'EBT'
570'WB'
570'WBT'
570'EBT'
575'WB'
575'WBT'
575'EBT'
580'WB'
580'WBT'
580'EBT'
585'WB'
585'WBT'
585'EBT'
560'EB'
565'EB'
570'EB'
575'EB'
580'EB'
585'EB'

BEGIN & END LANE SHIFT TAPER
(STA. 561'EBT'+00 TO 565'EBT'+50)
SHIFT TRAFFIC LANES 7 FEET RIGHT

REMOVE REMAINDER OF EXIST. 24" PIPES.
INSTALL 24" RCCP PIPES.

TEMPORARY MGS GUARDRAIL
(INSTALLED IN STAGE 1B)

BEGIN & END LANE SHIFT TAPER
(STA. 573'EBT'+00 TO 577'EBT'+50)
SHIFT TRAFFIC LANES 7 FEET LEFT

REMOVE TEMP. INLET (INLT9) & TEMP. 24" PIPE.
REMOVE REMAINDER OF EXIST. 24" PIPE.
INSTALL 24" RCCP.

105'K'

PT: 573+41.97'EB'

ROAD WORK AHEAD
W20-1A
48"X48"

END ROAD WORK
G20-2A
48"X24"

130TH ST / KINNICKINNIC RD

STAGE 3 - EB & WB ALL LANES OPEN AND WB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

NEW STRUCTURE, B-55-256
REMOVE EXIST. STRUCTURE

REMOVE EXIST. GUARDRAIL

INSTALL INLET 2X2-FT (INL6) & TYPE V COVER.
INSTALL 12" PIPE UNDERDRAIN.

REMOVE TEMP. 24" PIPE.
CONNECT 24" TEMP. CULVERT PIPE TO (MHT1).

REMOVE TEMP. INLET (INLT10) & TEMP. 24" PIPE.
REMOVE REMAINDER OF EXIST. 24" PIPE.
INSTALL 24" RCCP.

REMOVE EXIST. 24" PIPE.
INSTALL 24" RCCP.

PC: 596+57.24'WB'
PC: 600+66.41'WBT'
PC: 600+66.67'EBT'
PC: 615+91.64'WB'
PT: 614+72.97'WB'
PC: 615+91.90'EBT'
PT: 614+73.22'EBT'
PT: 618+15.28'EB'

IH 94

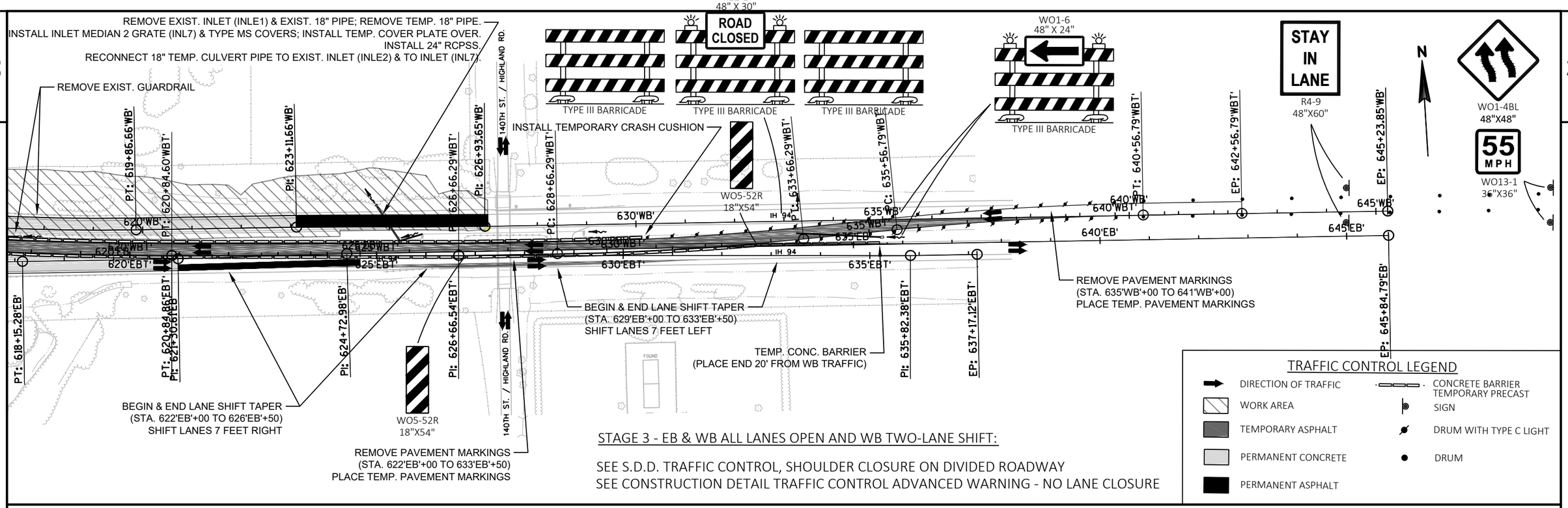
590'WB'
590'WBT'
590'EBT'
595'WB'
595'WBT'
595'EBT'
600'WB'
600'WBT'
600'EBT'
605'WB'
605'WBT'
605'EBT'
610'WB'
610'WBT'
610'EBT'
615'WB'
615'WBT'
615'EBT'
620'WB'
620'WBT'
620'EB'
590'EB'
595'EB'
600'EB'
605'EB'
610'EB'
615'EB'

WO1-4BR
48"X48"

STAY IN LANE
R4-9
48"X60"

TCBP (LEFT IN FROM INTERIM COMPLETION STAGE).

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 3	SHEET 54	E



STAGE 3 - EB & WB ALL LANES OPEN AND WB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - NO LANE CLOSURE

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 3	SHEET 55	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025300_TC_STAGE3.DWG
LAYOUT NAME - SHEET - (5)
PLOT DATE : 6/5/2018 8:29 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

STAGE 4 TRAFFIC

- IH 94 EB AND WB LEFT LANE CLOSURES DURING DESIGNATED HOURS (SEE SPECIAL PROVISIONS).
- IH 94 WB TWO-LANE SHIFT ONTO OUTSIDE SHOULDER AND LANE.

STAGE 4 CONSTRUCTION

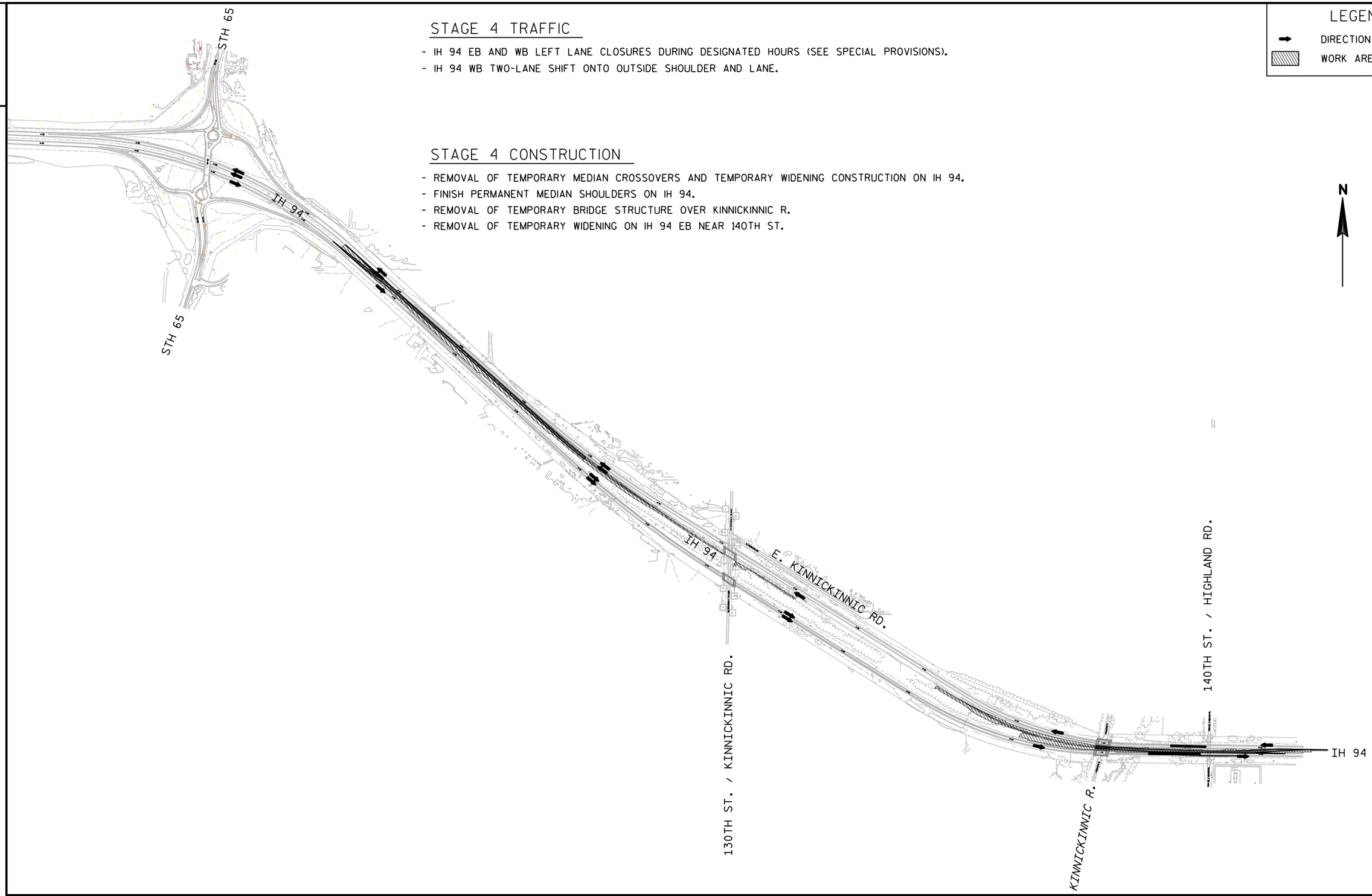
- REMOVAL OF TEMPORARY MEDIAN CROSSOVERS AND TEMPORARY WIDENING CONSTRUCTION ON IH 94.
- FINISH PERMANENT MEDIAN SHOULDERS ON IH 94.
- REMOVAL OF TEMPORARY BRIDGE STRUCTURE OVER KINNICKINNIC R.
- REMOVAL OF TEMPORARY WIDENING ON IH 94 EB NEAR 140TH ST.

LEGEND

DIRECTION OF TRAFFIC

WORK AREA

N

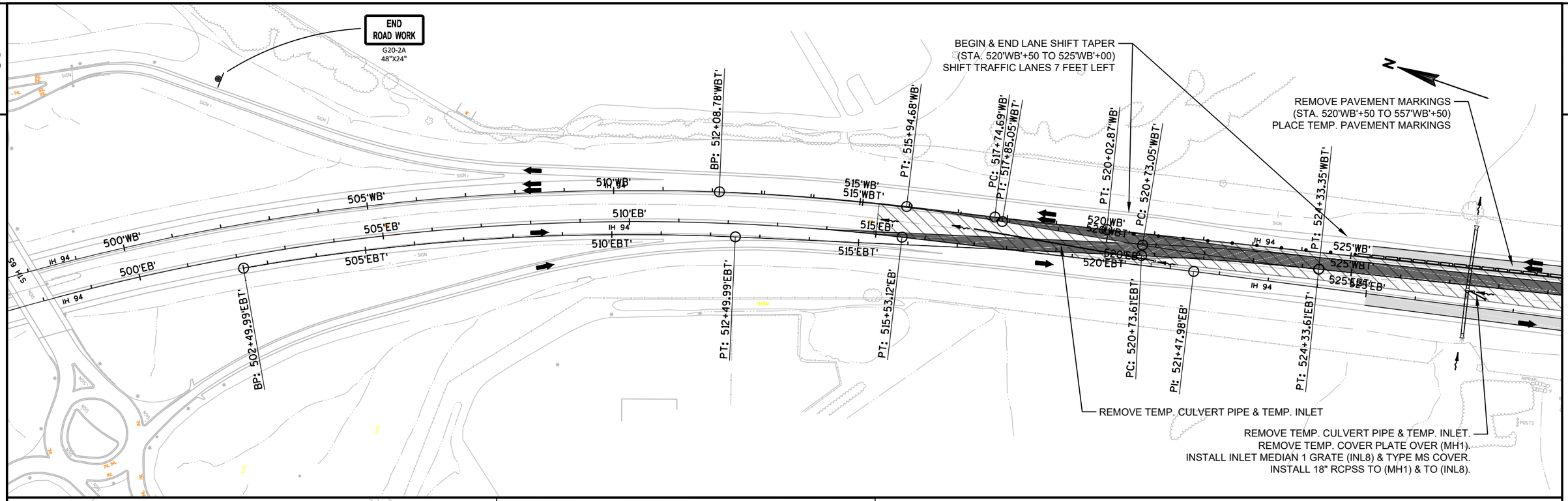


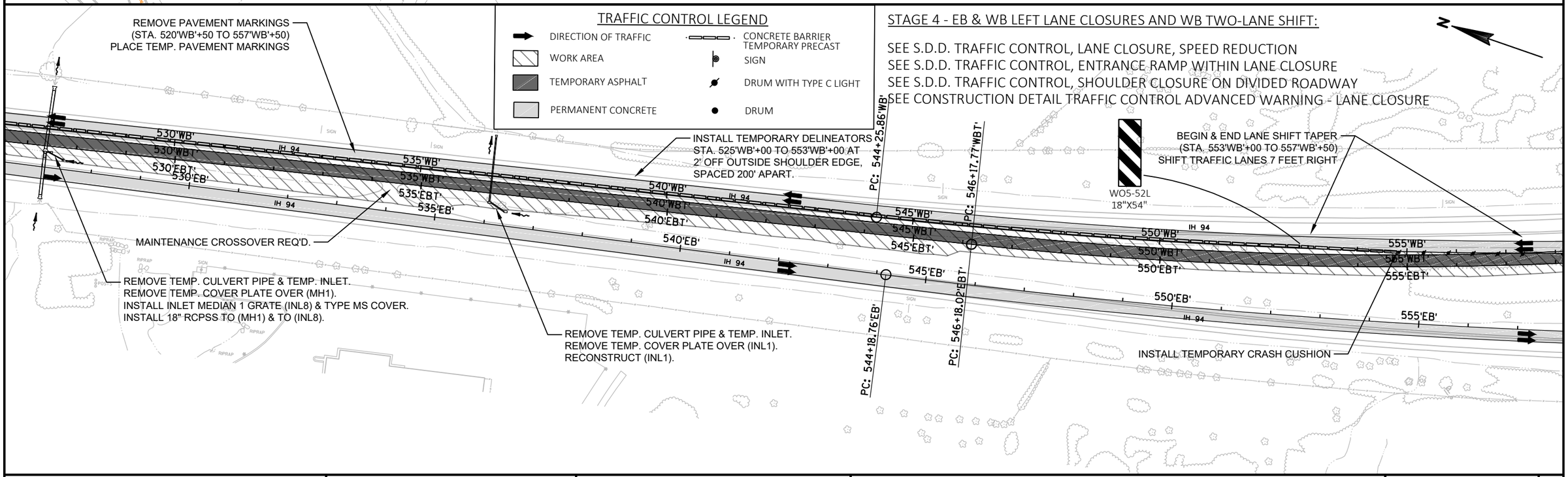
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL OVERVIEW - STAGE 4	SHEET 56	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025399_TC_OVERVIEW_STAGE4.DWG
LAYOUT NAME - overviewSheet - (1)

PLOT DATE : 2/12/2018 8:18 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:1000 FT

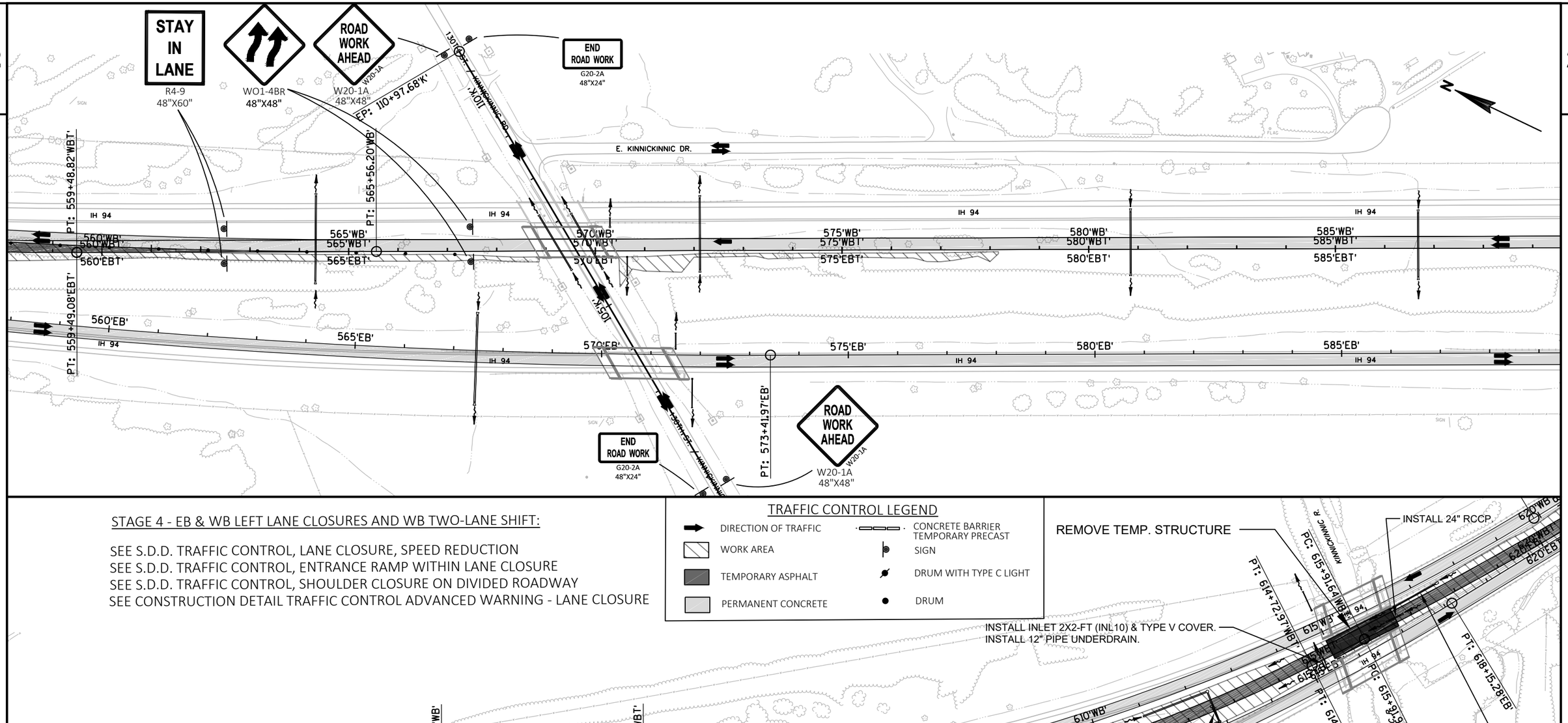
WISDOT/CADDS SHEET 42





PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 4	SHEET 57	E

2



STAGE 4 - EB & WB LEFT LANE CLOSURES AND WB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SEE S.D.D. TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE

TRAFFIC CONTROL LEGEND

- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

REMOVE TEMP. STRUCTURE

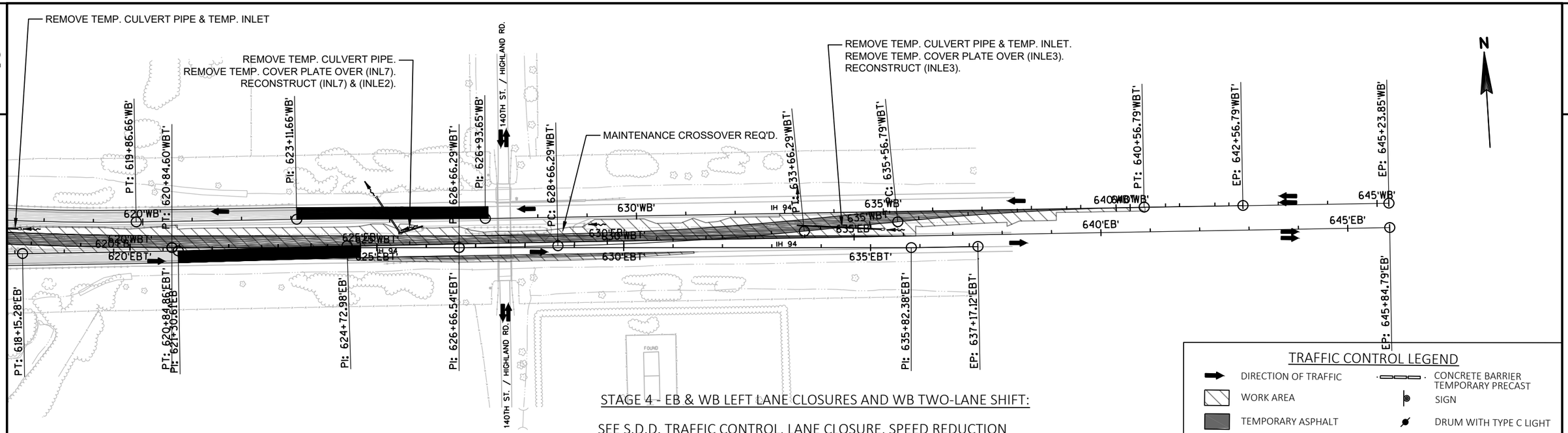
INSTALL 24" RCCP.

INSTALL INLET 2X2-FT (INL10) & TYPE V COVER.
INSTALL 12" PIPE UNDERDRAIN.

REMOVE TEMP. CULVERT PIPE & TEMP. INLET

REMOVE TEMP. CULVERT PIPES & TEMP. MANHOLES.
INSTALL INLET MEDIAN 2 GRATE (INL9) & TYPE MS COVERS.
INSTALL 24" RCPSS TO (INL9).

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 4	SHEET 58	E



STAGE 4 - EB & WB LEFT LANE CLOSURES AND WB TWO-LANE SHIFT:

SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
SEE S.D.D. TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY
SEE CONSTRUCTION DETAIL TRAFFIC CONTROL ADVANCED WARNING - LANE CLOSURE

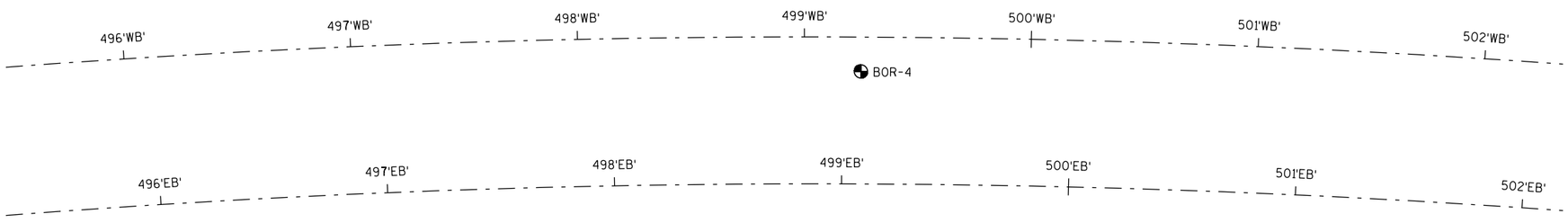
TRAFFIC CONTROL LEGEND

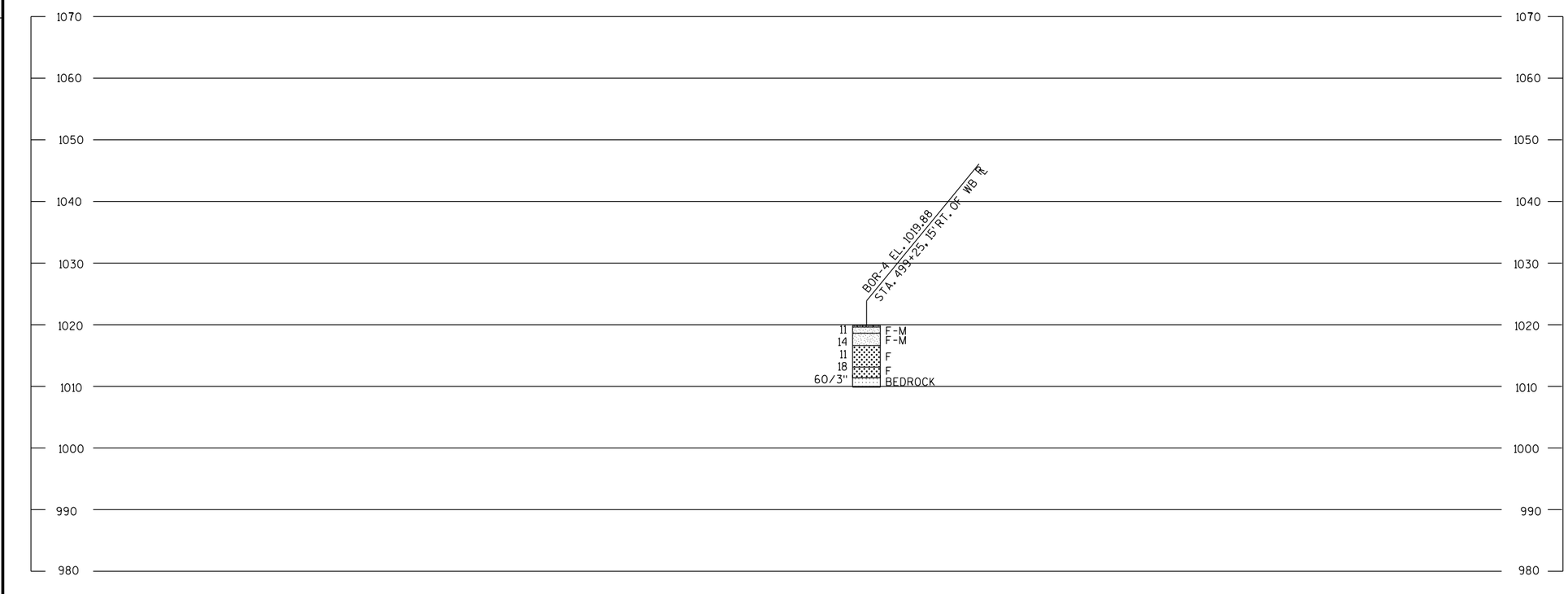
- DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY ASPHALT
- PERMANENT CONCRETE
- PERMANENT ASPHALT
- CONCRETE BARRIER TEMPORARY PRECAST
- SIGN
- DRUM WITH TYPE C LIGHT
- DRUM

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	TRAFFIC CONTROL - STAGE 4	SHEET 59	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\025400_TC_STAGE4.DWG
LAYOUT NAME - SHEET - (5)
PLOT DATE : 5/30/2018 9:06 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
4	10/18/2017	336623	562180
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





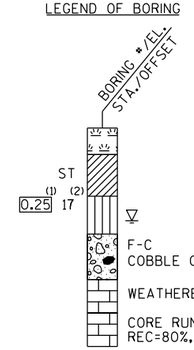
STATE PROJECT NUMBER

1020-03-76

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

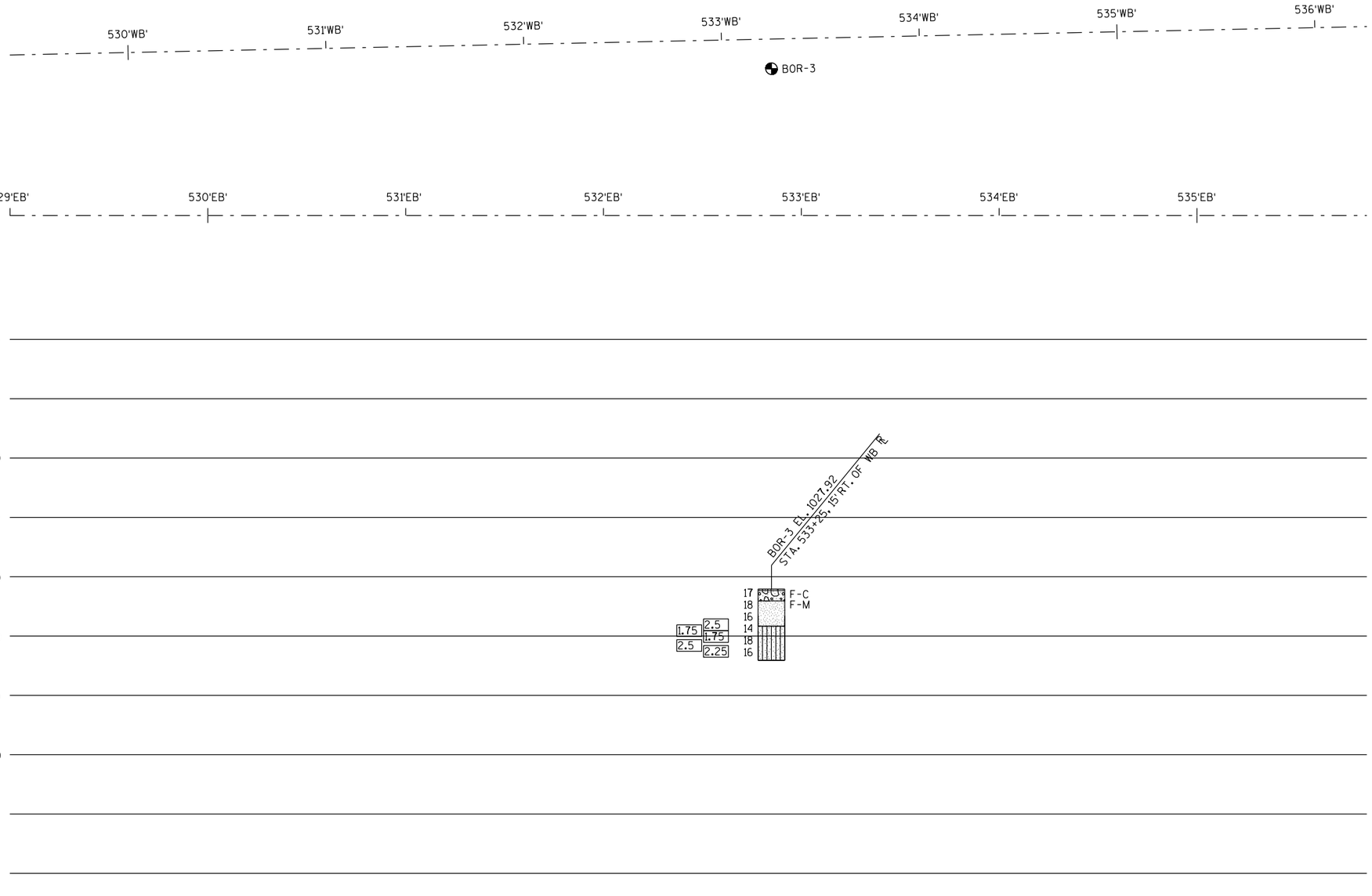
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

SUBSURFACE CONDITIONS IN THE PROJECT AREA CONSIST OF GLACIAL DRIFT UNDERLAIN BY LIMESTONE OR SANDSTONE. SOME EXCAVATIONS AND POST INSTALLATIONS WITHIN THE PROJECT LIMITS CAN BE EXPECTED TO ENCOUNTER SHALLOW DEPTHS TO BEDROCK (EITHER LIMESTONE OR SANDSTONE) DURING CONSTRUCTION OPERATIONS.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	10/18/2017	334597	564877
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



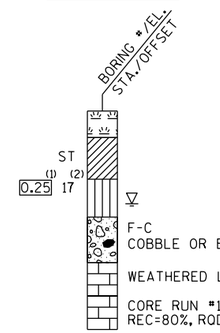
STATE PROJECT NUMBER

1020-03-76

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

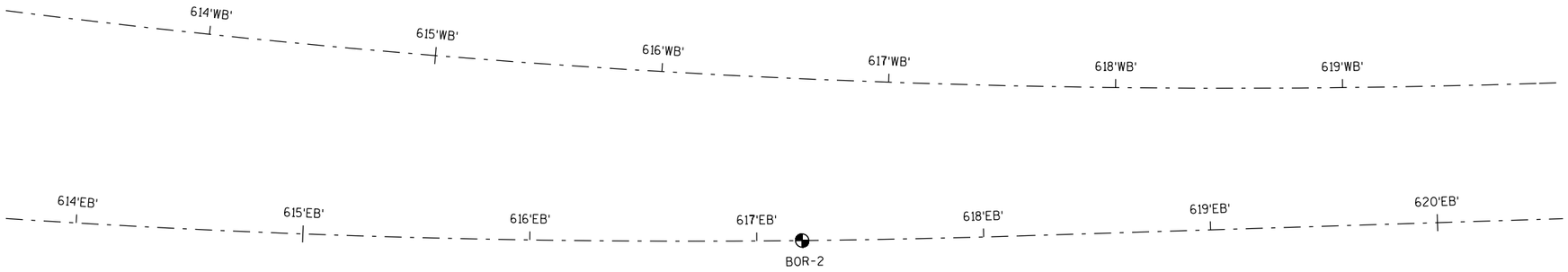
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

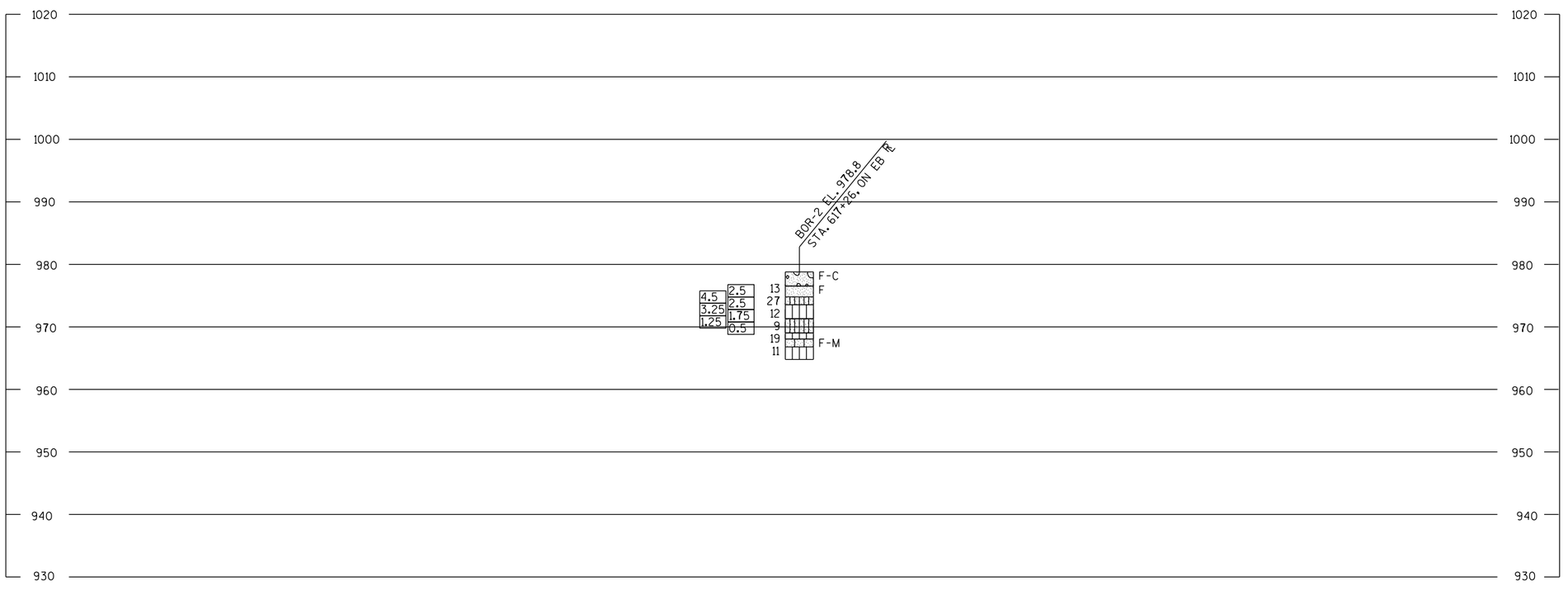
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

SUBSURFACE CONDITIONS IN THE PROJECT AREA CONSIST OF GLACIAL DRIFT UNDERLAIN BY LIMESTONE OR SANDSTONE. SOME EXCAVATIONS AND POST INSTALLATIONS WITHIN THE PROJECT LIMITS CAN BE EXPECTED TO ENCOUNTER SHALLOW DEPTHS TO BEDROCK (EITHER LIMESTONE OR SANDSTONE) DURING CONSTRUCTION OPERATIONS.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
2	10/18/2017	330251	571922
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





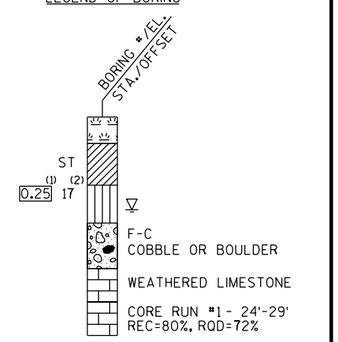
STATE PROJECT NUMBER

1020-03-79

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

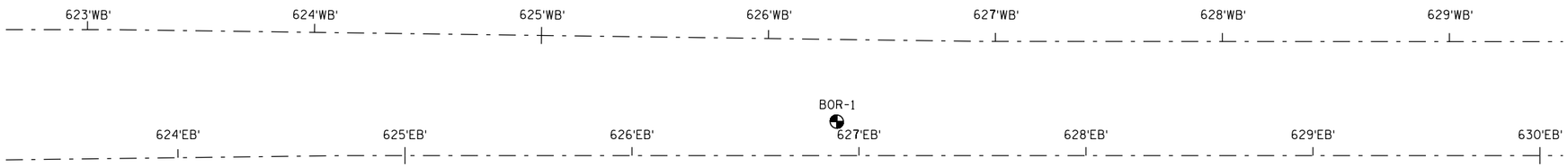
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

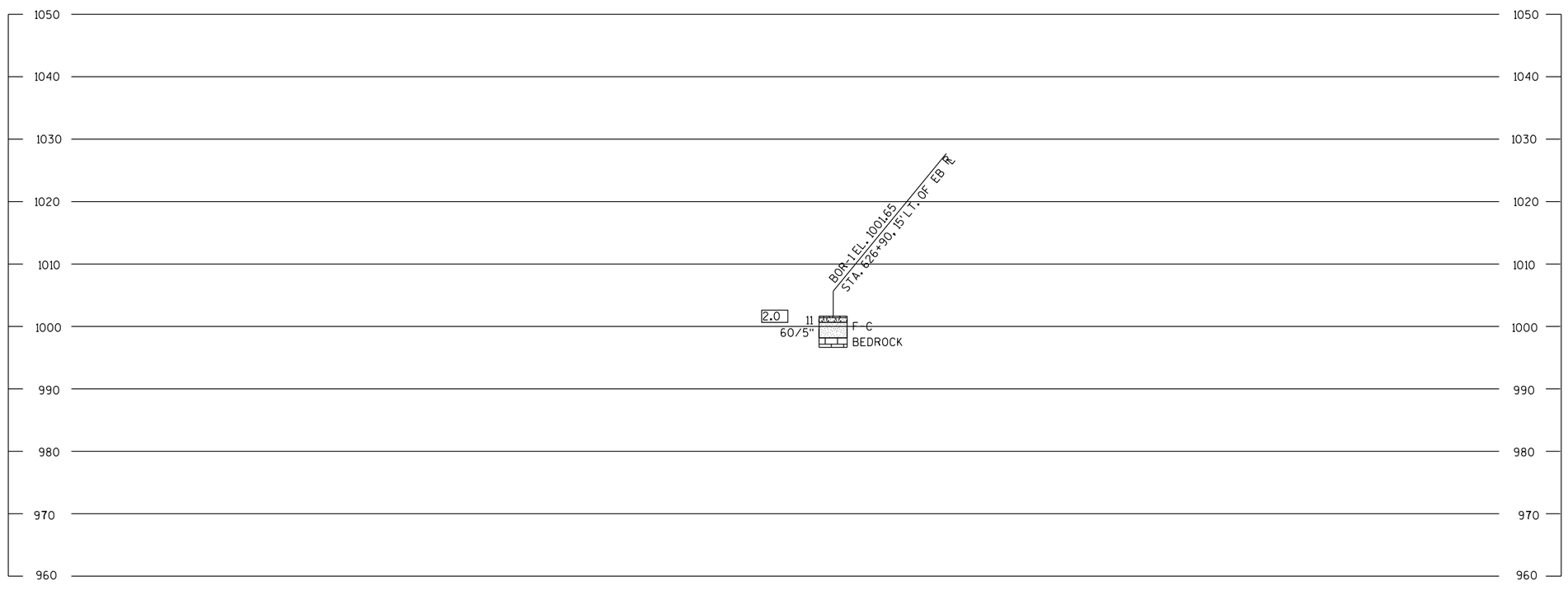
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

SUBSURFACE CONDITIONS IN THE PROJECT AREA CONSIST OF GLACIAL DRIFT UNDERLAIN BY LIMESTONE OR SANDSTONE. SOME EXCAVATIONS AND POST INSTALLATIONS WITHIN THE PROJECT LIMITS CAN BE EXPECTED TO ENCOUNTER SHALLOW DEPTHS TO BEDROCK (EITHER LIMESTONE OR SANDSTONE) DURING CONSTRUCTION OPERATIONS.

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	10/03/2017	330256	572892
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





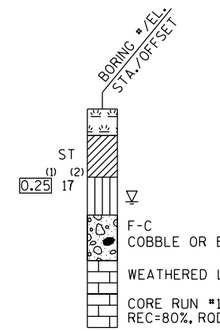
STATE PROJECT NUMBER

1020-03-79

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

SUBSURFACE CONDITIONS IN THE PROJECT AREA CONSIST OF GLACIAL DRIFT UNDERLAIN BY LIMESTONE OR SANDSTONE. SOME EXCAVATIONS AND POST INSTALLATIONS WITHIN THE PROJECT LIMITS CAN BE EXPECTED TO ENCOUNTER SHALLOW DEPTHS TO BEDROCK (EITHER LIMESTONE OR SANDSTONE) DURING CONSTRUCTION OPERATIONS.

Alignment: Alignment - WB EOP 63 plus 12 off CL - Line 'WB'

Arc	PC N	336961.761	E	560675.653	Station	483+73.59	
	CC N	332315.793	E	560466.795			
	PI N	336886.395	E	562352.133	Station	500+51.76	
	TAN	1678.174'					
	DB	S 87° 25' 33.68 E"'					
	DA	S 47° 44' 32.78 E"'					
	LChord Distance	3157.092'	Bearing	S 67° 35' 3.23 E"			
	External Distance	293.519'					
	Middle Ordinate	276.094'					
	Radius	4650.660'					
	DEG	1° 13' 55.17"'					
	DELTA	39° 41' 0.91"'					
	LENGTH	3221.090'					
	PT N	335757.883	E	563594.199	Station	515+94.68	
Tangent	N	335757.883	E	563594.199 Z	Station	515+94.68	
	Distance	180.010'	Bearing	S 47° 44' 32.78 E"			
Arc	PC N	335636.833	E	563727.43	Station	517+74.69	
	CC N	348959.162	E	575831.791			
	PI N	335560.11	E	563811.872	Station	518+88.78	
	TAN	114.092'					
	DB	S 47° 44' 32.78 E"'					
	DA	S 48° 28' 7.53 E"'					
	LChord Distance	228.178'	Bearing	S 48° 6' 20.15 E"			
	External Distance	.362'					
	Middle Ordinate	.362'					
	Radius	18000.000'					
	DEG	0° 19' 5.92"'					
	DELTA	0° 43' 34.75"'					
	LENGTH	228.180'					
	PT N	335484.464	E	563897.28	Station	520+02.87	
Tangent	N	335484.464	E	563897.28 Z	Station	520+02.87	
	Distance	2422.994'	Bearing	S 48° 28' 7.53 E"			
Arc	PC N	333877.951	E	565711.12	Station	544+25.86	
	CC N	343534.817	E	574264.185			
	PI N	333170.102	E	566510.319	Station	554+93.46	
	TAN	1067.600'					
	DB	S 48° 28' 7.53 E"'					
	DA	S 57° 55' 50.71 E"'					
	LChord Distance	2127.924'	Bearing	S 53° 11' 59.12 E"			
	External Distance	44.102'					
	Middle Ordinate	43.951'					
	Radius	12900.000'					
	DEG	0° 26' 38.95"'					
	DELTA	9° 27' 43.18"'					
	LENGTH	2130.344'					
	PT N	332603.267	E	567415.01	Station	565+56.2	
Tangent	N	332603.267	E	567415.01 Z	Station	565+56.2	
	Distance	3101.033'	Bearing	S 57° 55' 50.71 E"			
Arc	PC N	330956.793	E	570042.847	Station	596+57.24	
	CC N	334575.221	E	572309.977			
	PI N	330322.59	E	571055.059	Station	608+51.72	
	TAN	1194.482'					
	DB	S 57° 55' 50.71 E"'					
	DA	S 89° 11' 14.74 E"'					
	LChord Distance	2300.643'	Bearing	S 73° 33' 32.73 E"			
	External Distance	163.925'					
	Middle Ordinate	157.864'					
	Radius	4270.000'					
	DEG	1° 20' 30.56"'					
	DELTA	31° 15' 24.04"'					
	LENGTH	2329.421'					
	PT N	330305.65	E	572249.422	Station	619+86.66	
Tangent	N	330305.65	E	572249.422 Z	Station	619+86.66	
	Distance	325.005'	Bearing	S 89° 11' 14.74 E"			
Tangent	N	330301.041	E	572574.394 Z	Station	623+11.66	
	Distance	381.983'	Bearing	S 88° 26' 14.74 E"			
Tangent	N	330290.625	E	572956.235 Z	Station	626+93.65	
	Distance	1830.207'	Bearing	S 89° 11' 14.74 E"			
End	N	330264.67	E	574786.258 Z	Station	645+23.85	

Alignment Length = 16150.27'

Alignment: Alignment - EB EOP 12 off CL Adjusted - Line 'EB'

Arc	PC N	336896.007	E	560667.578	Station	483+73.59	
	CC N	332309.617	E	560469.621			
	PI N	336824.575	E	562322.558	Station	500+30.11	
	TAN	1656.521'					
	DB	S 87° 31' 42.75 E'''					
	DA	S 47° 50' 42 E'''					
	LChord Distance	3116.358'	Bearing	S 67° 41' 12.38 E''			
	External Distance	289.731'					
	Middle Ordinate	272.531'					
	Radius	4590.660'					
	DEG	1° 14' 53.14'''					
	DELTA	39° 41' 0.75'''					
	LENGTH	3179.530'					
	PT N	335712.82	E	563550.59	Station	515+53.12	
Tangent	N	335712.82	E	563550.59 Z	Station	515+53.12	
	Distance	594.860'	Bearing	S 47° 50' 42 E''			
Tangent	N	335313.587	E	563991.579 Z	Station	521+47.98	
	Distance	2270.781'	Bearing	S 47° 16' 2.94 E''			
Arc	PC N	333772.687	E	565659.535	Station	544+18.76	
	CC N	345304.802	E	576313.188			
	PI N	332778	E	566736.24	Station	558+84.6	
	TAN	1465.844'					
	DB	S 47° 16' 2.94 E'''					
	DA	S 57° 56' 7.78 E'''					
	LChord Distance	2918.992'	Bearing	S 52° 36' 5.36 E''			
	External Distance	68.281'					
	Middle Ordinate	67.986'					
	Radius	15700.000'					
	DEG	0° 21' 53.79'''					
	DELTA	10° 40' 4.84'''					
	LENGTH	2923.213'					
	PT N	331999.822	E	567978.471	Station	573+41.97	
Tangent	N	331999.822	E	567978.471 Z	Station	573+41.97	
	Distance	1991.515'	Bearing	S 57° 56' 7.78 E''			
Arc	PC N	330942.579	E	569666.183	Station	593+33.49	
	CC N	334798.481	E	572081.658			
	PI N	330266.986	E	570744.654	Station	606+06.09	
	TAN	1272.606'					
	DB	S 57° 56' 7.78 E'''					
	DA	S 89° 11' 14.74 E'''					
	LChord Distance	2451.143'	Bearing	S 73° 33' 41.26 E''			
	External Distance	174.619'					
	Middle Ordinate	168.165'					
	Radius	4550.000'					
	DEG	1° 15' 33.29'''					
	DELTA	31° 15' 6.97'''					
	LENGTH	2481.794'					
	PT N	330248.938	E	572017.132	Station	618+15.28	
Tangent	N	330248.938	E	572017.132 Z	Station	618+15.28	
	Distance	315.330'	Bearing	S 89° 11' 14.74 E''			
Tangent	N	330244.467	E	572332.43 Z	Station	621+30.61	
	Distance	342.371'	Bearing	S 89° 56' 15.99 E''			
Tangent	N	330244.095	E	572674.801 Z	Station	624+72.98	
	Distance	2111.806'	Bearing	S 89° 12' 54.88 E''			
End	N	330215.171	E	574786.41 Z	Station	645+84.79	

Alignment Length = 16211.20'

Alignment: 130th Street - (1) - Line 'K'

Tangent	N	331759.435	E	567739.456 Z	Station	100+00	
	Distance	1097.679'	Bearing	N 1° 45' 52.3 E''			
End	N	332856.593	E	567773.256 Z	Station	110+97.68	

Alignment Length = 1097.68'

Alignment: Alignment - TEMP WB EOP (6) - Line 'WBT'

Arc	PC	N 336001.909	E 563302.493		Station	512+08.78	
	CC	N 332331.232	E 560447.913				
	PI	N 335824.799	E 563530.237		Station	514+97.29	
		TAN 288.506'					
		DB S 52° 7' 43.74 E'''					
		DA S 45° 1' 41.43 E'''					
		LChord Distance 575.904'	Bearing S 48° 34' 42.58 E''				
		External Distance 8.941'					
		Middle Ordinate 8.924'					
		Radius 4650.000'					
		DEG 1° 13' 55.8'''					
		DELTA 7° 6' 2.31'''					
		LENGTH 576.272'					
	PT	N 335620.895	E 563734.342		Station	517+85.05	
Tangent		N 335620.895	E 563734.342	Z	Station	517+85.05	
	Distance	288.000'	Bearing S 45° 1' 41.43 E''				
Arc	PC	N 335417.349	E 563938.089		Station	520+73.05	
	CC	N 339662.075	E 568178.643				
	PI	N 335289.989	E 564065.574		Station	522+53.26	
		TAN 180.203'					
		DB S 45° 1' 41.43 E'''					
		DA S 48° 28' 7.53 E'''					
		LChord Distance 360.243'	Bearing S 46° 44' 54.48 E''				
		External Distance 2.705'					
		Middle Ordinate 2.704'					
		Radius 6000.000'					
		DEG 0° 57' 17.75'''					
		DELTA 3° 26' 26.1'''					
		LENGTH 360.297'					
	PT	N 335170.509	E 564200.473		Station	524+33.35	
Tangent		N 335170.509	E 564200.473	Z	Station	524+33.35	
	Distance	2184.414'	Bearing S 48° 28' 7.53 E''				
Arc	PC	N 333722.181	E 565835.713		Station	546+17.77	
	CC	N 339755.851	E 571179.721				
	PI	N 333279.913	E 566335.057		Station	552+84.81	
		TAN 667.043'					
		DB S 48° 28' 7.53 E'''					
		DA S 57° 55' 50.71 E'''					
		LChord Distance 1329.540'	Bearing S 53° 11' 59.12 E''				
		External Distance 27.555'					
		Middle Ordinate 27.461'					
		Radius 8060.000'					
		DEG 0° 42' 39.12'''					
		DELTA 9° 27' 43.18'''					
		LENGTH 1331.052'					
	PT	N 332925.75	E 566900.314		Station	559+48.82	
Tangent		N 332925.75	E 566900.314	Z	Station	559+48.82	
	Distance	4117.592'	Bearing S 57° 55' 50.71 E''				
Arc	PC	N 330739.54	E 570389.59		Station	600+66.41	
	CC	N 333290.235	E 571987.731				
	PI	N 330359.192	E 570996.64		Station	607+82.77	
		TAN 716.362'					
		DB S 57° 55' 50.71 E'''					
		DA S 84° 42' 17.14 E'''					
		LChord Distance 1393.794'	Bearing S 71° 19' 3.92 E''				
		External Distance 84.071'					
		Middle Ordinate 81.786'					
		Radius 3010.000'					
		DEG 1° 54' 12.65'''					
		DELTA 26° 46' 26.43'''					
		LENGTH 1406.557'					
	PT	N 330293.081	E 571709.945		Station	614+72.97	
Tangent		N 330293.081	E 571709.945	Z	Station	614+72.97	
	Distance	118.671'	Bearing S 84° 42' 17.14 E''				

2

Arc	PC N	330282.129	E	571828.109	Station	615+91.64		
	CC N	338307.732	E	572571.949				
	PI N	330259.375	E	572073.613	Station	618+38.19		
		TAN	246.557'					
		DB	S 84° 42' 17.14 E'''					
		DA	S 88° 12' 32.55 E'''					
		LChord Distance	492.883'	Bearing	S 86° 27' 24.84 E''			
		External Distance	3.770'					
		Middle Ordinate	3.768'					
		Radius	8060.000'					
		DEG	0° 42' 39.12'''					
		DELTA	3° 30' 15.41'''					
		LENGTH	492.959'					
	PT N	330251.669	E	572320.049	Station	620+84.6		
Tangent	N	330251.669	E	572320.049 Z	Station	620+84.6		
	Distance	581.689'	Bearing	S 88° 12' 32.55 E''				
Tangent	N	330233.49	E	572901.454 Z	Station	626+66.29		
	Distance	200.000'	Bearing	S 89° 12' 54.88 E''				
Arc	PC N	330230.75	E	573101.435	Station	628+66.29		
	CC N	336230.187	E	573183.612				
	PI N	330227.324	E	573351.557	Station	631+16.43		
		TAN	250.145'					
		DB	S 89° 12' 54.88 E'''					
		DA	N 86° 0' 36.4 E'''					
		LChord Distance	499.855'	Bearing	N 88° 23' 50.76 E''			
		External Distance	5.212'					
		Middle Ordinate	5.208'					
		Radius	6000.000'					
		DEG	0° 57' 17.75'''					
		DELTA	4° 46' 28.73'''					
		LENGTH	500.000'					
	PT N	330244.729	E	573601.095	Station	633+66.29		
Tangent	N	330244.729	E	573601.095 Z	Station	633+66.29		
	Distance	190.500'	Bearing	N 86° 0' 36.4 E''				

Arc	PC N	330257.985	E	573791.133	Station	635+56.79		
	CC N	324272.526	E	574208.616				
	PI N	330275.39	E	574040.672	Station	638+06.93		
		TAN	250.145'					
		DB	N 86° 0' 36.4 E'''					
		DA	S 89° 12' 54.88 E'''					
		LChord Distance	499.855'	Bearing	N 88° 23' 50.76 E''			
		External Distance	5.212'					
		Middle Ordinate	5.208'					
		Radius	6000.000'					
		DEG	0° 57' 17.75'''					
		DELTA	4° 46' 28.73'''					
		LENGTH	500.000'					
	PT N	330271.964	E	574290.793	Station	640+56.79		
Tangent	N	330271.964	E	574290.793 Z	Station	640+56.79		
	Distance	200.000'	Bearing	S 89° 12' 54.88 E''				
End	N	330269.224	E	574490.774 Z	Station	642+56.79		

Alignment Length = 13048.00'

2

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	ALIGNMENT DATA	SHEET 67	E

Alignment: Alignment - TEMP EB EOP(1) - Line 'EBT'

Arc	PC N	336435.291	E	562427.773	Station	502+49.99	
	CC N	332315.637	E	560458.813			
	PI N	336218.814	E	562880.708	Station	507+52	
	TAN	502.008'					
	DB	S 64° 27' 17.49 E'''					
	DA	S 51° 54' 23.41 E'''					
	LChord Distance	998.003'	Bearing	S 58° 10' 50.45 E''			
	External Distance	27.514'					
	Middle Ordinate	27.349'					
	Radius	4566.000'					
	DEG	1° 15' 17.41'''					
	DELTA	12° 32' 54.07'''					
	LENGTH	1000.000'					
	PT N	335909.102	E	563275.791	Station	512+49.99	
Tangent	N	335909.102	E	563275.791 Z	Station	512+49.99	
	Distance	823.618'	Bearing	S 51° 54' 23.41 E''			
Arc	PC N	335400.974	E	563923.982	Station	520+73.61	
	CC N	330678.943	E	560222.303			
	PI N	335289.89	E	564065.686	Station	522+53.66	
	TAN	180.054'					
	DB	S 51° 54' 23.41 E'''					
	DA	S 48° 28' 7.53 E'''					
	LChord Distance	359.946'	Bearing	S 50° 11' 15.47 E''			
	External Distance	2.701'					
	Middle Ordinate	2.700'					
	Radius	6000.000'					
	DEG	0° 57' 17.75'''					
	DELTA	3° 26' 15.89'''					
	LENGTH	360.000'					
	PT N	335170.509	E	564200.473	Station	524+33.61	
Tangent	N	335170.509	E	564200.473 Z	Station	524+33.61	
	Distance	2184.414'	Bearing	S 48° 28' 7.53 E''			
Arc	PC N	333722.181	E	565835.713	Station	546+18.02	
	CC N	339755.851	E	571179.721			
	PI N	333279.913	E	566335.057	Station	552+85.07	
	TAN	667.043'					
	DB	S 48° 28' 7.53 E'''					
	DA	S 57° 55' 50.71 E'''					
	LChord Distance	1329.540'	Bearing	S 53° 11' 59.12 E''			
	External Distance	27.555'					
	Middle Ordinate	27.461'					
	Radius	8060.000'					
	DEG	0° 42' 39.12'''					
	DELTA	9° 27' 43.18'''					
	LENGTH	1331.052'					
	PT N	332925.75	E	566900.314	Station	559+49.08	
Tangent	N	332925.75	E	566900.314 Z	Station	559+49.08	
	Distance	4117.592'	Bearing	S 57° 55' 50.71 E''			
Arc	PC N	330739.54	E	570389.59	Station	600+66.67	
	CC N	333290.235	E	571987.731			
	PI N	330359.192	E	570996.64	Station	607+83.03	
	TAN	716.362'					
	DB	S 57° 55' 50.71 E'''					
	DA	S 84° 42' 17.13 E'''					
	LChord Distance	1393.794'	Bearing	S 71° 19' 3.92 E''			
	External Distance	84.071'					
	Middle Ordinate	81.786'					
	Radius	3010.000'					
	DEG	1° 54' 12.65'''					
	DELTA	26° 46' 26.42'''					
	LENGTH	1406.557'					
	PT N	330293.081	E	571709.944	Station	614+73.22	
Tangent	N	330293.081	E	571709.944 Z	Station	614+73.22	
	Distance	118.671'	Bearing	S 84° 42' 17.13 E''			

Arc	PC	N 330282.129		E 571828.109		Station	615+91.9
	CC	N 338307.732		E 572571.949			
	PI	N 330259.375		E 572073.613		Station	618+38.45
			TAN	246.557'			
			DB	S 84° 42' 17.13 E'"			
			DA	S 88° 12' 32.55 E'"			
			LChord Distance	492.883'	Bearing	S 86° 27' 24.84 E"	
			External Distance	3.770'			
			Middle Ordinate	3.768'			
			Radius	8060.000'			
			DEG	0° 42' 39.12'"			
			DELTA	3° 30' 15.42'"			
			LENGTH	492.960'			
	PT	N 330251.669		E 572320.05		Station	620+84.86
Tangent		N 330251.669		E 572320.05	Z	Station	620+84.86
	Distance	581.688'	Bearing	S 88° 12' 32.55 E"			
Tangent		N 330233.49		E 572901.454	Z	Station	626+66.54
	Distance	915.832'	Bearing	S 88° 12' 32.55 E"			
Tangent		N 330204.867		E 573816.839	Z	Station	635+82.38
	Distance	134.744'	Bearing	S 89° 12' 32.57 E"			
End		N 330203.007		E 573951.571	Z	Station	637+17.12

Alignment Length = 13467.13'

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0002	201.0105	Clearing	STA	65.000	43.000	6.000	8.000	8.000
0004	201.0205	Grubbing	STA	65.000	43.000	6.000	8.000	8.000
0006	203.0100	Removing Small Pipe Culverts	EACH	27.000	19.000	4.000	1.000	3.000
0008	203.0200	Removing Old Structure (station) 01. 569+50'WB'	LS	1.000	1.000			
0010	203.0200	Removing Old Structure (station) 01. 571+00'EB'	LS	1.000		1.000		
0012	203.0700.S	Removing Old Structure Over Waterway With Debris Capture System (station) 01. 616+00'EB'	LS	1.000				1.000
0014	203.0700.S	Removing Old Structure Over Waterway With Debris Capture System (station) 01. 616+00'WB'	LS	1.000			1.000	
0016	204.0100	Removing Pavement	SY	51,951.000	23,129.000	17,876.000	3,373.000	7,573.000
0018	204.0120	Removing Asphaltic Surface Milling	SY	690.000				690.000
0020	204.0170	Removing Fence	LF	21,507.000	9,156.000	7,134.000	1,700.000	3,517.000
0022	204.0180	Removing Delineators and Markers	EACH	55.000	22.000	18.000	4.000	11.000
0024	204.0210	Removing Manholes	EACH	2.000	1.000			1.000
0026	204.0220	Removing Inlets	EACH	14.000	9.000	1.000	3.000	1.000
0028	205.0100	Excavation Common	CY	160,970.000	82,519.000	29,693.000	23,396.000	25,362.000
0030	206.1000	Excavation for Structures Bridges (structure) 01. B-55-254	LS	1.000	1.000			
0032	206.1000	Excavation for Structures Bridges (structure) 01. B-55-255	LS	1.000		1.000		
0034	206.1000	Excavation for Structures Bridges (structure) 01. B-55-256	LS	1.000			1.000	
0036	206.1000	Excavation for Structures Bridges (structure) 01. B-55-257	LS	1.000				1.000
0038	208.0100	Borrow	CY	142,450.000	105,327.000	27,105.000	4,508.000	5,510.000
0040	208.1100	Select Borrow	CY	18,121.000	8,565.000	1,822.000	4,295.000	3,439.000
0042	210.1500	Backfill Structure Type A	TON	2,895.000	670.000	715.000	760.000	750.000
0044	211.0200	Prepare Foundation for Concrete Pavement (project) 01. 1020-03-76	LS	1.000	1.000			
0046	211.0200	Prepare Foundation for Concrete Pavement (project) 01. 1020-03-77	LS	1.000		1.000		
0048	211.0200	Prepare Foundation for Concrete Pavement (project) 01. 1020-03-78	LS	1.000			1.000	
0050	211.0200	Prepare Foundation for Concrete Pavement (project) 01. 1020-03-79	LS	1.000				1.000
0052	213.0100	Finishing Roadway (project) 01. 1020-03-76	EACH	1.000	1.000			
0054	213.0100	Finishing Roadway (project) 01. 1020-03-77	EACH	1.000		1.000		
0056	213.0100	Finishing Roadway (project) 01. 1020-03-78	EACH	1.000			1.000	
0058	213.0100	Finishing Roadway (project) 01. 1020-03-79	EACH	1.000				1.000
0060	214.0100	Obliterating Old Road	STA	42.000	42.000			
0062	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,755.000	2,849.000	659.000	723.000	524.000
0064	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	91,793.000	45,275.000	21,545.000	12,871.000	12,102.000

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0066	312.0110	Select Crushed Material	TON	89,032.000	39,163.000	31,456.000	4,358.000	14,055.000
0068	415.0125	Concrete Pavement 12 1/2-Inch	SY	55,184.000	25,824.000	19,251.000	2,490.000	7,619.000
0070	415.0410	Concrete Pavement Approach Slab	SY	464.000	136.000	136.000	96.000	96.000
0072	416.0620	Drilled Dowel Bars	EACH	36.000	18.000	18.000		
0074	416.1110	Concrete Shoulder Rumble Strips	LF	18,770.000	8,596.000	6,671.000	858.000	2,645.000
0076	440.4410	Incentive IRI Ride	DOL	15,260.000	6,640.000	5,180.000	1,060.000	2,380.000
0078	450.4000	HMA Cold Weather Paving	TON	2,030.000		1,245.000		785.000
0080	455.0605	Tack Coat	GAL	3,773.000	1,537.000	1,085.000	465.000	686.000
0082	460.2000	Incentive Density HMA Pavement	DOL	5,760.000	2,190.000	1,650.000	790.000	1,130.000
0084	460.6444	HMA Pavement 4 MT 58-34 H	TON	6,850.000	2,350.000	2,570.000	670.000	1,260.000
0086	460.7423	HMA Pavement 3 HT 58-28 H	TON	2,338.000	1,378.000		435.000	525.000
0088	460.7444	HMA Pavement 4 HT 58-34 H	TON	895.000	590.000		125.000	180.000
0090	465.0125	Asphaltic Surface Temporary	TON	10,780.000	8,015.000		2,680.000	85.000
0092	465.0400	Asphaltic Shoulder Rumble Strips	LF	24,829.000	9,638.000	7,372.000	2,535.000	5,284.000
0094	501.1000.S	Ice Hot Weather Concreting	LB	20,385.000	5,055.000	5,095.000	5,130.000	5,105.000
0096	502.0100	Concrete Masonry Bridges	CY	2,717.000	674.000	679.000	684.000	680.000
0098	502.3200	Protective Surface Treatment	SY	4,356.000	1,113.000	1,113.000	1,065.000	1,065.000
0100	502.3210	Pigmented Surface Sealer	SY	628.000	162.000	162.000	152.000	152.000
0102	503.0155	Prestressed Girder Type I 54W-Inch	LF	3,952.000	1,080.000	1,080.000	896.000	896.000
0104	505.0400	Bar Steel Reinforcement HS Structures	LB	41,000.000	9,820.000	10,260.000	10,460.000	10,460.000
0106	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	335,200.000	85,670.000	86,290.000	81,620.000	81,620.000
0108	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	8,600.000	2,150.000	2,150.000	2,150.000	2,150.000
0110	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	68.000	18.000	18.000	16.000	16.000
0112	506.4000	Steel Diaphragms (structure) 01. B-55-254	EACH	16.000	16.000			
0114	506.4000	Steel Diaphragms (structure) 01. B-55-255	EACH	16.000		16.000		
0116	506.4000	Steel Diaphragms (structure) 01. B-55-256	EACH	14.000			14.000	
0118	506.4000	Steel Diaphragms (structure) 01. B-55-257	EACH	14.000				14.000
0120	509.5100.S	Polymer Overlay	SY	1,526.000			763.000	763.000
0122	511.1200	Temporary Shoring (structure) 01. B-55-254	SF	158.000	158.000			
0124	516.0500	Rubberized Membrane Waterproofing	SY	148.000	38.000	38.000	36.000	36.000
0126	520.2012	Culvert Pipe Temporary 12-Inch	LF	397.000	397.000			
0128	520.2018	Culvert Pipe Temporary 18-Inch	LF	400.000	35.000		365.000	
0130	520.2024	Culvert Pipe Temporary 24-Inch	LF	963.000	250.000		135.000	578.000
0132	520.2048	Culvert Pipe Temporary 48-Inch	LF	10.000	10.000			
0134	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	6.000	2.000	2.000	1.000	1.000
0136	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	1,084.000	1,058.000			26.000
0138	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	100.000		100.000		
0140	522.0148	Culvert Pipe Reinforced Concrete Class III 48-Inch	LF	88.000		88.000		
0142	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	274.000		176.000		98.000
0144	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete	EACH	21.000	17.000		1.000	3.000

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty	Qty
		24-Inch						
0146	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	6.000		4.000		2.000
0148	522.1048	Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	EACH	2.000		2.000		
0150	522.1060	Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	EACH	2.000	1.000	1.000		
0152	526.0100	Temporary Structure (station) 01. 615+92'EBT'	LS	1.000				1.000
0154	550.0500	Pile Points	EACH	140.000	36.000	36.000	34.000	34.000
0156	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	5,390.000	1,260.000	900.000	1,530.000	1,700.000
0158	601.0586	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBTT	LF	96.000	44.000	20.000	10.000	22.000
0160	603.8000	Concrete Barrier Temporary Precast Delivered	LF	39,475.000	25,075.000		3,800.000	10,600.000
0162	603.8125	Concrete Barrier Temporary Precast Installed	LF	43,075.000	28,075.000		3,800.000	11,200.000
0164	604.0500	Slope Paving Crushed Aggregate	SY	1,225.000	620.000	605.000		
0166	606.0200	Riprap Medium	CY	75.000	42.000	14.000	6.000	13.000
0168	606.0300	Riprap Heavy	CY	2,929.000	18.000	15.000	1,736.000	1,160.000
0170	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	14.000	14.000			
0172	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	260.000	130.000			130.000
0174	608.0360	Storm Sewer Pipe Reinforced Concrete Class III 60-Inch	LF	212.000	124.000	88.000		
0176	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	82.000			82.000	
0178	611.0430	Reconstructing Inlets	EACH	4.000	1.000		3.000	
0180	611.0545	Manhole Covers Type L	EACH	2.000	1.000			1.000
0182	611.0612	Inlet Covers Type C	EACH	1.000	1.000			
0184	611.0642	Inlet Covers Type MS	EACH	16.000	10.000		4.000	2.000
0186	611.0654	Inlet Covers Type V	EACH	6.000	2.000	2.000	1.000	1.000
0188	611.2004	Manholes 4-FT Diameter	EACH	2.000	1.000			1.000
0190	611.2008	Manholes 8-FT Diameter	EACH	1.000	1.000			
0192	611.3220	Inlets 2x2-FT	EACH	6.000	2.000	2.000	1.000	1.000
0194	611.3901	Inlets Median 1 Grate	EACH	9.000	8.000		1.000	
0196	611.3902	Inlets Median 2 Grate	EACH	3.000	1.000		1.000	1.000
0198	611.8120.S	Cover Plates Temporary	EACH	5.000	4.000		1.000	
0200	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	220.000	62.000	94.000	44.000	20.000
0202	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	960.000	250.000	250.000	230.000	230.000
0204	613.1100.S	Cable Barrier Type 1	LF	4,370.000	3,400.000			970.000
0206	613.1200.S	Cable Barrier End Terminal Type 1	EACH	4.000	2.000			2.000
0208	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	16.000	4.000	4.000	4.000	4.000

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0210	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000				2.000
0212	614.0230	Steel Thrie Beam	LF	137.500				137.500
0214	614.0360	Steel Plate Beam Guard Temporary	LF	480.000	480.000			
0216	614.0380	Steel Plate Beam Guard Energy Absorbing Terminal Temporary	EACH	2.000	2.000			
0218	614.0905	Crash Cushions Temporary	EACH	10.000	3.000		2.000	5.000
0220	614.0920	Salvaged Rail	LF	3,520.000	465.000	685.000	995.000	1,375.000
0222	614.0925	Salvaged Guardrail End Treatments	EACH	9.000	2.000	3.000	2.000	2.000
0224	614.2300	MGS Guardrail 3	LF	2,326.000	763.000	338.000	800.000	425.000
0226	614.2500	MGS Thrie Beam Transition	LF	285.000	79.000	79.000	79.000	48.000
0228	614.2610	MGS Guardrail Terminal EAT	EACH	7.000	2.000	2.000	2.000	1.000
0230	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000				1.000
0232	616.0100	Fence Woven Wire (height) 01. 4'	LF	20,730.000	8,830.000	7,100.000	1,450.000	3,350.000
0234	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1020-03-76	EACH	1.000	1.000			
0236	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1020-03-77	EACH	1.000		1.000		
0238	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1020-03-78	EACH	1.000			1.000	
0240	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1020-03-79	EACH	1.000				1.000
0242	619.1000	Mobilization	EACH	1.000	0.450	0.350	0.050	0.150
0244	624.0100	Water	MGAL	957.000	481.000	220.000	133.000	123.000
0246	625.0100	Topsoil	SY	59,980.000	21,490.000	14,215.000	2,625.000	21,650.000
0248	625.0500	Salvaged Topsoil	SY	183,920.000	64,470.000	46,645.000	7,875.000	64,930.000
0250	627.0200	Mulching	SY	239,900.000	85,960.000	56,860.000	10,500.000	86,580.000
0252	628.1104	Erosion Bales	EACH	500.000	200.000	150.000	50.000	100.000
0254	628.1504	Silt Fence	LF	2,400.000	1,400.000	750.000		250.000
0256	628.1520	Silt Fence Maintenance	LF	2,400.000	1,400.000	750.000		250.000
0258	628.1905	Mobilizations Erosion Control	EACH	16.000	5.000	4.000	3.000	4.000
0260	628.1910	Mobilizations Emergency Erosion Control	EACH	16.000	5.000	4.000	3.000	4.000
0262	628.2002	Erosion Mat Class I Type A	SY	8,721.000	666.000	5,611.000	1,333.000	1,111.000
0264	628.2023	Erosion Mat Class II Type B	SY	4,917.000			2,667.000	2,250.000
0266	628.7005	Inlet Protection Type A	EACH	19.000	6.000	6.000	5.000	2.000
0268	628.7504	Temporary Ditch Checks	LF	2,240.000	720.000	540.000	420.000	560.000
0270	628.7555	Culvert Pipe Checks	EACH	10.000				10.000
0272	629.0210	Fertilizer Type B	CWT	152.000	54.000	36.000	7.000	55.000
0274	630.0120	Seeding Mixture No. 20	LB	6,481.000	2,321.000	1,535.000	285.000	2,340.000
0276	630.0200	Seeding Temporary	LB	6,481.000	2,321.000	1,535.000	285.000	2,340.000
0278	633.0100	Delineator Posts Steel	EACH	65.000	26.000	20.000	6.000	13.000
0280	633.0500	Delineator Reflectors	EACH	65.000	26.000	20.000	6.000	13.000

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0282	633.1100	Delineators Temporary	EACH	126.000	75.000		40.000	11.000
0284	633.5200	Markers Culvert End	EACH	38.000	19.000	9.000	4.000	6.000
0286	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	13.000	4.000	8.000		1.000
0288	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	6.000	1.000	1.000	2.000	2.000
0290	635.0200	Sign Supports Structural Steel HS	LB	3,900.000	3,900.000			
0292	635.0300	Sign Supports Replacing Base Connection Bolts	EACH	16.000	8.000	8.000		
0294	636.0100	Sign Supports Concrete Masonry	CY	7.000	7.000			
0296	636.0500	Sign Supports Steel Reinforcement	LB	402.000	402.000			
0298	637.1220	Signs Type I Reflective SH	SF	1,046.500	934.500	112.000		
0300	637.2210	Signs Type II Reflective H	SF	153.760	27.630	78.130	22.500	25.500
0302	638.2601	Removing Signs Type I	EACH	7.000	6.000	1.000		
0304	638.2602	Removing Signs Type II	EACH	9.000	3.000	5.000		1.000
0306	638.3000	Removing Small Sign Supports	EACH	11.000	3.000	7.000		1.000
0308	638.3100	Removing Structural Steel Sign Supports	EACH	5.000	5.000			
0310	642.5201	Field Office Type C	EACH	1.000	0.450	0.350	0.050	0.150
0312	643.0300	Traffic Control Drums	DAY	44,348.000	12,338.000	15,084.000	11,349.000	5,577.000
0314	643.0420	Traffic Control Barricades Type III	DAY	1,683.000	251.000	859.000	469.000	104.000
0316	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	160.000	80.000		80.000	
0318	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	160.000	80.000		80.000	
0320	643.0705	Traffic Control Warning Lights Type A	DAY	3,365.000	502.000	1,718.000	937.000	208.000
0322	643.0715	Traffic Control Warning Lights Type C	DAY	16,366.000	5,958.000	6,232.000	3,861.000	315.000
0324	643.0800	Traffic Control Arrow Boards	DAY	240.000		122.000	118.000	
0326	643.0900	Traffic Control Signs	DAY	22,177.000	3,936.000	9,349.000	7,412.000	1,480.000
0328	643.0920	Traffic Control Covering Signs Type II	EACH	108.000		108.000		
0330	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	1,062.000		708.000	354.000	
0332	643.4100.S	Traffic Control Interim Lane Closure	EACH	163.000	55.000	48.000	38.000	22.000
0334	643.5000	Traffic Control	EACH	4.000	1.000	1.000	1.000	1.000
0336	645.0111	Geotextile Type DF Schedule A	SY	504.000	132.000	132.000	120.000	120.000
0338	645.0120	Geotextile Type HR	SY	4,675.000	104.000	51.000	2,690.000	1,830.000
0340	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	51,210.000	22,200.000	16,470.000	4,000.000	8,540.000
0342	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	7,610.000	4,145.000	1,890.000	500.000	1,075.000
0344	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	1,000.000	400.000	600.000		
0346	646.5420	Marking Aerial Enforcement Bar Epoxy	EACH	10.000	10.000			
0348	646.6464.S	Cold Weather Marking Epoxy 4-Inch	LF	10,515.000	4,390.000	2,975.000		3,150.000
0350	646.6468.S	Cold Weather Marking Epoxy 8-Inch	LF	600.000		600.000		
0352	646.9000	Marking Removal Line 4-Inch	LF	35,225.000	20,475.000	1,575.000	1,350.000	11,825.000
0354	646.9100	Marking Removal Line 8-Inch	LF	1,000.000	200.000	800.000		
0356	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	100,115.000	52,915.000	19,725.000	7,200.000	20,275.000
0358	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	7,695.000	3,375.000	500.000	100.000	3,720.000

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
0360	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	1,150.000	400.000	750.000		
0362	650.4000	Construction Staking Storm Sewer	EACH	10.000	4.000	2.000	2.000	2.000
0364	650.4500	Construction Staking Subgrade	LF	38,159.000	20,358.000	6,834.000	4,200.000	6,767.000
0366	650.5000	Construction Staking Base	LF	38,159.000	20,358.000	6,834.000	4,200.000	6,767.000
0368	650.6000	Construction Staking Pipe Culverts	EACH	13.000	8.000	3.000		2.000
0370	650.6500	Construction Staking Structure Layout (structure) 01. B-55-0254	LS	1.000	1.000			
0372	650.6500	Construction Staking Structure Layout (structure) 01. B-55-0255	LS	1.000		1.000		
0374	650.6500	Construction Staking Structure Layout (structure) 01. B-55-0256	LS	1.000			1.000	
0376	650.6500	Construction Staking Structure Layout (structure) 01. B-55-0257	LS	1.000				1.000
0378	650.7000	Construction Staking Concrete Pavement	LF	20,631.000	9,600.000	6,834.000	1,400.000	2,797.000
0380	650.9910	Construction Staking Supplemental Control (project) 01. 1020-03-76	LS	1.000	1.000			
0382	650.9910	Construction Staking Supplemental Control (project) 01. 1020-03-77	LS	1.000		1.000		
0384	650.9910	Construction Staking Supplemental Control (project) 01. 1020-03-78	LS	1.000			1.000	
0386	650.9910	Construction Staking Supplemental Control (project) 01. 1020-03-79	LS	1.000				1.000
0388	650.9920	Construction Staking Slope Stakes	LF	44,559.000	25,758.000	7,834.000	4,200.000	6,767.000
0390	690.0150	Sawing Asphalt	LF	112.000	62.000	14.000	26.000	10.000
0392	690.0250	Sawing Concrete	LF	192.000	120.000	24.000	24.000	24.000
0394	715.0415	Incentive Strength Concrete Pavement	DOL	16,693.000	7,788.000	5,816.000	775.000	2,314.000
0396	715.0502	Incentive Strength Concrete Structures	DOL	16,302.000	4,044.000	4,074.000	4,104.000	4,080.000
0398	715.0710	Optimized Aggregate Gradation Incentive	DOL	62,095.000	29,055.000	21,660.000	2,805.000	8,575.000
0400	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	820.000	545.000	315.000	420.000
0402	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	935.000	625.000	360.000	480.000
0404	SPV.0060	Special 01. Traffic Control Vertical Panels	EACH	67.000	34.000			33.000
0406	SPV.0105	Special 01. Construction Staking Concrete Pavement Joint Layout 1020-03-76	LS	1.000	1.000			
0408	SPV.0105	Special 02. Construction Staking Concrete Pavement Joint Layout 1020-03-77	LS	1.000		1.000		
0410	SPV.0105	Special 03. Construction Staking Concrete Pavement Joint Layout 1020-03-78	LS	1.000			1.000	
0412	SPV.0105	Special 04. Construction Staking Concrete Pavement Joint Layout 1020-03-79	LS	1.000				1.000
0414	SPV.0105	Special 05. Project Concrete Crack Mitigation and Repair 1020-03-76	LS	1.000	1.000			
0416	SPV.0105	Special 06. Project Concrete Crack Mitigation and	LS	1.000		1.000		

					1020-03-76	1020-03-77	1020-03-78	1020-03-79
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**	**Qty**
		Repair 1020-03-77						
0418	SPV.0105	Special 07. Project Concrete Crack Mitigation and Repair 1020-03-78	LS	1.000			1.000	
0420	SPV.0105	Special 08. Project Concrete Crack Mitigation and Repair 1020-03-79	LS	1.000				1.000
0422	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	61.000			35.000	26.000

3

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
555+00'WB'	-	569+00'WB'	IH 94 WB	14	14	Stage 1B
572+00'WB'	-	590+00'WB'	IH 94 WB	18	18	Stage 1B
596+00'WB'	-	605+00'WB'	IH 94 WB	9	9	Stage 1B
539+00'WB'	-	541+00'WB'	IH 94 WB	2	2	Stage 3
Project 1020-03-76			**TOTAL 0010**	**43**	**43**	

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
562+00'EB'	-	567+00'EB'	IH 94 EB	5	5	Stage 2
582+00'EB'	-	583+00'EB'	IH 94 EB	1	1	Stage 2
Project 1020-03-77			**TOTAL 0010**	**6**	**6**	

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
615+00'WB'	-	617+00'WB'	IH 94 WB	2	2	Stage 3
618+00'WB'	-	620+00'WB'	IH 94 WB	2	2	Stage 3
623+00'WB'	-	627+00'WB'	IH 94 WB	4	4	Stage 3
Project 1020-03-78			**TOTAL 0010**	**8**	**8**	

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
615+00'EB'	-	617+00'EB'	IH 94 EB	2	2	Stage 2
618+00'EB'	-	620+00'EB'	IH 94 EB	2	2	Stage 2
623+00'EB'	-	627+00'EB'	IH 94 EB	4	4	Stage 2
Project 1020-03-79			**TOTAL 0010**	**8**	**8**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
527+44'WB'	IH 94 WB	1	Stage 1A; 48" x 106' RCCP - Remove Partial
536+45'WB'	IH 94 WB	1	Stage 1A; 24" x 114' RCCP - Remove Partial
527+44'WB'	IH 94 WB	1	Stage 1B; 48" x 106' RCCP
536+45'WB'	IH 94 WB	1	Stage 1B; 24" x 114' RCCP
564+33'WB'	IH 94 WB	1	Stage 1B; 24" x 116' RCCP - Remove Partial
106+75'K'	130th St.	2	Stage 1B; 24" x 118' RCCP - Remove Partial
572+12'WB'	IH 94 WB	1	Stage 1B; 24" x 104' RCCP - Remove Partial
580+85'WB'	IH 94 WB	1	Stage 1B; 24" x 100' RCCP - Remove Partial
586+68'WB'	IH 94 WB	1	Stage 1B; 24" x 90' RCCP - Remove Partial
591+72'WB'	IH 94 WB	1	Stage 1B; 24" x 132' RCCP - Remove Partial
564+33'WB'	IH 94 WB	1	Stage 3; 24" x 116' RCCP
106+75'K'	130th St.	2	Stage 3; 24" x 118' RCCP
572+12'WB'	IH 94 WB	1	Stage 3; 24" x 104' RCCP
580+85'WB'	IH 94 WB	1	Stage 3; 24" x 100' RCCP
586+68'WB'	IH 94 WB	1	Stage 3; 24" x 90' RCCP
591+72'WB'	IH 94 WB	1	Stage 3; 24" x 132' RCCP
600+80'WB'	IH 94 WB	1	Stage 3; 24" x 78' RCCP
Project 1020-03-76	**TOTAL 0010**	**19**	

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
527+04'EB'	IH 94 EB	1	Stage 2; 48" x 88' RCCP
567+46'EB'	IH 94 EB	1	Stage 2; 30" x 104' RCCP
589+50'EB'	IH 94 EB	1	Stage 2; 48" x 84' RCCP
592+46'EB'	IH 94 EB	1	Stage 2; 30" x 94' RCCP
Project 1020-03-77	**TOTAL 0010**	**4**	

3

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
625+00'WB'	IH 94 WB	1	Stage 3; 18" x 92' RCCP
Project 1020-03-78	**TOTAL 0010**	**1**	

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
612+89'EB'	IH 94 EB	1	Stage 1B; 24" x 132' RCCP - Remove Partial
600+96'EB'	IH 94 EB	1	Stage 2; 30" x 88' RCCP
612+89'EB'	IH 94 EB	1	Stage 2; 24" x 132' RCCP
Project 1020-03-79	**TOTAL 0010**	**3**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

REMOVING PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
527+34'WB'	-	527+54'WB'	IH 94 WB	54	Stage 1B; Pipe Replacement
536+35'WB'	-	536+55'WB'	IH 94 WB	54	Stage 1B; Pipe Replacement
525+42'WB'	-	568+55'WB'	IH 94 WB	11501	Stage 3
569+80'WB'	-	613+00'WB'	IH 94 WB	11520	Stage 3
		Project 1020-03-76	**TOTAL 0010**	**23129**	

REMOVING PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
525+00'EB'	-	570+15'EB'	IH 94 EB	12040	Stage 2
571+45'EB'	-	593+33.49'EB'	IH 94 EB	5836	Stage 2
		Project 1020-03-77	**TOTAL 0010**	**17876**	

REMOVING PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
613+00'WB'	-	615+10'WB'	IH 94 WB	560	Stage 3
616+45'WB'	-	627+00'WB'	IH 94 WB	2813	Stage 3
		Project 1020-03-78	**TOTAL 0010**	**3373**	

REMOVING PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 SY	REMARKS
593+33.49'EB'	-	615+50'EB'	IH 94 EB	5911	Stage 2
616+80'EB'	-	621+30.11'EB'	IH 94 EB	1202	Stage 2
621+30.11'EB'	-	624+75'EB'	IH 94 EB	460	Stage 2; Rt. Lane
		Project 1020-03-79	**TOTAL 0010**	**7573**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

REMOVING ASPHALTIC SURFACE MILLING

STATION	TO	STATION	LOCATION	204.0120 SY	REMARKS
621+30.61'EB'	-	624+75'EB'	IH 94 EB	690	Stage 4; Lt. Lane & Shoulder
		Project 1020-03-79	**TOTAL 0010**	**690**	

REMOVING FENCE

STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
568+75'WB'	-	570+75'WB'	IH 94 WB, RT.	300	Stage 1B
525+42'WB'	-	613+00'WB'	IH 94 WB	8856	Stage 3
		Project 1020-03-76	**TOTAL 0010**	**9156**	

REMOVING FENCE

STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
525+00'EB'	-	593+33.49'EB'	IH 94 EB	7134	Stage 2
		Project 1020-03-77	**TOTAL 0010**	**7134**	

REMOVING FENCE

STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
615+00'WB'	-	616+50'WB'	IH 94 WB	150	Stage 1B
613+00'WB'	-	627+00'WB"	IH 94 WB	1550	Stage 3
		Project 1020-03-78	**TOTAL 0010**	**1700**	

REMOVING FENCE

STATION	TO	STATION	LOCATION	204.0170 LF	REMARKS
593+33.49'EB'	-	627+00'EB'	IH 94 EB	3517	Stage 2
		Project 1020-03-79	**TOTAL 0010**	**3517**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

3

REMOVING DELINEATORS AND MARKERS

STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
525+42'WB'	-	613+00'WB'	IH 94 WB, Lt.	22	Stage 3
Project 1020-03-76			TOTAL 0010	22	

REMOVING DELINEATORS AND MARKERS

STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
525+00'EB'	-	593+33.49'EB'	IH 94 EB	18	Stage 2
Project 1020-03-77			TOTAL 0010	18	

REMOVING DELINEATORS AND MARKERS

STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
613+00'WB'	-	627+00'WB'	IH 94 WB, Lt.	4	Stage 3
Project 1020-03-78			TOTAL 0010	4	

REMOVING DELINEATORS AND MARKERS

STATION	TO	STATION	LOCATION	204.0180 EACH	REMARKS
593+33.49'EB'	-	636+00'EB'	IH 94 EB, Rt.	11	Stage 2
Project 1020-03-79			TOTAL 0010	11	

REMOVING MANHOLES

STATION	LOCATION	204.0210 EACH	REMARKS
612+40'WB'	IH 94 WB, Rt	1	Stage 4; Temp Manhole
Project 1020-03-76	TOTAL 0010	1	

REMOVING MANHOLES

STATION	LOCATION	204.0210 EACH	REMARKS
612+89'EB'	IH 94 EB, Lt	1	Stage 4; Temp Manhole
Project 1020-03-79	TOTAL 0010	1	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	REMARKS
527+44'WB'	IH 94 WB, Rt.	1	Stage 1A; Exist Inlet
536+45'WB'	IH 94 WB, Rt.	1	Stage 1A; Exist Inlet
564+33'WB'	IH 94 WB, Lt.	1	Stage 3; Temp Inlet
572+12'WB'	IH 94 WB, Lt.	1	Stage 3; Temp Inlet
580+85'WB'	IH 94 WB, Lt.	1	Stage 3; Temp Inlet
586+68'WB'	IH 94 WB, Lt.	1	Stage 3; Temp Inlet
591+72'WB'	IH 94 WB, Lt.	1	Stage 3; Temp Inlet
527+75'WB'	IH 94 WB, Rt.	1	Stage 4; Temp Inlet
536+75'WB'	IH 94 WB, Rt.	1	Stage 4; Temp Inlet
Project 1020-03-76	**TOTAL 0010**	**9**	

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	REMARKS
620+70'EB'	IH 94 EB, Lt	1	Stage 4; Temp Inlet
Project 1020-03-77	**TOTAL 0010**	**1**	

3

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	REMARKS
625+25'WB'	IH 94 WB, Rt	1	Stage 3; Exist Inlet
617+50'WB'	IH 94 WB, Rt	1	Stage 4; Temp Inlet
635+00'WB'	IH 94 WB, Rt	1	Stage 4; Temp Inlet
Project 1020-03-78	**TOTAL 0010**	**3**	

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	REMARKS
612+89'EB'	IH 94 EB, Lt	1	Stage 1B; Exist Inlet
Project 1020-03-79	**TOTAL 0010**	**1**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

EXCAVATION COMMON

LOCATION	205.0100 CY	REMARKS
IH 94 WB	27261	Stage 1, See Earthwork Summary & Data (Includes EBS)
IH 94 WB	25235	Stage 3, See Earthwork Summary & Data (Includes EBS)
IH 94 WB	30023	Stage 4, See Earthwork Summary & Data
TOTAL 0010	**82519**	**Project 1020-03-76**

EXCAVATION COMMON

LOCATION	205.0100 CY	REMARKS
IH 94 EB	29693	Stage 2, See Earthwork Summary & Data (Includes EBS)
TOTAL 0010	**29693**	**Project 1020-03-77**

EXCAVATION COMMON

LOCATION	205.0100 CY	REMARKS
IH 94 WB	3503	Stage 1, See Earthwork Summary & Data (Includes EBS)
IH 94 WB	12626	Stage 3, See Earthwork Summary & Data (Includes EBS)
IH 94 WB	7267	Stage 4, See Earthwork Summary & Data
TOTAL 0010	**23396**	**Project 1020-03-78**

EXCAVATION COMMON

LOCATION	205.0100 CY	REMARKS
IH 94 EB	25362	Stage 2, See Earthwork Summary & Data (Includes EBS)
TOTAL 0010	**25362**	**Project 1020-03-79**

BORROW

LOCATION	208.0100 CY	REMARKS
IH 94 WB	105327	Stage 1, See Earthwork Summary & Data
TOTAL 0010	**105327**	**Project 1020-03-76**

BORROW

LOCATION	208.0100 CY	REMARKS
IH 94 EB	27105	Stage 2, See Earthwork Summary & Data
TOTAL 0010	**27105**	**Project 1020-03-77**

BORROW

LOCATION	208.0100 CY	REMARKS
IH 94 WB	4508	Stage 1, See Earthwork Summary & Data
TOTAL 0010	**4508**	**Project 1020-03-78**

BORROW

LOCATION	208.0100 CY	REMARKS
IH 94 EB	5510	Stage 2, See Earthwork Summary & Data
TOTAL 0010	**5510**	**Project 1020-03-79**

OBLITERATING OLD ROAD

STATION	TO	STATION	LOCATION	214.0100 STA	REMARKS
554+50'WB'	-	568+50'WB'	IH 94 WB, Lt.	14	Stage 3
570+00'WB'	-	598+00'WB'	IH 94 WB, Lt.	28	Stage 3
		Project 1020-03-76	**TOTAL 0010**	**42**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

SELECT BORROW

LOCATION	208.1100 CY	REMARKS
IH 94 WB	7876	Stage 1, See Earthwork Summary & Data
IH 94 WB	689	Stage 3, See Earthwork Summary & Data
TOTAL 0010	**8565**	**Project 1020-03-76**

SELECT BORROW

LOCATION	208.1100 CY	REMARKS
IH 94 EB	1822	Stage 2, See Earthwork Summary & Data
TOTAL 0010	**1822**	**Project 1020-03-77**

SELECT BORROW

LOCATION	208.1100 CY	REMARKS
IH 94 WB	2076	Stage 1, See Earthwork Summary & Data
IH 94 WB	2219	Stage 3, See Earthwork Summary & Data
TOTAL 0010	**4295**	**Project 1020-03-78**

SELECT BORROW

LOCATION	208.1100 CY	REMARKS
IH 94 EB	3439	Stage 2, See Earthwork Summary & Data
TOTAL 0010	**3439**	**Project 1020-03-79**

3

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	SELECT CRUSHED MATERIAL 312.0110 TON	WATER 624.0100 MGAL	REMARKS
0010	514+00'EBT'	-	550+50'EBT'	IH 94 EB Temp	502	10067	-	109	Stage 1A
0010	550+50'WB'	-	568+75'WB'	IH 94 WB	346	6466	-	68	Stage 1B
0010	553+00'WB'	-	568+75'WB'	IH 94 WB	-	-	5240	-	Stage 1B
0010	570+40'WB'	-	604+00'WB'	IH 94 WB	485	8430	14806	89	Stage 1B
0010	604+00'EBT'	-	613+00'EBT'	IH 94 EB Temp	257	2933	-	32	Stage 1B
0010	525+42'WB'	-	568+75'WB'	IH 94 WB	264	9262	11747	95	Stage 3
0010	570+25'WB'	-	574+25'WB'	IH 94 WB	-	-	525	-	Stage 3
0010	570+40'WB'	-	613+00'WB'	IH 94 WB	209	4680	-	49	Stage 3
0010	598+50'WB'	-	613+00'WB'	IH 94 WB	-	-	5171	-	Stage 3
0010	515+40'WB'	-	568+75'WB'	IH 94 WB	447	3007	-	35	Stage 4
0010	525+42'WB'	-	553+00'WB'	IH 94 WB	-	-	1674	-	Stage 4
0010	570+40'WB'	-	604+75'WB'	IH 94 WB	339	0	-	4	Stage 4
			Project 1020-03-76	TOTAL 0010	2849	44845	39163	481	
0020	568+79'WB'	-	570+28'WB'	IH 94 WB	-	430	-	-	B-55-0254
			Project 1020-03-76	TOTAL 0020	0	430	0	0	

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	SELECT CRUSHED MATERIAL 312.0110 TON	WATER 624.0100 MGAL	REMARKS
0010	525+00'EB'	-	569+80'EB'	IH 94 EB	426	14004	20972	144	Stage 2
0010	571+50'EB'	-	593+33.49'EB'	IH 94 EB	208	6826	10484	71	Stage 2
0010			534+00'EB'	IH 94 EB, LT	25	285	0	5	Stage 2
			Project 1020-03-77	TOTAL 0010	659	21115	31456	220	
0020	570+02'EB'	-	571+51'EB'	IH 94 EB	-	430	-	-	B-55-0255
			Project 1020-03-77	TOTAL 0020	0	430	0	0	

3

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	SELECT CRUSHED MATERIAL 312.0110 TON	WATER 624.0100 MGAL	REMARKS
0010	616+60'WBT'	-	640+50'WBT'	IH 94 WB Temp	342	5543	-	59	Stage 1A
0010	613+00'EBT'	-	615+20'EBT'	IH 94 EB Temp	57	652	-	7	Stage 1B
0010	613+00'WB'	-	615+00'WB'	IH 94 WB	22	1171	1024	12	Stage 3
0010	616+50'WB'	-	627+00'WB'	IH 94 WB	235	5125	-	54	Stage 3
0010	616+50'WB'	-	623+11.66'WB'	IH 94 WB	-	-	3334	-	Stage 3
0010	633+00'WB'	-	640+00'WB'	IH 94 WB	67	-	-	1	Stage 4
			Project 1020-03-78	**TOTAL 0010**	**723**	**12491**	**4358**	**133**	
0020	614+81'WB'	-	616+69'WB'	IH 94 WB	-	380	-	-	B-55-0256
			Project 1020-03-78	**TOTAL 0020**	**0**	**380**	**0**	**0**	

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	SELECT CRUSHED MATERIAL 312.0110 TON	WATER 624.0100 MGAL	REMARKS
0010	593+33.49'EB'	-	615+40'EB'	IH 94 EB	210	6899	11558	71	Stage 2
0010	616+90'EB'	-	621+30.11'EB'	IH 94 EB	-	-	2497	-	Stage 2
0010	617+00'EB'	-	636+00'EB'	IH 94 EB	105	4289	-	44	Stage 2
0010	609+00'EB'	-	615+40'EB'	IH 94 EB	62	415	-	5	Stage 4
0010	617+00'EB'	-	637+00'EB'	IH 94 EB	147	119	-	3	Stage 4
			Project 1020-03-79	**TOTAL 0010**	**524**	**11722**	**14055**	**123**	
0020	615+42'EB'	-	616+91'EB'	IH 94 EB	-	380	-	-	B-55-0257
			Project 1020-03-79	**TOTAL 0020**	**0**	**380**	**0**	**0**	

3

CONCRETE PAVEMENT 12 1/2-INCH

STATION	TO	STATION	LOCATION	415.0125 SY	REMARKS
553+00'WB'	-	568+51'WB'	IH 94 WB	3772	Stage 1B
570+56'WB'	-	604+00'WB'	IH 94 WB	9201	Stage 1B
525+42'WB'	-	558+00'WB'	IH 94 WB	9745	Stage 3
600+75'WB'	-	613+00'WB'	IH 94 WB	3106	Stage 3
	Project 1020-03-76		TOTAL 0010	25824	

CONCRETE PAVEMENT 12 1/2-INCH

STATION	TO	STATION	LOCATION	415.0125 SY	REMARKS
525+00'EB'	-	569+74'EB'	IH 94 EB	12943	Stage 2
571+79'EB'	-	593+33.49'EB'	IH 94 EB	6308	Stage 2
	Project 1020-03-77		TOTAL 0010	19251	

3

CONCRETE PAVEMENT 12 1/2-INCH

STATION	TO	STATION	LOCATION	415.0125 SY	REMARKS
613+00'WB'	-	614+81'WB'	IH 94 WB	578	Stage 3
616+60'WB'	-	623+11.66'WB'	IH 94 WB	1912	Stage 3
	Project 1020-03-78		TOTAL 0010	2490	

CONCRETE PAVEMENT 12 1/2-INCH

STATION	TO	STATION	LOCATION	415.0125 SY	REMARKS
593+33.49'EB'	-	615+23'EB'	IH 94 EB	6375	Stage 2
617+10'EB'	-	621+30.61'EB'	IH 94 EB	1244	Stage 2
	Project 1020-03-79		TOTAL 0010	7619	

CONCRETE PAVEMENT APPROACH SLAB

STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
568+56'WB'	-	568+79"WB'	IH 94 WB	68	Stage 1B
570+28'WB'	-	570+56'WB'	IH 94 WB	68	Stage 1B
	Project 1020-03-76		TOTAL 0010	136	

CONCRETE PAVEMENT APPROACH SLAB

STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
569+74'EB'	-	570+02'EB'	IH 94 EB	68	Stage 2
571+51'EB'	-	571+79'EB'	IH 94 EB	68	Stage 2
	Project 1020-03-77		TOTAL 0010	136	

CONCRETE PAVEMENT APPROACH SLAB

STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
614+81'WB'	-	615+00'WB'	IH 94 WB	48	Stage 3
616+50'WB'	-	616+69'WB'	IH 94 WB	48	Stage 3
	Project 1020-03-78		TOTAL 0010	96	

CONCRETE PAVEMENT APPROACH SLAB

STATION	TO	STATION	LOCATION	415.0410 SY	REMARKS
615+23'EB'	-	615+42'EB'	IH 94 EB	48	Stage 2
616+91'EB'	-	617+10'EB'	IH 94 EB	48	Stage 2
	Project 1020-03-79		TOTAL 0010	96	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

DRILLED DOWEL BARS

STATION	LOCATION	416.0620 EACH	REMARKS
525+42'WB'	IH 94 WB	18	Stage 3
Project 1020-03-76	**TOTAL 0010**	**18**	

DRILLED DOWEL BARS

STATION	LOCATION	416.0620 EACH	REMARKS
525+00'EB'	IH 94 EB	18	Stage 2
Project 1020-03-77	**TOTAL 0010**	**18**	

SHOULDER RUMBLE STRIPS

STATION	TO	STATION	LOCATION	CONCRETE SHOULDER RUMBLE STRIPS 416.1110 LF	ASPHALTIC SHOULDER RUMBLE STRIPS 465.0400 LF	REMARKS
558+00'WB'	-	568+66'WB'	IH 94 WB	1066	-	Stage 1B
570+28'WB'	-	600+75'WB'	IH 94 WB	3047	-	Stage 1B
525+42'WB'	-	558+00'WB'	IH 94 WB	3258	-	Stage 3
600+75'WB'	-	613+00'WB'	IH 94 WB	1225	1000	Stage 3
515+00'WB'	-	568+79'WB'	IH 94 WB	-	5379	Stage 4
570+41'WB'	-	603+00'WB'	IH 94 WB	-	3259	Stage 4
Project 1020-03-76			**TOTAL 0010**	**8596**	**9638**	

SHOULDER RUMBLE STRIPS

STATION	TO	STATION	LOCATION	CONCRETE SHOULDER RUMBLE STRIPS 416.1110 LF	ASPHALTIC SHOULDER RUMBLE STRIPS 465.0400 LF	REMARKS
525+00'EB'	-	570+03'EB'	IH 94 EB	4503	4489	Stage 2
571+51'EB'	-	593+33.49'EB'	IH 94 EB	2168	2183	Stage 2
514+00'EB'	-	521+00'EB'	IH 94 EB	-	700	Stage 4
Project 1020-03-77			**TOTAL 0010**	**6671**	**7372**	

SHOULDER RUMBLE STRIPS

STATION	TO	STATION	LOCATION	CONCRETE SHOULDER RUMBLE STRIPS 416.1110 LF	ASPHALTIC SHOULDER RUMBLE STRIPS 465.0400 LF	REMARKS
613+75'WB'	-	615+00'WB'	IH 94 WB	200	196	Stage 3
616+50'WB'	-	627+00'WB'	IH 94 WB	658	1439	Stage 3
632+00'WB'	-	641+00'WB'	IH 94 WB	-	900	Stage 4
Project 1020-03-78			**TOTAL 0010**	**858**	**2535**	

SHOULDER RUMBLE STRIPS

STATION	TO	STATION	LOCATION	CONCRETE SHOULDER RUMBLE STRIPS 416.1110 LF	ASPHALTIC SHOULDER RUMBLE STRIPS 465.0400 LF	REMARKS
593+33.49'EB'	-	615+42'EB'	IH 94 EB	2205	2209	Stage 2
616+91'EB'	-	621+30.61'EB'	IH 94 EB	440	-	Stage 2
616+95'EB'	-	637+00'EB'	IH 94 EB	-	3075	Stage 4
Project 1020-03-79			**TOTAL 0010**	**2645**	**5284**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

ASPHALT ITEMS

STATION	TO	STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 MT 58-34 H 460.6444 TON	HMA PAVEMENT 3 HT 58-28 H 460.7423 TON	HMA PAVEMENT 4 HT 58-34 H 460.7444 TON	REMARKS
527+30'WB'	-	527+50'WB'	IH 94 WB	16	-	24	20	Stage 1B; Pipe Replace
536+30'WB'	-	536+50'WB'	IH 94 WB	16	-	24	20	Stage 1B; Pipe Replace
561+50'WB'		568+75'WB'	IH 94 WB	97	-	240	100	Stage 1B
570+40'WB'	-	598+00'WB'	IH 94 WB	283	895	215	90	Stage 1B
525+42'WB'	-	568+75'WB'	IH 94 WB	620	290	875	360	Stage 3
570+40'WB'	-	613+00'WB'	IH 94 WB	270	625	0	0	Stage 3
515+40'WB'	-	562+00'WB'	IH 94 WB	235	540	-	-	Stage 4
		Project 1020-03-76	**TOTAL 0010**	**1537**	**2350**	**1378**	**590**	

ASPHALT ITEMS

STATION	TO	STATION	LOCATION	HMA COLD WEATHER PAVING 450.4000 TON	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 MT 58-34 H 460.6444 TON	REMARKS
525+00'EB'	-	569+80'EB'	IH 94 EB	825	720	1655	Stage 2
571+50'EB'	-	593+33.49'EB'	IH 94 EB	420	365	835	Stage 2
		534+00'EB'	IH 94 EB, Lt	-	-	80	Stage 4; Maint Crossover
		Project 1020-03-77	**TOTAL 0010**	**1245**	**1085**	**2570**	

ASPHALT ITEMS

STATION	TO	STATION	LOCATION	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 MT 58-34 H 460.6444 TON	HMA PAVEMENT 3 HT 58-28 H 460.7423 TON	HMA PAVEMENT 4 HT 58-34 H 460.7444 TON	REMARKS
613+00'WB'	-	615+00'WB'	IH 94 WB	55	125	-	-	Stage 3
616+50'WB'	-	627+00'WB'	IH 94 WB	375	470	435	125	Stage 3
633+00'WB'	-	640+00'WB'	IH 94 WB	35	75	-	-	Stage 4
		Project 1020-03-78	**TOTAL 0010**	**465**	**670**	**435**	**125**	

ASPHALT ITEMS

STATION	TO	STATION	LOCATION	HMA COLD WEATHER PAVING 450.4000 TON	TACK COAT 455.0605 GAL	HMA PAVEMENT 4 MT 58-34 H 460.6444 TON	HMA PAVEMENT 3 HT 58-28 H 460.7423 TON	HMA PAVEMENT 4 HT 58-34 H 460.7444 TON	REMARKS
593+33.49'EB'	-	615+40'EB'	IH 94 EB	420	366	845	0	0	Stage 2
617+00'EB'	-	624+75'EB'	IH 94 EB	365	150	210	400	115	Stage 2
617+00'EB'	-	637+00'EB'	IH 94 EB	-	170	205	125	65	Stage 4
		Project 1020-03-79	**TOTAL 0010**	**785**	**686**	**1260**	**525**	**180**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

ASPHALTIC SURFACE TEMPORARY

STATION	TO	STATION	LOCATION	465.0125 TON	REMARKS
515+00'WB'	-	555+00'WB'	IH 94 WB	30	Stage 1A - Fill Rumbles
514+00'EBT'	-	550+50'EBT'	IH 94 EB Temp	5420	Stage 1A
550+50'WB'	-	561+50'WB'	IH 94 WB	845	Stage 1B
598+00'WB'	-	604+00'WB'	IH 94 WB	715	Stage 1B
604+00'EBT'	-	613+00'EBT'	IH 94 EB Temp	1005	Stage 1B
		Project 1020-03-76	**TOTAL 0010**	**8015**	

ASPHALTIC SURFACE TEMPORARY

STATION	TO	STATION	LOCATION	465.0125 TON	REMARKS
612+50'EB'	-	641+50'EB	IH 94 EB	25	Stage 1A - Fill Rumbles
616+60'WBT'	-	640+50'WBT'	IH 94 WB Temp	2410	Stage 1A
613+00'EBT'	-	615+20'EBT'	IH 94 EB Temp	245	Stage 1B
		Project 1020-03-78	**TOTAL 0010**	**2680**	

3

ASPHALTIC SURFACE TEMPORARY

STATION	TO	STATION	LOCATION	465.0125 TON	REMARKS
625+00'EB'	-	632+00'EB'	IH 94 EB	85	Stage 2
		Project 1020-03-79	**TOTAL 0010**	**85**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

TEMPORARY DRAINAGE

STATION	TO	STATION	LOCATION	CULVERT PIPE TEMPORARY 12-INCH 520.2012 LF	CULVERT PIPE TEMPORARY 18-INCH 520.2018 LF	CULVERT PIPE TEMPORARY 24-INCH 520.2024 LF	CULVERT PIPE TEMPORARY 48-INCH 520.2048 LF	MANHOLE COVERS TYPE L 611.0545 EACH	INLET COVERS TYPE MS 611.0642 EACH	MANHOLES 4-FT DIAMETER 611.2004 EACH	INLETS MEDIAN 1 GRATE 611.3901 EACH	REMARKS
517+50'WBT'	-	521+00'WBT'	IH 94 WB Temp, Rt	360	-	-	-	-	1	-	1	Stage 1A; INLT1
527+38'EBT'	-	527+75'EBT'	IH 94 EB Temp, Rt	37	-	-	10	-	1	-	1	Stage 1A; INLT2
536+40'EBT'	-	536+75'EBT'	IH 94 EB Temp, Rt	-	35	-	-	-	1	-	1	Stage 1A; INLT3
		564+33'WB'	IH 94 WB, Lt	-	-	10	-	-	1	-	1	Stage 1B; INLT6
		572+12'WB'	IH 94 WB, Lt	-	-	10	-	-	1	-	1	Stage 1B; INLT7
		580+85'WB'	IH 94 WB, Lt	-	-	10	-	-	1	-	1	Stage 1B; INLT8
		586+68'WB'	IH 94 WB, Lt	-	-	10	-	-	1	-	1	Stage 1B; INLT9
		591+72'WB'	IH 94 WB, Lt	-	-	10	-	-	1	-	1	Stage 1B; INLT10
611+00'WB'	-	612+40'WB'	IH 94 WB, Rt	-	-	200	-	1	-	1	-	Stage 1B; MH1
	Project 1020-03-76		**TOTAL 0010**	**397**	**35**	**250**	**10**	**1**	**8 ***	**1**	**8**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY DRAINAGE

STATION	TO	STATION	LOCATION	CULVERT PIPE TEMPORARY 18-INCH 520.2018 LF	CULVERT PIPE TEMPORARY 24-INCH 520.2024 LF	INLET COVERS TYPE MS 611.0642 EACH	INLETS MEDIAN 1 GRATE 611.3901 EACH	REMARKS
616+70'WBT'	-	617+80'WBT'	IH 94 WB Temp, Lt	110	-	1	1	Stage 1A; INLT4
625+20'WB'	-	625+80'WB'	IH 94 WB, Rt	40	-	-	-	Stage 1A
633+25'WB'	-	635+00'WB'	IH 94 WB, Rt	175	-	1	-	Stage 1A; INLT5
611+00'WB'	-	612+35'WB'	IH 94 WB, Rt	-	135	-	-	Stage 3
625+20'WB'	-	625+60'WB'	IH 94 WB, Rt	40	-	-	-	Stage 3
	Project 1020-03-78		**TOTAL 0010**	**365**	**135**	**2 ***	**1**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY DRAINAGE

STATION	TO	STATION	LOCATION	CULVERT PIPE TEMPORARY 24-INCH 520.2024 LF	MANHOLE COVERS TYPE L 611.0545 EACH	MANHOLES 4-FT DIAMETER 611.2004 EACH	REMARKS
611+00'EB'	-	612+89'EB'	IH 94 EB, Lt	189	1	1	Stage 1B; MHT2
609+00'EB'	-	612+89'EB'	IH 94 EB, Lt	389	-	-	Stage 2
	Project 1020-03-79		**TOTAL 0010**	**578**	**1**	**1**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

3

BRIDGE DRAINAGE

STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH 521.1012 EACH	CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT 601.0586 LF	INLET COVERS TYPE V 611.0654 EACH	INLETS 2X2-FT 611.3220 EACH	PIPE UNDERDRAIN UNPERFORATED 12-INCH 612.0212 LF	REMARKS
570+64.45'WB'	IH 94 WB, Rt	1	22	1	1	40	Stage 1B; INL2
570+29.81'WB'	IH 94 WB, Lt	1	22	1	1	22	Stage 3; INL5
Project 1020-03-76	**TOTAL 0010**	**2**	**44**	**2**	**2**	**62**	

BRIDGE DRAINAGE

STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH 521.1012 EACH	CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT 601.0586 LF	INLET COVERS TYPE V 611.0654 EACH	INLETS 2X2-FT 611.3220 EACH	PIPE UNDERDRAIN UNPERFORATED 12-INCH 612.0212 LF	REMARKS
571+49.95'EB'	IH 94 EB, Lt	1	10	1	1	34	Stage 2; INL3
571+84.10'EB'	IH 94 EB, Rt	1	10	1	1	60	Stage 2; INL4
Project 1020-03-77	**TOTAL 0010**	**2**	**20**	**2**	**2**	**94**	

BRIDGE DRAINAGE

STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH 521.1012 EACH	CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT 601.0586 LF	INLET COVERS TYPE V 611.0654 EACH	INLETS 2X2-FT 611.3220 EACH	PIPE UNDERDRAIN UNPERFORATED 12-INCH 612.0212 LF	REMARKS
614+98.31'WB'	IH 94 WB, Lt	1	10	1	1	44	Stage 3; INL6
Project 1020-03-78	**TOTAL 0010**	**1**	**10**	**1**	**1**	**44**	

BRIDGE DRAINAGE

STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH 521.1012 EACH	CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT 601.0586 LF	INLET COVERS TYPE V 611.0654 EACH	INLETS 2X2-FT 611.3220 EACH	PIPE UNDERDRAIN UNPERFORATED 12-INCH 612.0212 LF	REMARKS
615+27.11'EB'	IH 94 EB, Lt	1	22	1	1	20	Stage 4; INL10
Project 1020-03-79	**TOTAL 0010**	**1**	**22**	**1**	**1**	**20**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

PERMANENT DRAINAGE

STATION	LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 60-INCH 522.1060 EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH 608.0318 LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH 608.0324 LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH 608.0360 LF	RECONSTRUCTING INLETS 611.0430 EACH	INLET COVERS TYPE C 611.0612 EACH	INLET COVERS TYPE MS 611.0642 EACH	MANHOLES 8-FT DIAMETER 611.2008 EACH	INLETS MEDIAN 2 GRATE 611.3902 EACH	COVER PLATES TEMPORARY 611.8120.S EACH	REMARKS
527+44'WB'	IH 94 WB	-	-	-	-	-	44	-	1	-	1	-	1	Stage 1A; MH1
536+45'WB'	IH 94 WB	-	-	-	-	52	-	-	-	2	-	1	1	Stage 1A; INL1
625+25'WB'	IH 94 WB, Rt	-	-	-	-	-	-	-	-	-	-	-	1	Stage 1A; INLE1
633+25'WB'	IH 94 WB, Rt	-	-	-	-	-	-	-	-	-	-	-	1	Stage 1A; INLE3
527+44'WB'	IH 94 WB	-	-	1	-	-	80	-	-	-	-	-	-	Stage 1B
536+45'WB'	IH 94 WB	-	1	-	-	78	-	-	-	-	-	-	-	Stage 1B
564+33'WB'	IH 94 WB	106	1	-	-	-	-	-	-	-	-	-	-	Stage 1B
106+75'K'	130th St.	196	2	-	-	-	-	-	-	-	-	-	-	Stage 1B
572+12'WB'	IH 94 WB	84	1	-	-	-	-	-	-	-	-	-	-	Stage 1B
580+85'WB'	IH 94 WB	102	1	-	-	-	-	-	-	-	-	-	-	Stage 1B
586+68'WB'	IH 94 WB	108	1	-	-	-	-	-	-	-	-	-	-	Stage 1B
591+72'WB'	IH 94 WB	108	1	-	-	-	-	-	-	-	-	-	-	Stage 1B
600+80'WB'	IH 94 WB	80	1	-	-	-	-	-	-	-	-	-	-	Stage 1B
564+33'WB'	IH 94 WB	64	1	-	-	-	-	-	-	-	-	-	-	Stage 3
106+75'K'	130th St.	40	2	-	-	-	-	-	-	-	-	-	-	Stage 3
572+12'WB'	IH 94 WB	60	1	-	-	-	-	-	-	-	-	-	-	Stage 3
580+85'WB'	IH 94 WB	22	1	-	-	-	-	-	-	-	-	-	-	Stage 3
586+68'WB'	IH 94 WB	22	1	-	-	-	-	-	-	-	-	-	-	Stage 3
591+72'WB'	IH 94 WB	36	1	-	-	-	-	-	-	-	-	-	-	Stage 3
600+80'WB'	IH 94 WB	30	1	-	-	-	-	-	-	-	-	-	-	Stage 3
527+55'WB'	IH 94 WB, Rt	-	-	-	14	-	-	-	-	-	-	-	-	Stage 4; INL8
536+45'WB'	IH 94 WB, Rt	-	-	-	-	-	-	1	-	-	-	-	-	Stage 4; INL1
Project 1020-03-76	**TOTAL 0010**	**1058**	**17**	**1**	**14**	**130**	**124**	**1**	**1**	**2 ***	**1**	**1**	**4**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PERMANENT DRAINAGE

STATION	LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH 522.0130 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH 522.0148 LF	CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH 522.0430 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 522.1030 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH 522.1048 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 60-INCH 522.1060 EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH 608.0360 LF	REMARKS
527+04'EB'	IH 94 EB	-	-	-	-	-	1	88	Stage 2
567+46'EB'	IH 94 EB	-	-	176	2	-	-	-	Stage 2
589+50'EB'	IH 94 EB	-	88	-	-	2	-	-	Stage 2
592+46'EB'	IH 94 EB	100	-	-	2	-	-	-	Stage 2
Project 1020-03-77	**TOTAL 0010**	**100**	**88**	**176**	**4**	**2**	**1**	**88**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

PERMANENT DRAINAGE

STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH 608.0424 LF	RECONSTRUCTING INLETS 611.0430 EACH	INLET COVERS TYPE MS 611.0642 EACH	INLETS MEDIAN 2 GRATE 611.3902 EACH	COVER PLATES TEMPORARY 611.8120.S EACH	REMARKS
625+20'WB'	IH 94 WB	1	82	-	2	1	1	Stage 3; INL7
625+20'WB'	IH 94 WB, Rt	-	-	1	-	-	-	Stage 4; INL7
625+60'WB'	IH 94 WB, Rt	-	-	1	-	-	-	Stage 4; INL2
633+25'WB"	IH 94 WB, Rt	-	-	1	-	-	-	Stage 4; INL3
Project 1020-03-78	**TOTAL 0010**	**1**	**82**	**3**	**2 ***	**1**	**1**	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PERMANENT DRAINAGE

STATION	LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH 522.0430 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH 522.1030 EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH 608.0324 LF	INLET COVERS TYPE MS 611.0642 EACH	INLETS MEDIAN 2 GRATE 611.3902 EACH	REMARKS
600+96'EB'	IH 94 EB	-	98	-	2	-	-	-	Stage 2
612+89'EB'	IH 94 EB	-	-	1	-	94	-	-	Stage 2
612+89'EB'	IH 94 EB, Lt	-	-	-	-	36	2	1	Stage 4; INL9
617+00'EB'	IH 94 EB, Lt	26	-	2	-	-	-	-	Stage 4
Project 1020-03-79	**TOTAL 0010**	**26**	**98**	**3**	**2**	**130**	**2**	**1**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

TEMPORARY CONCRETE BARRIER

STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	REMARKS
514+00'WB'	-	553+00'WB'	IH 94 WB	3900	3900	Stage 1A
549+00'WB'	-	568+75'WB'	IH 94 WB	1975	1975	Stage 1B
572+00'WB'	-	613+00'WB'	IH 94 WB	4100	4100	Stage 1B
518+00'WB'	-	578+00'WB'	IH 94 WB	6000	6000	Stage 2
522+00'EBT'	-	537+00'EBT'	IH 94 EBT	1500	1500	Stage 2
524+00'WB'	-	600+00'WB'	IH 94 WB	7600	7600	Stage 3
525+00'WB'	-	555+00'WB'	IH 94 WB	-	3000	Stage 4
	Project 1020-03-76		TOTAL 0010	25075	28075	

TEMPORARY CONCRETE BARRIER

STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	REMARKS
627+00'WB'	-	630+00'WB'	IH 94 WB	300	300	Stage 1A
613+00'WB'	-	615+00'WB'	IH 94 WB	200	200	Stage 1B
616+00'WBT'	-	635+00'WBT'	IH 94 WB Temp	3300	3300	Stage 3
	Project 1020-03-78		TOTAL 0010	3800	3800	

TEMPORARY CONCRETE BARRIER

STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	REMARKS
615+00'EB'	-	637+00'EB'	IH 94 EB	2200	2200	Stage 1A
625+00'EB'	-	628+00'EB'	IH 94 EB	-	300	Stage 1B
606+00'EB'	-	613+00'EB'	IH 94 EB	700	700	Stage 1B
603+00'EBT'	-	616+00'EBT'	IH 94 EB Temp	1700	1700	Stage 2
616+00'EBT'	-	636+00'EBT'	IH 94 EB Temp	3200	3200	Stage 2
612+00'EB'	-	616+00'EB'	IH 94 EB	400	400	Interim Compl. Stage
625+00'EB'	-	628+00'EB'	IH 94 EB	-	300	Interim Compl. Stage
600+00'EBT'	-	616+00'EBT'	IH 94 EB Temp	2400	2400	Stage 3
	Project 1020-03-79		TOTAL 0010	10600	11200	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

RIPRAP

STATION	LOCATION	RIPRAP MEDIUM 606.0200 CY	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE TYPE HR 645.0120 SY	REMARKS
527+44'WB'	IH 94 WB, Lt	-	18	27	Stage 1B
536+45'WB'	IH 94 WB, Lt	6	-	11	Stage 1B
580+85'WB'	IH 94 WB, Rt	6	-	11	Stage 1B
586+68'WB'	IH 94 WB, Rt	6	-	11	Stage 1B
591+72'WB'	IH 94 WB, Rt	6	-	11	Stage 1B
600+80'WB'	IH 94 WB, Rt	6	-	11	Stage 1B
564+33'WB'	IH 94 WB, Lt	6	-	11	Stage 3
572+12'WB'	IH 94 WB, Lt	6	-	11	Stage 3
Project 1020-03-76	**TOTAL 0010**	**42**	**18**	**104**	

RIPRAP

STATION	TO	STATION	LOCATION	RIPRAP MEDIUM 606.0200 CY	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE TYPE HR 645.0120 SY	REMARKS
615+00'WB'	-	615+50'WB'	IH 94 WB, Lt	-	56	84	Stage 3
618+00'WB'	-	622+50'WB'	IH 94 WB, Lt	-	500	750	Stage 3
		624+60'WB'	IH 94 WB, Lt	6	-	11	Stage 3
		Project 1020-03-78	**TOTAL 0010**	**6**	**556 ***	**845 ***	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

RIPRAP

STATION	TO	STATION	LOCATION	RIPRAP MEDIUM 606.0200 CY	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE TYPE HR 645.0120 SY	REMARKS
		600+96'EB'	IH 94 EB, Rt	7	-	14	Stage 2
		612+89'EB'	IH 94 EB, Rt	6	-	11	Stage 2
618+50'EB'	-	621+50'EB'	IH 94 EB, Rt	-	335	500	Stage 2
		Project 1020-03-79	**TOTAL 0010**	**13**	**335 ***	**525 ***	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

RIPRAP

STATION	LOCATION	RIPRAP MEDIUM 606.0200 CY	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE TYPE HR 645.0120 SY	REMARKS
567+46'EB'	IH 94 EB, Rt	7	-	14	Stage 2
589+50'EB'	IH 94 EB, Rt	-	15	23	Stage 2
592+46'EB'	IH 94 EB, Rt	7	0	14	Stage 2
Project 1020-03-77	**TOTAL 0010**	**14**	**15**	**51**	

3

CABLE BARRIER

STATION	TO	STATION	LOCATION	CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH	REMARKS
499+25'WB'	-	533+25'WB'	IH 94 WB, Rt	3400	2	Stage 4
Project 1020-03-76			**TOTAL 0010**	**3400**	**2**	

CABLE BARRIER

STATION	TO	STATION	LOCATION	CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH	REMARKS
617+20'EB'	-	626+90'EB'	IH 94 EB, Lt	970	2	Stage 4
Project 1020-03-79			**TOTAL 0010**	**970**	**2**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

TEMPORARY GUARDRAIL

STATION	TO	STATION	LOCATION	STEEL PLATE BEAM GUARD TEMPORARY 614.0360 LF	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY 614.0380 EACH	REMARKS
565+95'WB'	-	568+88.48'WB'	IH 94 WB, Rt	240	1	Stage 1B
570+45.37'WB'	-	572+85'WB'	IH 94 WB, Rt	240	1	Stage 1B
		Project 1020-03-76	**TOTAL 0010**	**480**	**2**	

CRASH CUSHIONS TEMPORARY

STATION	LOCATION	614.0905 EACH	BACK WIDTH FT.	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
553+00'WB'	IH 94 WB, Lt.	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Stage 1A
522+00'EBT'	IH 94 EBT, Rt.	1	2	OM-3R	TL-3	UNIDIRECTIONAL	LT.	END OF TEMP. BARRIER	Stage 2
555+00	IH 94 WB, Rt.	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Stage 4
Project 1020-03-76	**TOTAL 0010**	3							

CRASH CUSHIONS TEMPORARY

STATION	LOCATION	614.0905 EACH	BACK WIDTH FT.	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
630+00'WB'	IH 94 WB, Lt.	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Stage 1A
630+00'WBT'	IH 94 WB Temp, Lt.	1	2	OM-3R	TL-3	UNIDIRECTIONAL	LT.	END OF TEMP. BARRIER	Stage 3
Project 1020-03-78	**TOTAL 0010**	2							

CRASH CUSHIONS TEMPORARY

STATION	LOCATION	614.0905 EACH	BACK WIDTH FT.	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
615+00'EB'	IH 94 EB, Lt	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Stage 1A
606+00'EB'	IH 94 EB, Lt	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Stage 1B
603+00'EBT'	IH 94 EB Temp, Rt	1	2	OM-3R	TL-3	UNIDIRECTIONAL	LT.	END OF TEMP. BARRIER	Stage 2
612+00'EBT'	IH 94 EB Temp, LT	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Stage 2
612+00'EB'	IH 94 EB, Lt	1	2	OM-3L	TL-3	UNIDIRECTIONAL	RT.	END OF TEMP. BARRIER	Interim-Compl. Stage
Project 1020-03-79	**TOTAL 0010**	5							

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

SALVAGED GUARDRAIL

STATION	TO	STATION	LOCATION	SALVAGED RAIL 614.0920 LF	SALVAGED GUARDRAIL END TREATMENTS 614.0925 EACH	REMARKS
569+70'WB'	-	573+00'WB'	IH 94 WB, Lt	280	1	Stage 3
569+90'WB'	-	572+25'WB'	Ih 94 Wb, Rt	185	1	Stage 3
		Project 1020-03-76	TOTAL 0010	465	2	

SALVAGED GUARDRAIL

STATION	TO	STATION	LOCATION	SALVAGED RAIL 614.0920 LF	SALVAGED GUARDRAIL END TREATMENTS 614.0925 EACH	REMARKS
566+70'EB'	-	570+05'EB'	IH 94 EB, Lt	285	1	Stage 2
567+75'EB'	-	570+30'EB'	IH 94 EB, Rt	205	1	Stage 2
587+05'EB'	-	589+50'EB'	IH 94 EB, Lt	195	1	Stage 2
		Project 1020-03-77	TOTAL 0010	685	3	

3

SALVAGED GUARDRAIL

STATION	TO	STATION	LOCATION	SALVAGED RAIL 614.0920 LF	SALVAGED GUARDRAIL END TREATMENTS 614.0925 EACH	REMARKS
616+40'WB'	-	620+75'WB'	IH 94 WB, Rt	385	1	Stage 3
616+45'WB'	-	623+05'WB'	IH 94 WB, Lt	610	1	Stage 3
		Project 1020-03-78	TOTAL 0010	995	2	

SALVAGED GUARDRAIL

STATION	TO	STATION	LOCATION	SALVAGED RAIL 614.0920 LF	SALVAGED GUARDRAIL END TREATMENTS 614.0925 EACH	REMARKS
616+85'EB'	-	618+45'EB'	IH 94 EB, Lt	210	-	Stage 1A
627+15'EB'	-	628+85'EB'	IH 94 EB, Lt	340	-	Stage 1A
612+20'EB'	-	615+55'EB'	IH 94 EB, Lt	285	1	Stage 2
613+15'EB'	-	615+45'EB'	IH 94 EB, Rt	180	1	Stage 2
616+75'EB'	-	620+35'EB'	IH 94 EB, Rt	360	-	Stage 2
		Project 1020-03-79	TOTAL 0010	1375	2	

PERMANENT THRIE BEAM BULLNOSE

STATION	TO	STATION	LOCATION	STEEL THRIE BULLNOSE TERMINAL 614.0220 EACH	STEEL THRIE BEAM 614.0230 LF	REMARKS
627+15'EB'	-	628+85'EB'	IH 94 EB, Lt	2	137.5	Stage 4
		Project 1020-03-79	TOTAL 0010	2	137.5	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

3

PERMANENT GUARDRAIL

STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	REMARKS
570+10.73'WB'	-	573+02.88'WB'	IH 94 WB, Lt	200	39	1	Stage 3
570+45.37'WB'	-	576+97.01'WB'	IH 94 WB, Rt	563	39	1	Stage 4
		Project 1020-03-76	**TOTAL 0010**	**763**	**79**	**2**	

PERMANENT GUARDRAIL

STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	REMARKS
567+27.56'EB'	-	570+19.70'EB'	IH 94 EB, Rt	200	39	1	Stage 2
567+54.97'EB'	-	569+84.73'EB'	IH 94 EB, Lt	138	39	1	Stage 2
		Project 1020-03-77	**TOTAL 0010**	**338**	**79**	**2**	

PERMANENT GUARDRAIL

STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	REMARKS
616+56.80'WB'	-	623+12.50	IH 94 WB, Lt	563	39	1	Stage 3
616+45'WB'	-	619+74.77	IH 94 WB, Rt	238	39	1	Stage 3
		Project 1020-03-78	**TOTAL 0010**	**800**	**79**	**2**	

PERMANENT GUARDRAIL

STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614.2620 EACH	REMARKS
612+28.93'EB'	-	615+46.17'EB'	IH 94 EB, Lt	225	39	1	-	Stage 4
616+95.17'EB'	-	618+96.89'EB'	IH 94 EB, Lt	200	8	-	1	Stage 4
		Prooject 1020-03-79	**TOTAL 0010**	**425**	**48**	**1**	**1**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

FENCE WOVEN WIRE 4'

STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
525+42'WB'	-	613+00'WB"	IH 94 WB	8830	Stage 3
		Project 1020-03-76	**TOTAL 0010**	**8830**	

FENCE WOVEN WIRE 4'

STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
525+00'EB'	-	593+33.49'EB'	IH 94 EB	7100	Stage 2
		Project 1020-03-77	**TOTAL 0010**	**7100**	

FENCE WOVEN WIRE 4'

STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
613+00'WB'	-	627+00'WB'	IH 94 WB	1450	Stage 3
		Project 1020-03-78	**TOTAL 0010**	**1450**	

FENCE WOVEN WIRE 4'

STATION	TO	STATION	LOCATION	616.0100 LF	REMARKS
593+33.49'EB'	-	627+00'EB'	IH 94 EB	3350	Stage 2
		Project 1020-03-79	**TOTAL 0010**	**3350**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	REMARKS
514+00'WB'	-	613+00'WB'	IH 94 WB	3110	9340	12450	8	336	336	Stage 1
525+42'WB'	-	613+00'WB'	IH 94 WB	8430	25280	33710	21	910	910	Stage 3
514+00'WB'	-	578+00'WB'	IH 94 WB	9950	29850	39800	25	1075	1075	Stage 4
		Project 1020-03-76	**TOTAL 0010**	**21490**	**64470**	**85960**	**54**	**2321**	**2321**	

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	REMARKS
525+00'EB'	-	593+33.49'EB'	Ih 94 EB	14215	46645	56860	36	1535	1535	Stage 2
		Project 1020-03-77	**TOTAL 0010**	**14215**	**46645**	**56860**	**36**	**1535**	**1535**	

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	REMARKS
613+00'WB'	-	627+00'WB'	IH 94 WB	2625	7875	10500	7	285	285	Stage 3
		Project 1020-03-78	**TOTAL 0010**	**2625**	**7875**	**10500**	**7**	**285**	**285**	

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	TOPSOIL 625.0100 SY	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	REMARKS
613+00'EB'	-	641+00'EB'	IH 94 EB	12435	37300	49735	32	1345	1345	Stage 1
593+33.49'EB'	-	636+00'EB'	IH 94 EB	6400	19185	25585	16	690	690	Stage 2
596+00'EB'	-	641+00'EB'	IH 94 EB	2815	8445	11260	7	305	305	Stage 4
		Project 1020-03-79	**TOTAL 0010**	**21650**	**64930**	**86580**	**55**	**2340**	**2340**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

EROSION BALES

STATION	LOCATION	628.1104 EACH	REMARKS
Undistributed	Project 1020-03-76	200	Any Stage
	TOTAL 0010	**200**	

EROSION BALES

STATION	LOCATION	628.1104 EACH	REMARKS
Undistributed	Project 1020-03-78	50	Any Stage
	TOTAL 0010	**50**	

EROSION BALES

STATION	LOCATION	628.1104 EACH	REMARKS
Undistributed	Project 1020-03-77	150	Any Stage
	TOTAL 0010	**150**	

EROSION BALES

STATION	LOCATION	628.1104 EACH	REMARKS
Undistributed	Project 1020-03-79	100	Any Stage
	TOTAL 0010	**100**	

3

SILT FENCE

STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
528+00'WB'	-	542+00'WB'	IH 94 WB, Lt.	1400	1400	Stage 3
		Project 1020-03-76	**TOTAL 0010**	**1400**	**1400**	

SILT FENCE

STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
566+00'EB'	-	575+00'EB'	IH 94 EB, Rt.	750	750	Stage 2
		Project 1020-03-77	**TOTAL 0010**	**750**	**750**	

SILT FENCE

STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	REMARKS
613+00'EB'	-	615+50'EB'	IH 94 EB, Rt	250	250	Stage 2
		Project 1020-03-79	**TOTAL 0010**	**250**	**250**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

MOBILIZATIONS EROSION CONTROL

LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
Project 1020-03-76	5	5	Any Stage
TOTAL 0010	**5**	**5**	

MOBILIZATIONS EROSION CONTROL

LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
Project 1020-03-77	4	4	Any Stage
TOTAL 0010	**4**	**4**	

MOBILIZATIONS EROSION CONTROL

LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
Project 1020-03-78	3	3	Any Stage
TOTAL 0010	**3**	**3**	

MOBILIZATIONS EROSION CONTROL

LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
Project 1020-03-79	4	4	Any Stage
TOTAL 0010	**4**	**4**	

EROSION MAT CLASS I TYPE A

STATION	TO	STATION	LOCATION	628.2002 SY	REMARKS
568+00'WB'	-	569+00'WB'	IH 94 WB, Lt.	333	Stage 3
569+50'WB'	-	570+50'WB'	IH 94 WB, Lt.	333	Stage 3
Project 1020-03-76			**TOTAL 0010**	**666**	

EROSION MAT CLASS I TYPE A

STATION	TO	STATION	LOCATION	628.2002 SY	REMARKS
566+00'EB'	-	570+50'EB'	IH 94 EB, Lt & Rt	4444	Stage 2
571+00'EB'	-	575+00'EB'	IH 94 EB, Rt	1167	Stage 2
Project 1020-03-77			**TOTAL 0010**	**5611**	

EROSION MAT CLASS I TYPE A

STATION	TO	STATION	LOCATION	628.2002 SY	REMARKS
623+00'WB'	-	626+00'WB'	IH 94 WB, Lt.	1333	Stage 3
Project 1020-03-78			**TOTAL 0010**	**1333**	

EROSION MAT CLASS I TYPE A

STATION	TO	STATION	LOCATION	628.2002 SY	REMARKS
613+50'EB'	-	615+50'EB'	IH 94 EB, Rt	1111	Stage 2
Project 1020-03-79			**TOTAL 0010**	**1111**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

EROSION MAT CLASS II TYPE B

STATION	TO	STATION	LOCATION	628.2023 SY	REMARKS
616+50'WB'	-	620+50'WB'	IH 94 WB, Lt.	2667	Stage 3
Project 1020-03-78			TOTAL 0010	2667	

EROSION MAT CLASS II TYPE B

STATION	TO	STATION	LOCATION	628.2023 SY	REMARKS
617+00'EB'	-	620+00'EB'	IH 94 EB, Rt	2250	Stage 2
Project 1020-03-79			TOTAL 0010	2250	

3

INLET PROTECTION TYPE A

STATION	LOCATION	628.7005 EACH	REMARKS
515+50'WB'	IH 94 WB, Rt.	1	Stage 1A
565+30'WB'	IH 94 WB, Lt.	1	Stage 1B
572+00'WB'	IH 94 WB, Lt.	1	Stage 1B
581+00'WB'	IH 94 WB, Lt.	1	Stage 1B
586+75'WB'	IH 94 WB, Lt.	1	Stage 1B
591+75'WB'	IH 94 WB, Lt.	1	Stage 1B
Project 1020-03-76	TOTAL 0010	6	

INLET PROTECTION TYPE A

STATION	LOCATION	628.7005 EACH	REMARKS
520+60'EB'	IH 94 EB, Lt.	1	Stage 1A
527+40'EB'	IH 94 EB, Lt.	1	Stage 1A
536+40'EB'	IH 94 EB, Lt.	1	Stage 1A
515+00'EB'	IH 94 EB, Lt.	1	Stage 4
527+20'EB'	IH 94 EB, Lt.	1	Stage 4
536+10'EB'	IH 94 EB, Lt.	1	Stage 4
Project 1020-03-77	TOTAL 0010	6	

INLET PROTECTION TYPE A

STATION	LOCATION	628.7005 EACH	REMARKS
617+50'WB'	IH 94 WB, Rt.	1	Stage 1A
629+00'WB'	IH 94 WB, Rt.	1	Stage 1A
625+25'WB'	IH 94 WB, Rt.	1	Stage 4
629+00'WB'	IH 94 WB, Rt.	1	Stage 4
633+25'WB'	IH 94 WB, Rt.	1	Stage 4
Project 1020-03-78	TOTAL 0010	5	

INLET PROTECTION TYPE A

STATION	LOCATION	628.7005 EACH	REMARKS
635+60'EB'	IH 94 EB, Lt	1	Stage 1A
612+90'EB'	IH 94 EB, Lt	1	Stage 4
Project 1020-03-79	TOTAL 0010	2	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 LF	REMARKS
517+00'WB'	IH 94 WB, Rt.	40	Stage 1A
563+75'WB'	IH 94 WB, Rt.	40	Stage 1B
565+00'WB'	IH 94 WB, Rt.	40	Stage 1B
571+75'WB'	IH 94 WB, Rt.	40	Stage 1B
572+50'WB'	IH 94 WB, Rt.	40	Stage 1B
610+00'WB'	IH 94 WB, Rt.	40	Stage 1B
541+50'WB'	IH 94 WB, Lt.	40	Stage 2
547+00'WB'	IH 94 WB, Lt.	40	Stage 2
580+00'WB'	IH 94 WB, Lt.	40	Stage 2
581+50'WB'	IH 94 WB, Lt.	40	Stage 2
586+00'WB'	IH 94 WB, Lt.	40	Stage 2
591+50'WB'	IH 94 WB, Lt.	40	Stage 2
600+50'WB'	IH 94 WB, Lt.	40	Stage 2
607+00'WB'	IH 94 WB, Lt.	40	Stage 2
611+00'WB'	IH 94 WB, Lt.	40	Stage 2
607+00'WB'	IH 94 WB, Rt.	40	Stage 4
609+00'WB'	IH 94 WB, Rt.	40	Stage 4
611+00'WB'	IH 94 WB, Rt.	40	Stage 4
Project 1020-03-76	**TOTAL 0010**	**720**	

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 LF	REMARKS
618+50'WB'	IH 94 WB, Rt	30	Stage 1A
636+00'WB'	IH 94 WB, Rt	30	Stage 1A
613+00'WB'	IH 94 WB, Lt	40	Stage 2
615+00'WB'	IH 94 WB, Lt	40	Stage 2
621+00'WB'	IH 94 WB, Lt	40	Stage 2
623+00'WB'	IH 94 WB, Lt	40	Stage 2
613+50'WB'	IH 94 WB, Rt	40	Stage 4
617+50'WB'	IH 94 WB, Rt	40	Stage 4
618+50'WB'	IH 94 WB, Rt	40	Stage 4
620+00'WB'	IH 94 WB, Rt	40	Stage 4
622+00'WB'	IH 94 WB, Rt	40	Stage 4
Project 1020-03-78	**TOTAL 0010**	**420**	

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 LF	REMARKS
527+00'EB'	IH 94 EB, Rt.	60	Stage 2
528+00'EB'	IH 94 EB, Rt.	40	Stage 2
532+00'EB'	IH 94 EB, Rt.	40	Stage 2
556+00'EB'	IH 94 EB, Rt.	40	Stage 2
577+00'EB'	IH 94 EB, Lt.	40	Stage 2
581+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
584+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
587+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
589+00'EB'	IH 94 EB, Lt	40	Stage 2
592+00'EB'	IH 94 EB, Lt	40	Stage 2
Project 1020-03-77	**TOTAL 0010**	**540**	

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 LF	REMARKS
610+00'EB'	IH 94 EB, Lt	40	Stage 1B
597+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
600+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
605+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
608+00'EB'	IH 94 EB, Lt & Rt	80	Stage 2
610+00'EB'	IH 94 EB, Rt	40	Stage 2
621+00'EB'	IH 94 EB, Rt	40	Stage 2
622+00'EB'	IH 94 EB, Rt	40	Stage 2
623+00'EB'	IH 94 EB, Rt	40	Stage 2
629+00'EB'	IH 94 EB, Rt	40	Stage 2
Project 1020-03-79	**TOTAL 0010**	**560**	

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH	REMARKS
617+75'EB'	IH 94 EB, Lt	10	Stage 4
Project 1020-03-79	**TOTAL 0010**	**10**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

DELINEATORS

STATION	TO	STATION	LOCATION	DELINEATOR POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	REMARKS
525+42'WB'	-	613+00'WB'	IH 94 WB, Lt.	24	24	Stage 3
533+80'WB'	-	535+00'WB'	IH 94 WB, Rt.	2	2	Stage 4; Maint. X-over
Project 1020-03-76			TOTAL 0010	26	26	

DELINEATORS

STATION	TO	STATION	LOCATION	DELINEATOR POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	REMARKS
525+00'EB'	-	593+33.49'EB'	IH 94 EB, Rt.	20	20	Stage 2
Project 1020-03-77			TOTAL 0010	20	20	

DELINEATORS

STATION	TO	STATION	LOCATION	DELINEATOR POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	REMARKS
613+00'WB'	-	627+00'WB'	IH 94 WB, Lt	6	6	Stage 3
Project 1020-03-78			TOTAL 0010	6	6	

DELINEATORS

STATION	TO	STATION	LOCATION	DELINEATOR POSTS STEEL 633.0100 EACH	DELINEATOR REFLECTORS 633.0500 EACH	REMARKS
593+33.49'EB'	-	636+00'EB'	IH 94 EB, Rt	13	13	Stage 2
Project 1020-03-79			TOTAL 0010	13	13	

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH	REMARKS
564+33'WB'	IH 94 WB, Lt & Rt	2	Stage 3
570+30'WB'	IH 94 WB, Lt	1	Stage 3
570+60'WB'	IH 94 WB, Rt	1	Stage 3
572+12'WB'	IH 94 WB, Lt & Rt	2	Stage 3
580+58'WB'	IH 94 WB, Lt & Rt	2	Stage 3
586+68'WB'	IH 94 WB, Lt & Rt	2	Stage 3
591+72'WB'	IH 94 WB, Lt & Rt	2	Stage 3
600+80'WB'	IH 94 WB, Lt & Rt	2	Stage 3
515+50'WB'	IH 94 WB, Rt	1	Stage 4
527+44'WB'	IH 94 WB, Lt & Rt	2	Stage 4
536+45'WB'	IH 94 WB, Lt & Rt	2	Stage 4
Project 1020-03-76	TOTAL 0010	19	

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH	REMARKS
614+98'WB'	IH 94 WB, Lt	1	Stage 3
624+65'WB'	IH 94 WB, Lt	1	Stage 3
625+25'WB'	IH 94 WB, Rt	1	Stage 4
633+25'WB'	IH 94 WB, Rt	1	Stage 4
Project 1020-03-78	TOTAL 0010	4	

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH	REMARKS
567+46'EB'	IH 94 EB, Lt & Rt	2	Stage 2
571+50'EB'	IH 94 EB, Lt	1	Stage 2
571+84'EB'	IH 94 EB, Rt	1	Stage 2
589+50'EB'	IH 94 EB, Lt & Rt	2	Stage 2
592+46'EB'	IH 94 EB, Lt & Rt	2	Stage 2
527+04'EB'	IH 94 EB, Rt	1	Stage 4
Project 1020-03-77	TOTAL 0010	9	

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH	REMARKS
600+96'EB'	IH 94 EB, Lt & Rt	2	Stage 2
612+89'EB'	IH 94 EB, Lt & Rt	2	Stage 4
615+57'EB'	IH 94 EB, Lt	1	Stage 4
617+25'EB'	IH 94 EB, Lt	1	Stage 4
Project 1020-03-79	TOTAL 0010	6	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TYPE I PERMANENT SIGNS - 1020-03-76

IH 94 Sign Reference	Existing Sign Code	Existing Sign Description	Existing Sign Position	635.0300 Sign Supports Replacing Base Connection Bolts (Each)	638.2601 Removing Signs Type I (Each)	638.3100 Removing Structural Steel Sign Supports (Each)	New Sign Code	New Sign Description	New Sign Position	New Sign Size Width	New Sign Size Height	637.1220 Signs Type I Reflective SH (SF)	635.0200 Sign Supports Structural Steel (LB)	636.0100 Sign Supports Concrete Masonry (CY)	636.0500 Sign Supports Steel Reinforcement (CY)	Order -Line 1	Notes
WB-01 (I)	E1-1A	Ground Mounted Exit Guide Sign	Right	-	1	1	E1-1A	Ground Mounted Exit Guide Sign	Right	204.00	162.00	229.50	1250	1.8	100	65/ Roberts/ River Falls	See Sign Detail; 2 Type "C" Supports
WB-01 (I)	E1-5P	Exit Number panel for guide sign	Right	-	-	-	E1-5P	Exit Number panel for guide sign	Right	96.00	30.00	20.00	-	-	-	10	See Sign Detail
WB-02 (I)	E3-1	Ground Mounted Supplemental	Right	-	1	1	E3-1	Ground Mounted Supplemental	Right	180.00	60.00	75.00	500	1.2	68	New Richmond/ Exit 10	See Sign Detail; 2 Type "A" Supports
WB-03 (I)	E3-1	Ground Mounted Supplemental	Right	-	1	1	E3-1	Ground Mounted Supplemental	Right	180.00	60.00	75.00	500	1.2	68	UW River Falls/ Exit 10	See Sign Detail; 2 Type "A" Supports
WB-04 (I)	E3-1	Ground Mounted Supplemental	Right	-	1	1	E3-1	Ground Mounted Supplemental	Right	204.00	138.00	195.50	950	1.6	98	Chippew Valley Tech College	See Sign Detail; 2 Type "B" Supports
WB-05 (I)	D4-4	Park & Ride Exit _ w/ car symbol	Right	-	1	1	D4-4	Park & Ride Exit _ w/ car symbol	Right	144.00	90.00	90.00	700	1.2	68	10	2 Type "A" Supports
WB-06 (I)	E1-1A	Ground Mounted Exit Guide Sign	Right	8	1	-	E1-1A	Ground Mounted Exit Guide Sign	Right	204.00	162.00	229.50	-	-	-	65/ Roberts/ River Falls	See Sign Detail
WB-06 (I)	E1-5P	Exit Number panel for guide sign	Right	-	-	-	E1-5P	Exit Number panel for guide sign	Right	96.00	30.00	20.00	-	-	-	10	See Sign Detail
		Project Totals		**8**	**6**	**5**						**934.50**	**3900**	**7.0**	**402**		

TYPE I PERMANENT SIGNS - 1020-03-77

IH 94 Sign Reference	Existing Sign Code	Existing Sign Description	Existing Sign Position	635.0300 Sign Supports Replacing Base Connection Bolts (Each)	638.2601 Removing Signs Type I (Each)	New Sign Code	New Sign Description	New Sign Position	New Sign Size Width	New Sign Size Height	637.1220 Signs Type I Reflective SH (SF)	Order -Line 1	Notes
EB-01 (I)	D2-3	Destination Distance	Right	8	1	D2-3	Destination Distance	Right	192.00	84.00	112.00	Hammond 5/ Etc.	See Sign Detail
		Project Totals		**8**	**1**						**112.00**		

TYPE II PERMANENT SIGNS - 1020-03-76

IH 94 Sign Reference	Existing Sign Code	Existing Sign Description	Existing Sign Position	638.2602 Removing Signs Type II (Each)	638.3000 Removing Small Sign Supports (Each)	New Sign Code	New Sign Description	New Sign Position	New Sign Size Width	New Sign Size Height	637.2210 Signs Type II Reflective H (SF)	634.0616 Posts Wood 4x6 -Inch x 16 - Ft. Each	634.0618 Posts Wood 4x6 - Inch x 18 - Ft. Each	Order -Line 1	Notes
WB-02 (II)	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	1	-	12	
WB-03 (II)	-	-	-	-	-	M1-94	Crossroad Name	Right	66.00	21.00	9.63	2	-	130th St	New Sign; See Sign Details
WB-04 (II)	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	1	-	11	
WB-05 (II)	R3-4B	No U-Turn symbol (w/R3-4A message)	Left	1	1	R3-4B	No U-Turn symbol (w/R3-4A message)	Left	36.00	48.00	12.00	-	1		
		Project Totals		**3**	**3**						**27.63**	**4**	**1**		

TYPE II PERMANENT SIGNS - 1020-03-77

IH 94 Sign Reference	Existing Sign Code	Existing Sign Description	Existing Sign Position	638.2602 Removing Signs Type II (Each)	638.3000 Removing Small Sign Supports (Each)	New Sign Code	New Sign Description	New Sign Position	New Sign Size Width	New Sign Size Height	637.2210 Signs Type II Reflective H (SF)	634.0616 Posts Wood 4x6 -Inch x 16 - Ft. Each	634.0618 Posts Wood 4x6 - Inch x 18 - Ft. Each	Order -Line 1	Notes
EB-01(II)	J4-1	Reassurance Assembly (1 Headed Route	Right	1	1	J4-1	Reassurance Assembly (1 Headed Route)	Right	36	54	13.5	1	-	East 94	
EB-02 (II)	R3-4B	No U-Turn symbol (w/R3-4A message)	Left	1	1	R3-4B	No U-Turn symbol (w/R3-4A message)	Left	36.00	48.00	12	-	1		
EB-03 (II)	R2-1	Speed Limit	Right	1	2	R2-1	Speed Limit	Right	48.00	60.00	20.00	2	-	70	
EB-04 (II)	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	1	-	11	
EB-05 (II)	R4-3	Slower Traffic Keep Right	Right	1	2	R4-3	Slower Traffic Keep Right	Right	48.00	60.00	20.00	2			
EB-06 (II)	-	-	-	-	-	M1-94	Crossroad Name	Right	66.00	21.00	9.63	2	-	130th St	New Sign; See Sign Details
		Project Totals		**5**	**7**						**78.13**	**8**	**1**		

TYPE II PERMANENT SIGNS - 1020-03-78

IH 94 Sign Reference	Existing Sign Code	Existing Sign Description	Existing Sign Position	638.2602 Removing Signs Type II (Each)	638.3000 Removing Small Sign Supports (Each)	New Sign Code	New Sign Description	New Sign Position	New Sign Size Width	New Sign Size Height	637.2210 Signs Type II Reflective H (SF)	634.0616 Posts Wood 4x6 -Inch x 16 - Ft. Each	634.0618 Posts Wood 4x6 - Inch x 18 - Ft. Each	Order -Line 1	Notes
WB-01 (II)	-	-	-	-	-	I3-1	Lake/ River (name)	Right	90.00	36.00	22.5	-	2	Kinnickinnic River	New Sign; See Sign Details
		Project Totals		**0**	**0**						**22.50**	**0**	**2**		

TYPE II PERMANENT SIGNS - 1020-03-79

IH 94 Sign Reference	Existing Sign Code	Existing Sign Description	Existing Sign Position	638.2602 Removing Signs Type II (Each)	638.3000 Removing Small Sign Supports (Each)	New Sign Code	New Sign Description	New Sign Position	New Sign Size Width	New Sign Size Height	637.2210 Signs Type II Reflective H (SF)	634.0616 Posts Wood 4x6 -Inch x 16 - Ft. Each	634.0618 Posts Wood 4x6 - Inch x 18 - Ft. Each	Order -Line 1	Notes
EB-07(II)	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	1	-	12	
EB-08 (II)	-	-	-	-	-	I3-1	Lake/ River (name)	Right	90.00	36.00	22.5	-	2	Kinnickinnic River	New Sign; See Sign Details
		Project Totals		**1**	**1**						**25.50**	**1**	**2**		

3

TRAFFIC CONTROL ITEMS

LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	REMARKS
IH 94 WB	546	-	-	126	147	Stage 1A
IH 94 WB, 130th St.	4354	38	76	1244	835	Stage 1B
IH 94 WB, 130th St.	-	30	60	-	699	Stage 2
IH 94 WB, 130th St.	3618	58	116	3178	774	Stage 3
IH 94 WB	1320	-	-	660	231	Stage 4
Undistributed	2500	125	250	750	1250	Any Stage
TOTAL 0010	**12338**	**251**	**502**	**5958**	**3936**	**Project 1020-03-76**

TRAFFIC CONTROL INTERIM LANE CLOSURE

LOCATION	643.4100.S EACH	REMARKS
IH 94 WB	3	Stage 1A
IH 94 WB	17	Stage 1B
IH 94 WB	3	Stage 2
IH 94 WB	27	Stage 3
IH 94 WB	5	Stage 4
TOTAL 0010	**55**	**Project 1020-03-76**

3

TEMP. DELINEATORS & FLEXIBLE TUBULAR MARKERS

STATION	TO	STATION	LOCATION	DELINEATORS TEMPORARY 633.1100 EACH	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS 643.0500 EACH	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES 643.0600 EACH	REMARKS
514+00'WB'	-	551+00'WB'	IH 94 WB, Lt	20	-	-	Stage 1A
518+00'WB'	-	522+00'WB'	IH 94 WB, Rt	40	80	80	End of Stage 2 - Crossovers Not in Use
525+00'WB'	-	553+00'WB'	IH 94 WB, Lt	15	-	-	Stage 4
Project 1020-03-76			**TOTAL 0010**	**75**	**80**	**80**	

TRAFFIC CONTROL INTERIM LANE CLOSURE

LOCATION	643.4100.S EACH	REMARKS
IH 94 EB	10	Stage 1A
IH 94 EB	17	Stage 1B
IH 94 EB	3	Stage 2
IH 94 EB	3	Stage 3
IH 94 EB	15	Stage 4
TOTAL 0010	**48**	**Project 1020-03-77**

TRAFFIC CONTROL ITEMS

LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL COVERING SIGNS TYPE II 643.0920 EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY	REMARKS
IH 94 EB	1785	105	210	462	42	714	42	42	1	42	Stage 1A
IH 94 EB, 130th St.	1804	38	76	104	14	2089	-	-	-	228	Stage 1B
IH 94 EB, 130th St.	6105	474	948	4440	-	3030	-	-	-	222	Stage 2
IH 94 EB, 130th St.	750	10	20	-	-	1361	-	-	-	150	Stage 3
IH 94 EB	2640	132	264	726	66	1155	66	66	1	66	Stage 4
Undistributed	2000	100	200	500	-	1000	-	-	-	-	Any Stage
TOTAL 0010	**15084**	**859**	**1718**	**6232**	**122**	**9349**	**108**			**708**	**Project 1020-03-77**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

TRAFFIC CONTROL ITEMS

LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS 643.1051 DAY	REMARKS
IH 94 WB	1365	42	84	294	42	609	21	Stage 1A
IH 94 WB	1592	9	18	32	4	1866	114	Stage 1B
IH 94 WB	1482	-	-	-	-	1824	111	Stage 2
IH 94 WB	4665	314	627	3048	6	2073	75	Stage 3
IH 94 WB	2145	99	198	462	66	990	33	Stage 4
Undistributed	100	5	10	25	-	50	-	Any Stage
TOTAL 0010	**11349**	**469**	**937**	**3861**	**118**	**7412**	**354**	**Project 1020-03-78**

TRAFFIC CONTROL INTERIM LANE CLOSURE

LOCATION	643.4100.S EACH	REMARKS
IH 94 WB	10	Stage 1A
IH 94 WB	5	Stage 1B
IH 94 WB	1	Stage 2
IH 94 WB	7	Stage 3
IH 94 WB	15	Stage 4
TOTAL 0010	**38**	**Project 1020-03-78**

3

TEMP. DELINEATORS & FLEXIBLE TUBULAR MARKERS

STATION	TO	STATION	LOCATION	DELINEATORS TEMPORARY 633.1100 EACH	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS 643.0500 EACH	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES 643.0600 EACH	REMARKS
631+00'WB'	-	635+00'WB'	IH 94 WB, Rt	40	80	80	End of Stage 2 - Crossover Not in Use
		Project 1020-03-78	**TOTAL 0010**	**40**	**80**	**80**	

DELINEATORS TEMPORARY

STATION	TO	STATION	LOCATION	633.1100 EACH	REMARKS
617+00'EB'	-	637+00'EB'	IH 94 EB, Rt	11	Stage 1A
Project 1020-03-79			**TOTAL 0010**	**11**	

TRAFFIC CONTROL ITEMS

LOCATION	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	REMARKS
IH 94 EB	756	-	-	126	147	Stage 1A
IH 94 EB	2500	18	36	64	312	Stage 1B
IH 94 EB	666	-	-	-	222	Stage 2
IH 94 EB	-	-	-	-	450	Stage 3
IH 94 EB	1155	66	132	-	99	Stage 4
Undistributed	500	20	40	125	250	Any Stage
TOTAL 0010	**5577**	**104**	**208**	**315**	**1480**	**Project 1020-03-79**

TRAFFIC CONTROL INTERIM LANE CLOSURE

LOCATION	643.4100.S EACH	REMARKS
IH 94 EB	3	Stage 1A
IH 94 EB	10	Stage 1B
IH 94 EB	2	Stage 2
IH 94 EB	2	Stage 3
IH 94 EB	5	Stage 4
TOTAL 0010	**22**	**Project 1020-03-79**

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

PERMANENT MARKING LINE

STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH 646.3555 LF	COLD WEATHER MARKING EPOXY 4-INCH 646.6464.S LF	REMARKS
577+50'WB'	-	597+00'WB'	IH 94 WB	1950	490	-	2440	End Stage 2-Cold Weather Epoxy (White); Stage 3-Laneline Tape & Edgeline Epoxy (White)
577+50'WB'	-	597+00'WB'	IH 94 WB	1950	-	-	1950	End Stage 2-Cold Weather Epoxy (Yellow); Stage 3-Edgeline Epoxy (Yellow)
603+00'WB'	-	613+00'WB'	IH 94 WB	1000	250	-	-	Stage 3; Laneline Tape & Edgeline Epoxy (White)
603+00'WB'	-	613+00'WB'	IH 94 WB	1000	-	-	-	Stage 3; Edgeline Epoxy (Yellow)
512+00'WB'	-	521+00'WB'	IH 94 WB	1800	225	400	-	End Stage 3; Lanelines & Gorelines Tape & Edgeline Epoxy (White)
512+00'WB'	-	521+00'WB'	IH 94 WB	1800	-	-	-	End Stage 3; Edgeline Epoxy (Yellow)
597+00'WB'	-	603+00'WB'	IH 94 WB	600	150	-	-	Stage 3; Laneline Tape & Edgeline Epoxy (White)
597+00'WB'	-	603+00'WB'	IH 94 WB	600	150	-	-	End Stage 3; Edgeline Epoxy (Yellow)
520+00'WB'	-	577+50'WB'	IH 94 WB	5750	1440	-	-	Stage 4; Laneline Tape & Edgeline Epoxy (White)
520+00'WB'	-	577+50'WB'	IH 94 WB	5750	1440	-	-	End Stage 4; Edgeline Epoxy (Yellow)
		Project 1020-03-76	**TOTAL 0010**	**22200**	**4145**	**400**	**4390**	

PERMANENT MARKING LINE

STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH 646.3555 LF	COLD WEATHER MARKING EPOXY 4-INCH 646.6464.S LF	COLD WEATHER MARKING EPOXY 8-INCH 646.6468.S LF	REMARKS
525+00'EB'	-	593+33.49'EB'	IH 94 EB	6835	1715	-	-	-	Stage 2; Lanelines Tape & Edgeline Epoxy (White)
525+00'EB'	-	593+33.49'EB'	IH 94 EB	6835	-	-	-	-	Stage 2; Edgeline Epoxy (Yellow)
513+00'EB'	-	520+00'EB'	IH 94 EB	1400	175	600	1575	600	End Stg. 2-Cold Weather Epoxy (White); Stg. 3-Lanes. & Gores. Tape; Edges. Epoxy (White)
513+00'EB'	-	520+00'EB'	IH 94 EB	1400	-	-	1400	-	End Stage 2-Cold Weather Epoxy (Yellow); Stage 3-Edgeline Epoxy (Yellow)
		Project 1020-03-77	**TOTAL 0010**	**16470**	**1890**	**600**	**2975**	**600**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

PERMANENT MARKING LINE

STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	REMARKS
613+00'WB'	-	627+00'WB'	IH 94 WB	1400	350	Stage 3; Laneline Tape & Edgelines Epoxy (White)
613+00'WB'	-	627+00'WB'	IH 94 WB	1400	-	Stage 3; Edgeline Epoxy (Yellow)
635+00'WB'	-	641+00'WB'	IH 94 WB	600	150	End Stage 3; Laneline Tape & Edgelines Epoxy (White)
635+00'WB'	-	641+00'WB'	IH 94 WB	600	-	End Stage 3; Edgeline Epoxy (Yellow)
		Project 1020-03-78	TOTAL 0010	4000	500	

PERMANENT MARKING LINE

STATION	TO	STATION	LOCATION	MARKING LINE GROOVED WET REF EPOXY 4-INCH 646.1040 LF	MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH 646.1555 LF	COLD WEATHER MARKING EPOXY 4-INCH 646.6464.S LF	REMARKS
593+33.49'EB'	-	622+00'EB'	IH 94 EB	2870	725	-	Stage 2; Laneline Tape & Edgelines Epoxy (White)
593+33.49'EB'	-	622+00'EB'	IH 94 EB	2870	-	-	Stage 2; Edgelines Epoxy (Yellow)
622+00'EB'	-	636+00'EB'	IH 94 EB	-	-	1750	End Stage 2-Cold Weather Epoxy; Stage 3-Laneline Tape & Edgelines Epoxy (White)
622+00'EB'	-	636+00'EB'	IH 94 EB	-	-	1400	End Stage 2-Cold Weather Epoxy; Stage 3-Edgelines Epoxy (Yellow)
622+00'EB'	-	636+00'EB'	IH 94 EB	1400	350	-	End Stage 3; Laneline Tape & Edgelines Epoxy (White)
622+00'EB'	-	636+00'EB'	IH 94 EB	1400	-	-	End Stage 3; Edgelines Epoxy (Yellow)
		Project 1020-03-79	TOTAL 0010	8540	1075	3150	

MARKING AERIAL ENFORCEMENT BAR EPOXY

STATION	TO	STATION	LOCATION	646.5420 EACH	REMARKS
567+50'WB'	-	593+90'WB'	IH 94 WB	10	Stage 4
		Project 1020-03-76	TOTAL 0010	10	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

MARKING REMOVAL LINE

STATION	TO	STATION	LOCATION	MARKING REMOVAL LINE 4-INCH 646.9000 LF	MARKING REMOVAL LINE 8-INCH 646.9100 LF	REMARKS
510+00'WB'	-	555+00'WB'	IH 94 WB	10125	200	Begin Stage 1A
512+00'WB'	-	521+00'WB'	IH 94 WB	2025	-	Begin Stage 3
520+50'WB'	-	557+50'WB'	IH 94 WB	8325	-	Begin Stage 4
		Project 1020-03-76	TOTAL 0010	20475	200	

MARKING REMOVAL LINE

STATION	TO	STATION	LOCATION	MARKING REMOVAL LINE 4-INCH 646.9000 LF	MARKING REMOVAL LINE 8-INCH 646.9100 LF	REMARKS
513+00'EB'	-	520+00'EB'	IH 94 EB	1575	800	Begin Stage 2
		Project 1020-03-77	TOTAL 0010	1575	800	

3

MARKING REMOVAL LINE

STATION	TO	STATION	LOCATION	MARKING REMOVAL LINE 4-INCH 646.9000 LF	REMARKS
635+00'WB'	-	641+00'WB'	IH 94 WB	1350	Begin Stage 3
		Project 1020-03-78	TOTAL 0010	1350	

MARKING REMOVAL LINE

STATION	TO	STATION	LOCATION	MARKING REMOVAL LINE 4-INCH 646.9000 LF	REMARKS
612+50'EB'	-	641+50'EB'	IH 94 EB	6525	Begin Stage 1A
624+00'EB'	-	636+00'EB'	IH 94 EB	2700	Begin Stage 2
622+00'EB'	-	633+50'EB'	IH 94 EB	2600	Begin Stage 3
		Project 1020-03-79	TOTAL 0010	11825	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

3

TEMPORARY MARKING LINE

STATION	TO	STATION	LOCATION	TEMPORARY MARKING LINE EPOXY 4-INCH 649.0120 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH 649.0250 LF	REMARKS
510+00'WB'	-	555+00'WB'	IH 94 WB	6750	3375	200	Begin Stage 1A
510+00'WB'	-	555+00'WB'	IH 94 WB	10125	-	200	Begin Stage 1B
515+00'WBT'	-	550+00'WBT'	IH 94 WB Temp	7875	-	-	Begin Stage 1B
512+00'WB'	-	521+00'WB'	IH 94 WB	2525	-	-	Begin Stage 3
521+00'WBT'	-	577+50'WBT'	IH 94 WB Temp	12715	-	-	Begin Stage 3
597+00'WBT'	-	613+00'WBT'	IH 94 WB Temp	4100	-	-	Begin Stage 3
520+50'WB'	-	557+50'WB'	IH 94 WB	8825	-	-	Begin Stage 4
		Project 1020-03-76	**TOTAL 0010**	**52915**	**3375**	**400**	

TEMPORARY MARKING LINE

STATION	TO	STATION	LOCATION	TEMPORARY MARKING LINE EPOXY 4-INCH 649.0120 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH 649.0250 LF	REMARKS
513+00'EB'	-	520+00'EB'	IH 94 EB	1575	500	750	Begin Stage 2
520+00'EBT'	-	600+66.67'EBT'	IH 94 EB Temp	18150	-	-	Begin Stage 2
		Project 1020-03-77	**TOTAL 0010**	**19725**	**500**	**750**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

3

TEMPORARY MARKING LINE

STATION	TO	STATION	LOCATION	TEMPORARY MARKING LINE EPOXY 4-INCH 649.0120 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	REMARKS
613+00'WBT'	-	641+00'WBT'	IH 94 WB Temp	7200	100	Begin Stage 3
		Project 1020-03-78	**TOTAL 0010**	**7200**	**100**	

TEMPORARY MARKING LINE

STATION	TO	STATION	LOCATION	TEMPORARY MARKING LINE EPOXY 4-INCH 649.0120 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	REMARKS
612+50'EB'	-	641+50'EB'	IH 94 EB	2815	3720	Begin Stage 1A
612+50'EB'	-	641+50'EB'	IH 94 EB	6535	-	Begin Stage 1B
600+66.67'EBT'	-	636+00'EBT'	IH 94 EB Temp	7950	-	Begin Stage 2
622+00'EB'	-	633+00'EB'	IH 94 EB	2975	-	Begin Stage 3
		Project 1020-03-79	**TOTAL 0010**	**20275**	**3720**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

CONSTRUCTION STAKING STORM SEWER

STATION	LOCATION	650.4000 EACH	REMARKS
527+40'WB'	IH 94 WB, Rt.	1	Stage 1A
536+40'WB'	IH 94 WB, Rt.	1	Stage 1A
570+64'WB'	IH 94 WB, Rt.	1	Stage 1B
570+30'WB'	IH 94 WB, Lt.	1	Stage 3
Project 1020-03-76	**TOTAL 0010**	**4**	

CONSTRUCTION STAKING STORM SEWER

STATION	LOCATION	650.4000 EACH	REMARKS
571+50'EB'	IH 94 EB, Lt.	1	Stage 2
571+84'EB'	IH 94 EB, Rt.	1	Stage 2
Project 1020-03-77	**TOTAL 0010**	**2**	

CONSTRUCTION STAKING STORM SEWER

STATION	LOCATION	650.4000 EACH	REMARKS
612+89'EB'	IH 94 EB, Lt	1	Stage 2
615+27'EB'	IH 94 EB, Lt	1	Stage 4
Project 1020-03-79	**TOTAL 0010**	**2**	

3

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	SUBGRADE 650.4500 LF	BASE 650.5000 LF	CONCRETE PAVEMENT 650.7000 LF	SLOPE STAKES 650.9920 LF	REMARKS
514+00'WB'	-	613+00'WB'	IH 94 WB	9900	9900	5100	9900	Stage 1 - Temp & Perm, WB
525+42'WB'	-	613+00'WB'	IH 94 WB	4500	4500	4500	9900	Stage 3 - Perm. WB
525+42'WB'	-	565+00'WB'	IH 94 WB	3958	3958	-	3958	Stage 4 - Perm. WB
596+00'WB'	-	616+00'WB'	IH 94 WB	2000	2000	-	2000	Stage 4 - Perm. WB
	Project 1020-03-76		**TOTAL 0010**	**20358**	**20358**	**9600**	**25758**	

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	SUBGRADE 650.4500 LF	BASE 650.5000 LF	CONCRETE PAVEMENT 650.7000 LF	SLOPE STAKES 650.9920 LF	REMARKS
525+00'EB'	-	593+33.49'EB'	IH 94 EB	6834	6834	6834	6834	Stage 2 - Perm EB
515+00'EB'	-	525+00'EB'	IH 94 EB	-	-	-	1000	Stage 4 - EB Median
	Project 1020-03-77		**TOTAL 0010**	**6834**	**6834**	**6834**	**7834**	

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	SUBGRADE 650.4500 LF	BASE 650.5000 LF	CONCRETE PAVEMENT 650.7000 LF	SLOPE STAKES 650.9920 LF	REMARKS
613+00'WB'	-	641+00'WB'	IH 94 WB	2800	2800	-	2800	Stage 1; Temp & Perm, WB
613+00'WB'	-	627+00'WB'	IH 94 WB	1400	1400	1400	1400	Stage 3; Perm, WB
	Project 1020-03-78		**TOTAL 0010**	**4200**	**4200**	**1400**	**4200**	

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	SUBGRADE 650.4500 LF	BASE 650.5000 LF	CONCRETE PAVEMENT 650.7000 LF	SLOPE STAKES 650.9920 LF	REMARKS
593+33.49'EB'	-	636+00'EB'	IH 94 EB	4267	4267	2797	4267	Stage 2; Perm. EB
616+00'EB'	-	641+00'EB'	IH 94 EB	2500	2500	-	2500	Stage 4; Median EB
	Project 1020-03-79		**TOTAL 0010**	**6767**	**6767**	**2797**	**6767**	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650.6000 EACH	REMARKS
564+33'WB'	IH 94 WB	1	Stage 1B
569+25'WB'	IH 94 WB	1	Stage 1B
570+00'WB'	IH 94 WB	1	Stage 1B
572+12'WB'	IH 94 WB	1	Stage 1B
580+85'WB'	IH 94 WB	1	Stage 1B
586+68'WB'	IH 94 WB	1	Stage 1B
591+72'WB'	IH 94 WB	1	Stage 1B
600+80'WB'	IH 94 WB	1	Stage 1B
Project 1020-03-76	TOTAL 0010	8	

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650.6000 EACH	REMARKS
567+46'EB'	IH 94 EB	1	Stage 2
589+50'EB'	IH 94 EB	1	Stage 2
592+46'EB'	IH 94 EB	1	Stage 2
Project 1020-03-77	TOTAL 0010	3	

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650.6000 EACH	REMARKS
600+96'EB'	IH 94 EB	1	Stage 2
617+00'EB'	IH 94 EB, Lt	1	Stage 4
Project 1020-03-79	TOTAL 0010	2	

3

SAWING ASPHALT

STATION	TO	STATION	LOCATION	690.0150 LF	REMARKS
514+00'WB'	-	520+00'WB'	IH 94 WB	12	Stage 1A
527+34'WB'	-	527+54'WB'	IH 94 WB	20	Stage 1B; Pipe Replacement
536+35'WB'	-	536+55'WB'	IH 94 WB	20	Stage 1B; Pipe Replacement
		525+42'WB'	IH 94 WB	10	Stage 3
	Project 1020-03-76		TOTAL 0010	62	

SAWING ASPHALT

STATION	LOCATION	690.0150 LF	REMARKS
525+00'EB'	IH 94 EB	14	Stage 2
Project 1020-03-77	TOTAL 0010	14	

SAWING ASPHALT

STATION	TO	STATION	LOCATION	690.0150 LF	REMARKS
633+00'WB'	-	642+00'WB'	IH 94 WB	12	Stage 1A
		627+00'WB'	IH 94 WB	14	Stage 3
	Project 1020-03-78		TOTAL 0010	26	

SAWING ASPHALT

STATION	LOCATION	690.0150 LF	REMARKS
633+00'EB'	Ih 94 EB	10	Stage 2
Project 1020-03-79	TOTAL 0010	10	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

SAWING CONCRETE

STATION	TO	STATION	LOCATION	690.0250 LF	REMARKS
527+34'WB'	-	527+54'WB'	IH 94 WB	48	Stage 1B; Pipe Replacement
536+35'WB'	-	536+55'WB'	IH 94 WB	48	Stage 1B; Pipe Replacement
		525+42'WB'	IH 94 WB	24	Stage 3
	Project 1020-03-76		TOTAL 0010	120	

SAWING CONCRETE

STATION	LOCATION	690.0250 LF	REMARKS
525+00'EB'	IH 94 EB	24	Stage 2
Project 1020-03-77	TOTAL 0010	24	

3

SAWING CONCRETE

STATION	LOCATION	690.0250 LF	REMARKS
623+11.66'WB'	IH 94 WB	24	Stage 3
Project 1020-03-78	TOTAL 0010	24	

SAWING CONCRETE

STATION	LOCATION	690.0250 LF	REMARKS
621+30.61'EB'	IH 94 EB	24	Stage 3
Project 1020-03-79	TOTAL 0010	24	

TRAFFIC CONTROL VERTICAL PANELS

STATION	TO	STATION	LOCATION	SPV.0060.01 EACH	REMARKS
516+00'WB'	-	550+00'WB'	IH 94 WB, Rt	34	Place at End of Stage 2
	Project 1020-03-76		TOTAL 0010	34	

TRAFFIC CONTROL VERTICAL PANELS

STATION	TO	STATION	LOCATION	SPV.0060.01 EACH	REMARKS
620+00'EB'	-	633+00'EB'	IH 94 EB, Lt	33	Place at End of Stage 2
	Project 1020-03-79		TOTAL 0010	33	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

3

3

EARTHWORK SUMMARY

Division	From/To Station	Location	205.0100 Common Excavation (1)		208.1100 Select Borrow	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
			Cut (2)	EBS Excavation (3)					Factor 1.25				
Division 1													
Stage1-IH94	514'WB'+20/640'WB'+56	IH 94 Median & WB	20,812	9,952	9,952	499	20,313	104,119	130,148	-109,835	0	109,835	
Division 1 Subtotal			20,812	9,952	9,952	499	20,313	104,119	130,148	-109,835	0	109,835	
Division 2													
Stage 2-IH94	525'EB'+00/636'EB'+00	IH 94 EB	49,794	5,261	5,261	13,695	36,099	54,971	68,714	-32,615	0	32,615	
Division 2 Subtotal			49,794	5,261	5,261	13,695	36,099	54,971	68,714	-32,615	0	32,615	
Division 3													
Stage 3-IH94	525'WB'+42/627'WB'+00	IH 94 WB	33,581	2,908	2,908	9,944	23,637	14,129	17,661	5,976	5,976	0	
Stage 3-130th	107'KK'+00/108'KK'+50	130th Street	1,372	0	0	0	1,372	3	4	1,369	1,369	0	
Division 3 Subtotal			34,953	2,908	2,908	9,944	25,009	14,131	17,664	7,345	7,345	0	
Division 4													
Stage 4-IH94	515'WB'+39/640'WB'+50	IH 94 Median	37,290	0	0	6,434	30,856	183	228	30,628	30,628	0	
Division 4 Subtotal			37,290	0	0	6,434	30,856	183	228	30,628	30,628	0	
Grand Total			142,850	18,121	18,121	30,572	112,278	173,404	216,755	-104,477	37,972	142,450	
		Total Common Excavation	160,971										

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(3) EBS Excavation to be backfilled with Select Borrow material.

(4) Salvaged/Unusable Pavement Material

(5) Available Material = Cut - Salvaged/Unusuable Pavement Material

(13) Expanded Fill Factor = 1.25

(14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

BEGIN PROJECT 1020-03-76
STA. 525'WB'+42

STA. 499'WB'+00.00 - 533'WB'+00.00, 15' RT.
INSTALL CABLE BARRIER
SEE SOIL BORINGS - CABLE BARRIER

STA. 534'WB'+40, RT. / STA. 534'EB'+00, LT.
MAINTENANCE CROSSOVER REQ'D.

STA. 525'WB'+42 - 627'WB'+00, LT.
REMOVE & REPLACE EXIST. WOVEN WIRE FENCE

STA. 527'WB'+44
EXIST. INLET & 48" RCCP
TO BE REMOVED

STA. 536'WB'+45
EXIST. INLET & 24" RCCP
TO BE REMOVED

PT: 520+02.87'WB'
PC: 544+25.86'WB'
PI: 521+47.98'EB'
PC: 544+18.76'EB'

520'WB' 525'WB' 530'WB' 535'WB' 540'WB' 545'WB' 550'WB'
520'EB' S47° 50' 42"E 525'EB' 530'EB' S47° 16' 03"E 535'EB' 540'EB' 545'EB' 550'EB'
IH 94 S48° 28' 08"E

AT&T LEGACY
LEVEL 3 COMM.
CENTURYLINK COMM.

5 5

STA 521+00.00 EL 1023.48
STA 524+00.00 EL 1025.36
STA 526+00.00 EL 1026.52
VCL = 800.00
K = 5761.87
VPC STA 543+91.53'W
VPC EL 1034.63
VPI STA 547+91.53'W
VPI EL 1036.69

FINISHED PROFILE
0.63% 0.58% 0.38% 0.51%
EXISTING GROUND

STA. 527'WB'+44
1-MANHOLE 8-FT(MH1) REQ'D.
1-60" RCPSS CLASS III REQ'D.

VPC STA 529+95.00'WB'
VPC EL 1028.00
VPI STA 533+95.00'WB'
VPI EL 1029.50
VPT STA 537+95.00'WB'
VPT EL 1031.56

STA. 536'WB'+45
1-INLET MEDIAN 2 GRATE(INL1) REQ'D.
1-24" RCPSS CLASS III REQ'D.

VCL = 800.00
K = 1074.81

BEGIN PROJECT 1020-03-76
STA. 525'WB'+42

1060 1050 1040 1030 1020 1010 1000 990

520 525 530 535 540 545 550

1023.48 1023.48 | 1023.86 1024.11 | 1024.37 1024.73 | 1025.23 1025.36 | 1025.80 1025.94 | 1026.52 1026.52 | 1026.99 1026.90 | 1027.35 1027.27 | 1027.57 1027.65 | 1027.90 1028.02 | 1028.38 1028.41 | 1028.69 1028.81 | 1028.94 1029.23 | 1029.43 1029.67 | 1029.90 1030.12 | 1030.24 1030.59 | 1030.83 1031.08 | 1031.40 1031.59 | 1032.06 1032.10 | 1032.42 1032.62 | 1032.92 1033.13 | 1033.53 1033.65 | 1034.20 1034.16 | 1034.61 1034.67 | 1034.87 1035.13 | 1034.94 1035.50 | 1034.69 1035.77 | 1034.20 1035.95 | 1033.74 1036.04

525+00 530+00 535+00 540+00 545+00

PROJECT NO: 1020-03-76 & 1020-03-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 120	E

STA. 554'WB'+50 - 568'WB'+50, LT.
OBLITERATE OLD ROAD

PI STA = 554+93.46
Y = 333170.102
X = 566510.319
DELTA = 9°27'43"
D = 0°26'39"
T = 1067.60'
L = 2130.34'
R = 12900.00'
PC STA = 544+25.86
PT STA = 565+56.20
S.E. = R.C. / 2.0%

STA. 525'WB'+42 - 627'WB'+00, LT.
REMOVE & REPLACE EXIST. WOVEN WIRE FENCE

STA. 570'WB'+10.73 - 573'WB'+02.88(POST 1), LT.
INSTALL MGS THRIE BEAM TRANSITION & GUARDRAIL & EAT

STA. 570'WB'+45.37 - 576'WB'+97.01(POST 1), RT.
INSTALL MGS THRIE BEAM TRANSITION & GUARDRAIL & EAT

STA. 570'WB'+00 - 598'WB'+00, LT.
OBLITERATE OLD ROAD

STA. 568'WB'+63 - 569'WB'+88, LT.
REMOVE BRIDGE STRUCT. B-55-36
3 SPAN HAUNCHED SLAB

STA. 572'WB'+12
EXIST. 24" RCCP
TO BE REMOVED

STA. 564'WB'+33
EXIST. 24" RCCP
TO BE REMOVED

E. KINNICKINNIC DR.
EXIST. 24" RCCP'S
UNDER B-55-36, ALONG 130TH ST.
TO BE REMOVED

130TH ST. / KINNICKINNIC RD.

PT: 565+56.20'WB'

BM1
BM2
BM3
BM4

DAIRYLAND POWER
XCEL ENERGY
AT&T WI
AT&T LEGACY
LEVEL 3 COMM.
CENTURYLINK COMM.

B-55-254
B-55-255

IH 94

550'WB' 555'WB' 560'WB' 565'WB' 570'WB' 575'WB' 580'WB'

550'EB' 555'EB' 560'EB' 565'EB' 570'EB' 575'EB' 580'EB'

PI STA = 558+84.60
Y = 332778.000
X = 566736.240
DELTA = 10°40'05"
D = 0°21'54"
T = 1465.84'
L = 2923.21'
R = 15700.00'
PC STA = 544+18.76
PT STA = 573+41.97
S.E. = N.C.

PT: 573+41.97'EB'

BENCH MARKS

NO.	STATION & OFFSET	DESCRIPTION	ELEV.
1	568'WB'+63.95, 131.150' LT.	CP8, 3/4" REB RCAP	1005.02'
2	569'EB'+38.48, 111.212' LT.	CP9, 3/4" REB RCAP	1018.48'
3	570'WB'+46.28, 77.246 RT.	CP10, 3/4" REB RCAP	1006.51'
4	571'EB'+25.20, 116.148' RT.	CP11, 3/4" REB RCAP	1009.47'

VPT STA 551+91.53'WB'
VPT ELL 1035.77

VPC STA 562+00.00'WB'
VPC EL 1033.45

VPI STA 565+00.00'WB'
VPI EL 1032.76

VPT STA 568+00.00'WB'
VPT EL 1030.33

FINISHED PROFILE

-0.23%

-0.81%

EXISTING GROUND

VCL = 800.00
K = 1074.81

VCL = 600.00
K = 1033.18

STA. 564'WB'+33
1-24" RCCP CLASS III REQ'D.

STA. 572'WB'+12
1-24" RCCP CLASS III REQ'D.

UNDER B-55-254, ALONG 130TH ST.
2-24" RCCP CLASS III REQ'D.

STA. 568'WB'+99.06 - 570'WB'+20.94
BRIDGE STRUCT. B-55-254 REQ'D.
SINGLE SPAN 54" PRESTR. GIRDER
SEE STRUCTURE PLANS

1060 1050 1040 1030 1020 1010 1000 990

550	555	560	565	570	575	580
1032.18	1035.94	1031.52	1035.75	1031.65	1035.52	1031.82	1035.29	1030.90	1035.06	1029.71	1034.83	1028.53	1034.60	1026.91	1034.37	1025.60	1034.14	1024.50	1033.91	1022.99	1033.68	1022.47	1033.45	1020.52	1033.17	1019.36	1032.79	1020.22	1032.32	1025.63	1031.75	1023.28	1031.09	1016.14	1030.33	1019.88	1029.52	1006.51	1028.70	1018.16	1027.89	1014.93	1027.08	1016.53	1026.27	1019.77	1025.46	1022.69	1024.65	1024.22	1023.84	1023.63	1023.03	1023.29	1022.22	1021.43	1021.41
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	555+00		560+00		565+00		570+00		575+00	

PROJECT NO: 1020-03-76 & 1020-03-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 121	E

STA. 525'WB'+42 - 627'WB'+00, LT.
REMOVE & REPLACE EXIST. WOVEN WIRE FENCE

STA. 570'WB'+00 - 598'WB'+00, LT.
OBLITERATE OLD ROAD

STA. 580'WB'+85
EXIST. 24" RCCP
TO BE REMOVED

STA. 586'WB'+68
EXIST. 24" RCCP
TO BE REMOVED

STA. 591'WB'+72
EXIST. 24" RCCP
TO BE REMOVED

STA. 600'WB'+80
EXIST. 24" RCCP
TO BE REMOVED

PI STA = 608+51.72
Y = 330322.590
X = 571055.059
DELTA = 31°15'24"
D = 1°20'31"
T = 1194.48'
L = 2329.42'
R = 4270.00'
PC STA = 596+57.24
PT STA = 619+86.66
S.E. = 4.7%

PI STA = 606+06.09
Y = 330266.986
X = 570744.654
DELTA = 31°15'07"
D = 1°15'33"
T = 1272.61'
L = 2481.79'
R = 4550.00'
PC STA = 593+33.49
PT STA = 618+15.28
S.E. = 4.5%

580'WB' S57° 55' 51"E 585'WB' 590'WB' 595'WB' 600'WB' 605'WB' 610'WB'
580'EB' S57° 56' 08"E 585'EB' 590'EB' 595'EB' 600'EB' 605'EB' 610'EB'
IH 94

PC: 596+57.24'WB'
PC: 593+33.49'EB'

AT&T LEGACY
LEVEL 3 COMM.
CENTURYLINK COMM.

-0.81%
-2.12%
FINISHED PROFILE
EXISTING GROUND

STA. 580'WB'+85
1-24" RCCP CLASS III REQ'D.
VPC STA 583+88.19'WB'
VPC EL 1017.45

STA. 586'WB'+68
1-24" RCCP CLASS III REQ'D.
VPI STA 587+88.19'WB'
VPI EL 1014.21

STA. 591'WB'+72
1-24" RCCP CLASS III REQ'D.
VPT STA 591+88.19'WB'
VPT EL 1005.71

STA. 600'WB'+80
1-24" RCCP CLASS III REQ'D.
VPC STA 601+81.37'WB'
VPC EL 984.61

VCL = 800.00
K = 608.96

VCL = 1775.00
K = 401.18

580	585	590	595	600	605	610
1011.10	1009.01	1006.62	1004.96	1003.28	1002.77	1002.46
1019.79	1018.98	1018.16	1017.35	1016.44	1015.36	1014.12
1003.82	1003.03	998.61	993.37	992.21	992.16	993.32
1012.72	1011.15	1009.42	1007.52	1005.46	1003.33	1001.21
994.05	992.45	987.79	985.28	983.57	982.57	983.07
999.08	996.96	994.84	992.71	990.59	988.46	986.34
983.96	981.23	978.33	975.69	973.71	973.54	973.63	973.81
984.22	982.26	980.56	979.11	977.90	976.94	976.24	975.78

585+00 590+00 595+00 600+00 605+00

PROJECT NO: 1020-03-76 & 1020-03-78	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 WB	SHEET 122	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050110_PPIH94WB_12082017.DWG
LAYOUT NAME - ppwb3
PLOT DATE : 5/30/2018 3:16 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : ##########

STA. 525'WB'+42 - 627'WB'+00, LT.
REMOVE & REPLACE EXIST. WOVEN WIRE FENCE

PI STA = 608+51.72
Y = 330322.590
X = 571055.059
DELTA = 31°15'24"
D = 1°20'31"
T = 1194.48'
L = 2329.42'
R = 4270.00'
PC STA = 596+57.24
PT STA = 619+86.66
S.E. = 4.7%

END PROJECT 1020-03-76
BEGIN PROJECT 1020-03-78
STA. 613'WB'+00

STA. 616'WB'+56.80 - 623'WB'+12.50(POST 1), LT.
INSTALL MGS THRIE BEAM TRANSITION & GUARDRAIL & EAT

STA. 616'WB'+45.00 - 619'WB'+74.77(POST 1), RT.
INSTALL MGS THRIE BEAM TRANSITION & GUARDRAIL & EAT

END PROJECT 1020-03-78
STA. 627'WB'+00

N

STA. 615'WB'+09 - 616'WB'+41
REMOVE BRIDGE STRUCT. B-55-38
3 SPAN CONCRETE GIRDER

STA. 625'WB'+00
EXIST. INLET & 18" RCCP
TO BE REMOVED

STA. 628'WB'+45, RT. / 629'EB'+05, LT.
MAINTENANCE CROSSOVER REQ'D.

605'WB' IH 94 610'WB'
605'EB' IH 94 610'EB'
615'WB' IH 94 B-55-256
615'EB' IH 94 B-55-257
620'WB' S89° 11' 15"E 625'WB' S88° 26' 15"E 630'WB' IH 94 S89° 11' 15"E 635'WB'
630'EB' IH 94 S89° 12' 55"E 635'EB'
S89° 11' 15"E 620'EB' S89° 56' 16"E 625'EB' IH 94

PI: 619+86.66'WB'
PI: 623+11.66'WB'
PI: 626+93.65'WB'
140TH ST. / HIGHLAND RD.

BM7
BM5
BM8
BM6

KINNICKINNIC R.

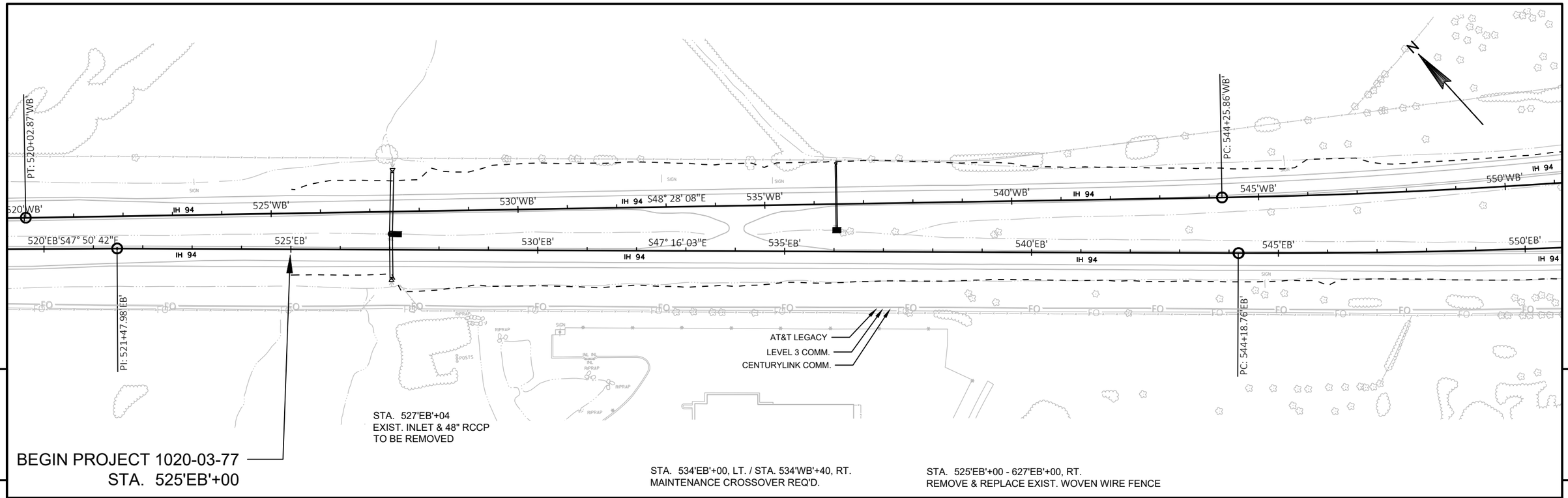
PI STA = 606+06.09
Y = 330266.986
X = 570744.654
DELTA = 31°15'07"
D = 1°15'33"
T = 1272.61'
L = 2481.79'
R = 4550.00'
PC STA = 593+33.49
PT STA = 618+15.28
S.E. = 4.5%

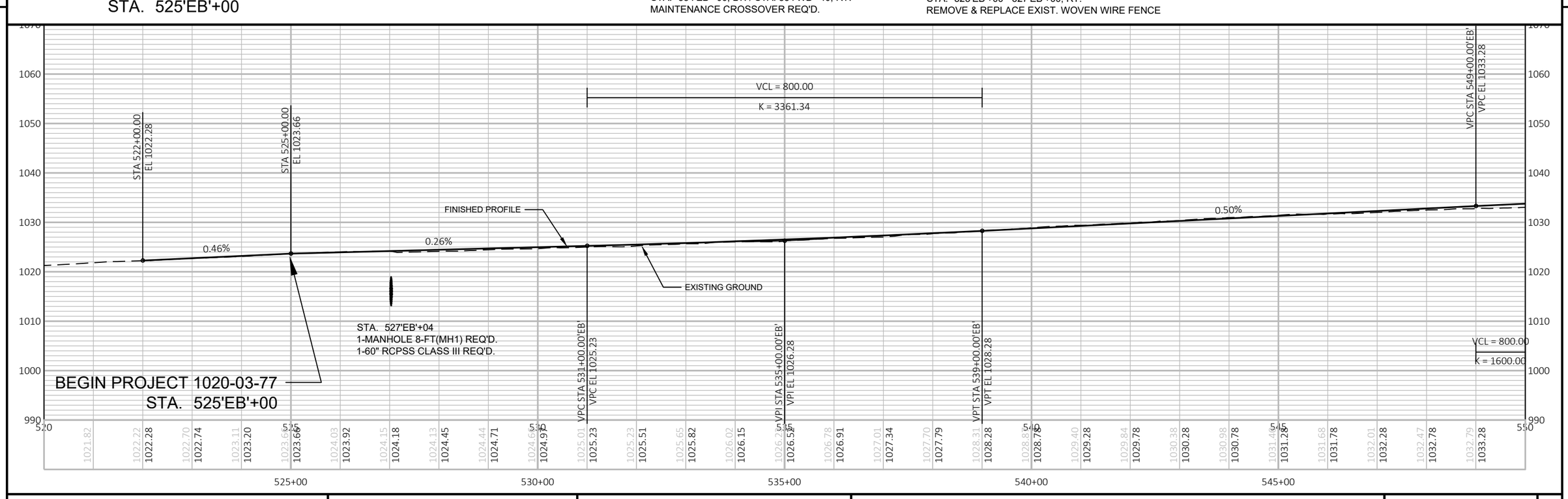
AT&T LEGACY
LEVEL 3 COMM.
CENTURYLINK COMM.

PI: 618+15.28'EB'
PI: 621+30.61'EB'
PI: 624+72.98'EB'

ST. CROIX ELECTRIC

FO FO FO





PROJECT NO: 1020-03-77 & 1020-03-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 124	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050105_PPIH94EB_12082017.DWG
LAYOUT NAME - ppeb1
PLOT DATE : 5/30/2018 3:23 PM
PLOT BY : K. KOPACZ
PLOT NAME :
PLOT SCALE : ############

PI STA = 554+93.46'WB'
Y = 333170.102
X = 566510.319
DELTA = 9°27'43"
D = 0°26'39"
T = 1067.60'
L = 2130.34'
R = 12900.00'
PC STA = 544+25.86'WB'
PT STA = 565+56.20'WB'
S.E. = R.C. / 2.0%

PT: 565+56.20'WB'

E. KINNICKINNIC DR.

BM1

IH 94

550'WB' 555'WB' 560'WB' 565'WB' 570'WB' 575'WB' 580'WB'

B-55-254

BM3

DAIRYLAND POWER

BM2

XCEL ENERGY

AT&T WI

550'EB' 555'EB' 560'EB' 565'EB' 570'EB' 575'EB' 580'EB'

B-55-255

BM4

30TH ST. / KINNICKINNIC RD.

PT: 573+41.97'EB'

PI STA = 558+84.60'EB'
Y = 332778.000
X = 566736.240
DELTA = 10°40'05"
D = 0°21'54"
T = 1465.84'
L = 2923.21'
R = 15700.00'
PC STA = 544+18.76'EB'
PT STA = 573+41.97'EB'
S.E. = N.C.

AT&T LEGACY
LEVEL 3 COMM.
CENTURYLINK COMM.

STA. 570'EB'+10 - 571'EB'+35
REMOVE BRIDGE STRUCT. B-55-37
3 SPAN HAUNCHED SLAB

STA. 567'EB'+46
EXIST. 30" RCCP
TO BE REMOVED

STA. 525'EB'+00 - 627'EB'+00, RT.
REMOVE & REPLACE EXIST. WOVEN WIRE FENCE

STA. 567'EB'+54.97(POST 1) - 569'EB'+84.73, LT.
INSTALL MGS EAT & GUARDRAIL & THRIE BEAM TRANSITION

STA. 567'EB'+27.56(POST 1) - 570'EB'+19.70, RT.
INSTALL MGS EAT & GUARDRAIL & THRIE BEAM TRANSITION

BENCH MARKS

NO.	STATION & OFFSET	DESCRIPTION	ELEV.
1	568'WB'+63.95, 131.150' LT.	CP8, 3/4" REB RCAP	1005.02'
2	569'EB'+38.48, 111.212' LT.	CP9, 3/4" REB RCAP	1018.48'
3	570'WB'+46.28, 77.246 RT.	CP10, 3/4" REB RCAP	1006.51'
4	571'EB'+25.20, 116.148' RT.	CP11, 3/4" REB RCAP	1009.47'

VPI STA 553+00.00'EB'
VPI EL 1035.28

VPT STA 557+00.00'EB'
VPT EL 1035.28

VPC STA 564+00.00'EB'
VPC EL 1035.28

VPI STA 569+00.00'EB'
VPI EL 1035.28

VPT STA 574+00.00'EB'
VPT EL 1026.63

FINISHED PROFILE

0.00%

EXISTING GROUND

-1.73%

STA. 567'EB'+46
1-30" RCCP CLASS IV REQ'D.

STA. 570'EB'+09.30 - 571'EB'+31.20
BRIDGE STRUCT. B-55-255 REQ'D.
SINGLE SPAN 54" PRESTR. GIRDER
SEE STRUCTURE PLANS

VCL = 800.00
K = 1600.00

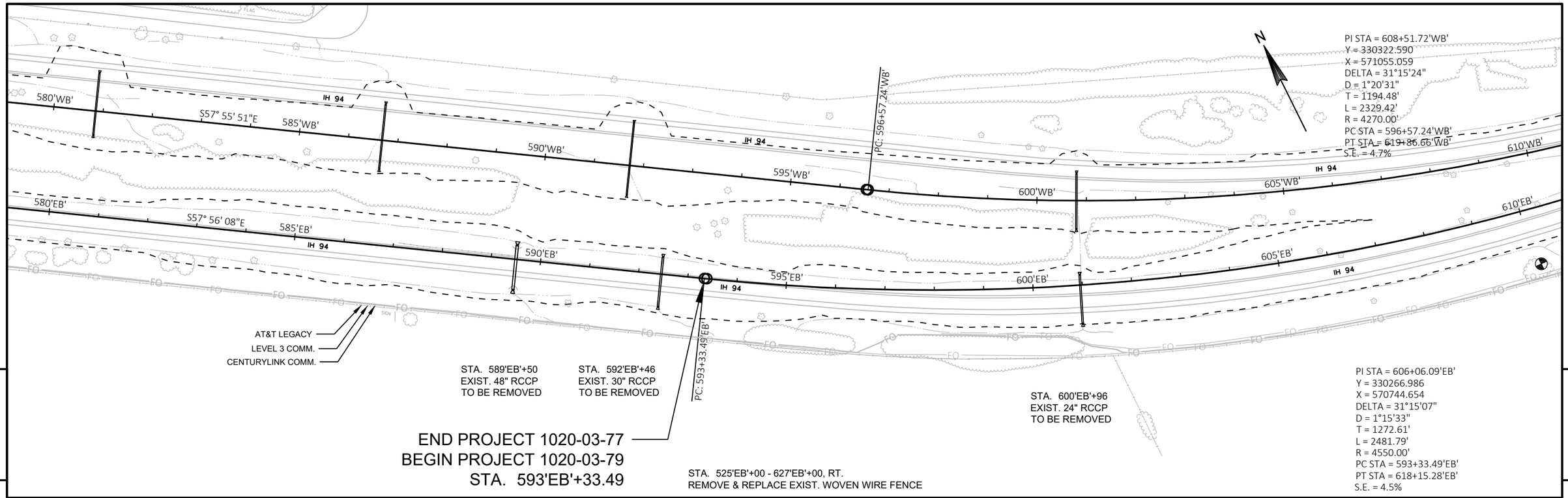
VCL = 1000.00
K = 578.11

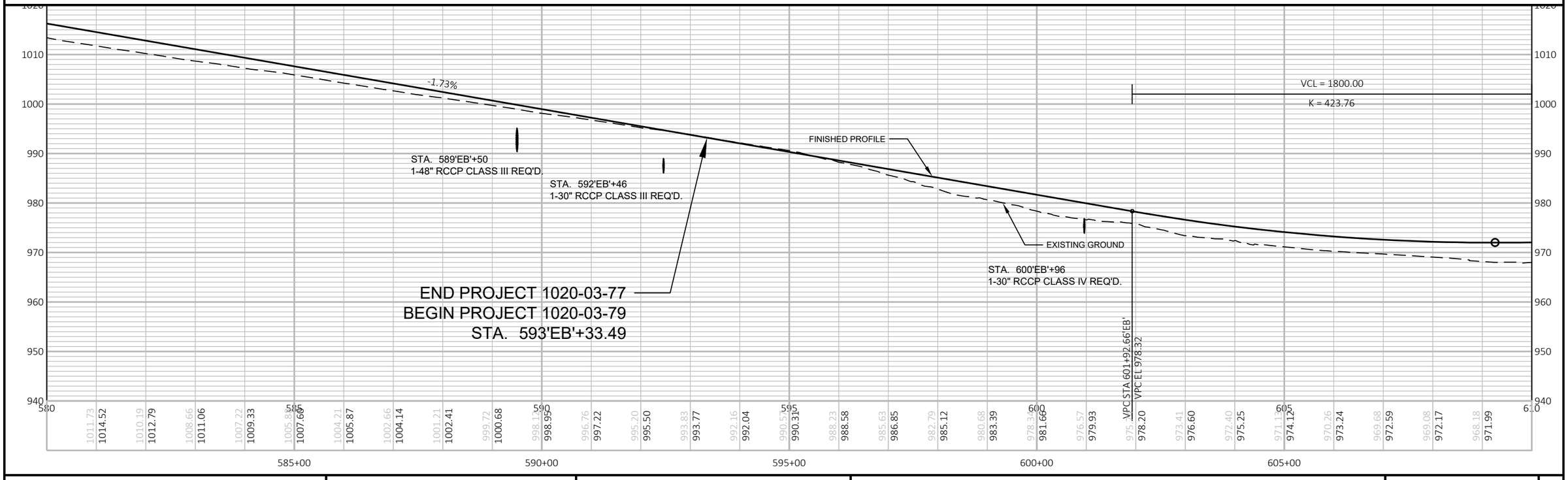
1080 1070 1060 1050 1040 1030 1020 1010 1000 990

550 555 560 565 570 575 580

555+00 560+00 565+00 570+00 575+00

1032.82	1034.16	1032.92	1034.50	1032.93	1034.78	1032.39	1035.00	1032.04	1035.16	1031.56	1035.25	1031.68	1035.28	1031.41	1035.28	1030.45	1035.28	1029.94	1035.28	1029.64	1035.28	1029.61	1035.28	1029.82	1035.28	1029.50	1035.28	1030.25	1035.19	1030.54	1034.93	1030.47	1034.50	1030.07	1033.90	1029.01	1033.12	1027.58	1032.17	1008.25	1031.04	1024.79	1029.74	1023.46	1028.27	1022.02	1026.63	1020.59	1024.90	1019.26	1023.17	1017.85	1021.44	1016.48	1019.71	1014.97	1017.98





PROJECT NO: 1020-03-77 & 1020-03-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 126	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050105_PPIH94EB_12082017.DWG
LAYOUT NAME - ppeb3

PLOT DATE : 5/30/2018 3:23 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : ############

PI STA = 608+51.72'WB'
Y = 330322.590
X = 571055.059
DELTA = 31°15'24"
D = 1°20'31"
T = 1194.48'
L = 2329.42'
R = 4270.00'
PC STA = 596+57.24'WB'
PT STA = 619+86.66'WB'
S.E. = 4.7%

BENCH MARKS

NO.	STATION & OFFSET	DESCRIPTION	ELEV.
5	615'WB'+12.97, 8.431' RT.	CP5003, ALUM. CAP TOP BRIDGE PARAPET	980.906'
6	615'EB'+50.11, 38.661' RT.	CP5004, ALUM. CAP TOP BRIDGE PARAPET	979.980'
7	611'WB'+89.69, 158.205 LT.	CP10444, RR SPIKE IN 14" PINE TREE	977.410'
8	610'EB'+13.83, 113.335' RT.	CP10445, 3/8" SPIKE IN 10" PINE TREE	971.570'

PI STA = 606+06.09'EB'
Y = 330266.986
X = 570744.654
DELTA = 31°15'07"
D = 1°15'33"
T = 1272.61'
L = 2481.79'
R = 4550.00'
PC STA = 593+33.49'EB'
PT STA = 618+15.28'EB'
S.E. = 4.5%

STA. 525'EB'+00 - 627'EB'+00, RT.
REMOVE & REPLACE EXIST. WOVEN WIRE FENCE

STA. 612'EB'+28.93(POST 1) - 615'EB'+46.19, LT.
INSTALL MGS EAT & GUARDRAIL & THRIE BEAM TRANSITION

STA. 612'EB'+44.58(POST 1) - 615'EB'+36.73, RT.
INSTALL MGS EAT & GUARDRAIL & THRIE BEAM TRANSITION

STA. 616'EB'+95.17 - 618'EB'+96.89, LT.
INSTALL MGS THRIE W BEAM TRANS. & GUARDRAIL & TYPE 2 TERMINAL

STA. 616'EB'+83.63 - 620'EB'+06.40, RT.
INSTALL MGS THRIE W BEAM TRANS. & GUARDRAIL & TYPE 2 TERMINAL

STA. 617'EB'+00.00 - 627'EB'+00.00,15' LT.
INSTALL CABLE BARRIER
SEE SOIL BORINGS - CABLE BARRIER

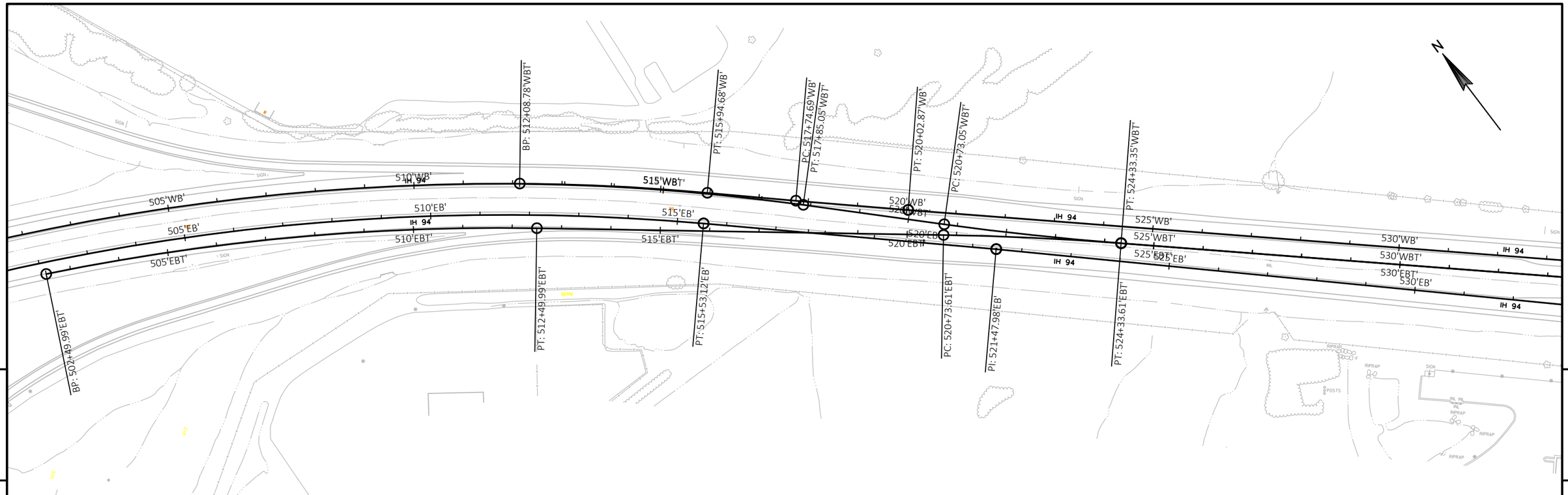
STA. 627'EB'+15 - 628'EB'+85, LT.
INSTALL STEEL THRIE BEAM & BULLNOSE TERMINAL

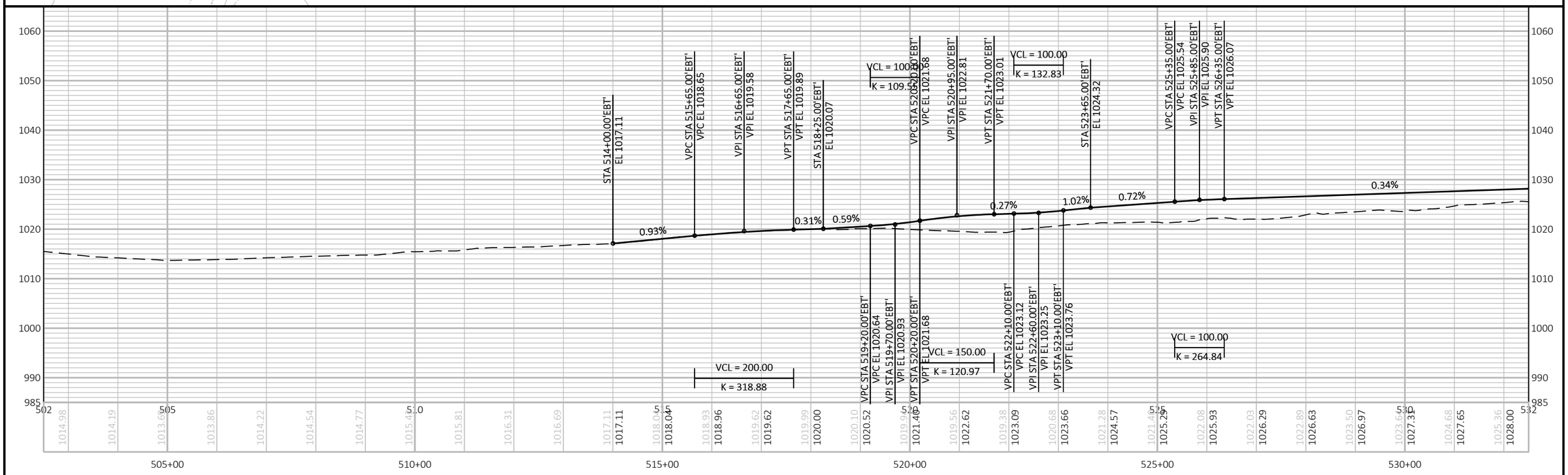
STA. 629'EB'+05, LT. / STA. 628'WB'+45, RT.
MAINTENANCE CROSSOVER REQ'D.

END PROJECT 1020-03-79
STA. 624'EB'+75

VCL = 1800.00
K = 423.76
STA 621+00.00
EL 988.12
2.48%
2.52%
FINISHED PROFILE
EXISTING GROUND
STA 629+00.00
EL 1007.94
VPI STA 610+92.66'EB'
VPI EL 962.76
VPT STA 619+92.66'EB'
VPT EL 985.42
STA. 612'EB'+89
1-INLET MEDIAN 2 GRATE(INL9) REQ'D.
1-24" RCPSS CLASS III REQ'D.
STA. 617'EB'+00, LT.
1-24" RCCP CLASS III REQ'D.
STA. 615'EB'+61.73 - 616'EB'+75.28
BRIDGE STRUCT. B-55-257 REQ'D.
SINGLE SPAN 54" PRESTR. GIRDER
SEE STRUCTURE PLANS

PROJECT NO: 1020-03-77 & 1020-03-79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 EB	SHEET 127	E



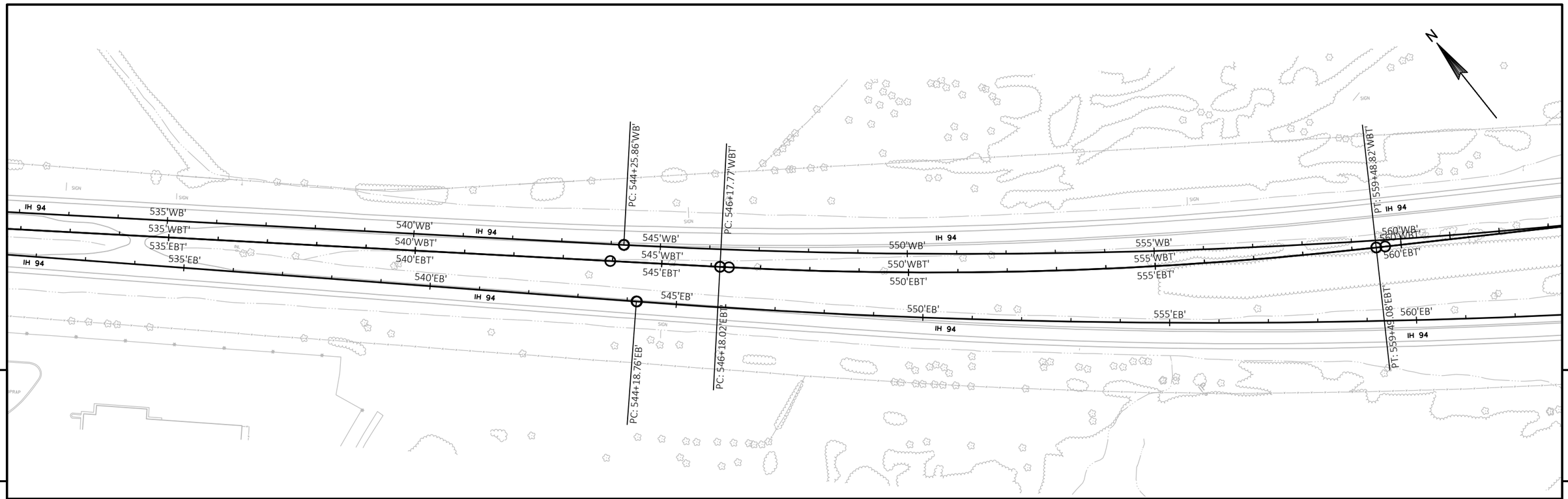


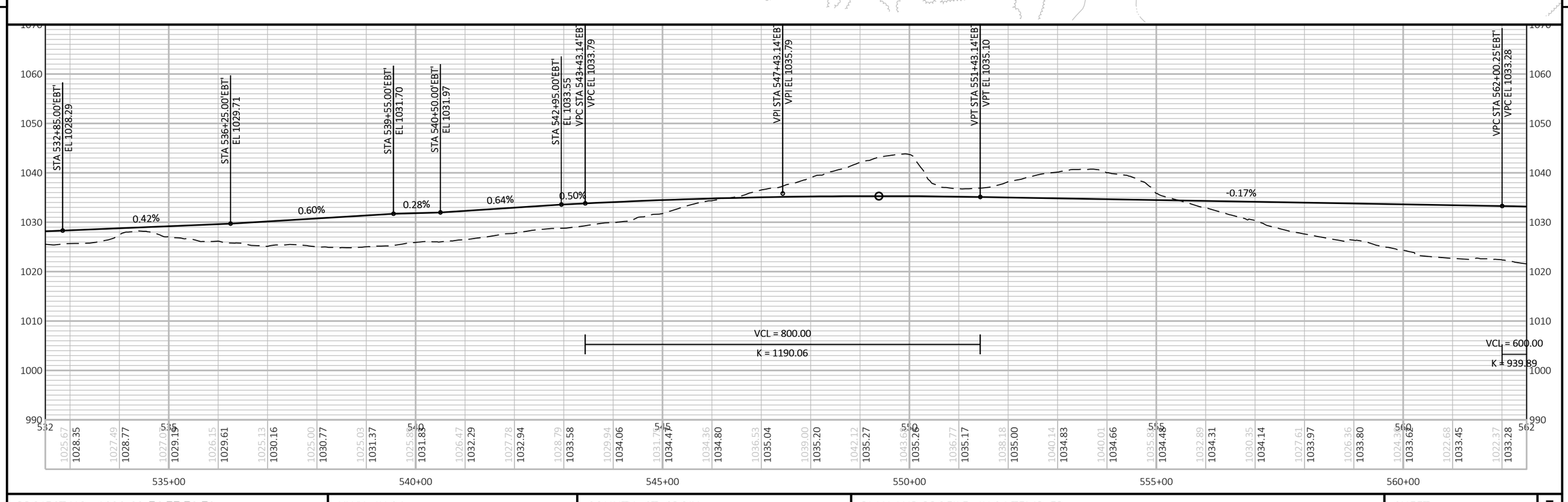
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. EB	SHEET 128 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050115_PPTEMPIH94EBT_03052018.DWG
LAYOUT NAME - PPEBT - 1

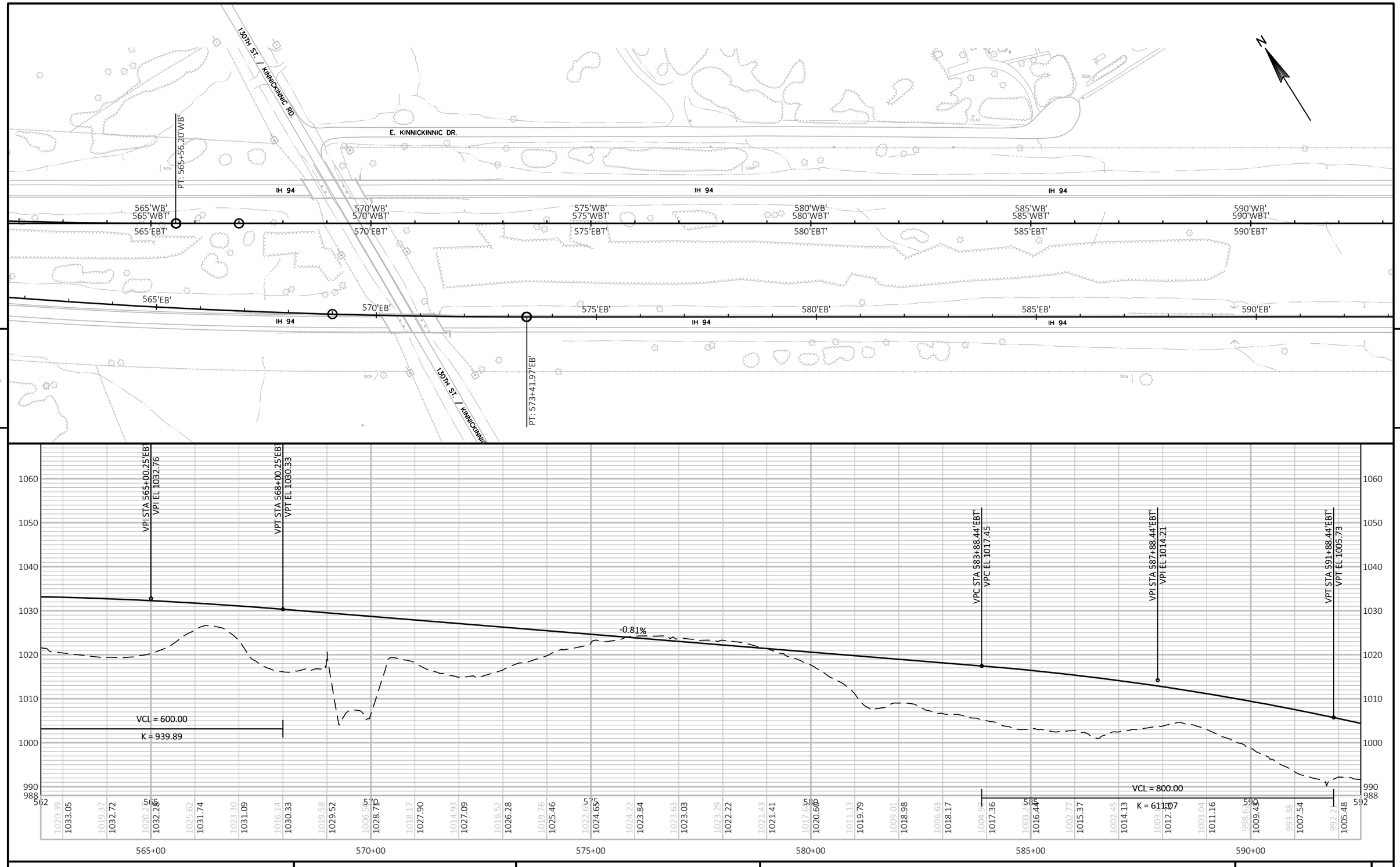
PLOT DATE : 5/21/2018 11:06 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44





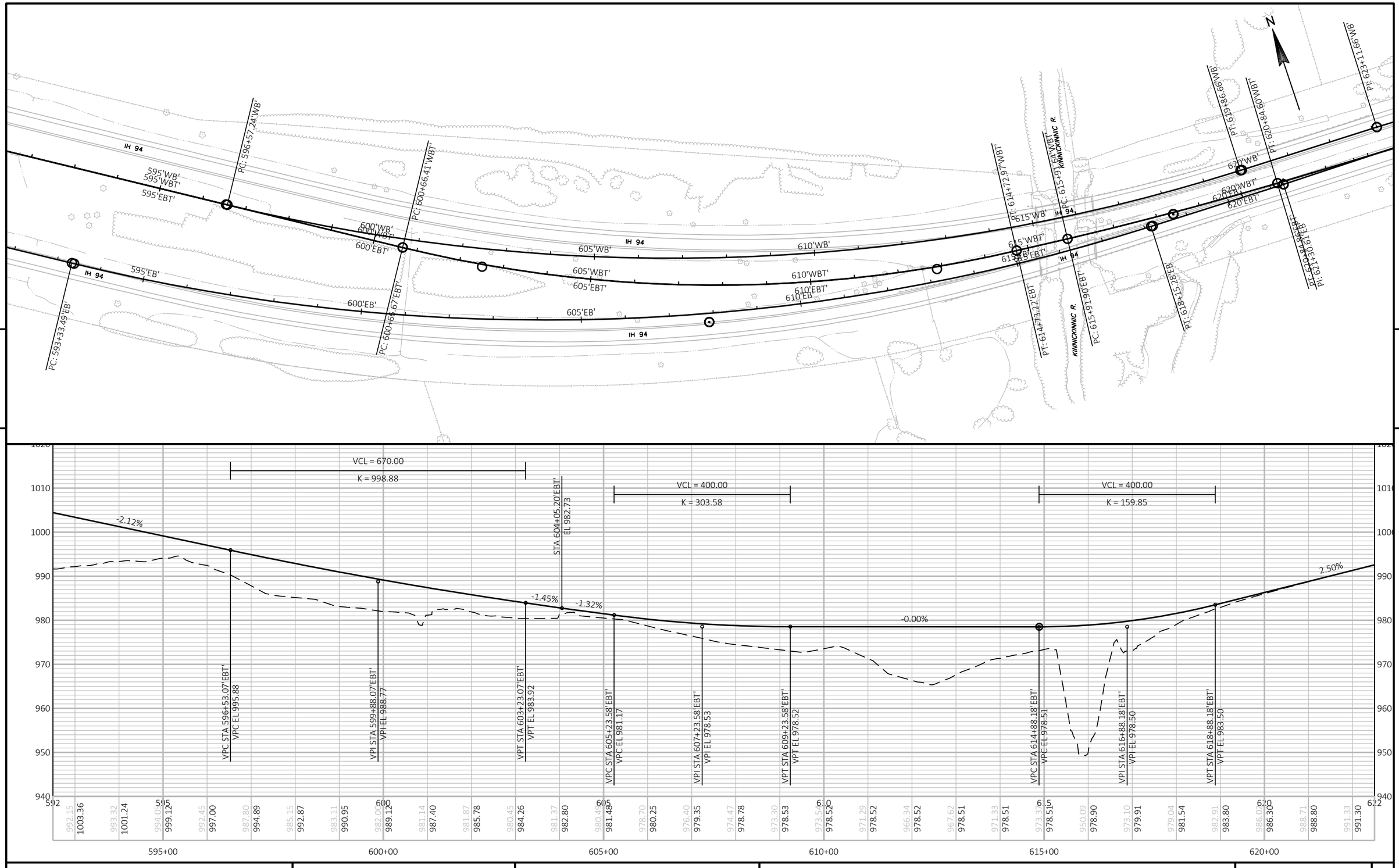
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. EB	SHEET 129 E



5

5

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. EB	SHEET 130	E



5

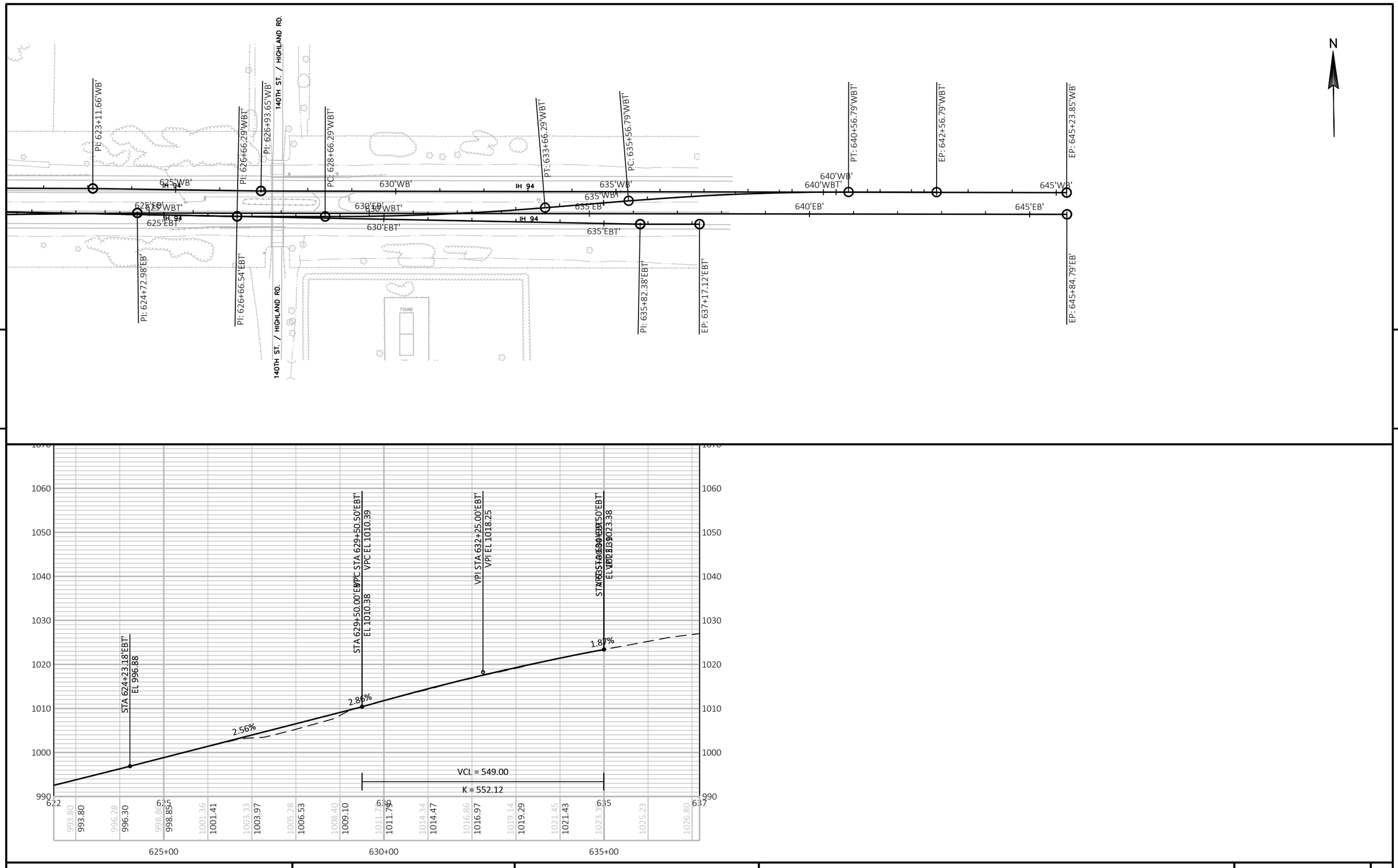
5

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. EB	SHEET 131	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050115_PPTEMPIH94EBT_03052018.DWG
LAYOUT NAME - PPEBT - 4

PLOT DATE : 5/21/2018 11:06 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

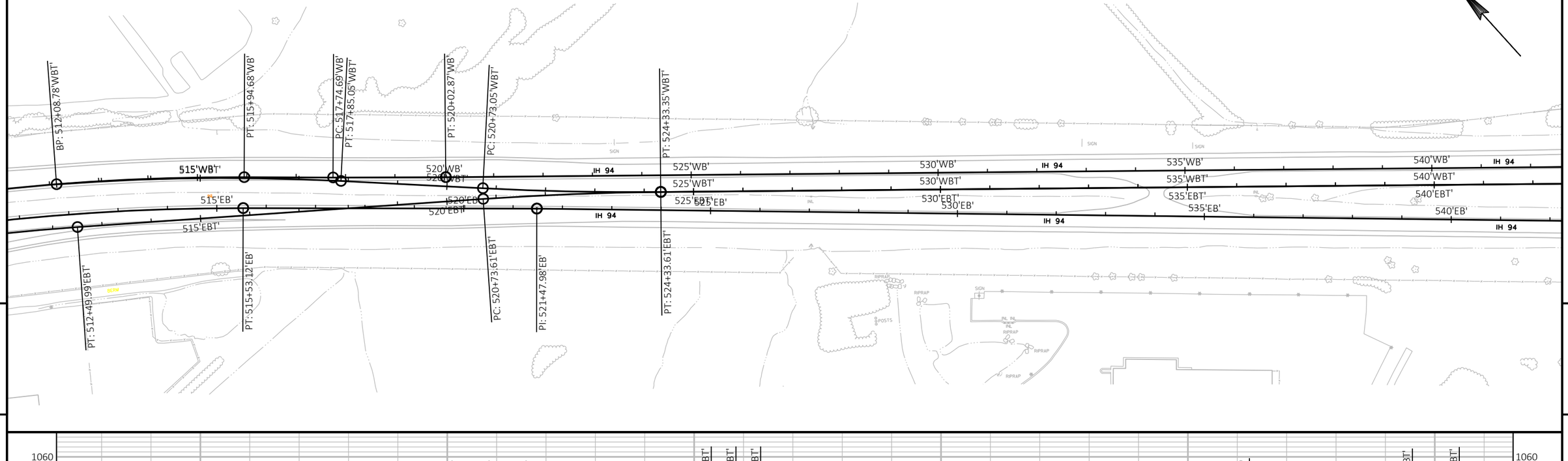
WISDOT/CADDS SHEET 44

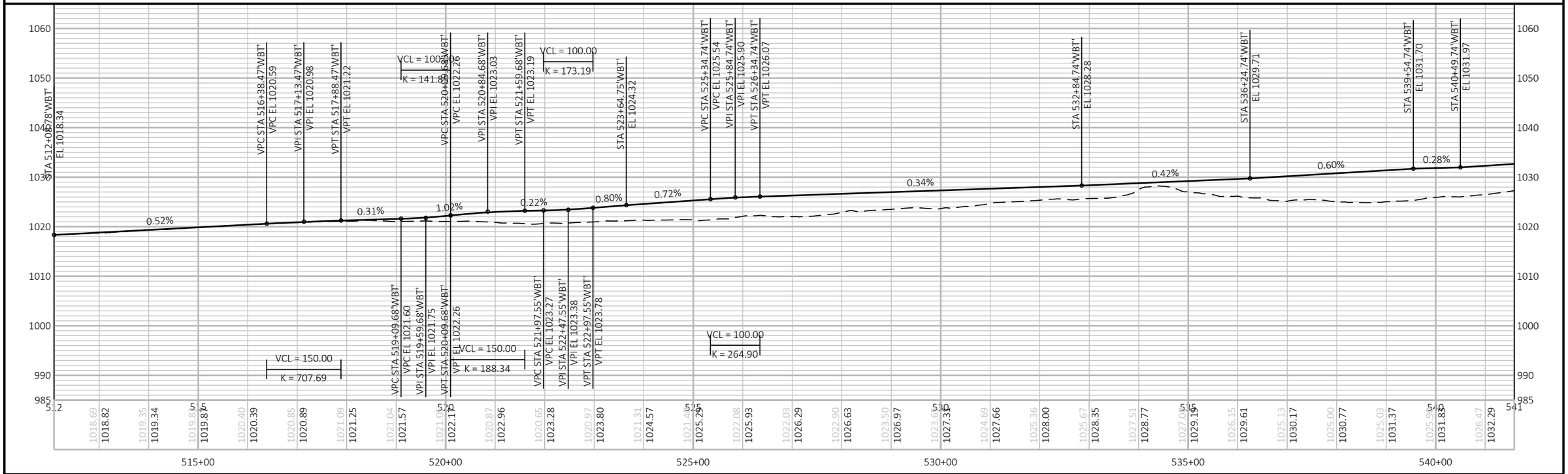


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. EB	SHEET 132	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050115_PPTEMPIH94EBT_03052018.DWG
LAYOUT NAME - PPEBT - 5

PLOT DATE : 5/21/2018 11:06 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT



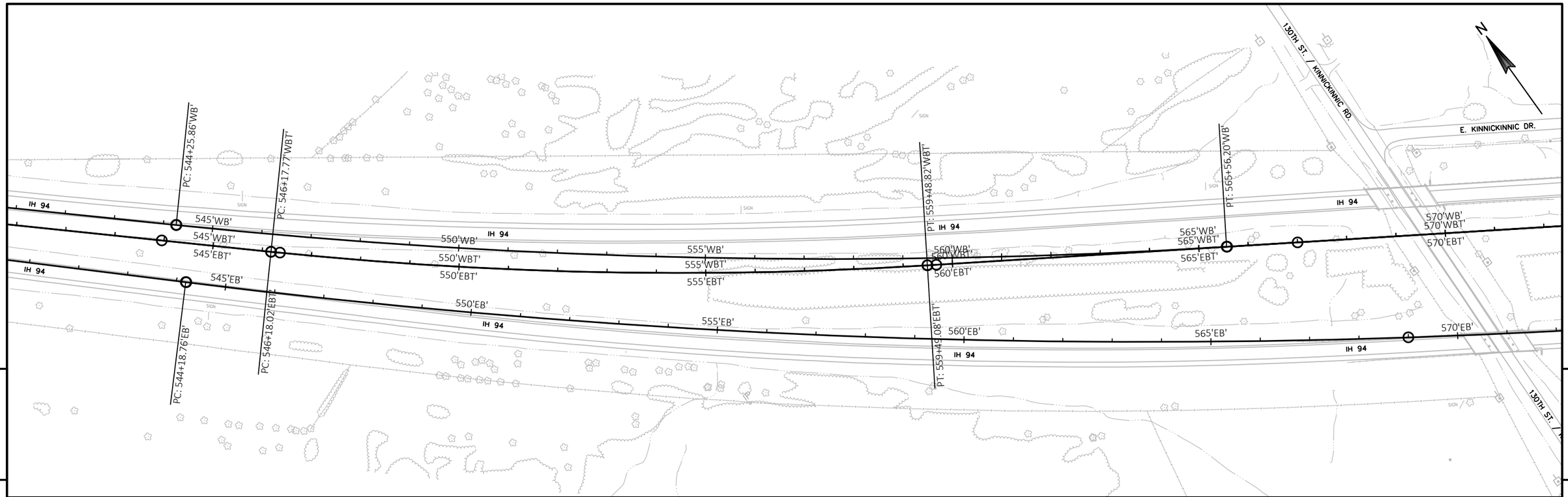


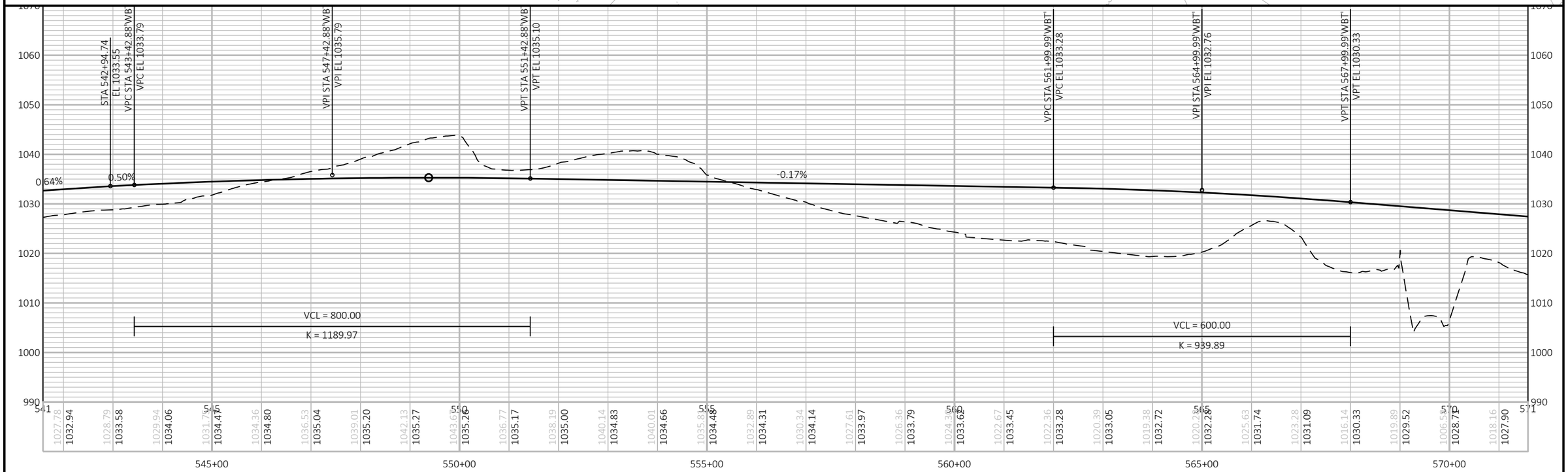
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. WB	SHEET 133	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050115_PPTEMPIH94EBT_03052018.DWG
LAYOUT NAME - PPWBT - 1

PLOT DATE : 5/21/2018 11:04 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

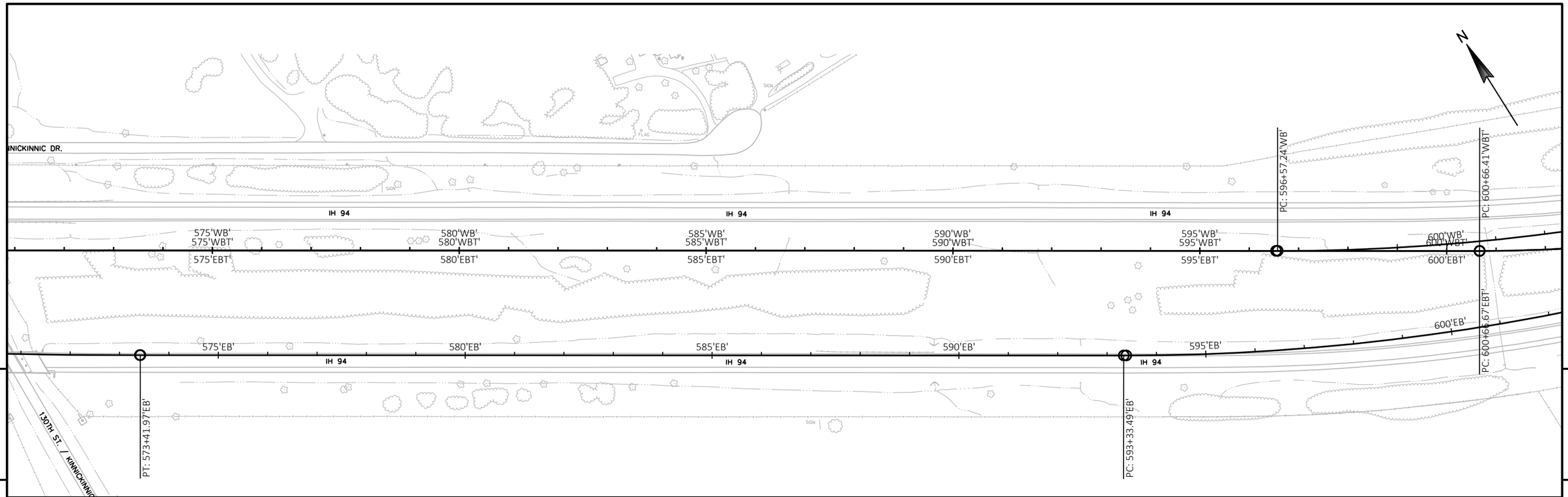
WISDOT/CADDS SHEET 44





PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. WB	SHEET 134	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050115_PPTEMPIH94EBT_03052018.DWG
LAYOUT NAME - PPWBT - 2
PLOT DATE : 5/21/2018 11:04 AM
PLOT BY : K. KOPACZ
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

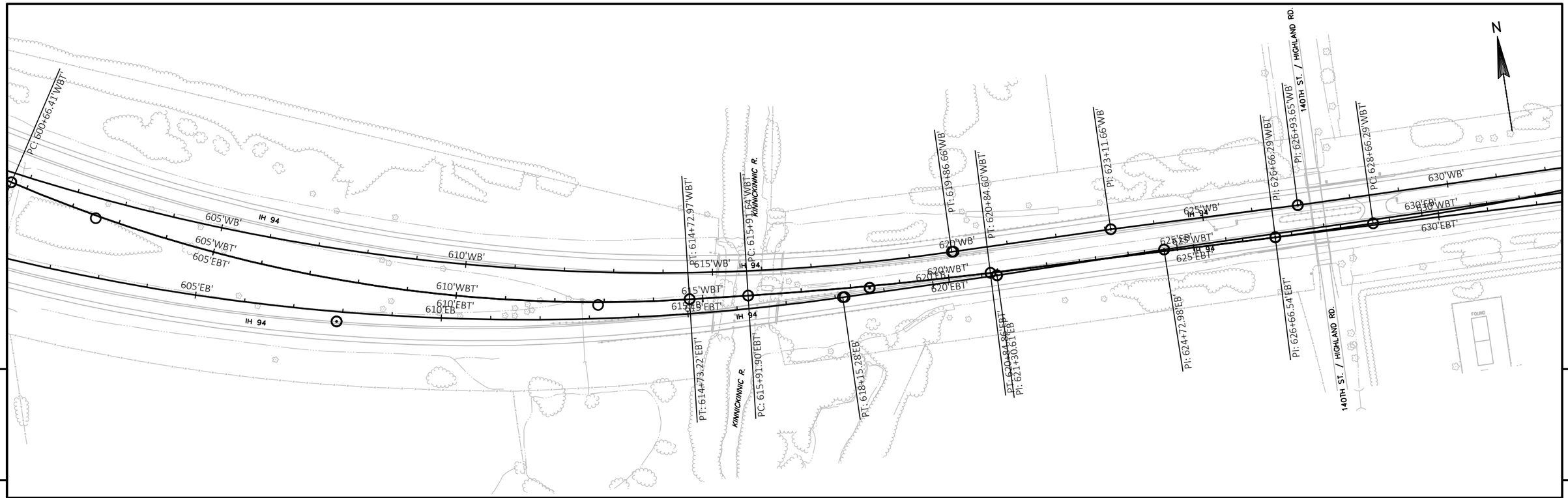


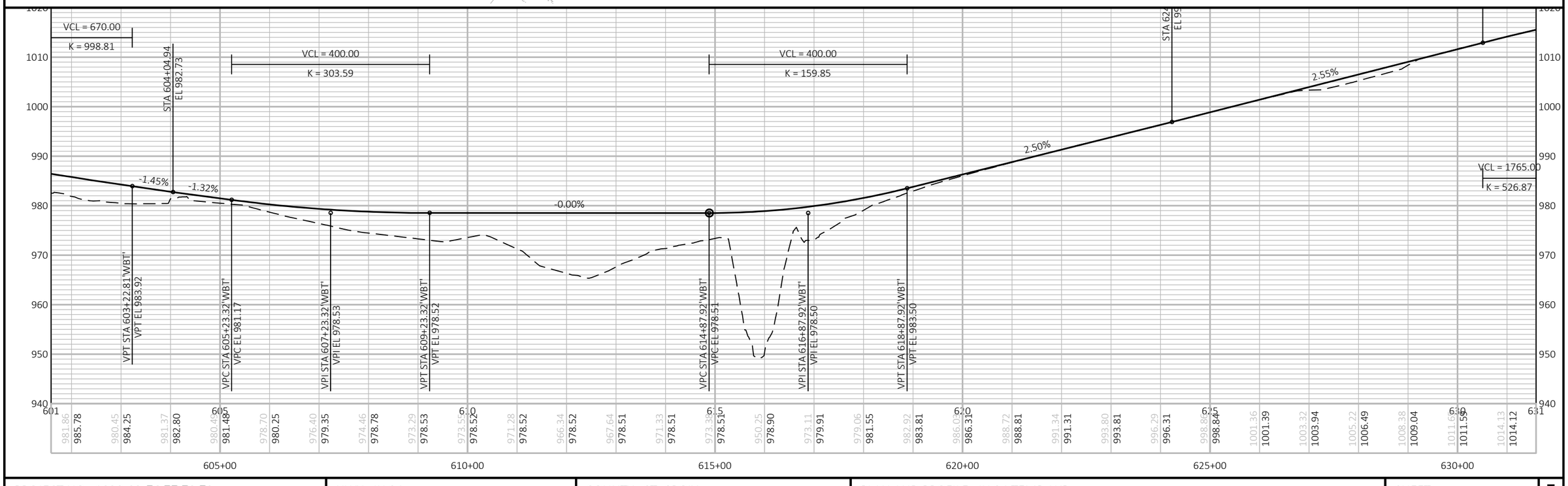
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. WB	SHEET 135	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\050115_PPTEMPIH94EBT_03052018.DWG
LAYOUT NAME - PPWBT - 3

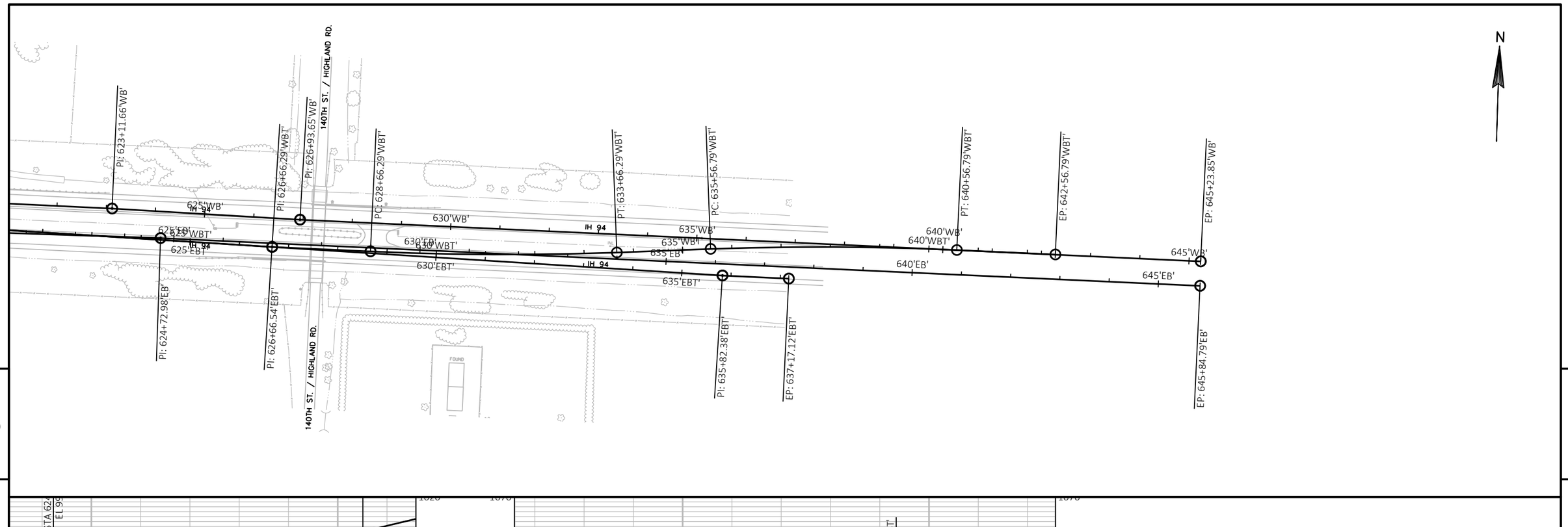
PLOT DATE : 5/21/2018 11:05 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

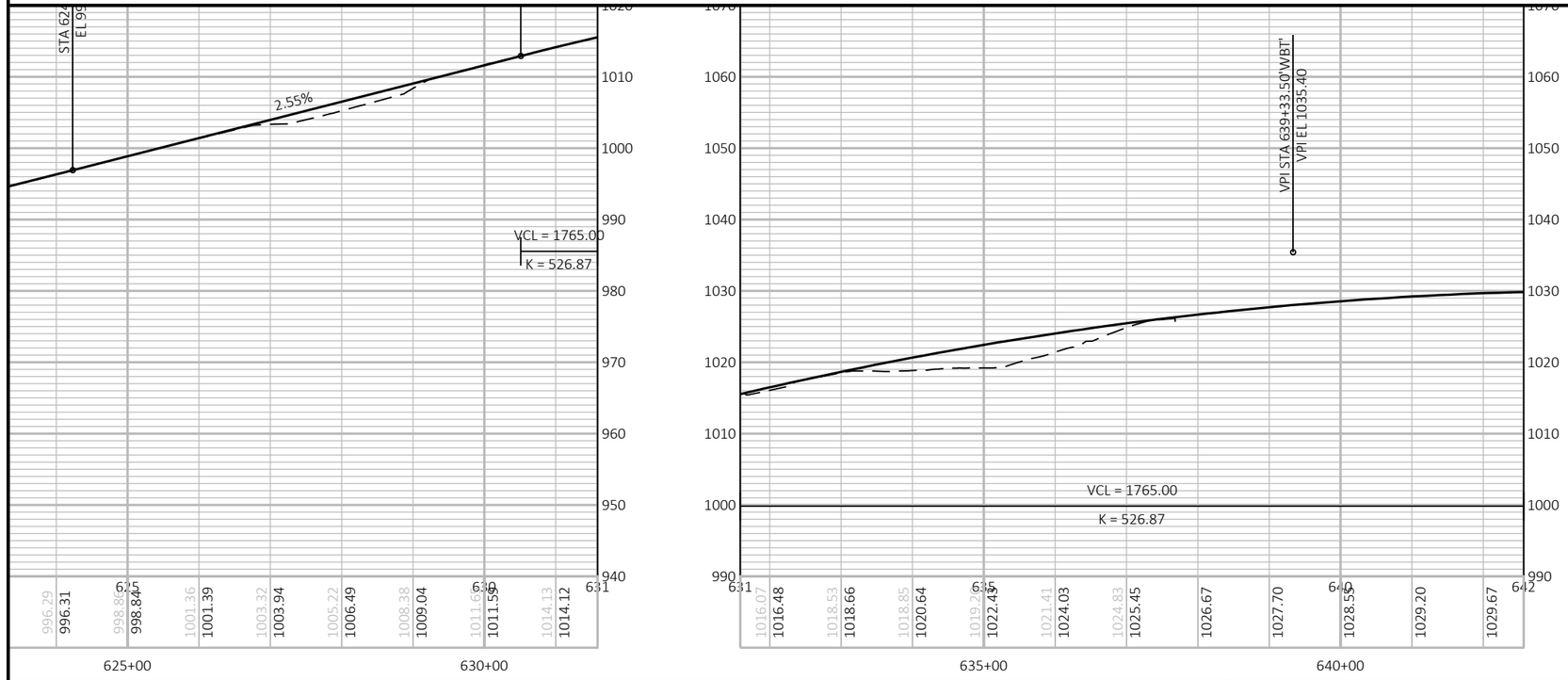
WISDOT/CADDS SHEET 44





PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. WB	SHEET 136	E





PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	PLAN AND PROFILE: IH 94 TEMP. WB	SHEET 137	E

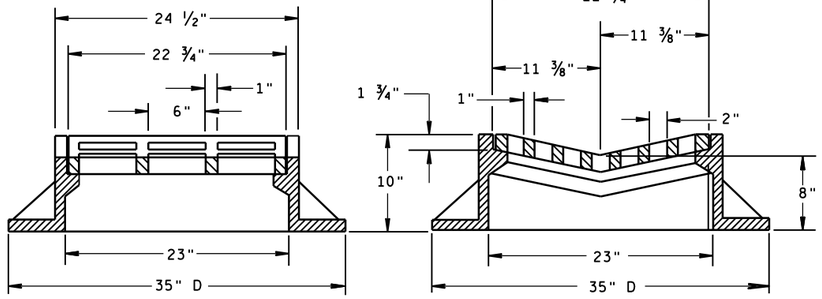
Standard Detail Drawing List

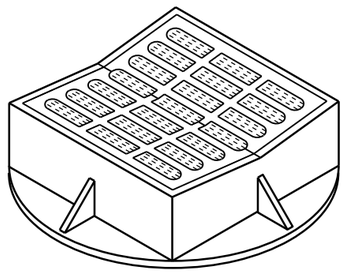
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-07	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-12A	RURAL DOWELED CONCRETE PAVEMENT
13C11-12B	RURAL DOWELED CONCRETE PAVEMENT
13C18-06A	CONCRETE PAVEMENT JOINTING
13C18-06C	CONCRETE PAVEMENT JOINT TYPES
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B01-08A	FENCE WOVEN WIRE

6

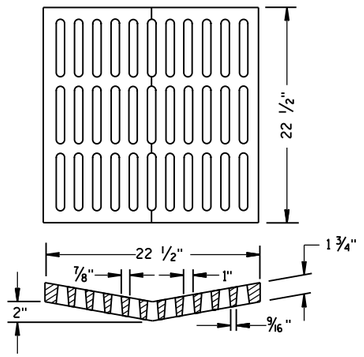
Standard Detail Drawing List

15B01-08B	FENCE WOVEN WIRE
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C14-03	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-03C	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-04A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-04E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D40-01	TRAFFIC CONTROL, LANE SHIFT, MULTILANE DIVIDED OR ONE WAY ROAD



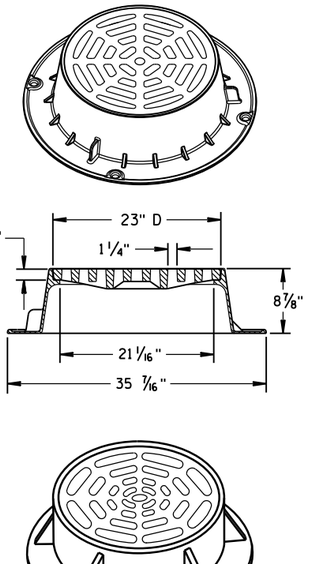


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

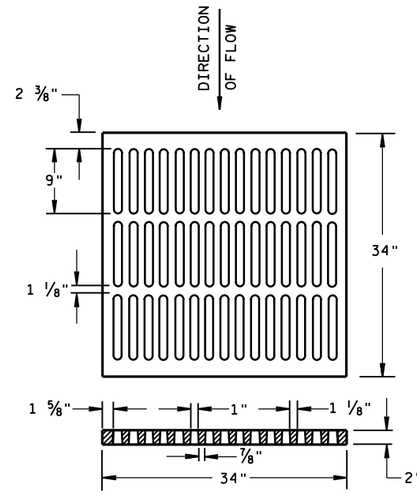
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

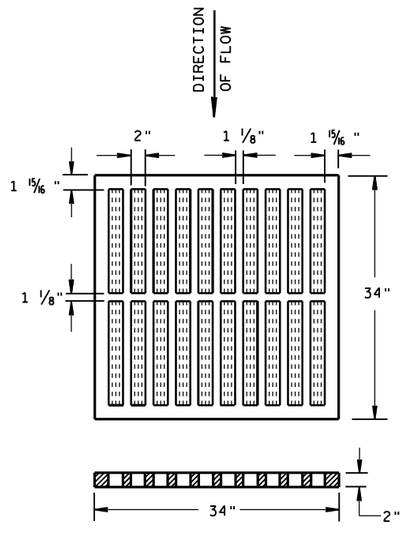
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



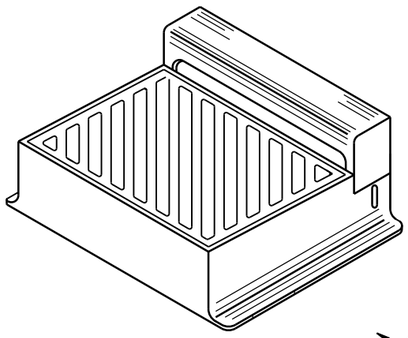
ALTERNATIVE TYPE "MS"

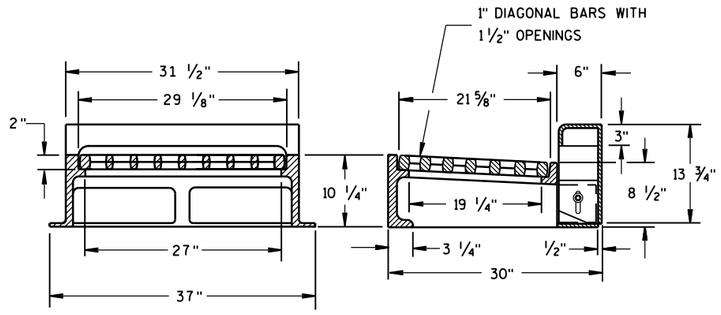
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

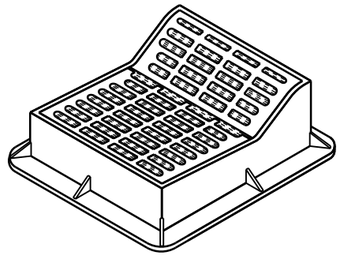
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

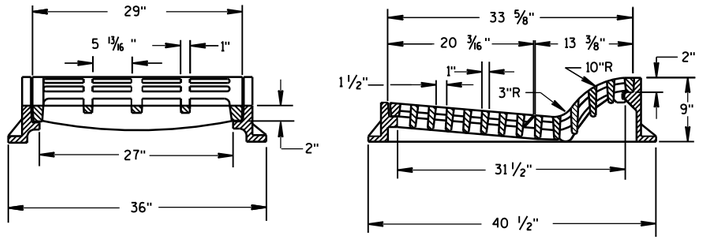
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

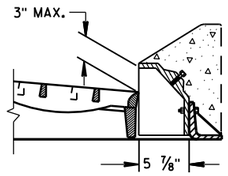
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

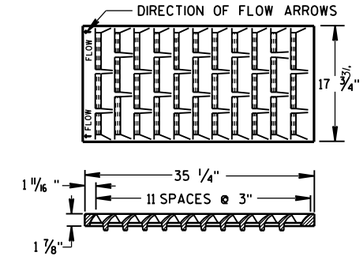
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

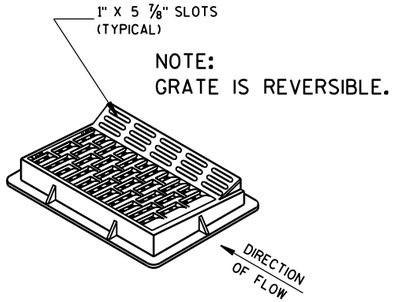
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

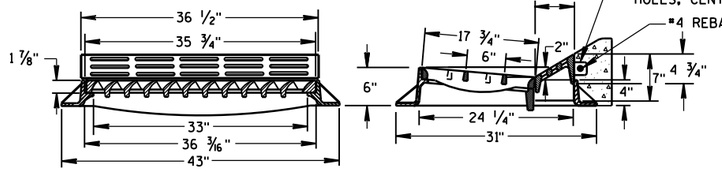
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



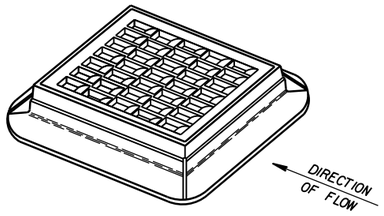


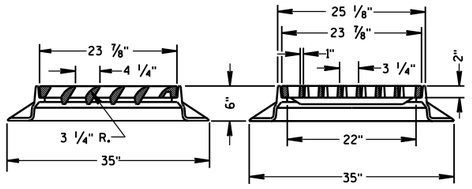


TYPE "HM"

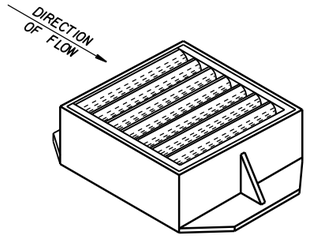
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

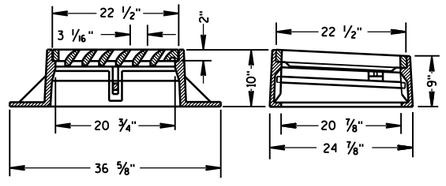
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



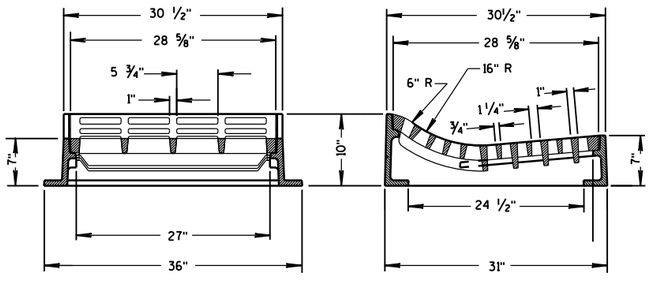


TYPE "S"



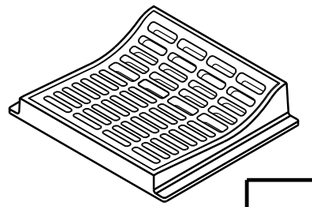


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

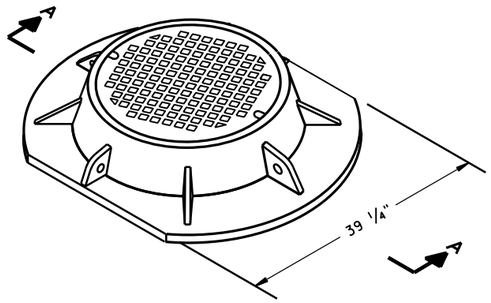
APPROVED
11/27/2013
DATE

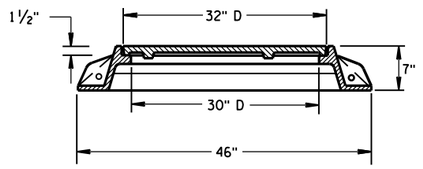
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

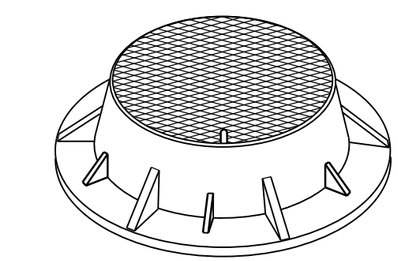
6

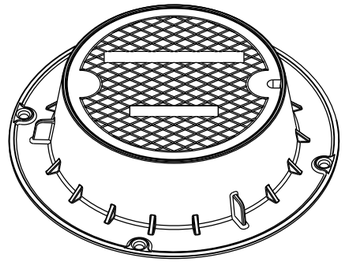
S.D.D. 8 A 5-19c

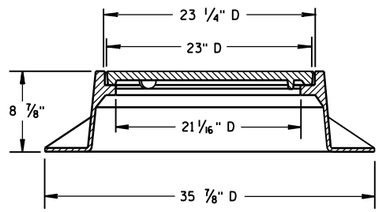


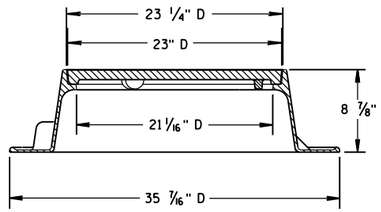


SECTION A-A
TYPE "K"









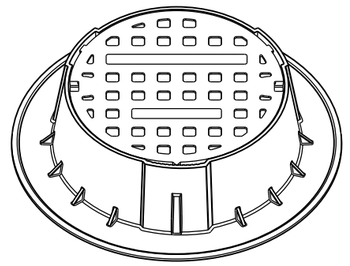
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

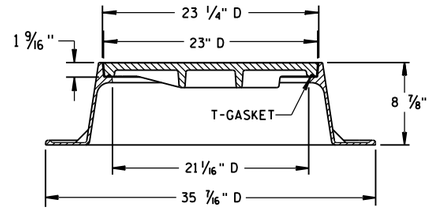
GENERAL NOTES

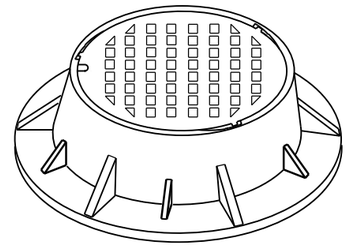
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

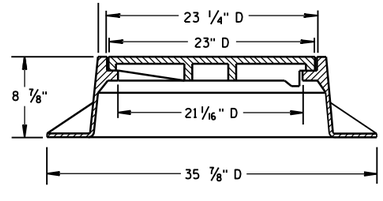
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

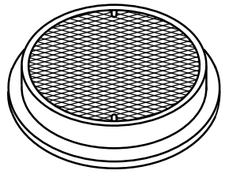


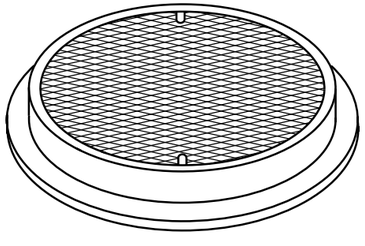


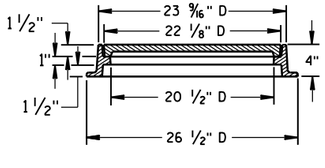




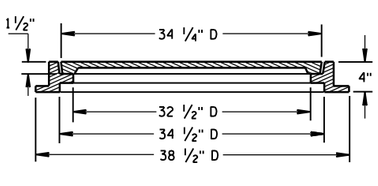
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



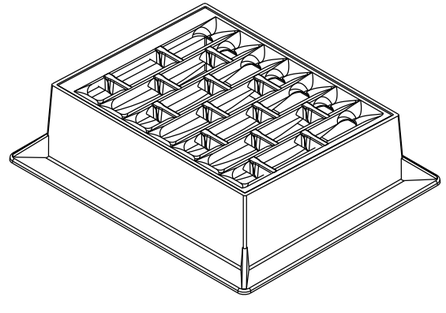


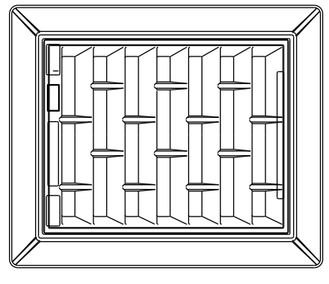


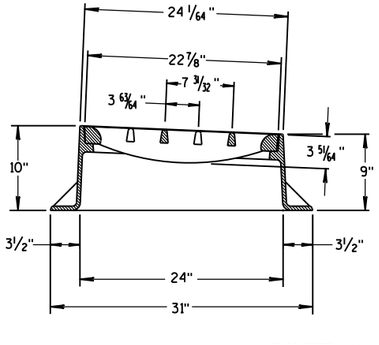
TYPE "L"

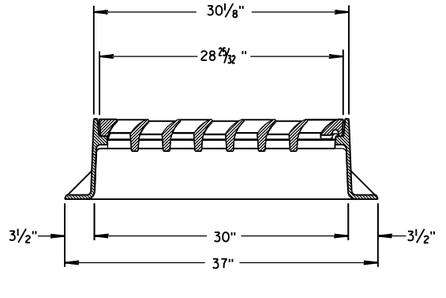


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

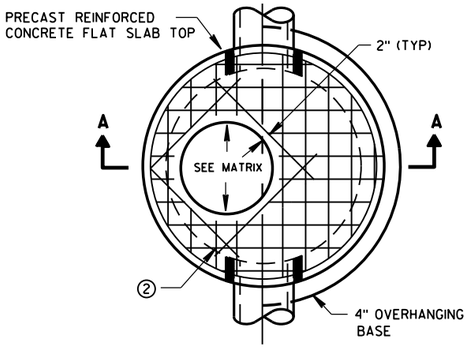
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

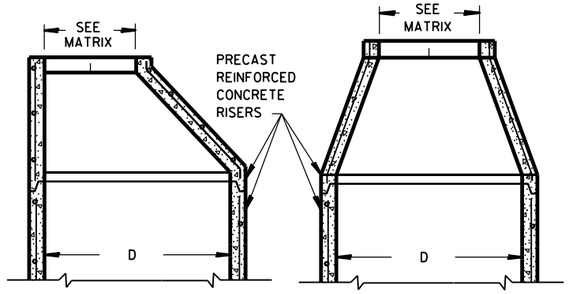
S.D.D. 8 A 5-19d

6

S.D.D. 8 A 5-19d

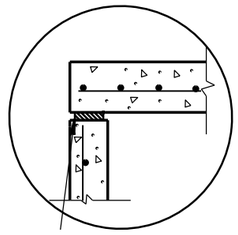


PLAN VIEW CIRCULAR OPENING

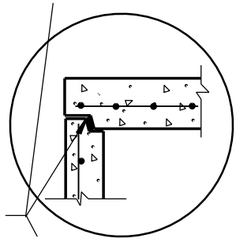


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

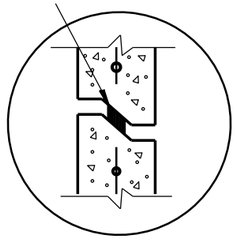


TOP WITH PLAIN END JOINT



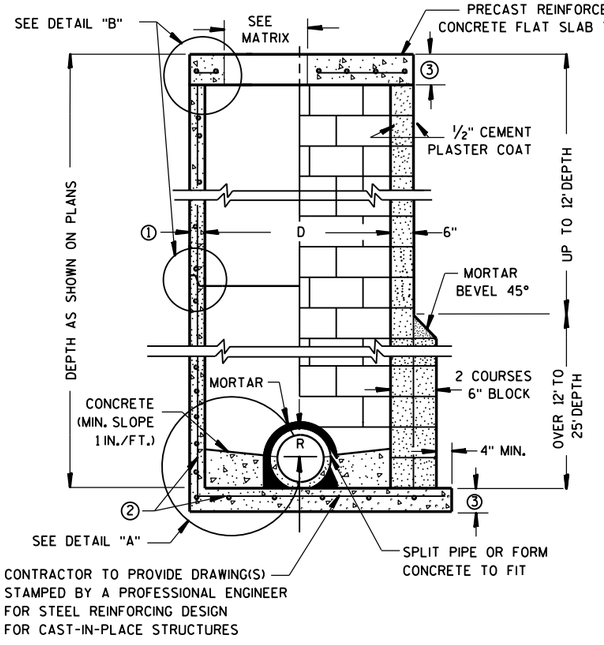
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



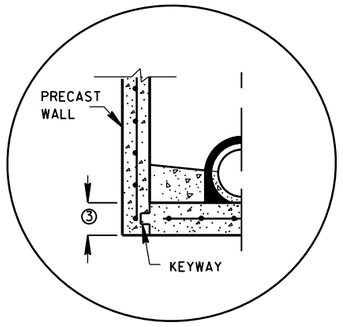
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

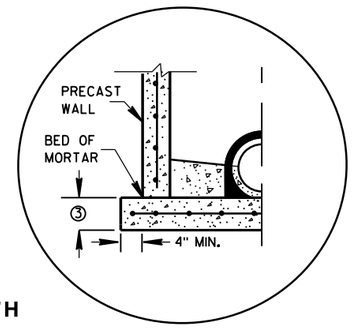


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

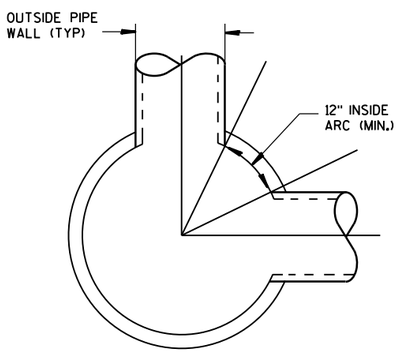


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

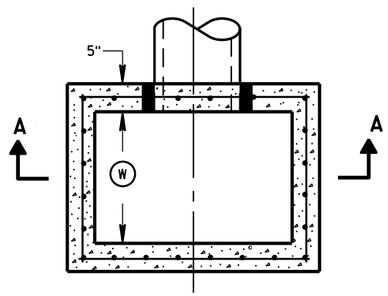
APPROVED

Sept., 2016
DATE

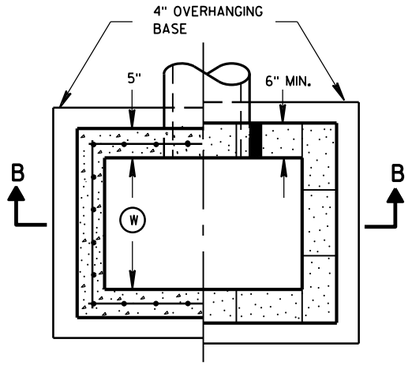
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

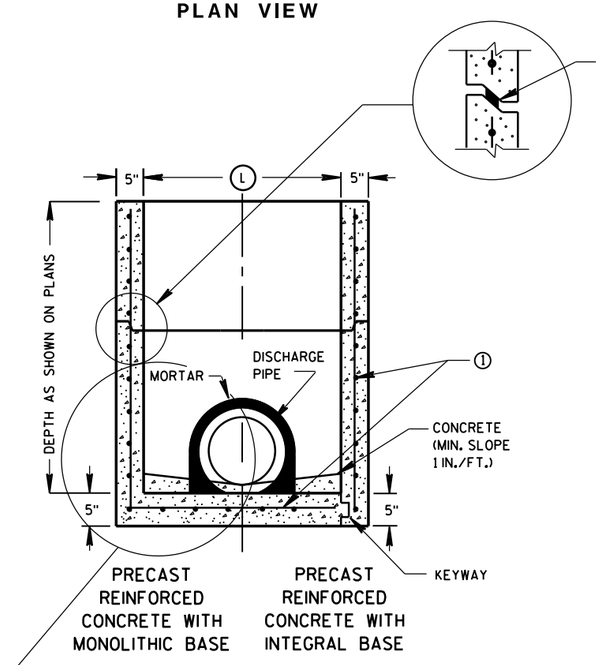
6
S.D.D. 8 B 9-2



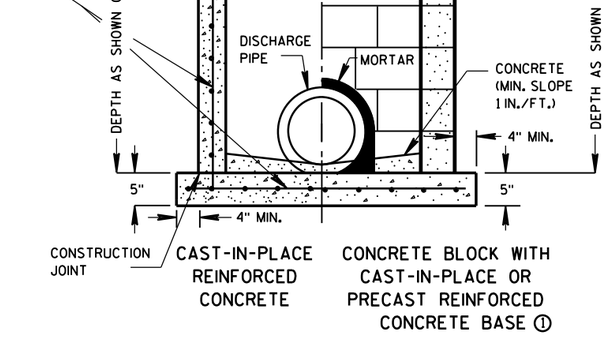
PLAN VIEW



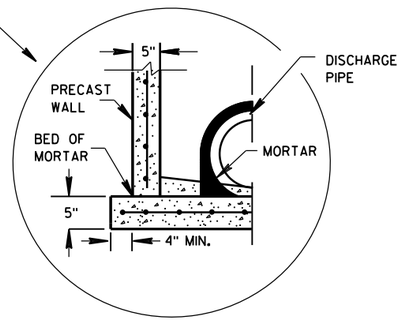
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

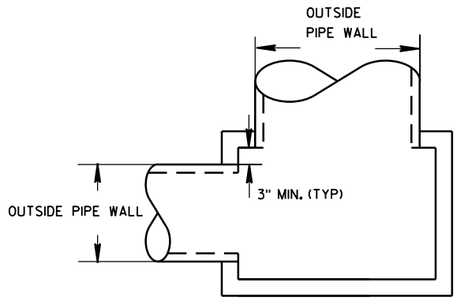
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



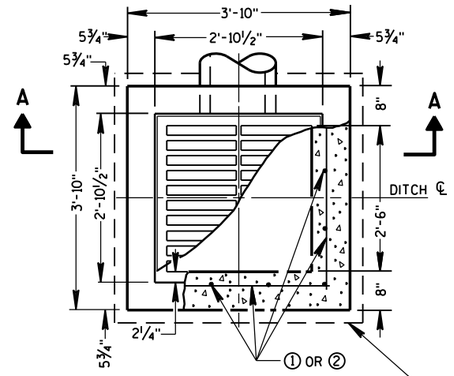
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

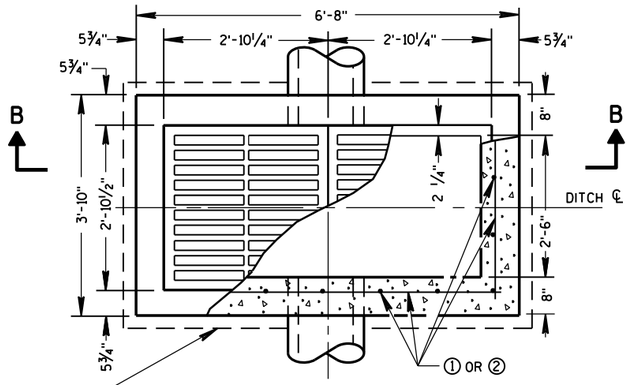
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

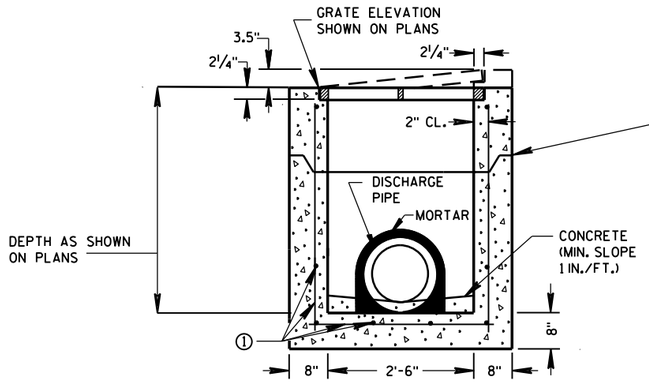


PLAN VIEW

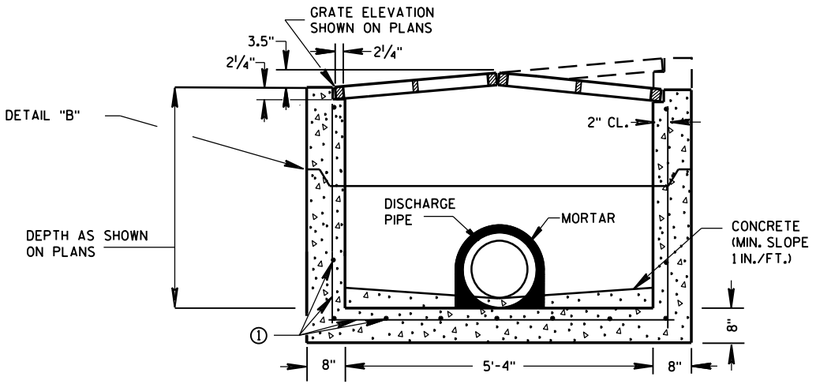


PLAN VIEW

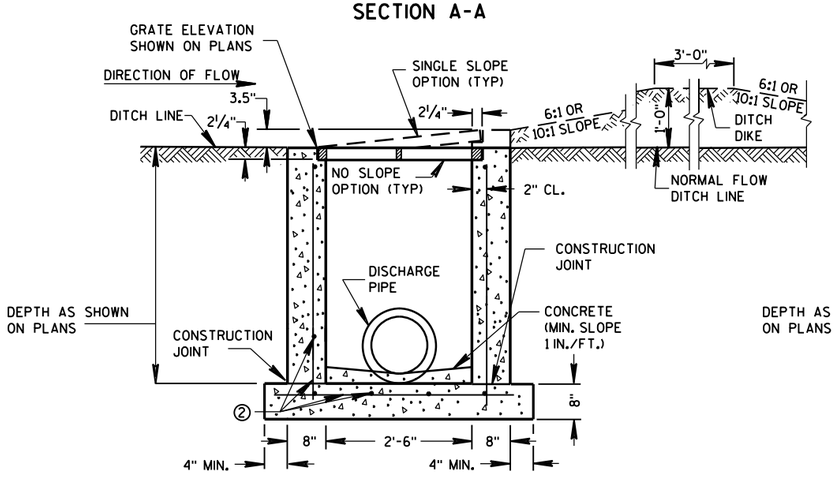
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



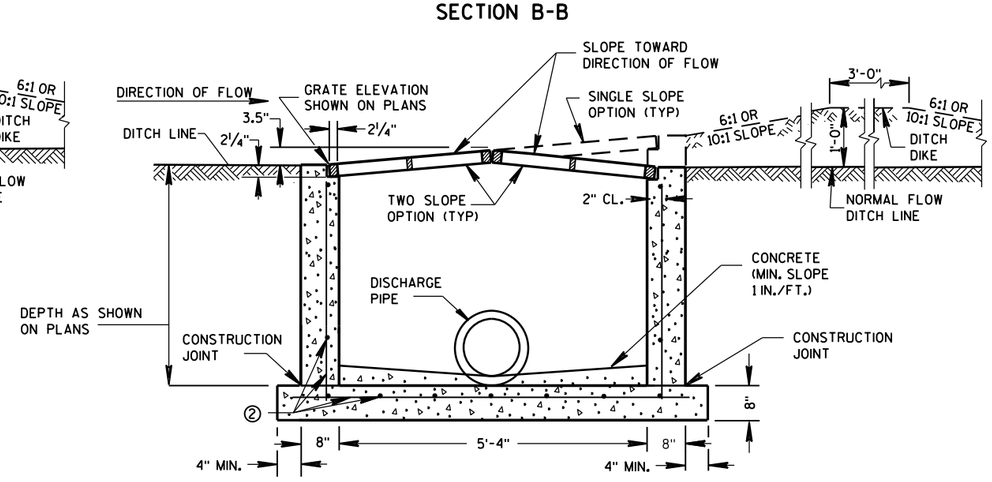
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

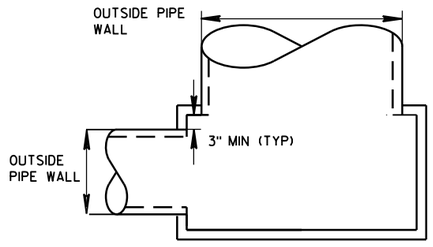
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

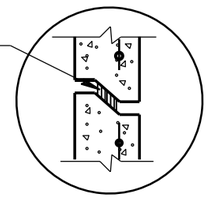
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

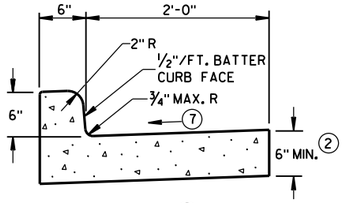
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

6

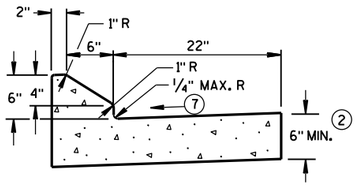
S.D.D. 8 C 8-2

6

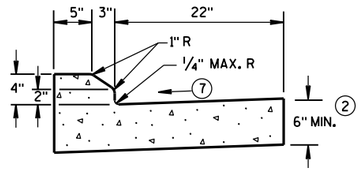
S.D.D. 8 C 8-2



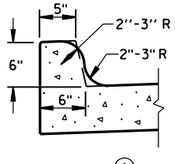
TYPES A (1) & D



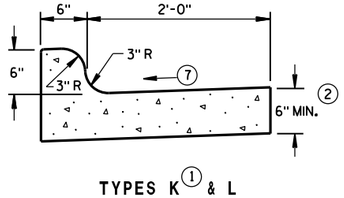
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

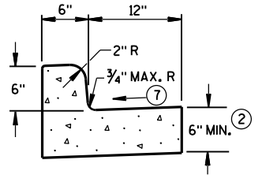


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



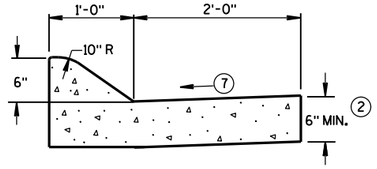
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

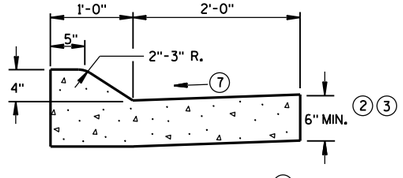


TYPES A (1) & D

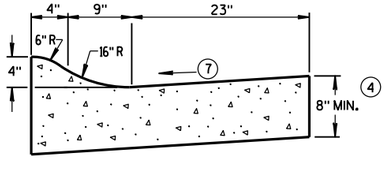
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

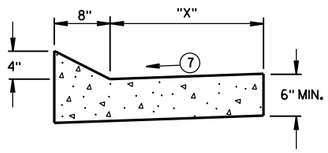


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

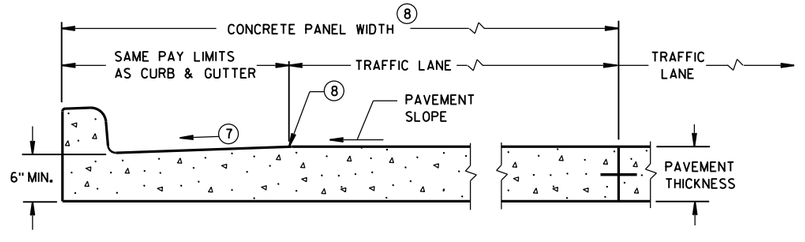
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

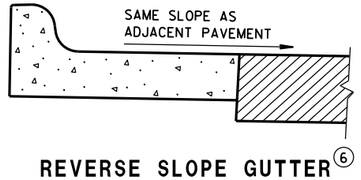
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

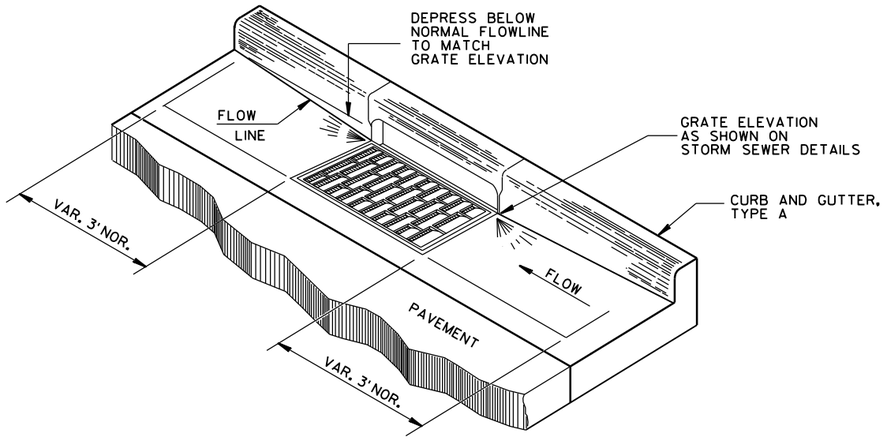
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 8 D 1-20a

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

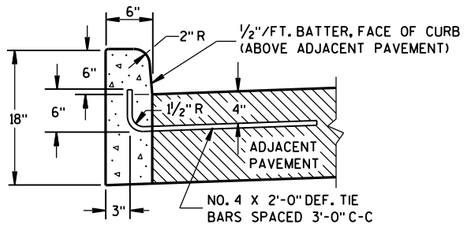
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

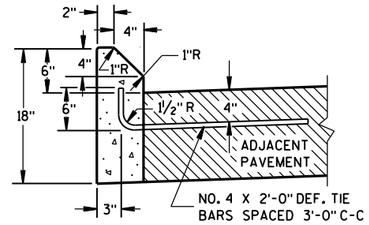
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

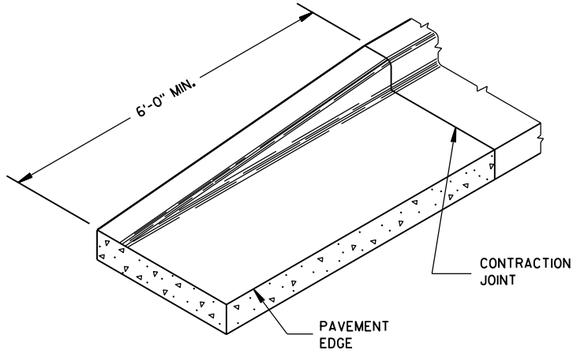


TYPES A(1) & D

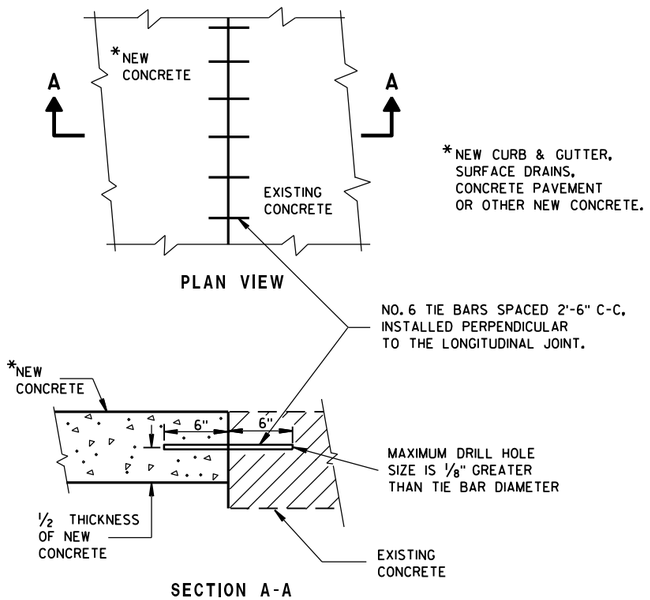


TYPES G(1) & J

CONCRETE CURB



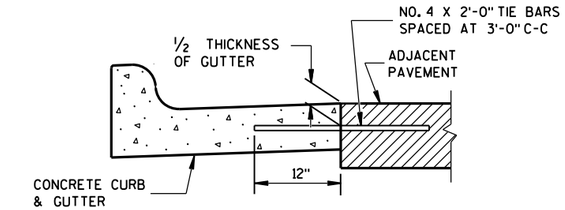
END SECTION CURB & GUTTER



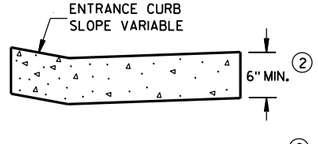
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

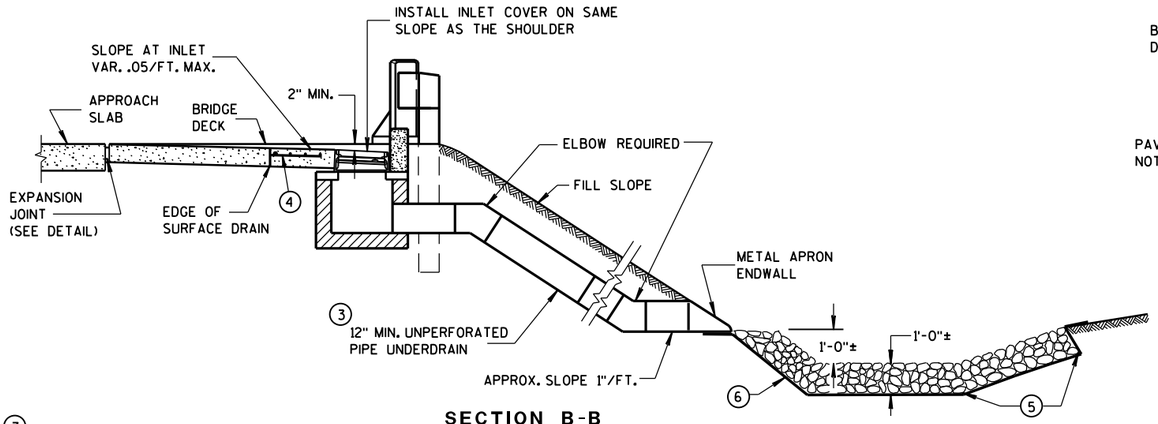
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

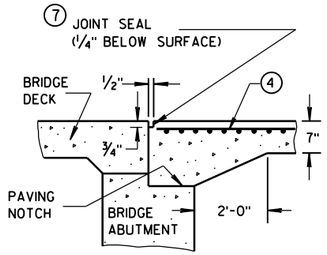
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
147
ENT
FHWA

6

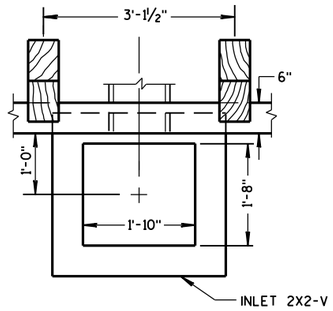
S.D.D. 8 D 1-20b



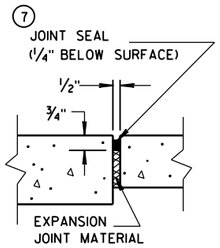
SECTION B-B



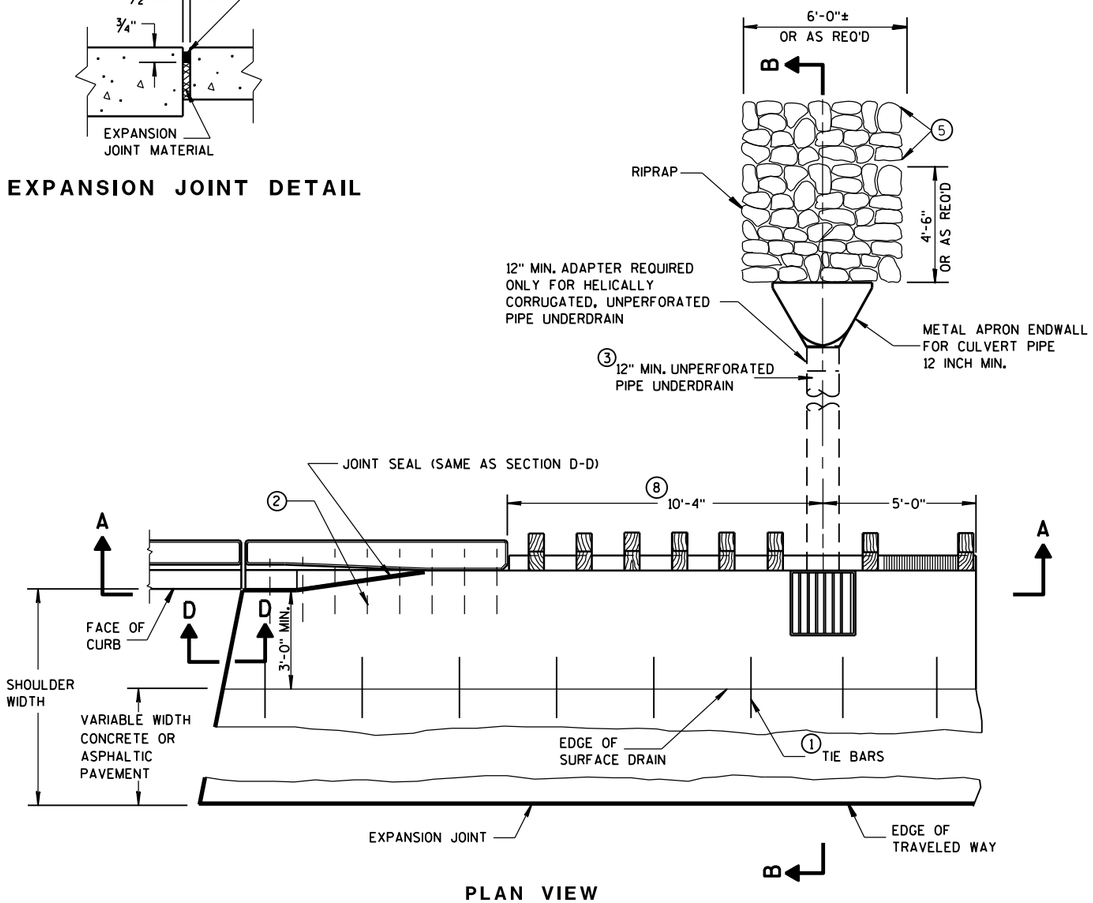
SECTION D-D



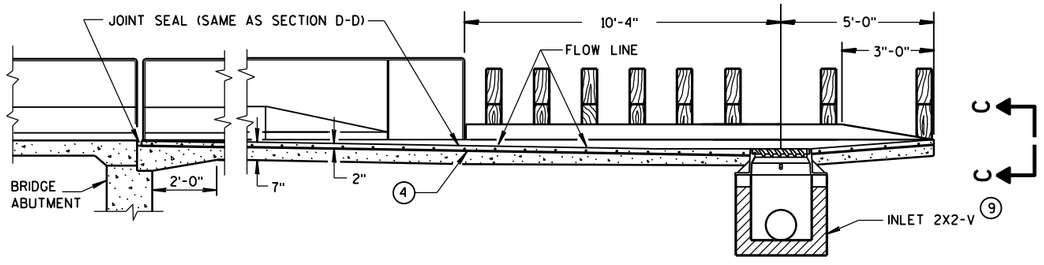
PLAN VIEW



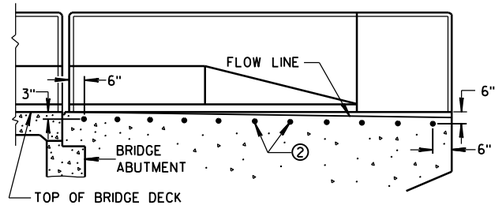
EXPANSION JOINT DETAIL



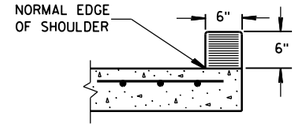
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.

(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(6) GEOTEXTILE FABRIC.

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".

(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

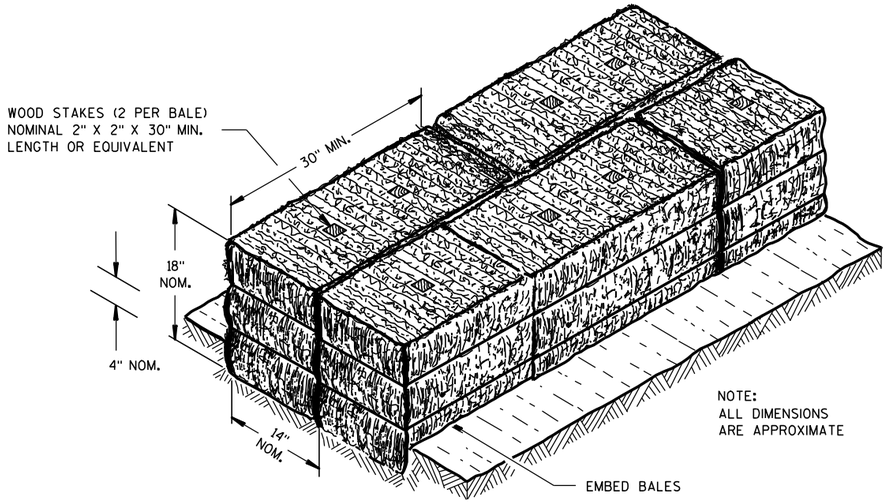
CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

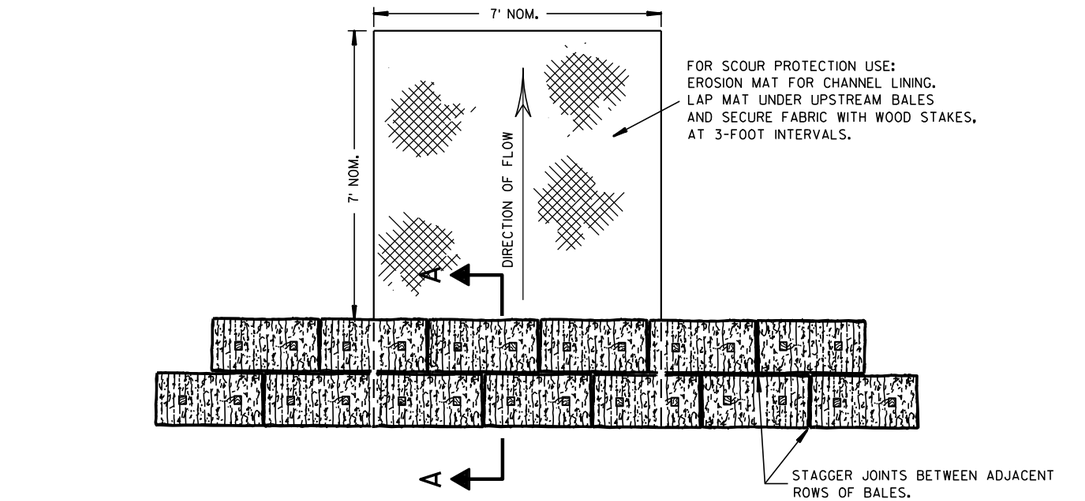
APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV...
FHWA

6

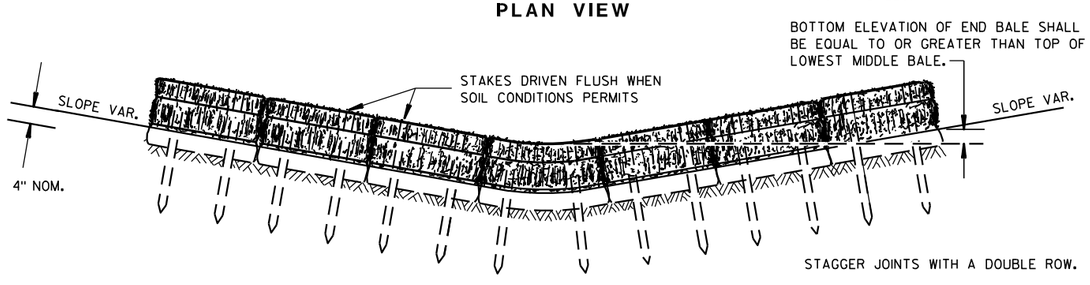
S.D.D. 8 D 3-7



SECTION A-A



PLAN VIEW



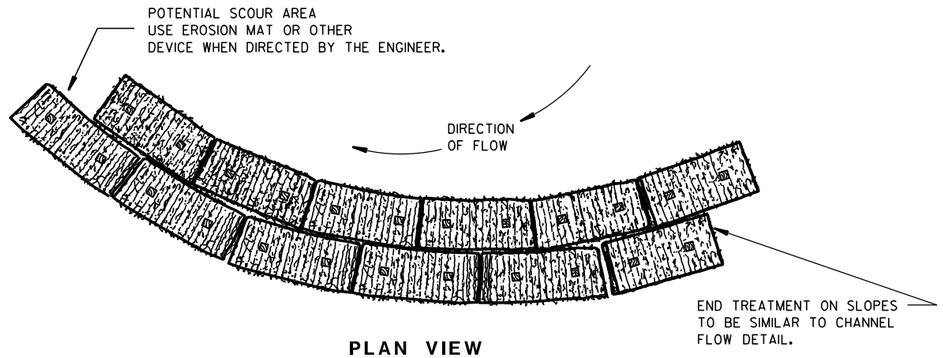
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

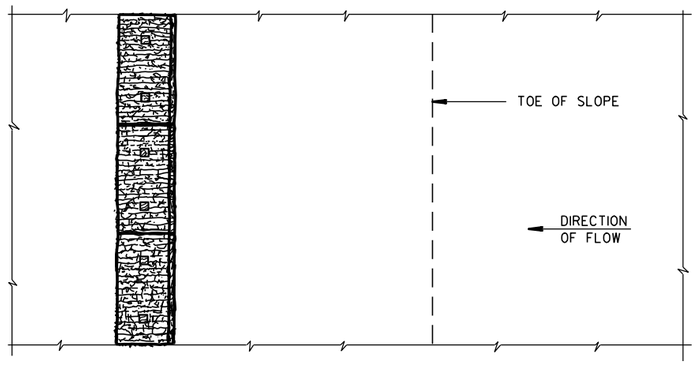
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

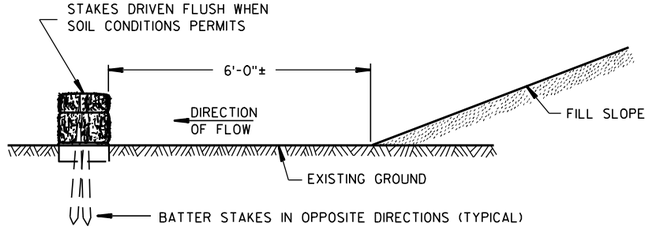


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

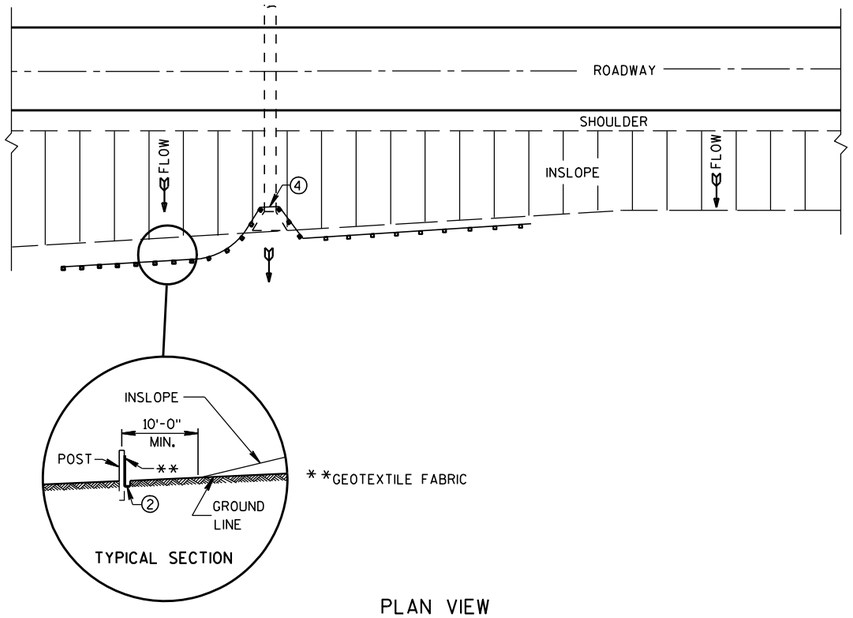
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

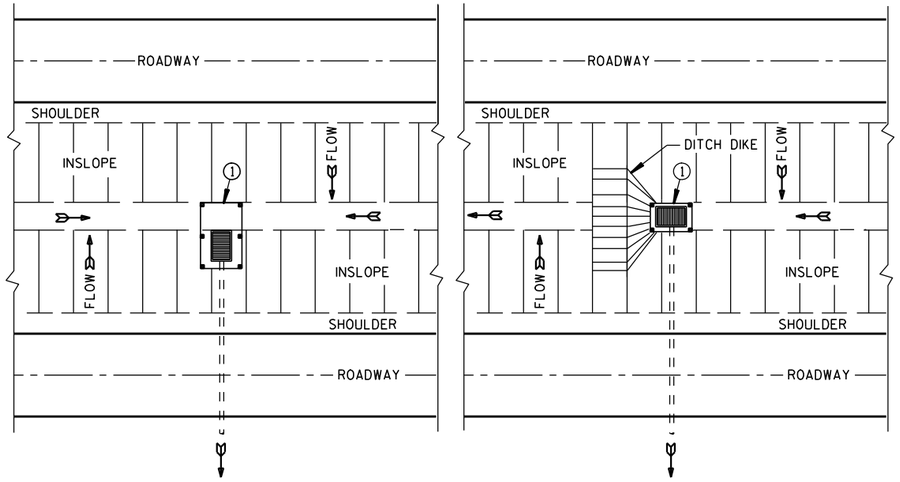
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



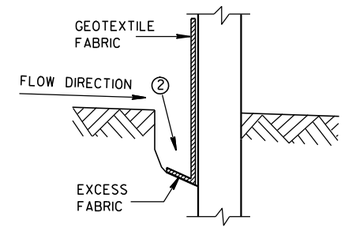
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

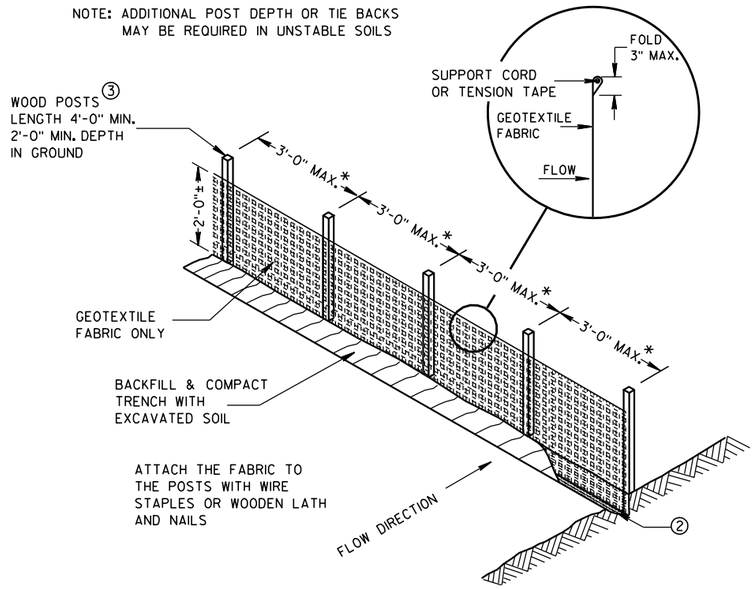
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

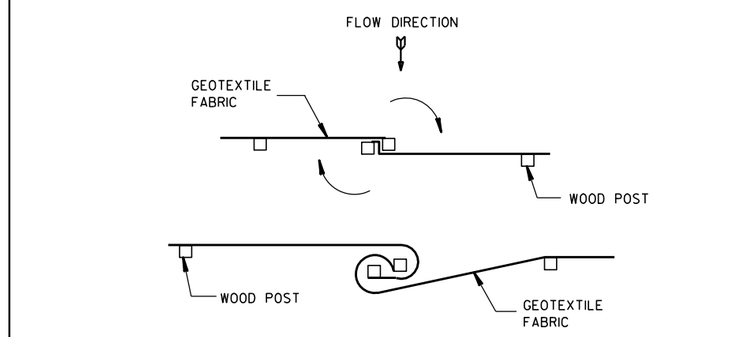


TRENCH DETAIL

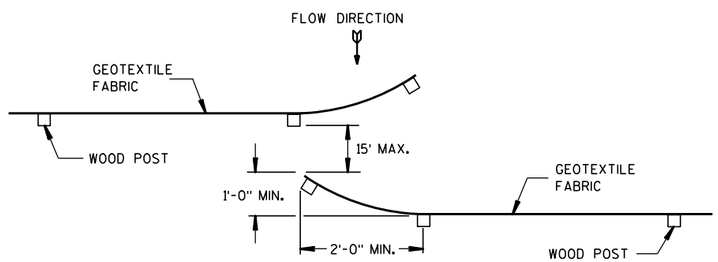


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

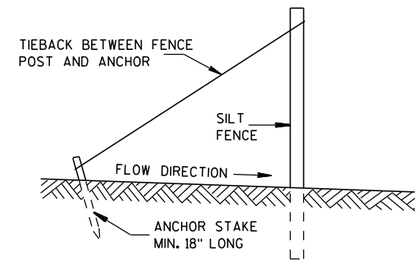


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

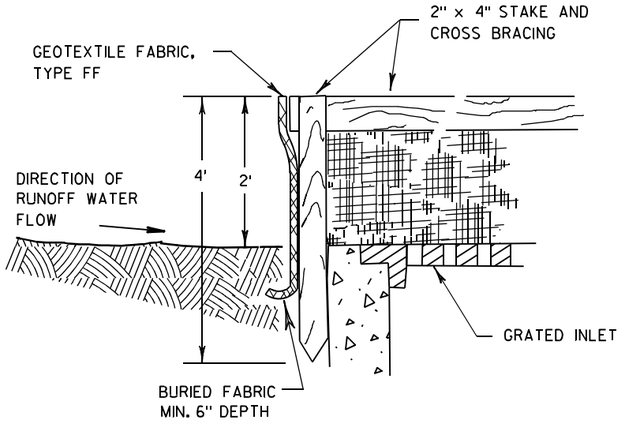
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

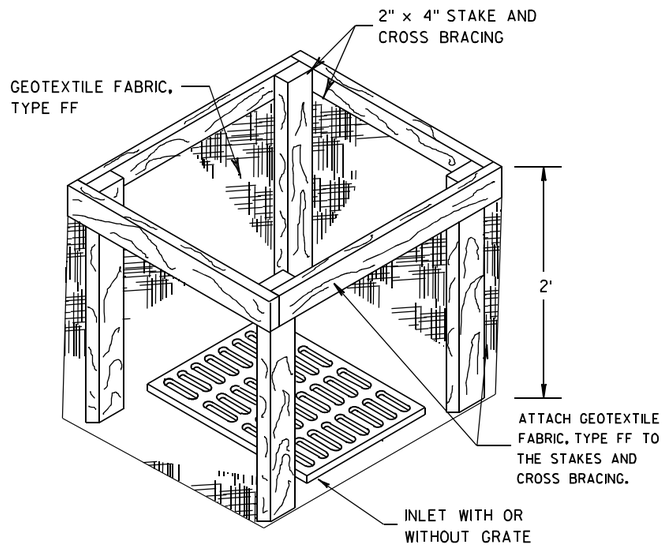
6

S.D.D. 8 E 9-6

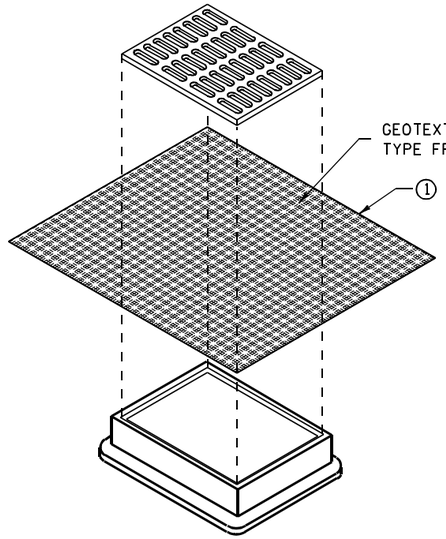
6

S.D.D. 8 E 9-6



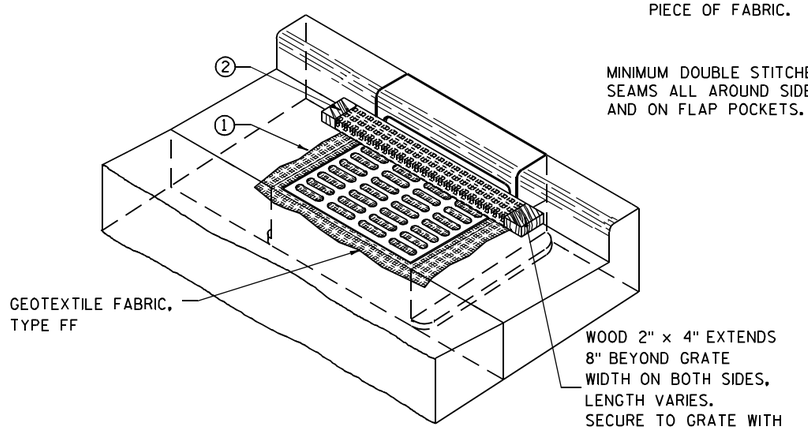


INLET PROTECTION, TYPE A

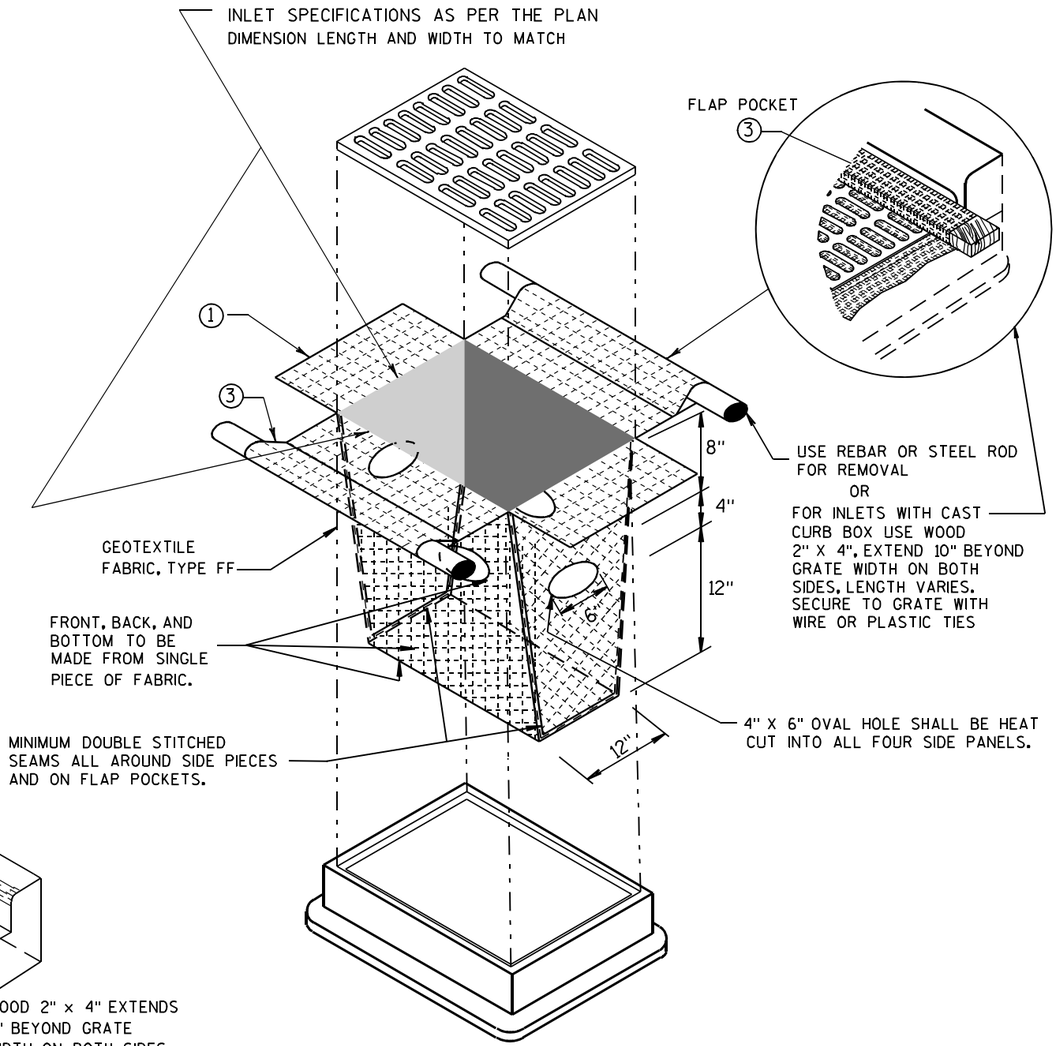


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

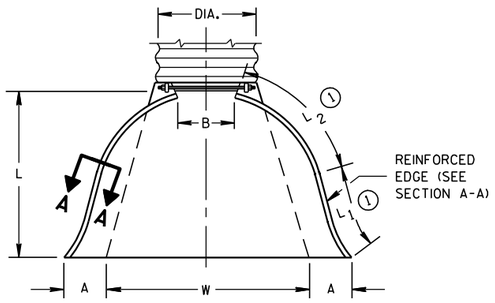
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

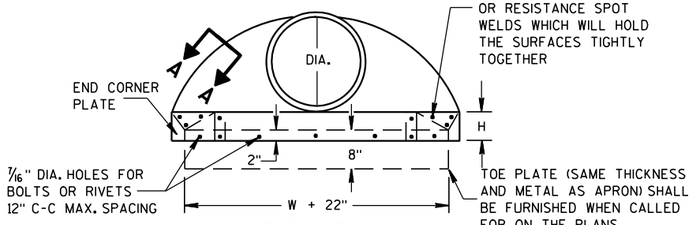
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

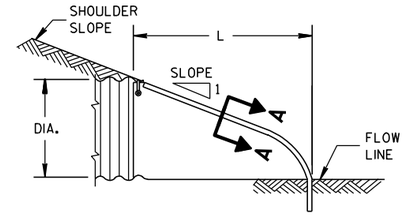
* MINIMUM
** MAXIMUM



PLAN VIEW

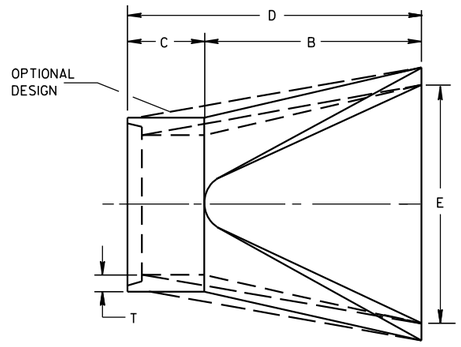


END VIEW

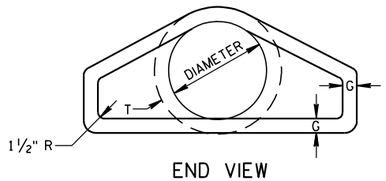


SIDE ELEVATION

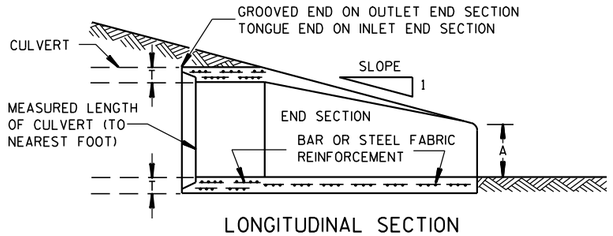
METAL ENDWALLS



PLAN

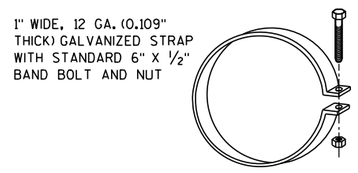


END VIEW



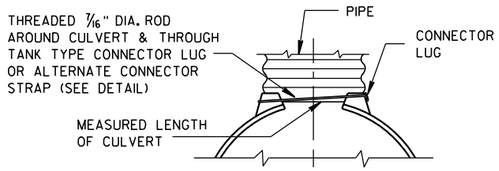
LONGITUDINAL SECTION

CONCRETE ENDWALLS

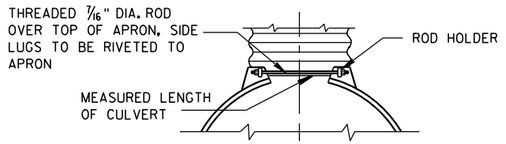


ALTERNATE FOR TYPE 1 CONNECTION

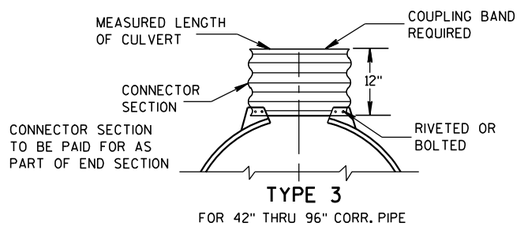
END SECTION CONNECTOR STRAP



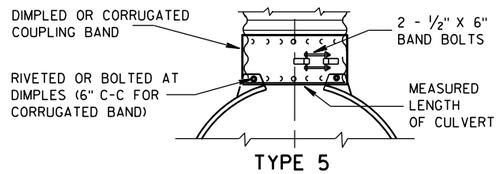
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

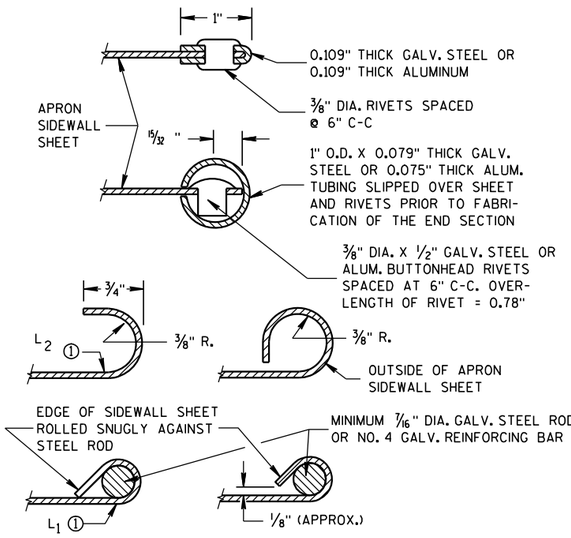
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

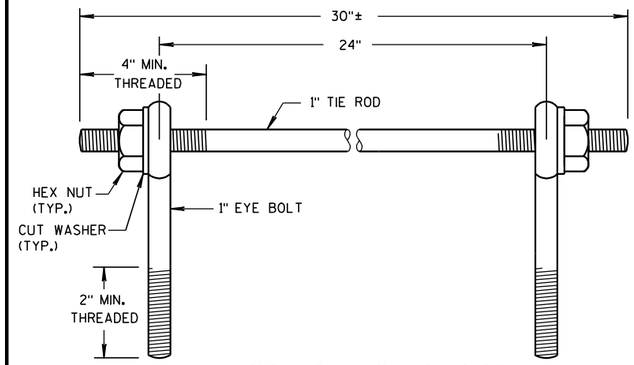
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

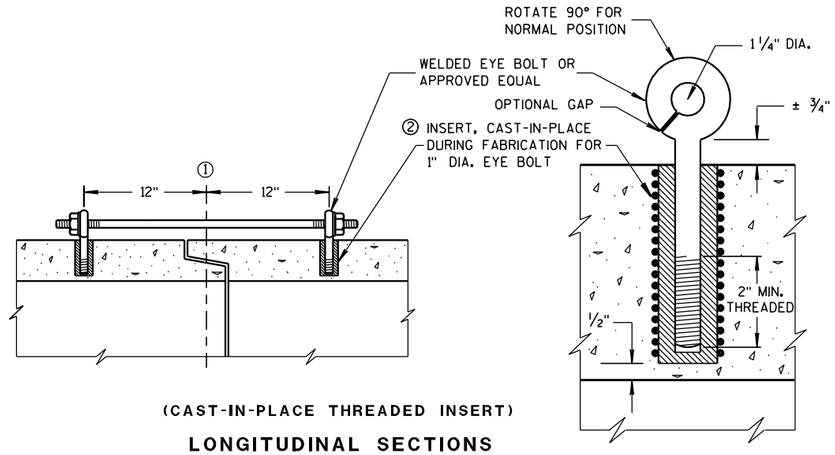
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

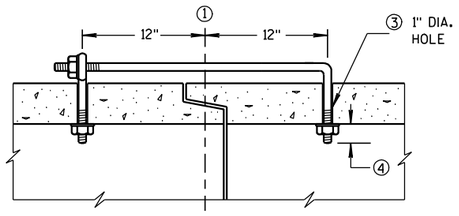
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

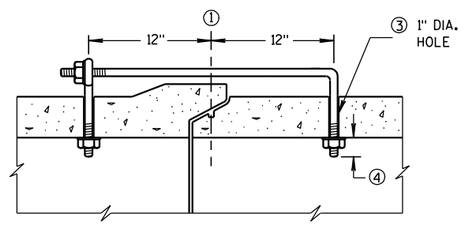
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

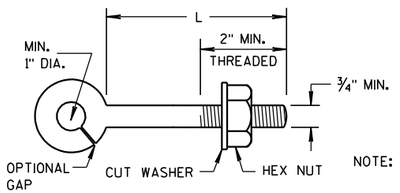


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

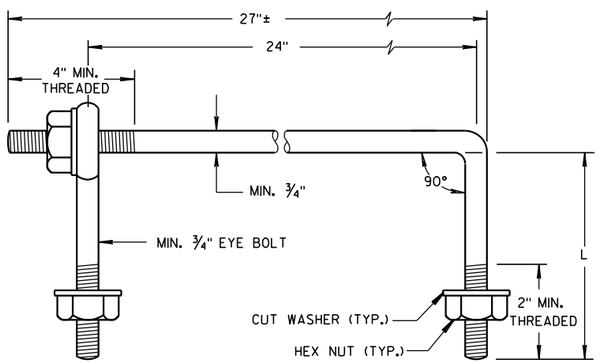
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

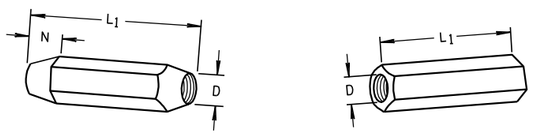
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

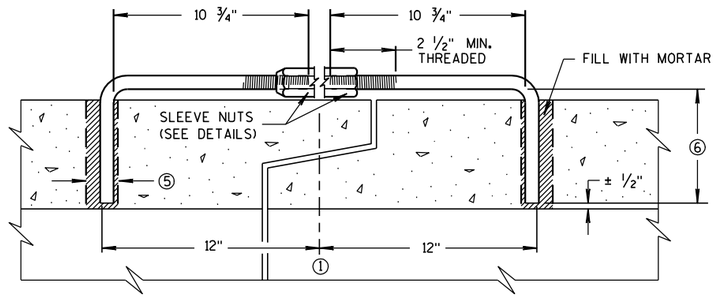
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

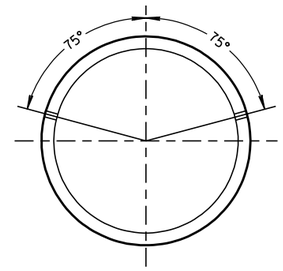
SLEEVE NUTS



LONGITUDINAL SECTION

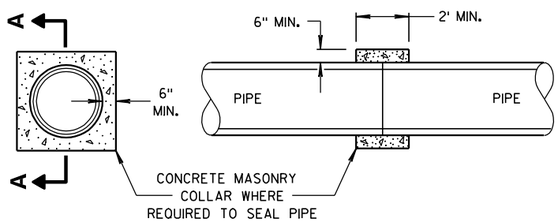
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

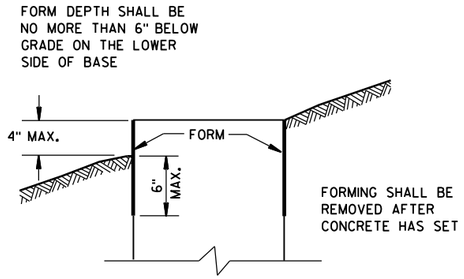
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
153
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

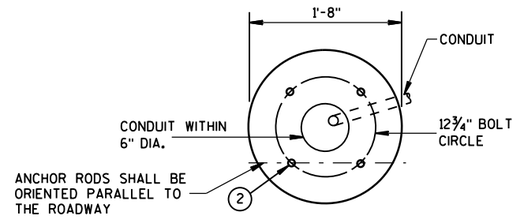
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

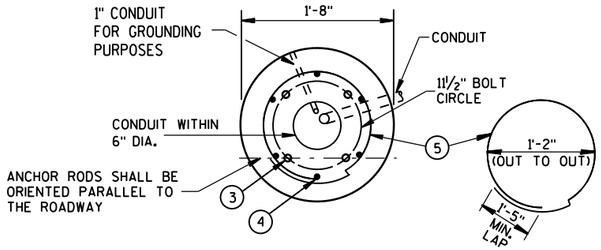
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

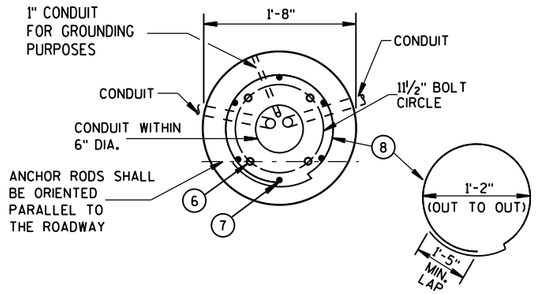
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

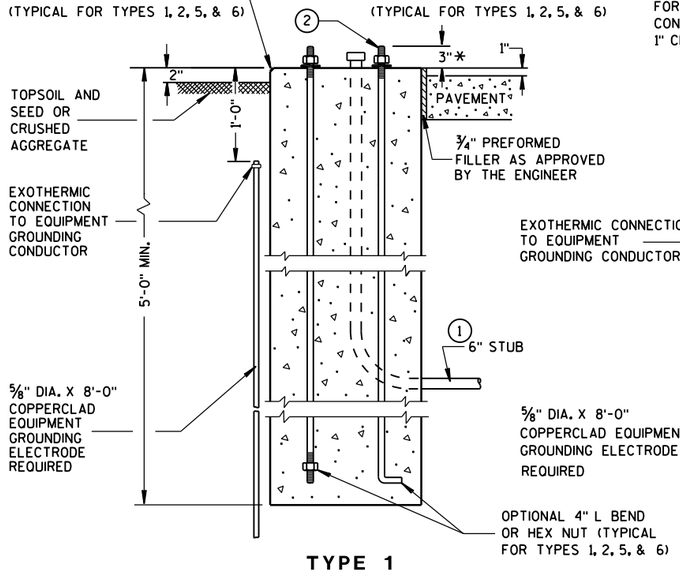




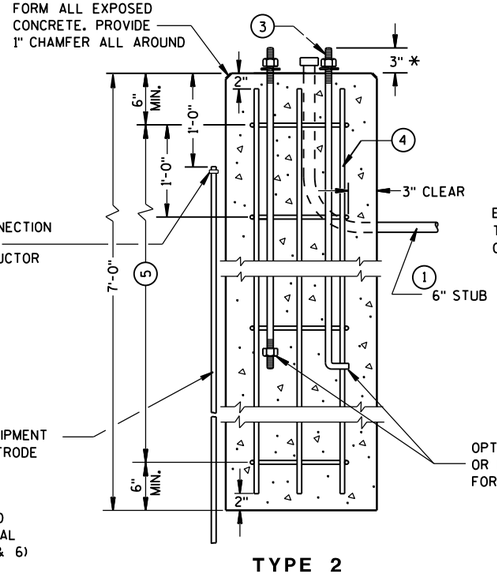


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

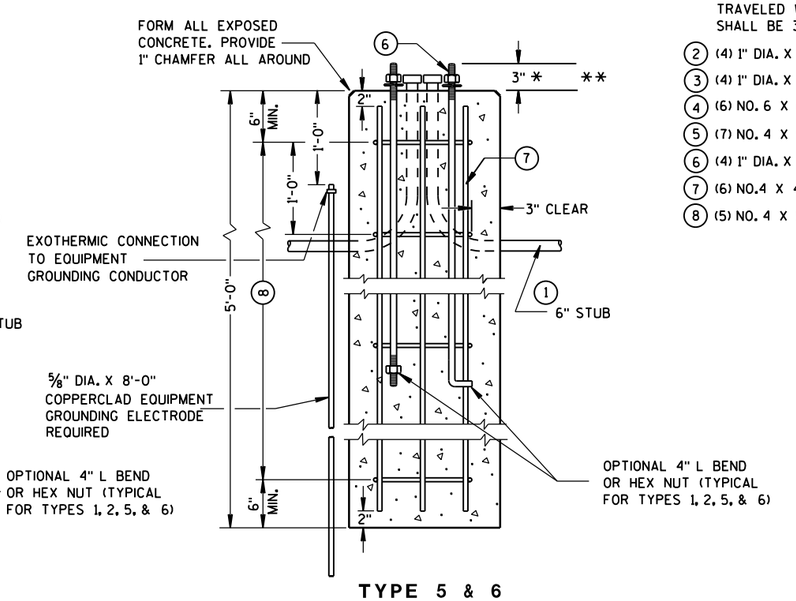
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

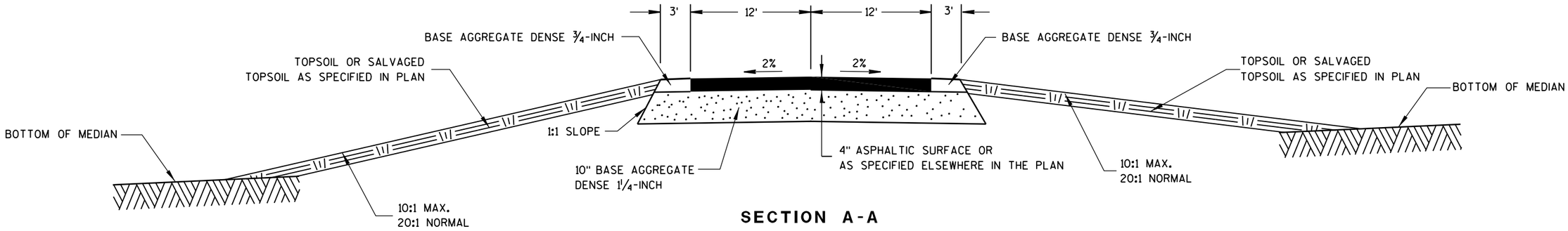
CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

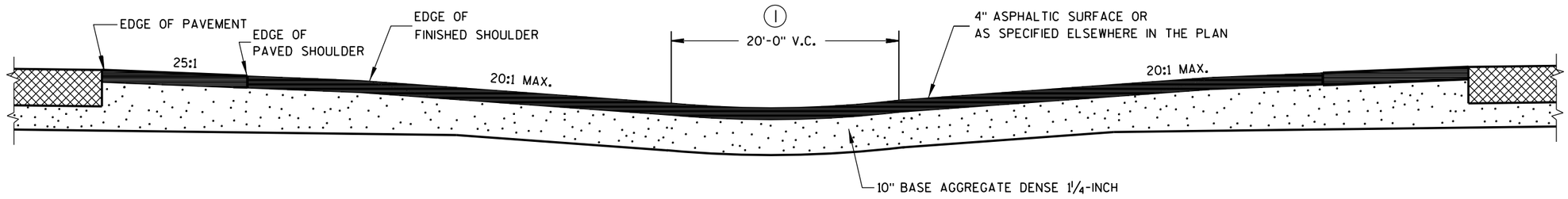
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

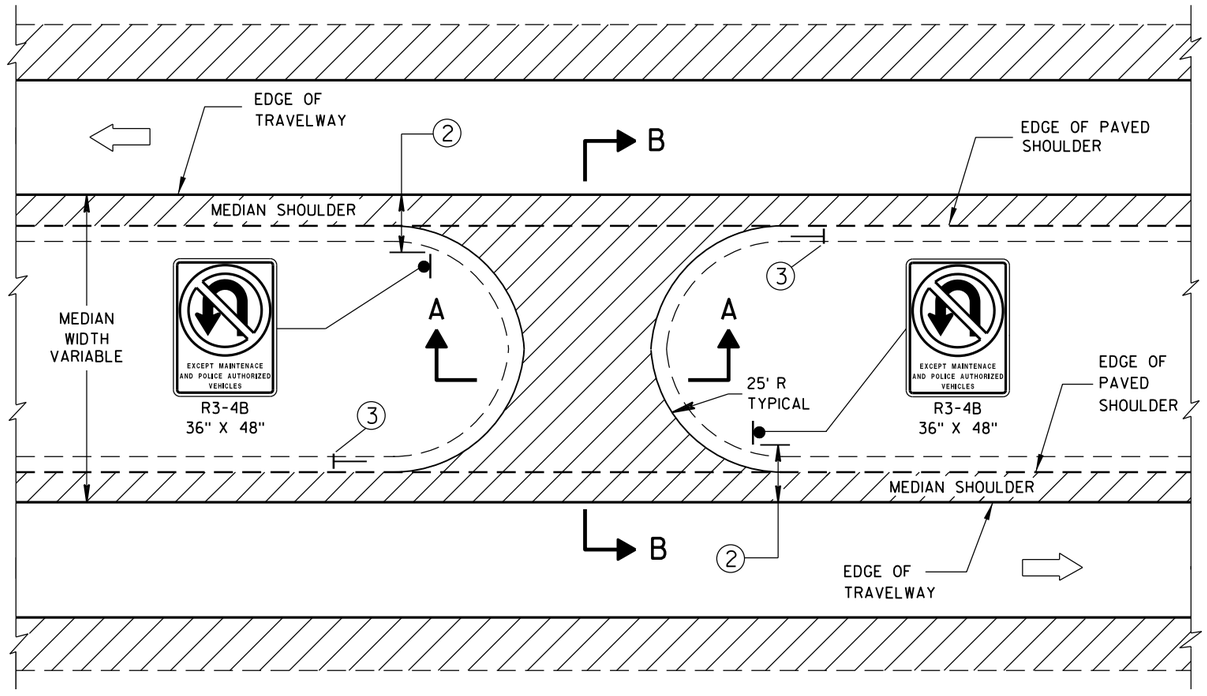
S.D.D. 9 C 2-7



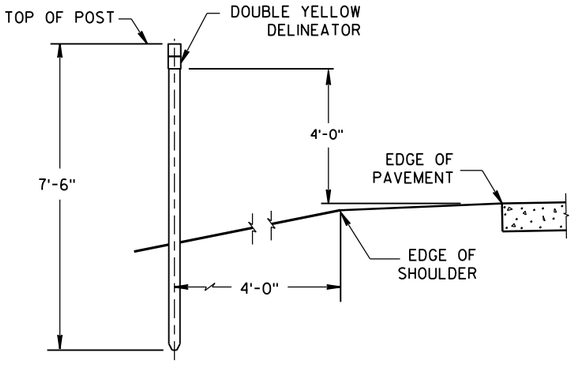
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

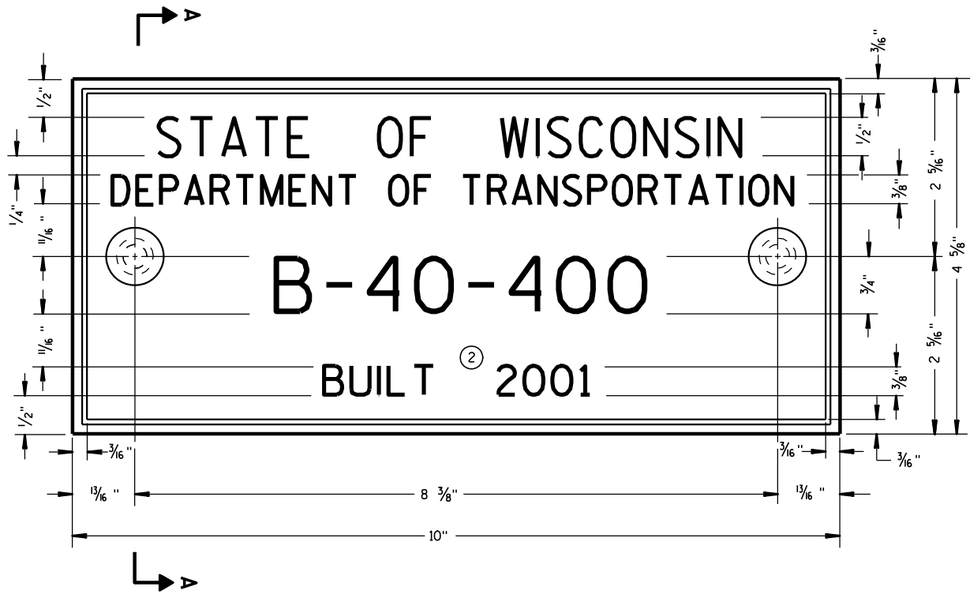
FHWA

6

S.D.D. 11 A 1-5

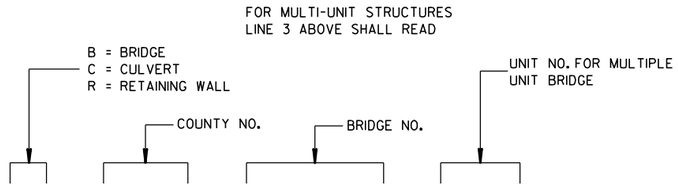
6

S.D.D. 11 A 1-5



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

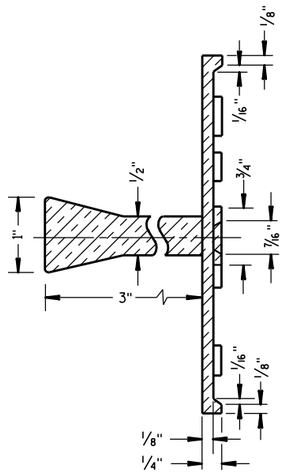
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

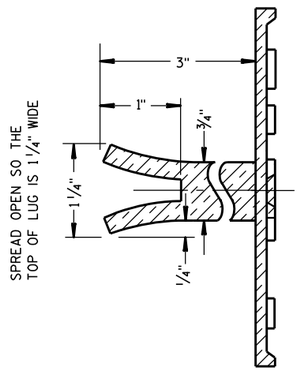
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

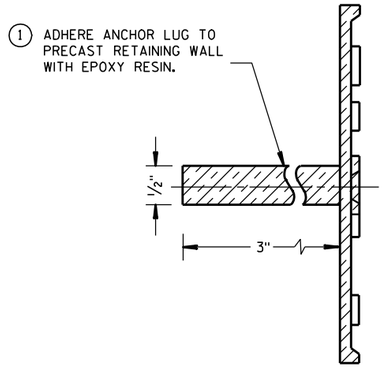
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

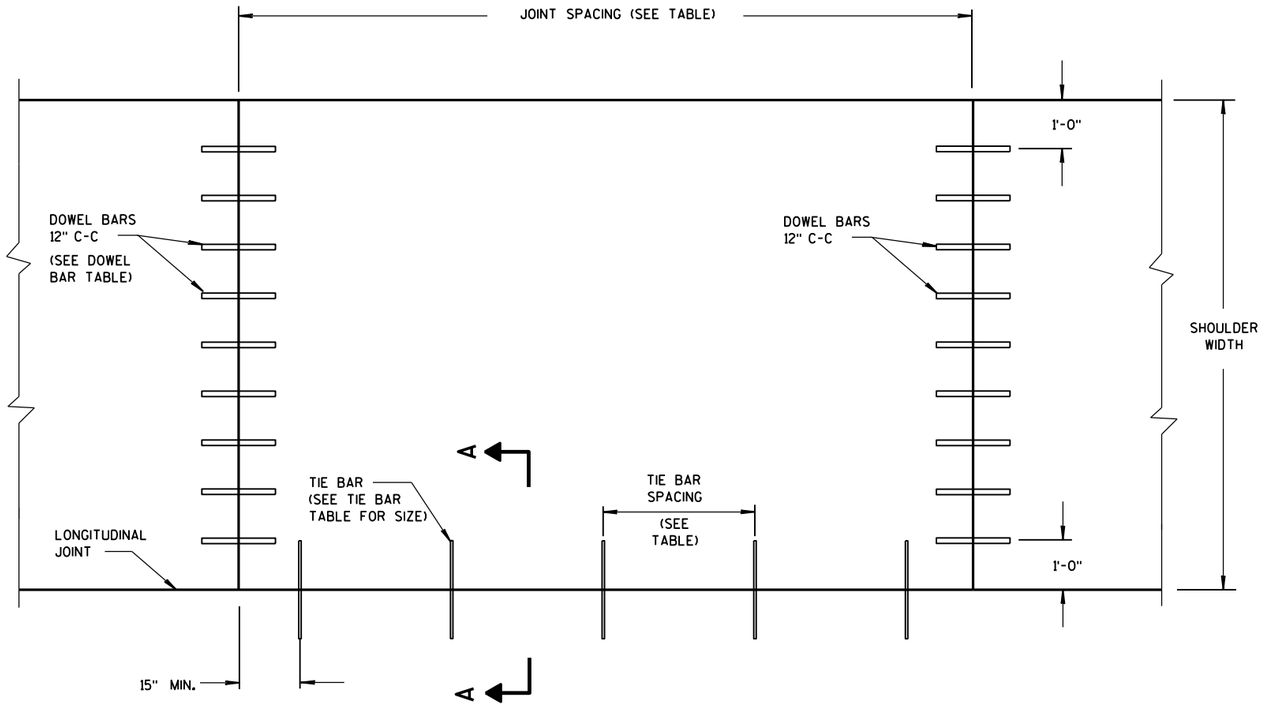
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

6

S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

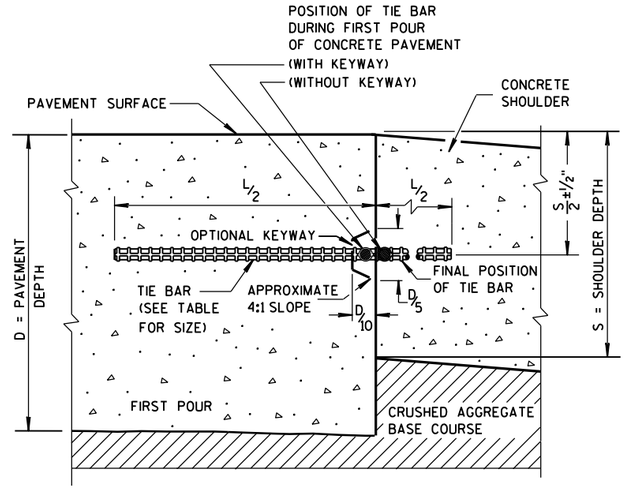
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

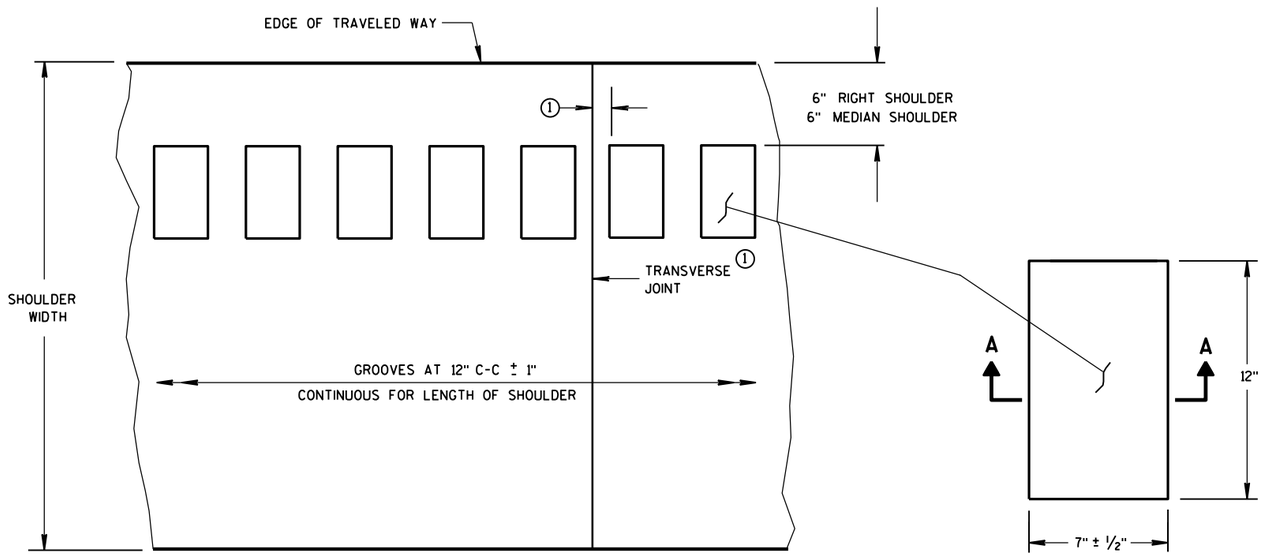
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

6

S.D.D. 13 A 3-6

6

S.D.D. 13 A 3-6



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

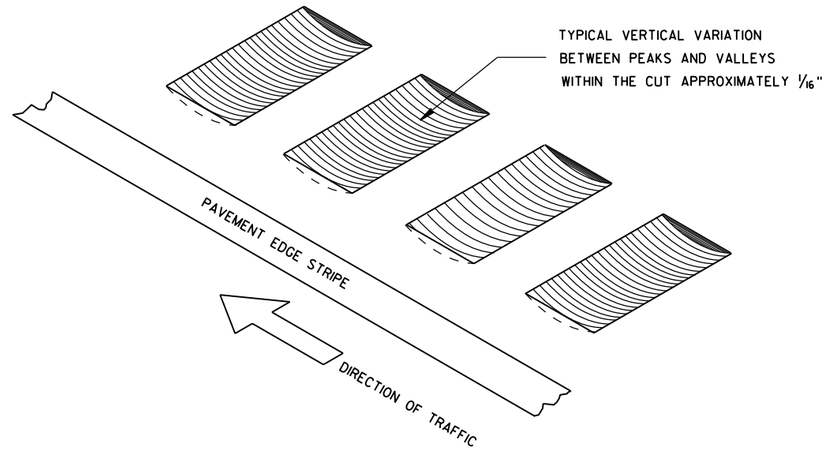
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

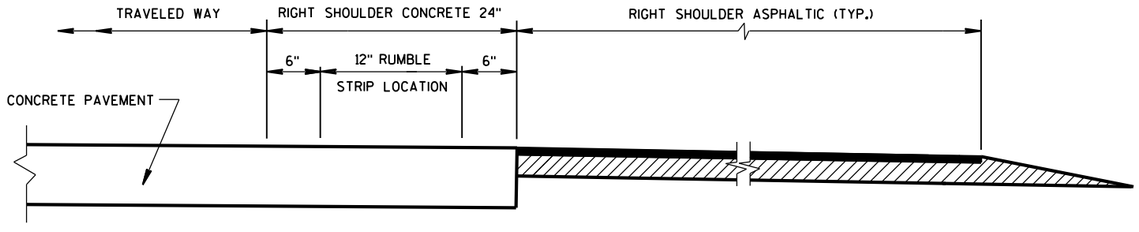
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

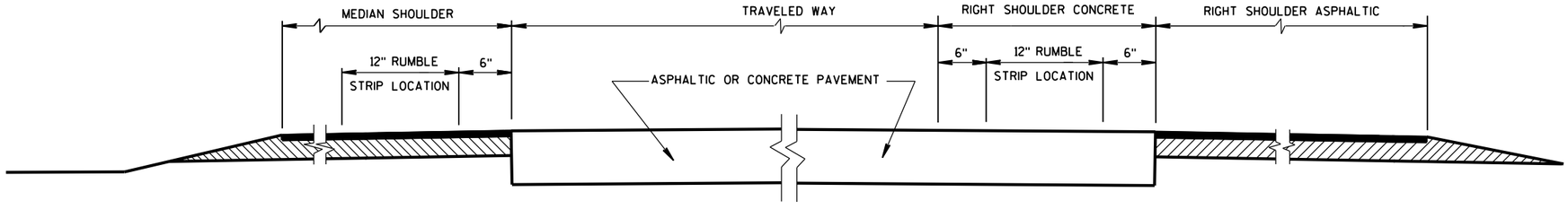
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



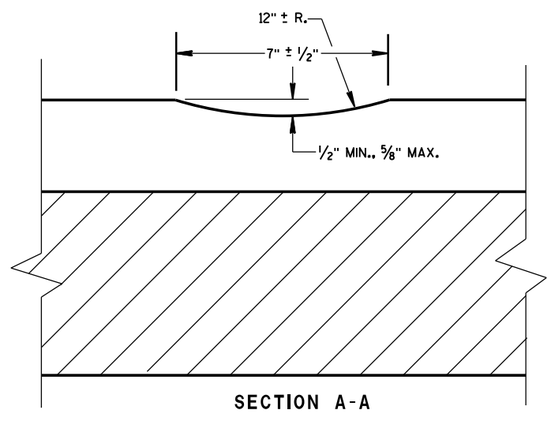
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

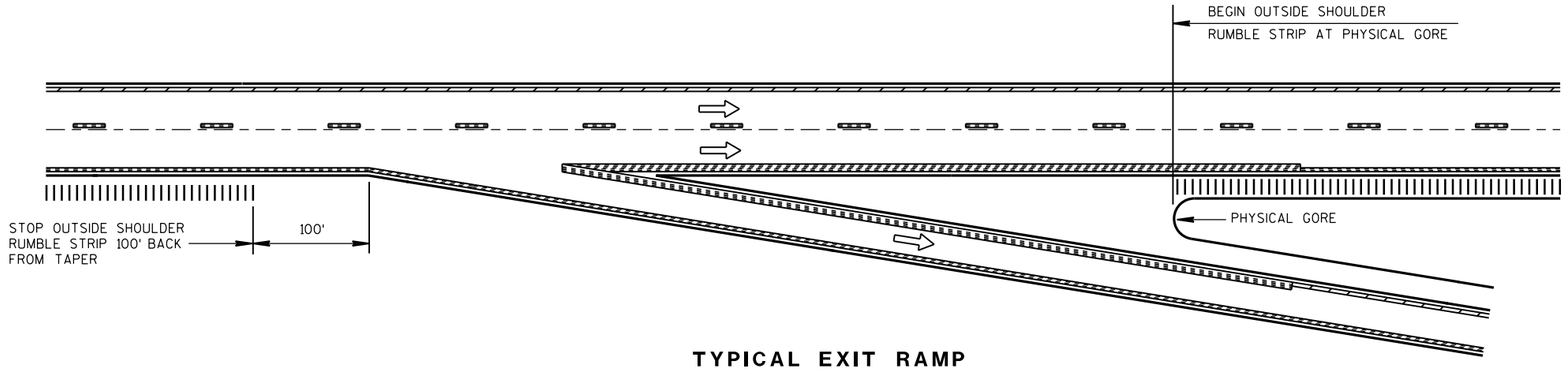
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

6

S.D.D. 13 A 5-5a



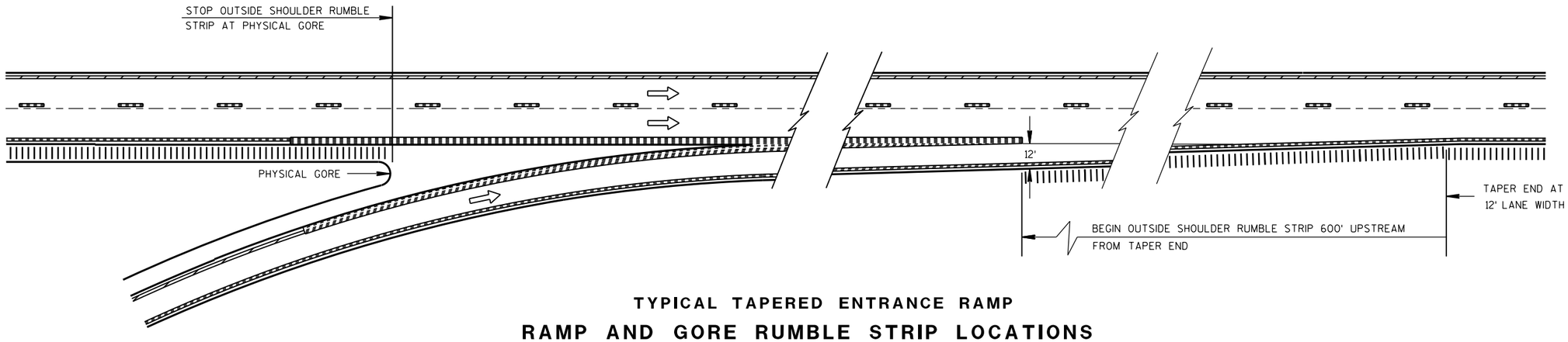
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

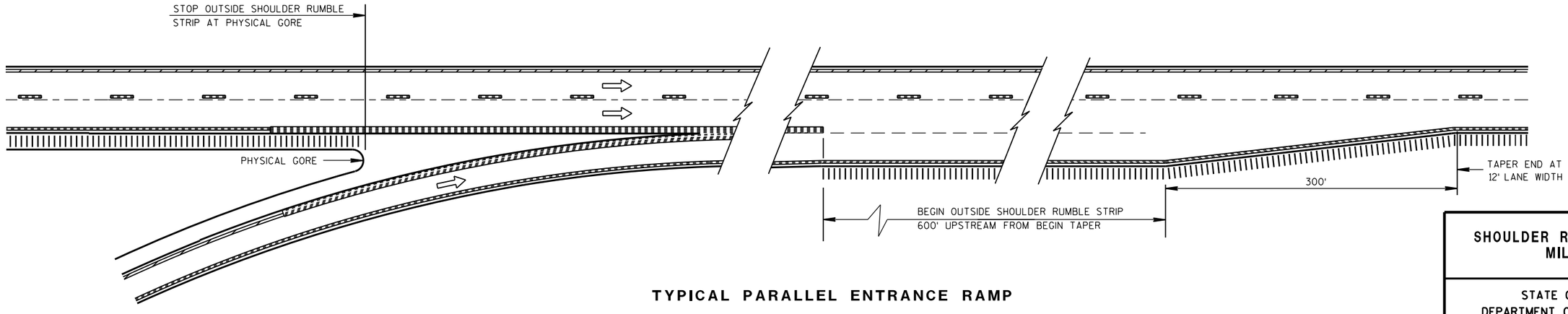
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

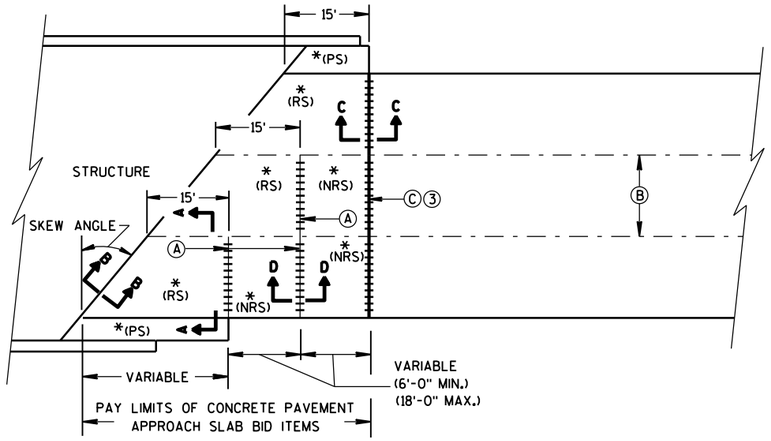
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

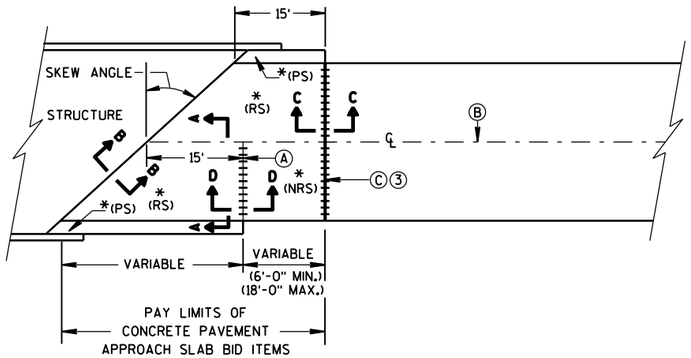
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

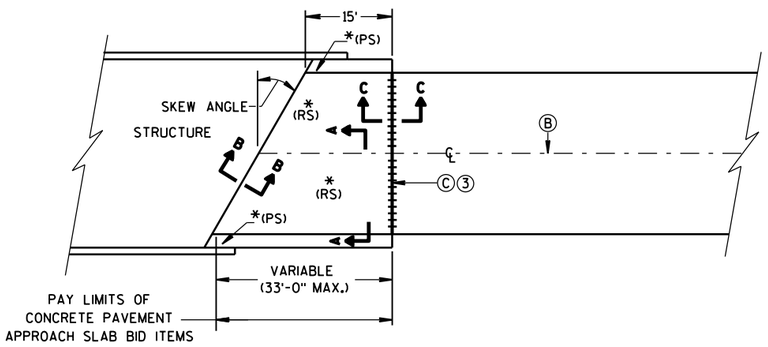
S.D.D. 13 A 5-5b



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



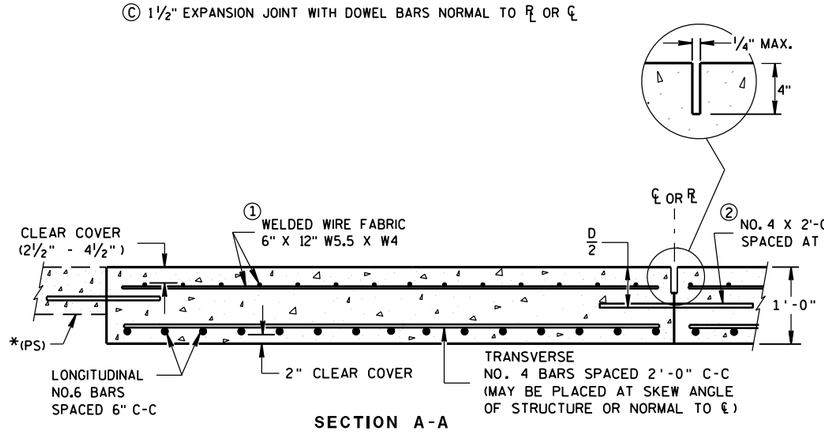
SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

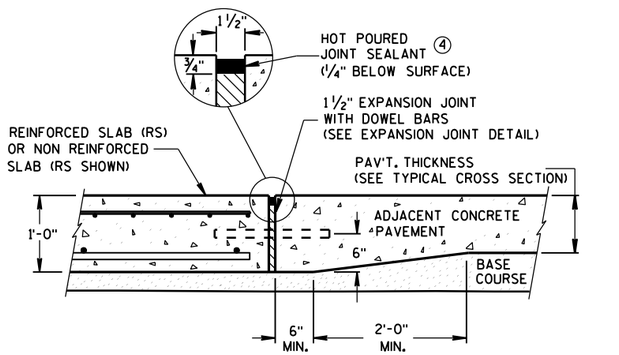
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

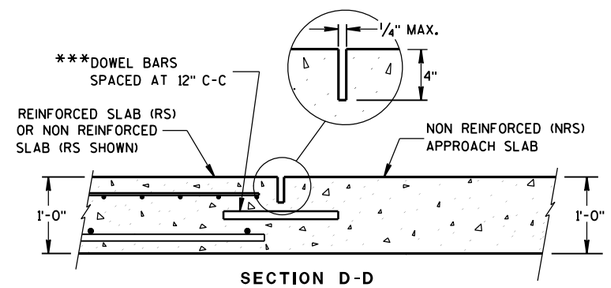
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

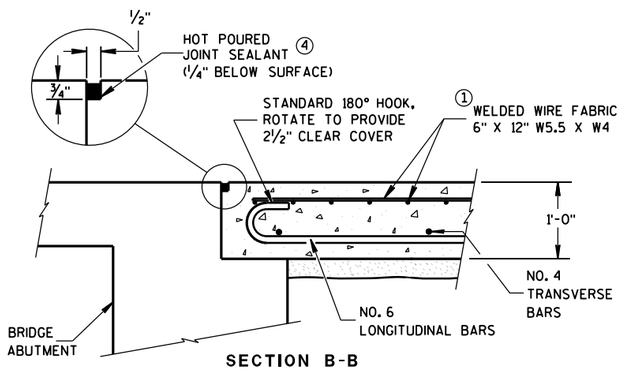
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

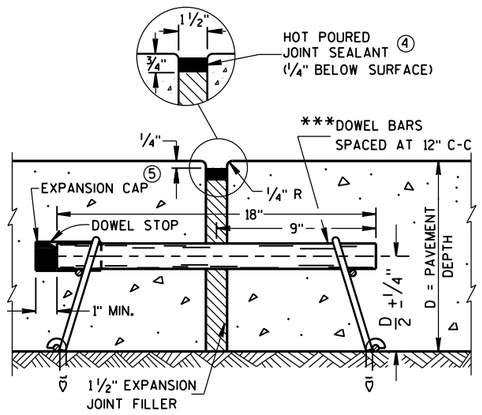
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

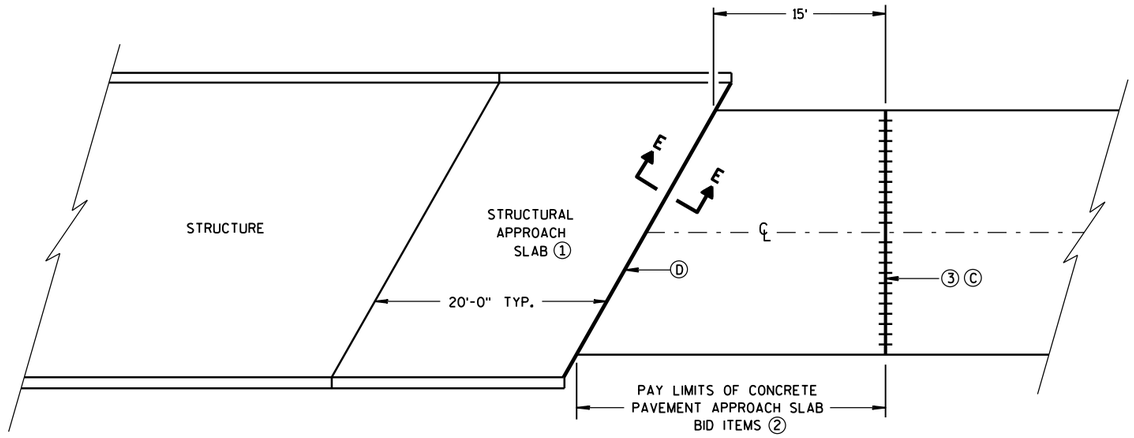
6

S.D.D. 13 B 2-8a

6

S.D.D. 13 B 2-8a

BRIDGE APPROACHES



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

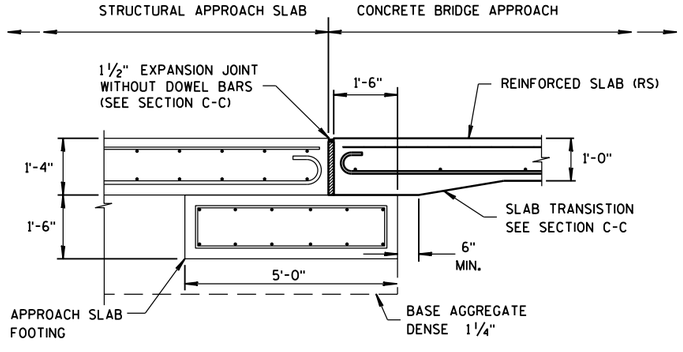
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

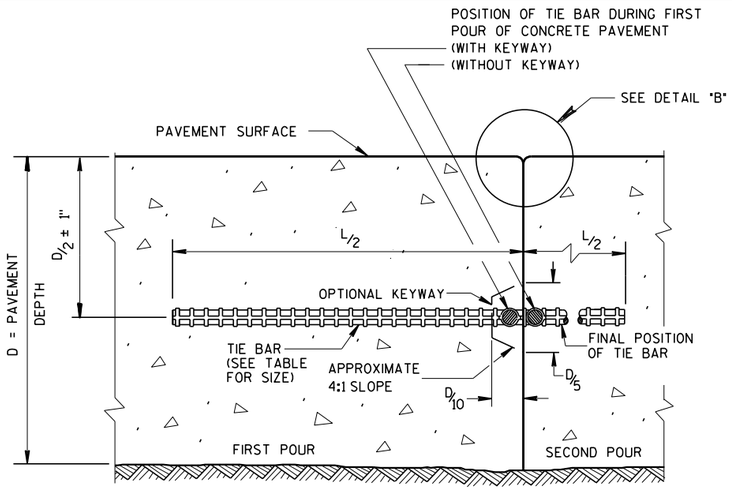
STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

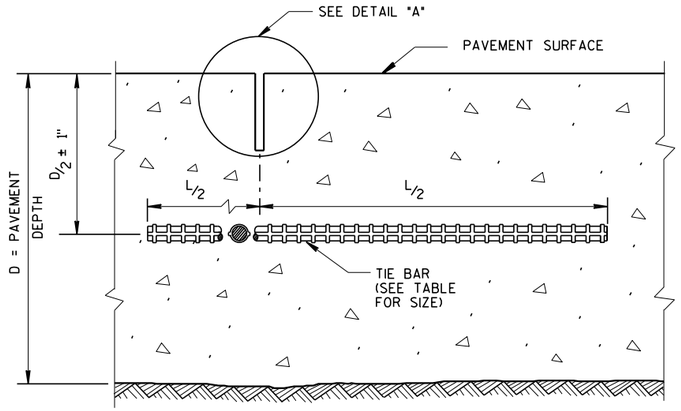
APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEF
FHWA

6

S.D.D. 13 B 2-8b



CONSTRUCTION JOINT



SAWED JOINT

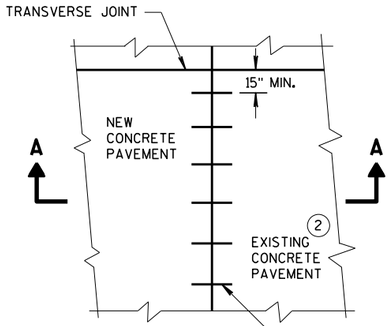
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

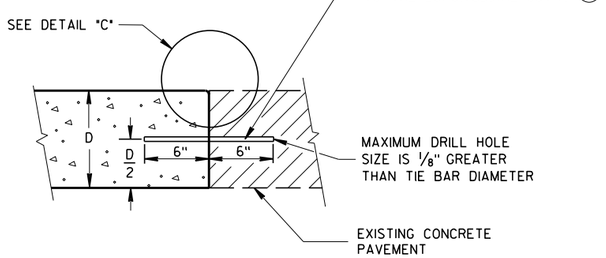
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

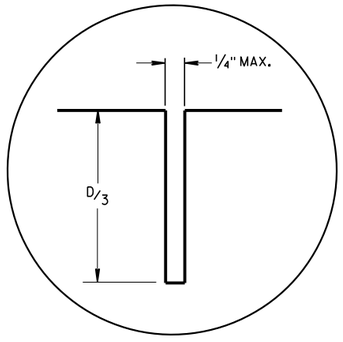


PLAN VIEW

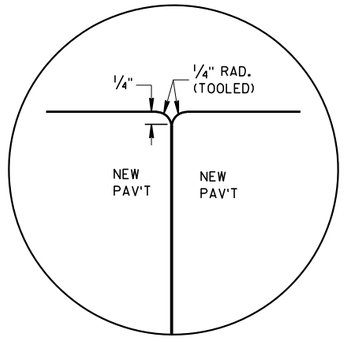


SECTION A-A

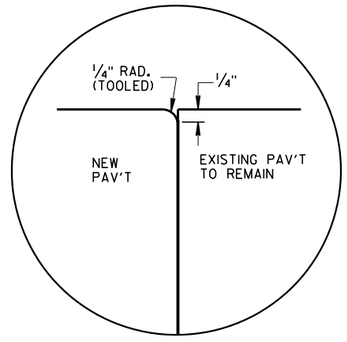
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



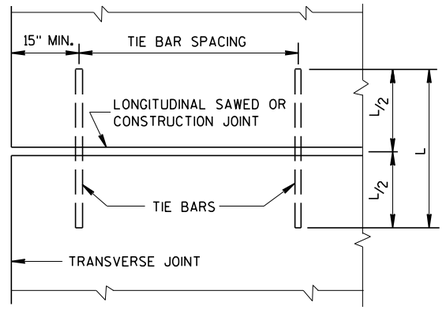
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



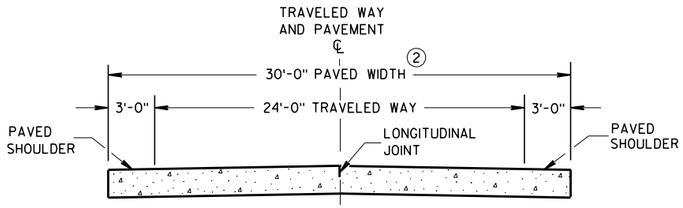
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

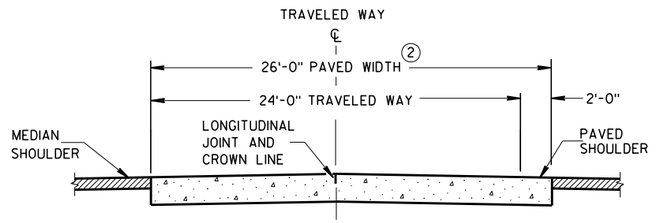
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

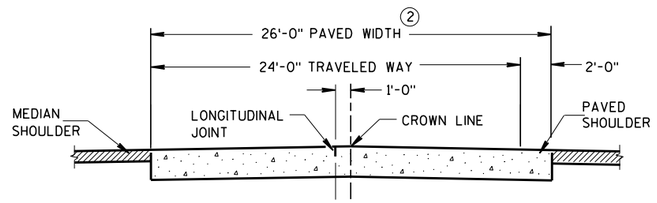
6
S.D.D. 13 C 1-19



SECTION A-A
TWO-LANE TWO-WAY HIGHWAY ①



SECTION B-B



ALTERNATIVE SECTION B-B
①
DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

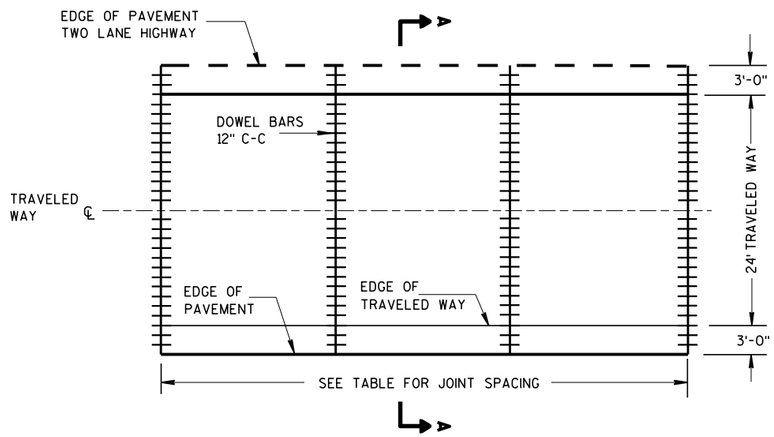
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

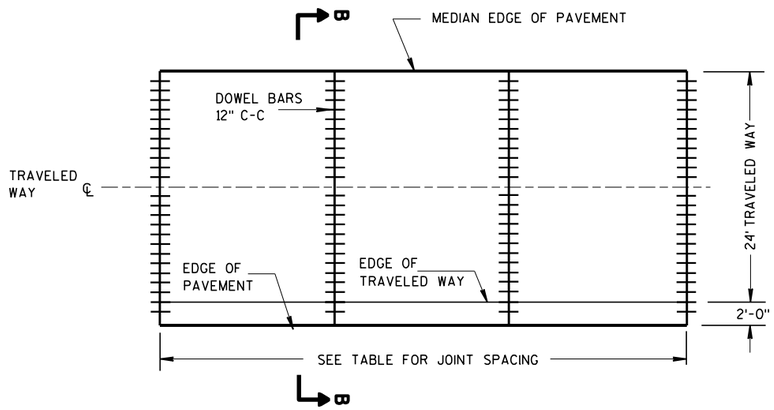
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



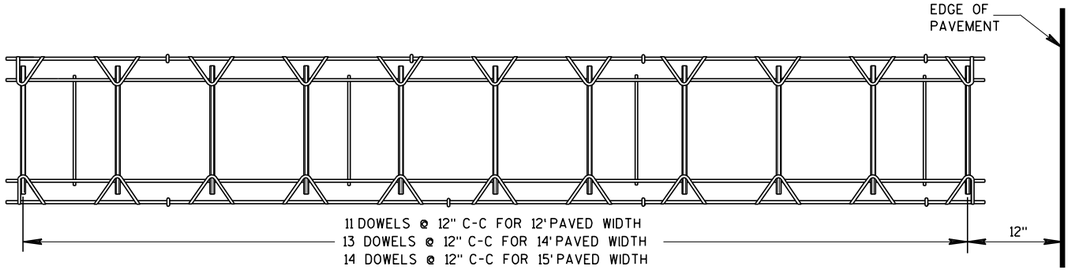
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

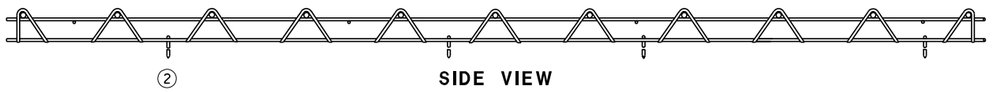
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 11-12a



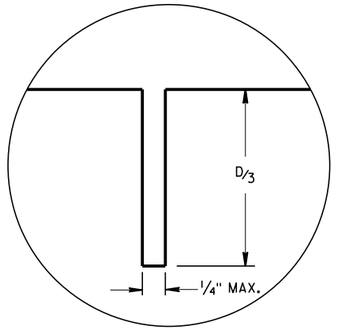
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

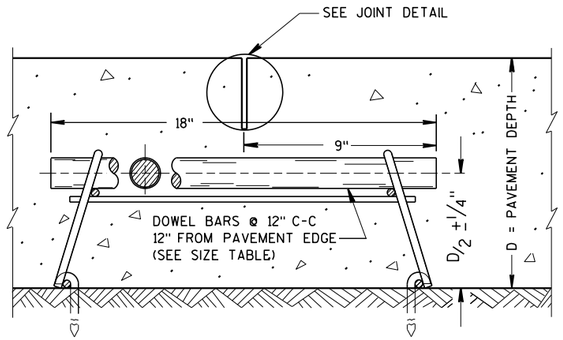
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

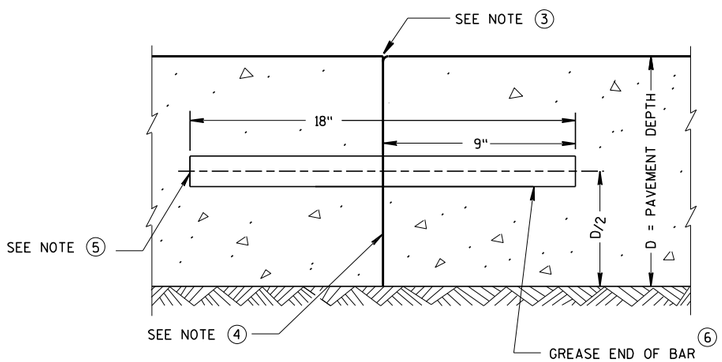
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

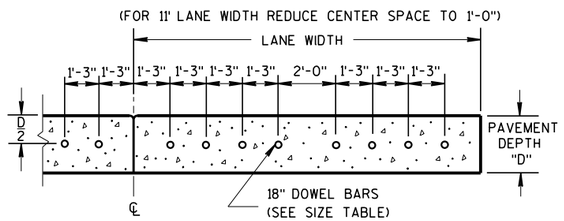
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT

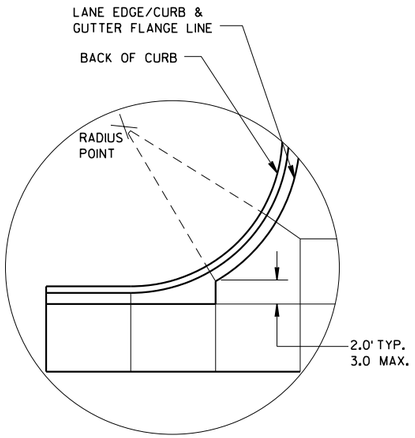


TRANSVERSE CONSTRUCTION JOINT

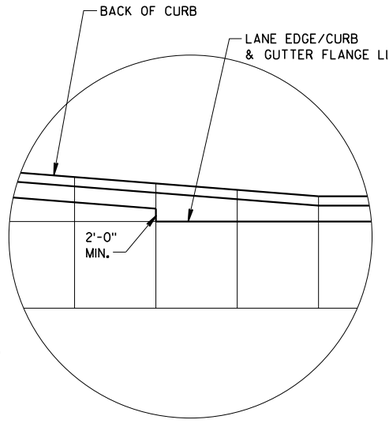


DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

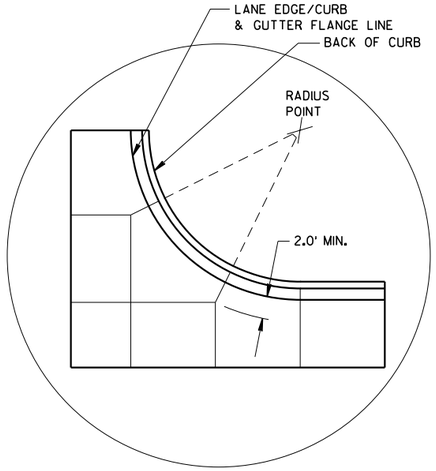
RURAL DOWELED CONCRETE PAVEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/S/ Peter Kemp P.E. PAVEMENT SUP
FHWA	



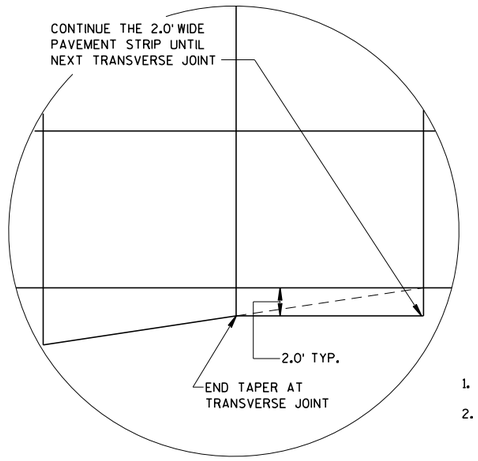
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

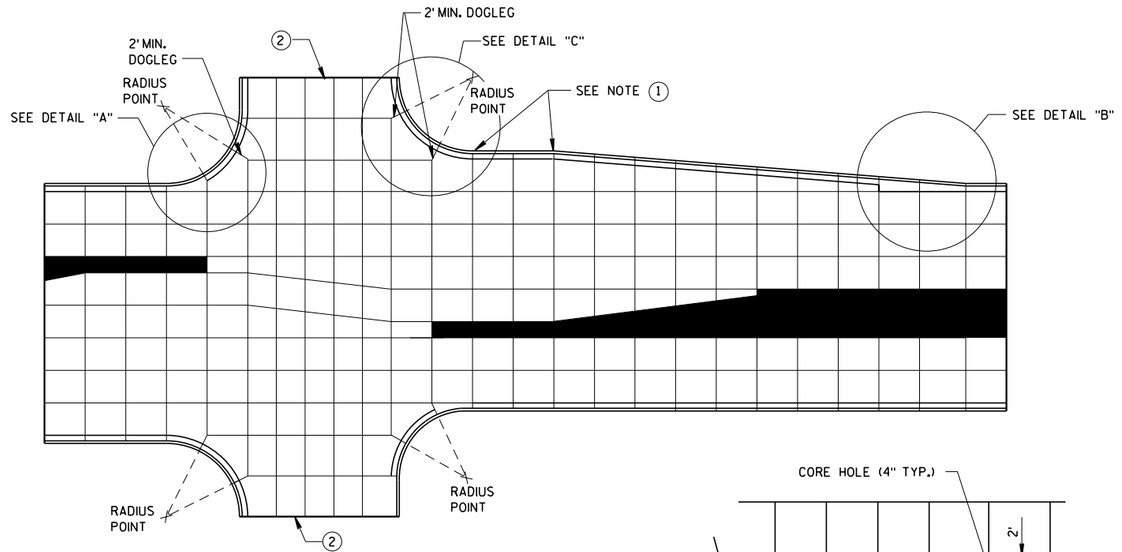
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

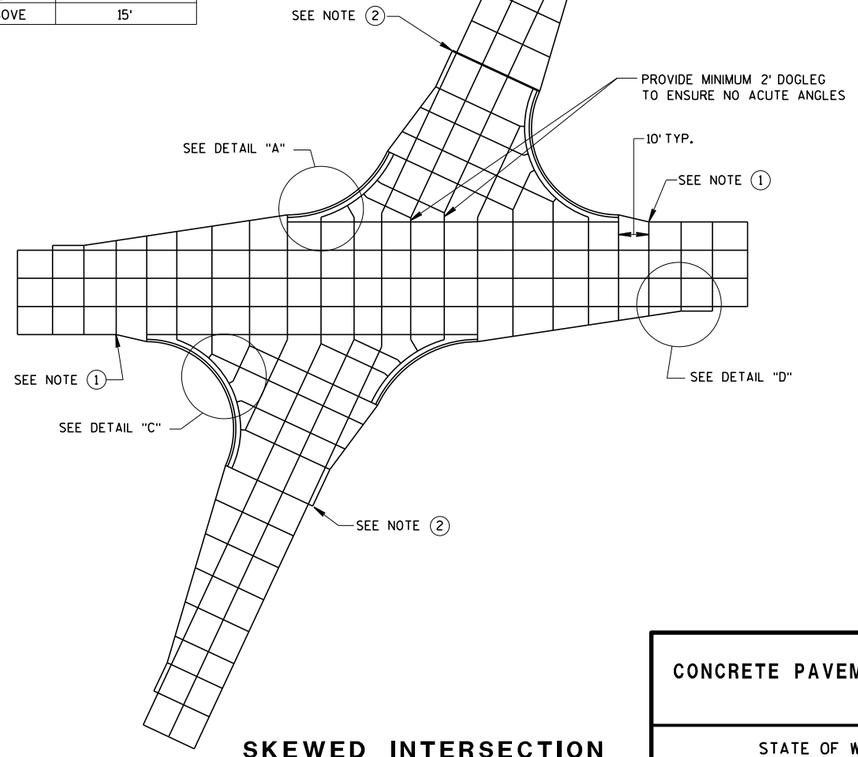
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



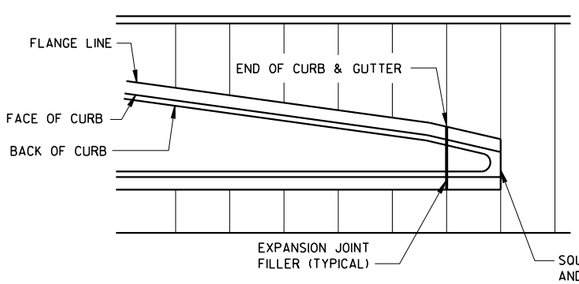
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

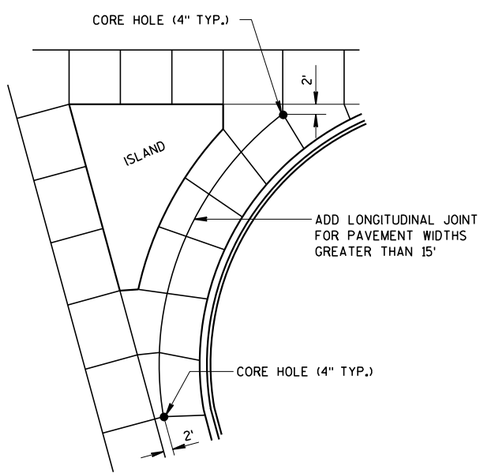
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



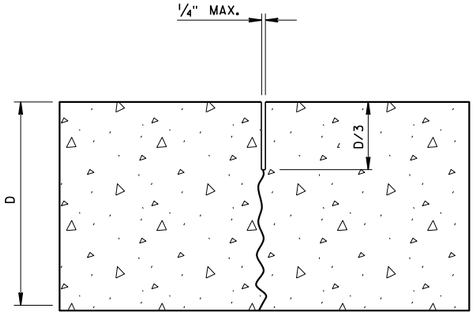
APPROACH TO MEDIAN



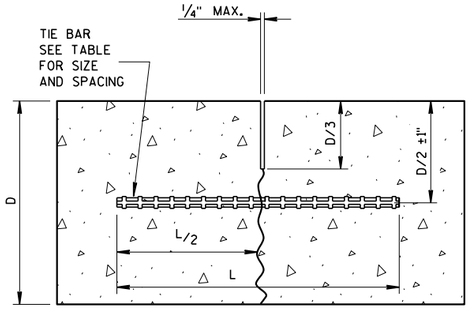
LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

6
S.D.D. 13 C 18-6a



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

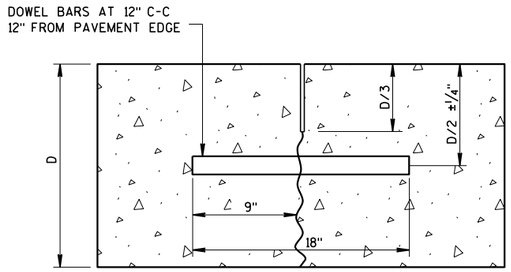
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

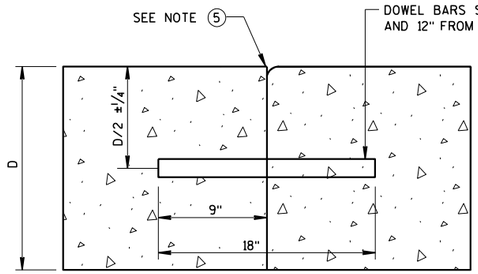
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



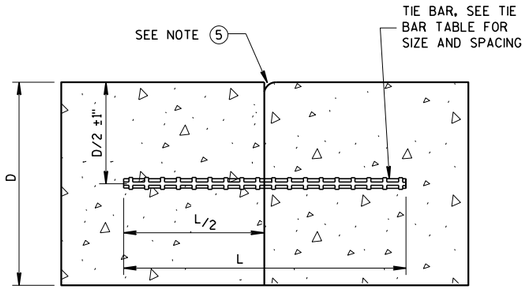
DOWELED-TRANSVERSE

CONTRACTION JOINTS

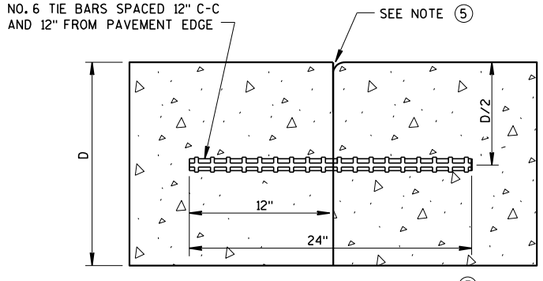
SEE NOTE (2)



DOWELED TRANSVERSE (3)

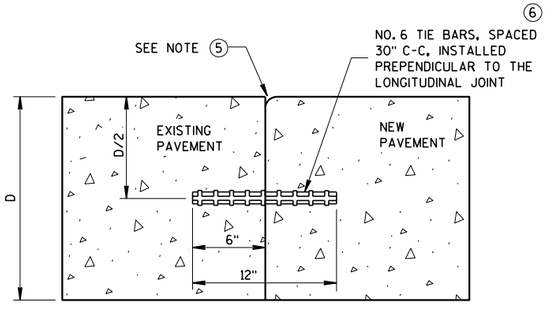


TIED LONGITUDINAL



TIED TRANSVERSE (3)

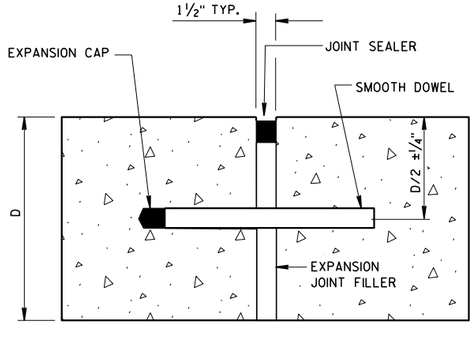
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

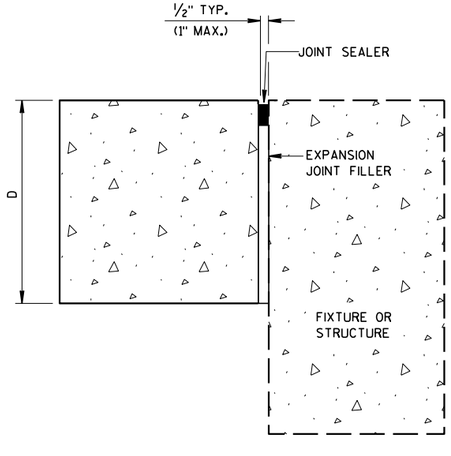
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

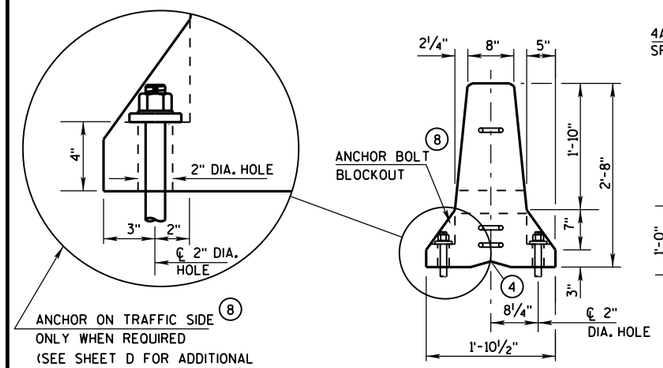
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

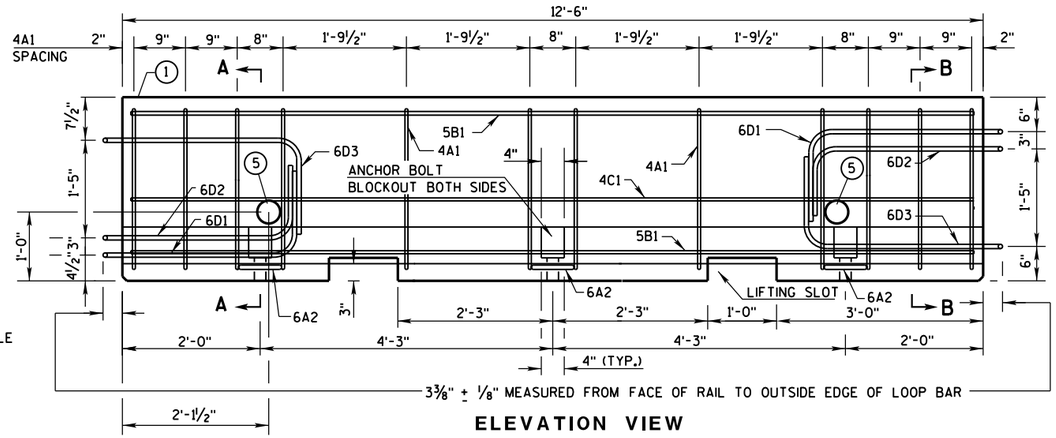
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

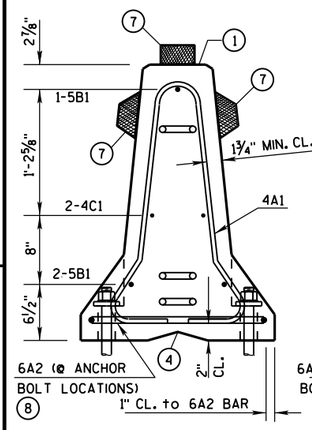
S.D.D. 13 C 18-6c



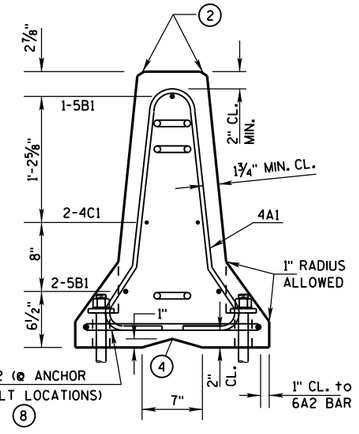
END VIEW



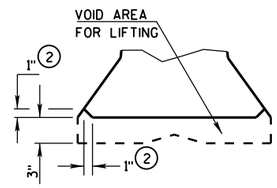
ELEVATION VIEW



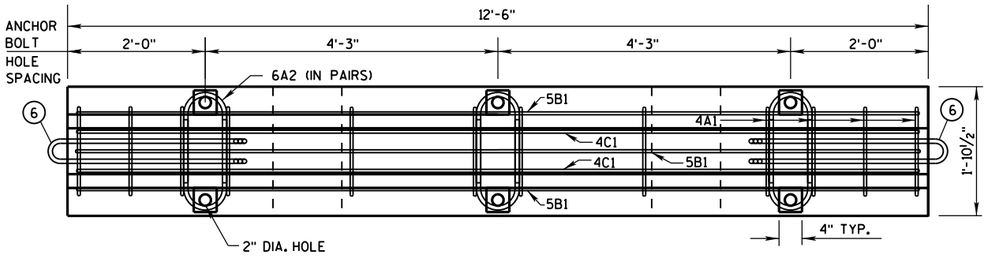
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

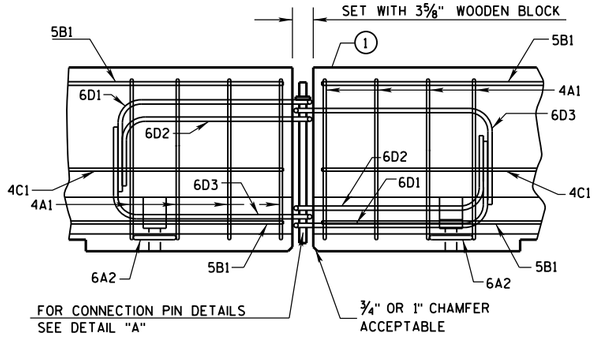


DETAIL "B"
LIFTING SLOT DETAIL

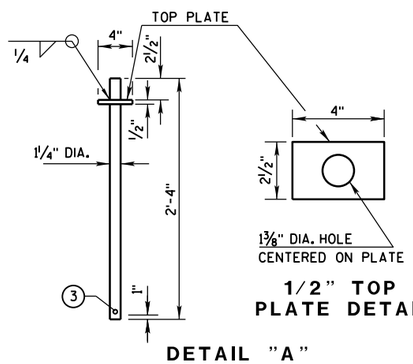


PLAN VIEW

DETAILS OF BARRIER SECTION

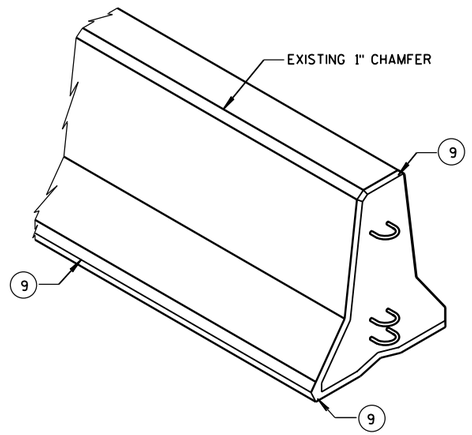


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

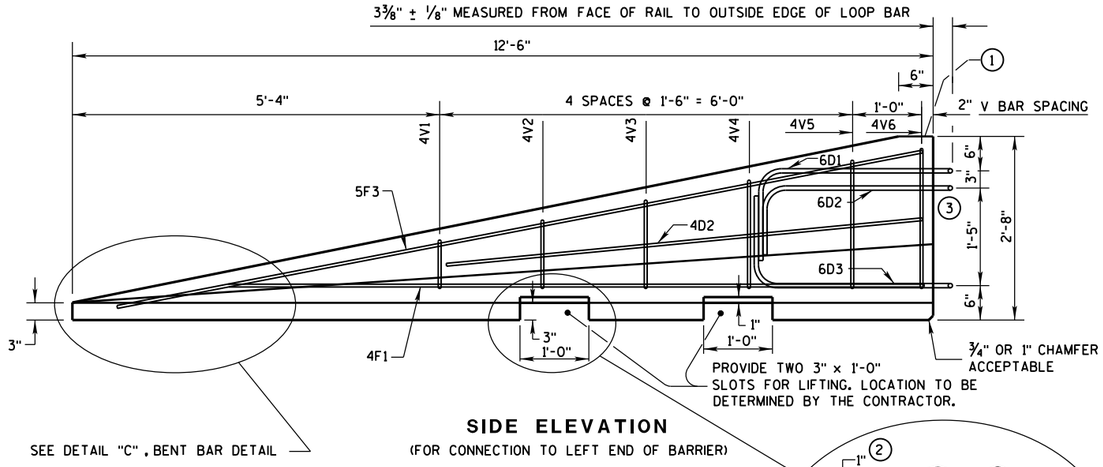
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

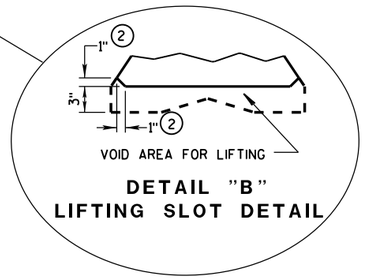
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

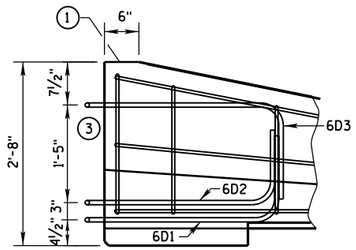
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



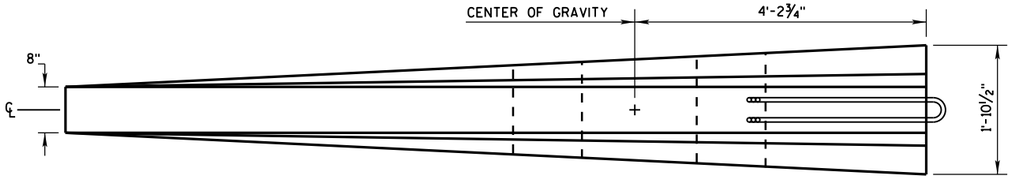
DETAIL "B"
LIFTING SLOT DETAIL



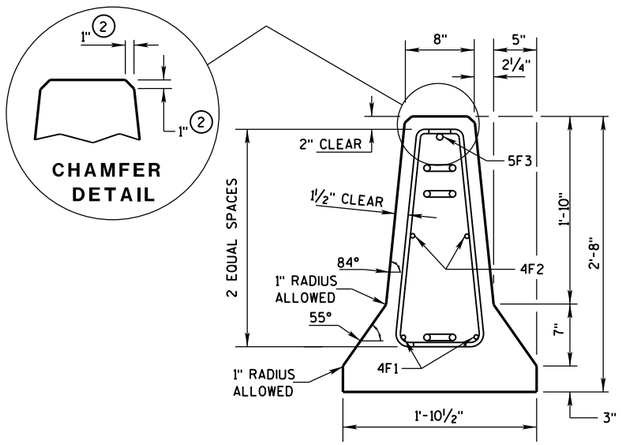
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

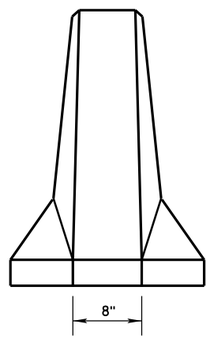
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



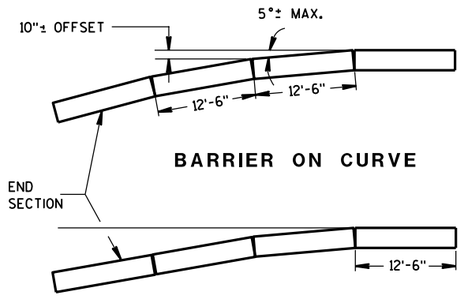
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

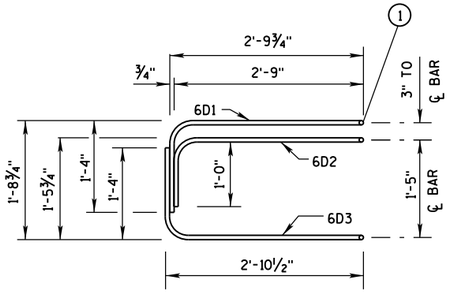
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15b

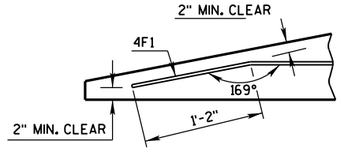
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

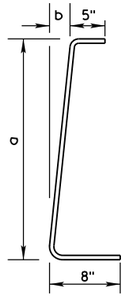
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

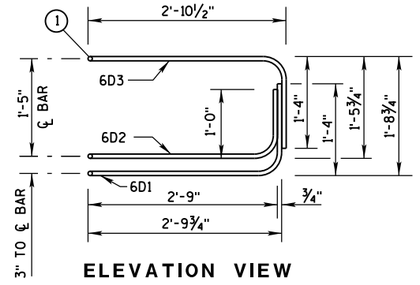
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

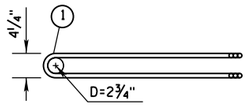
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

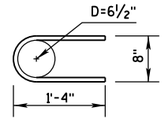
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



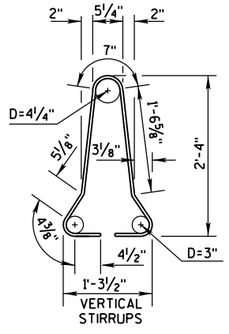
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

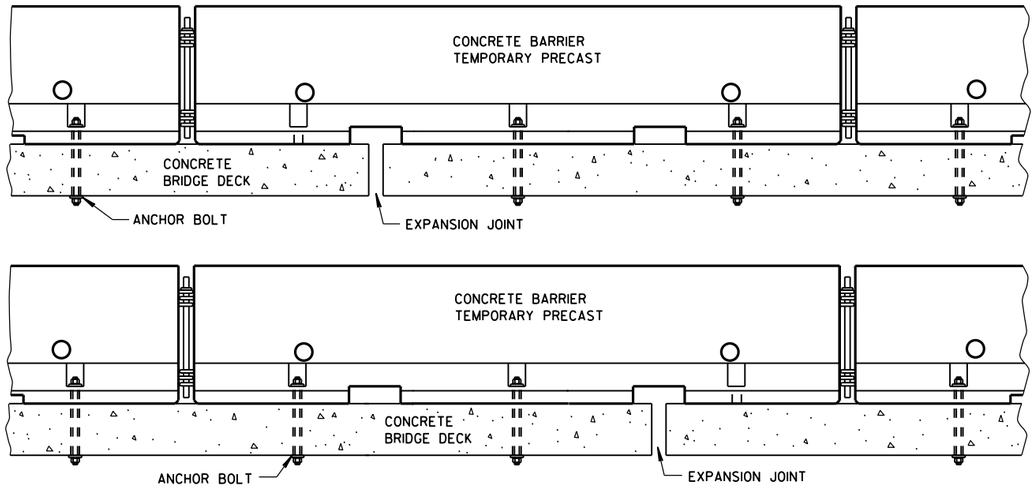
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)

GENERAL NOTES

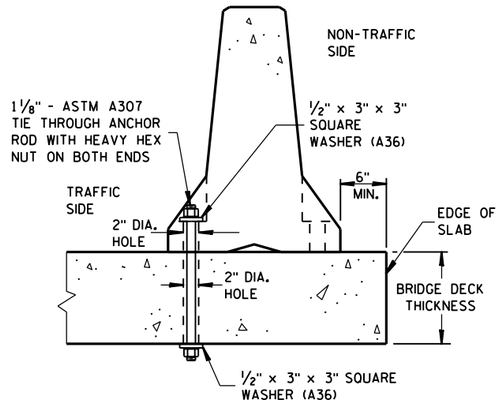
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

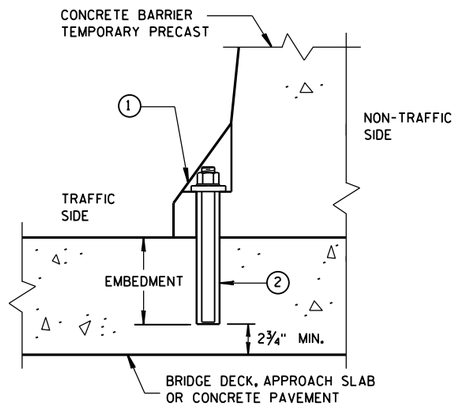
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



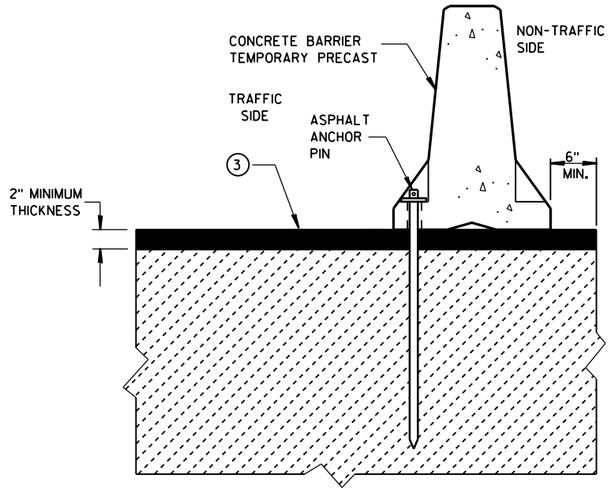
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

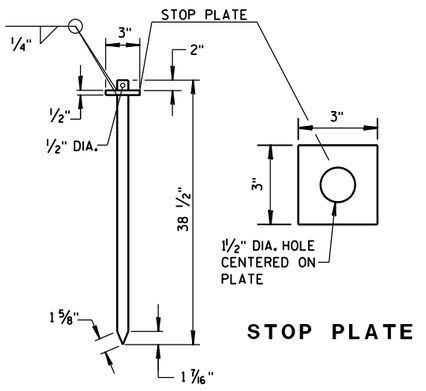


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



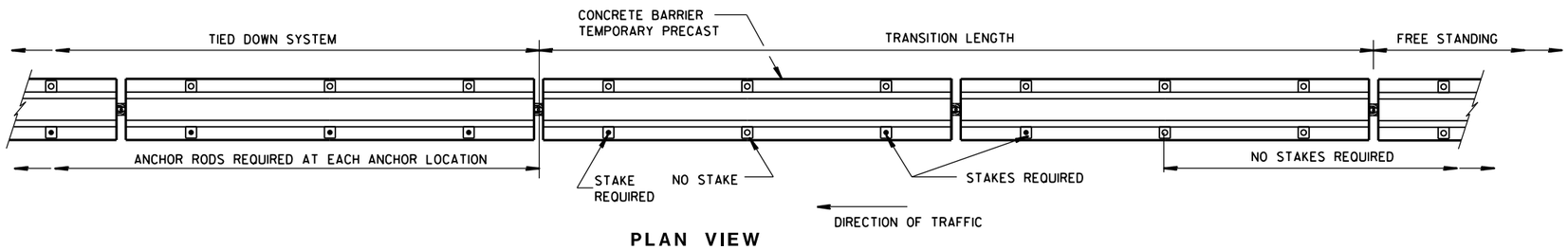
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

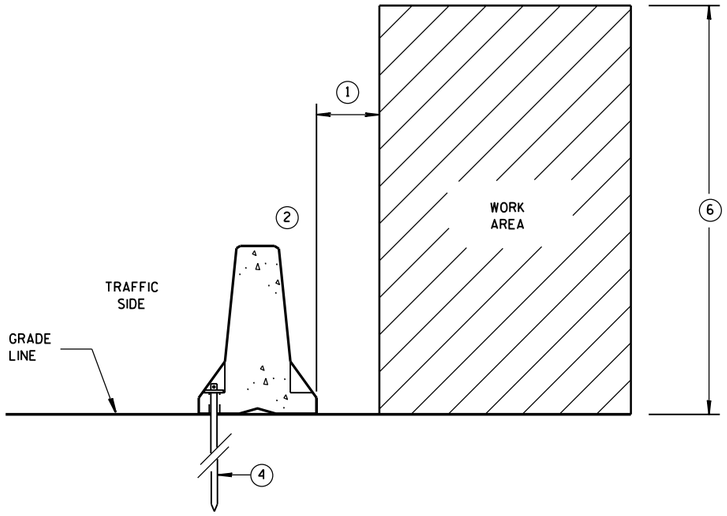
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

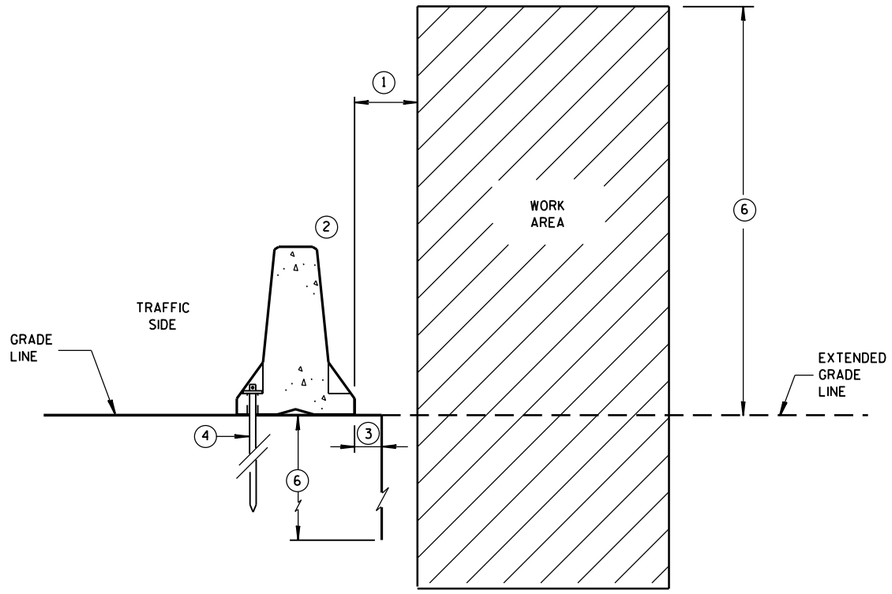
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

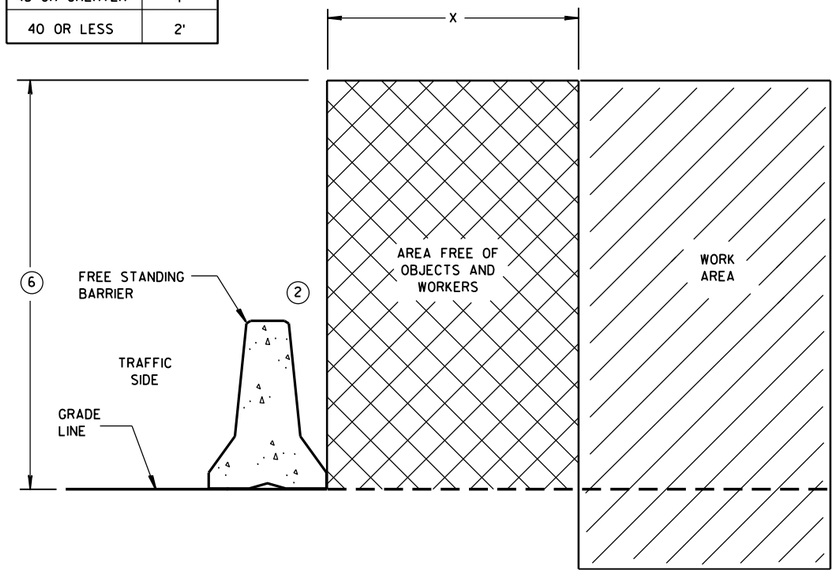


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

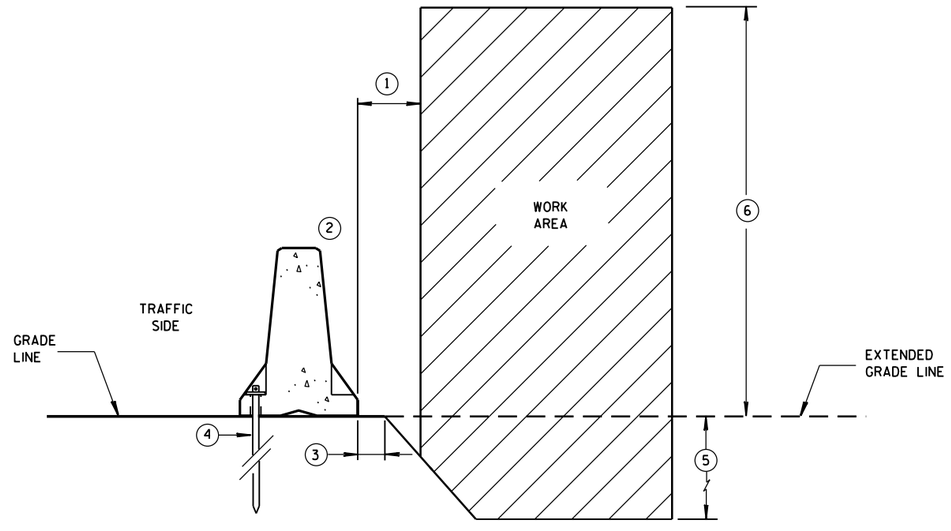
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



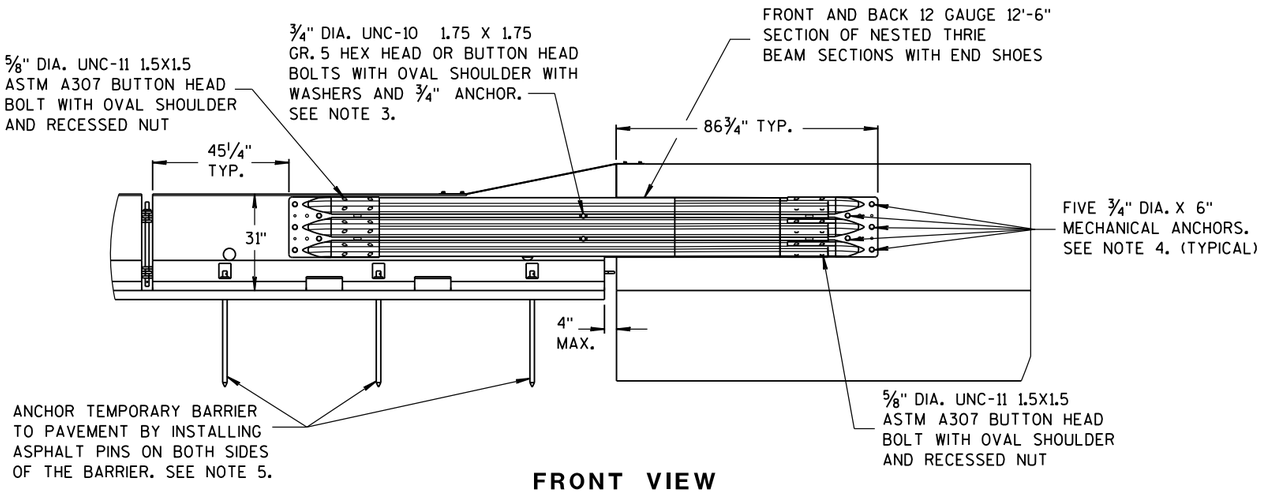
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

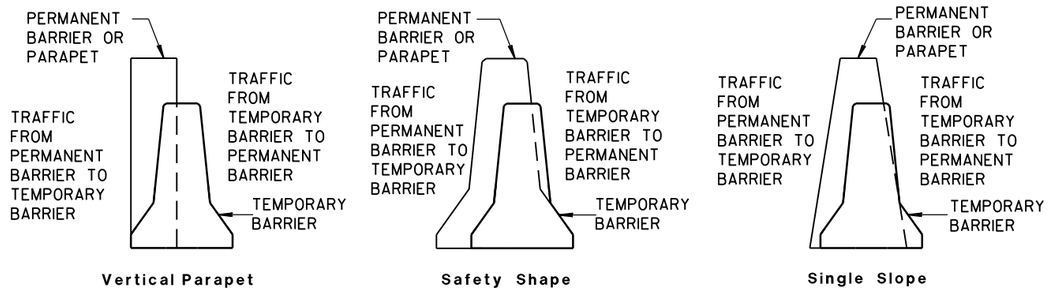
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

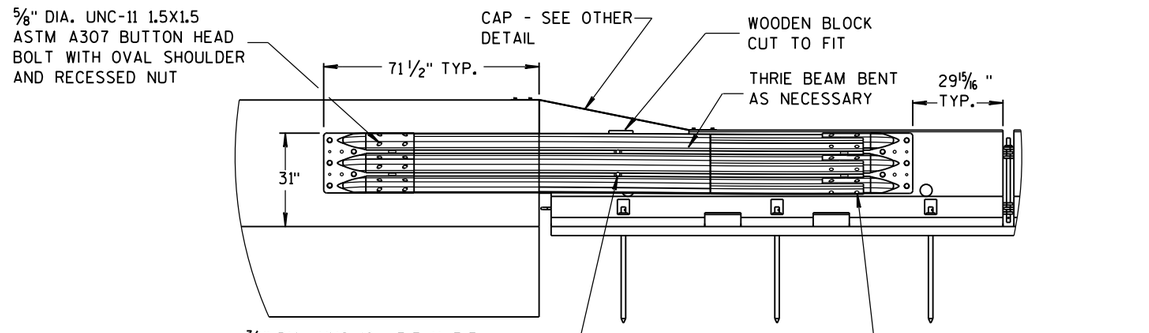


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

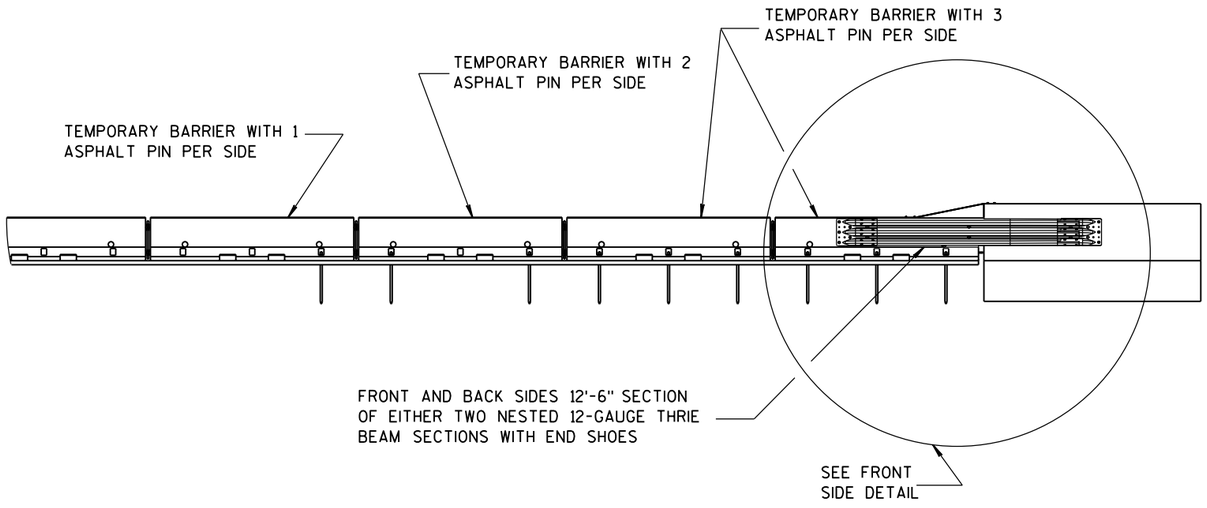
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

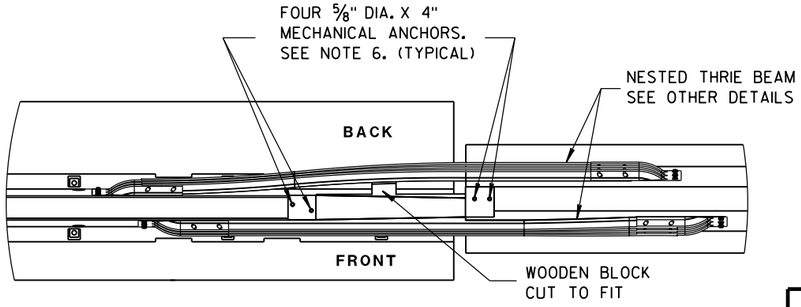
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

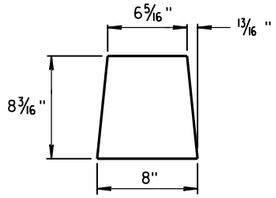
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

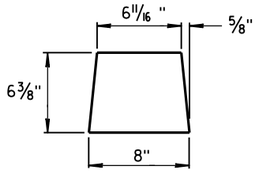
S.D.D. 14 B 7-15f

6

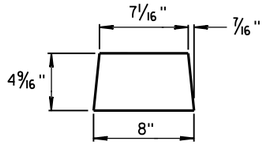
S.D.D. 14 B 7-15f



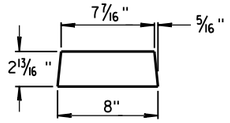
GUSSET 1



GUSSET 2

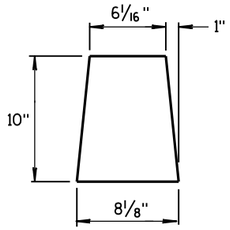


GUSSET 3

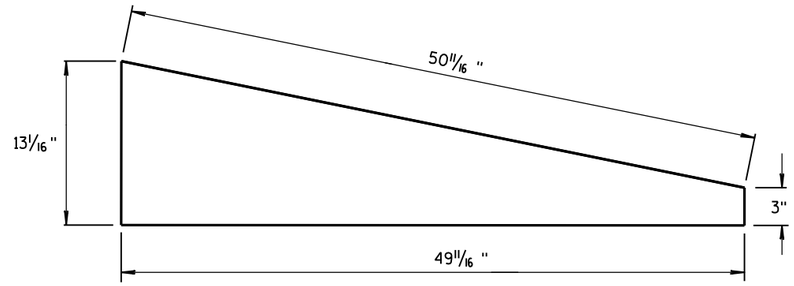


GUSSET 4

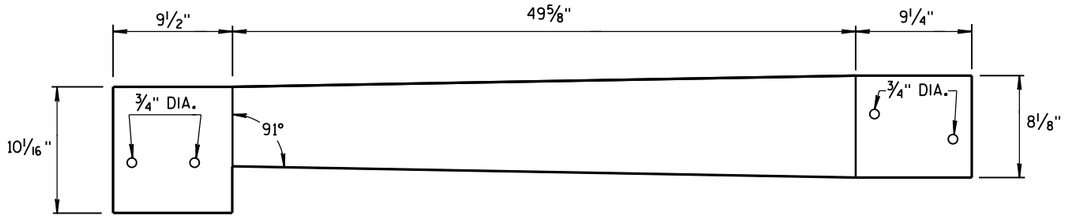
GUSSETS

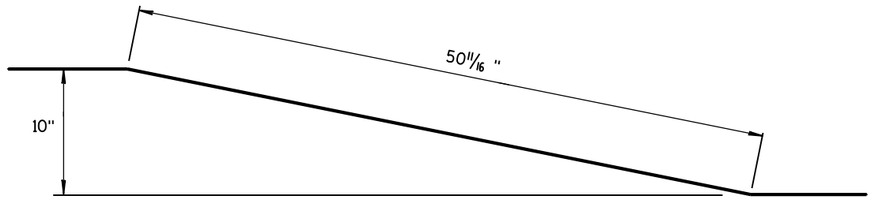


END PLATE



SIDE PLATE

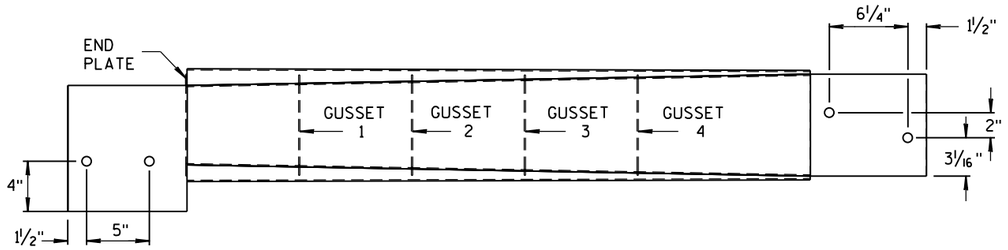


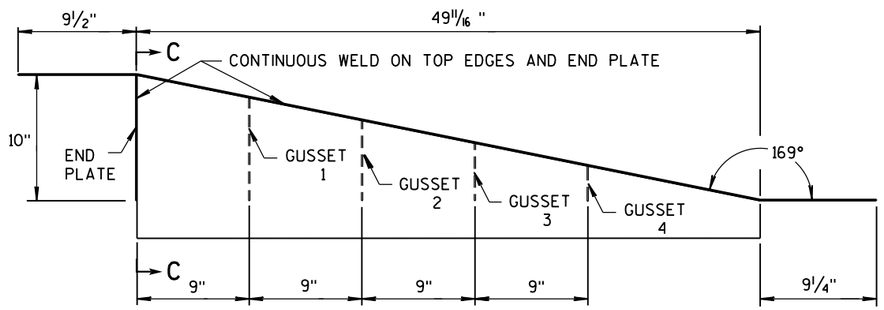


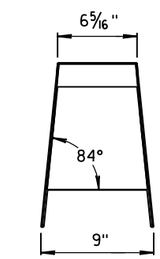
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

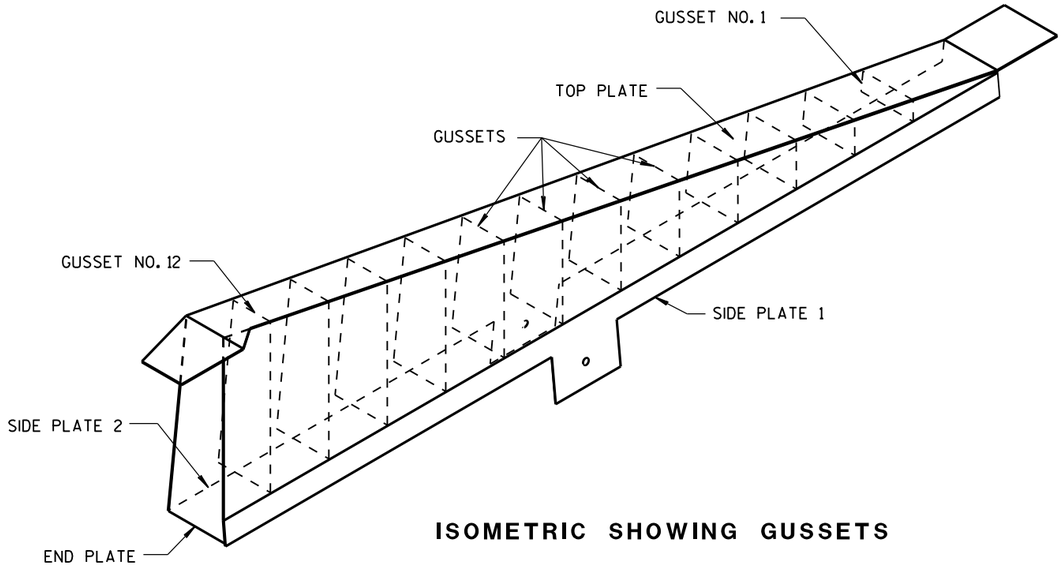
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

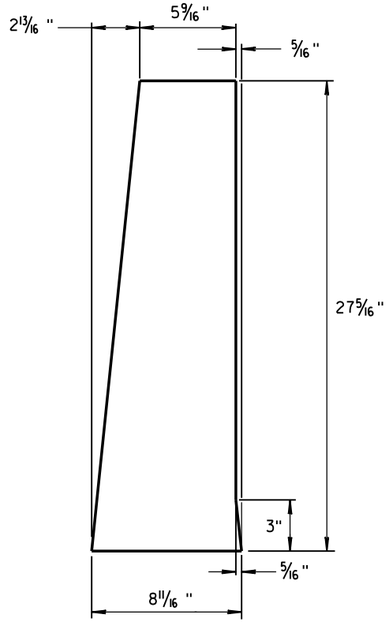
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15g

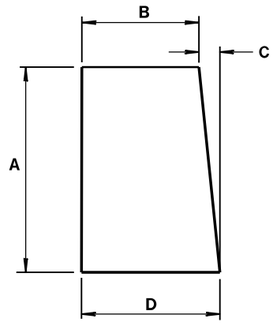


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



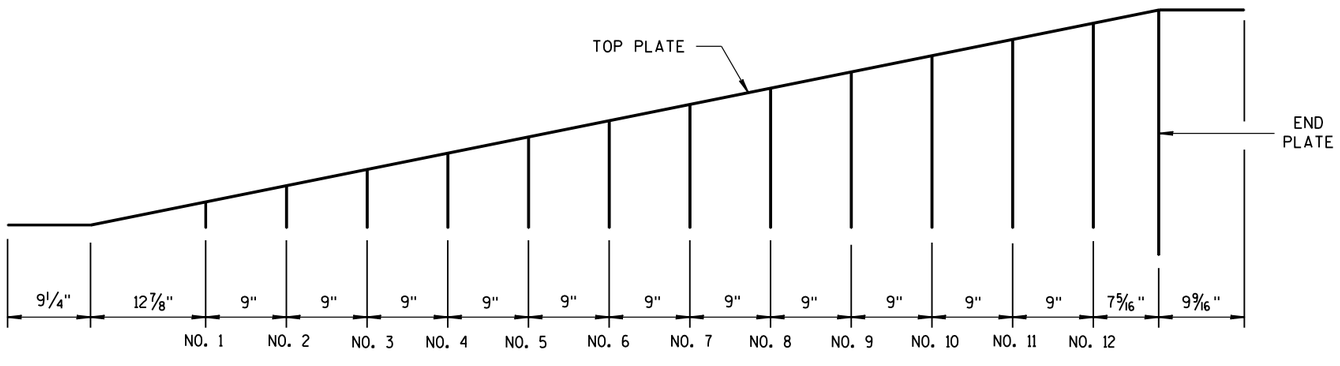
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

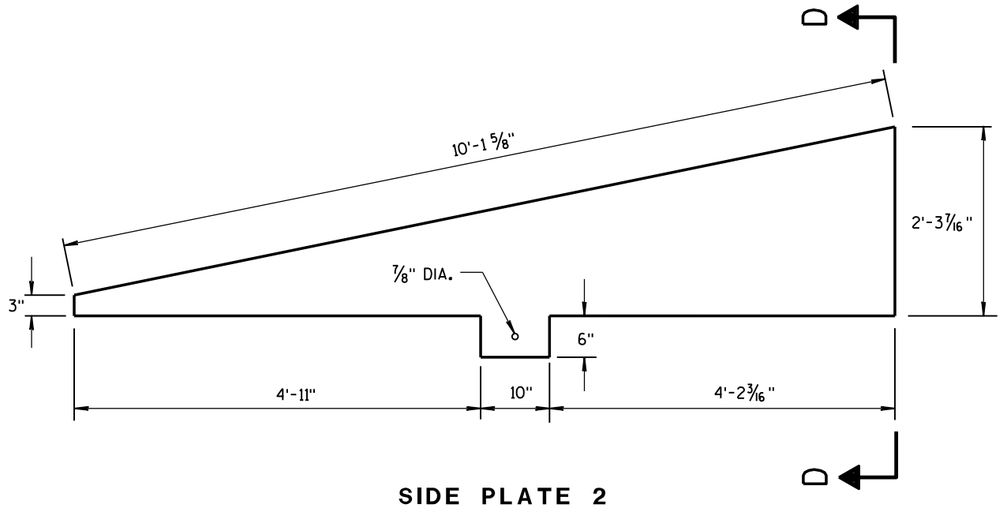
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

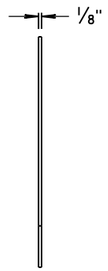
S.D.D. 14 B 7-15h

6

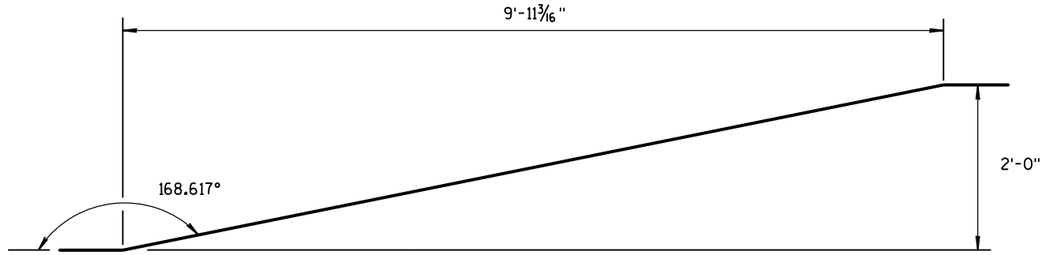
S.D.D. 14 B 7-15h



SIDE PLATE 2

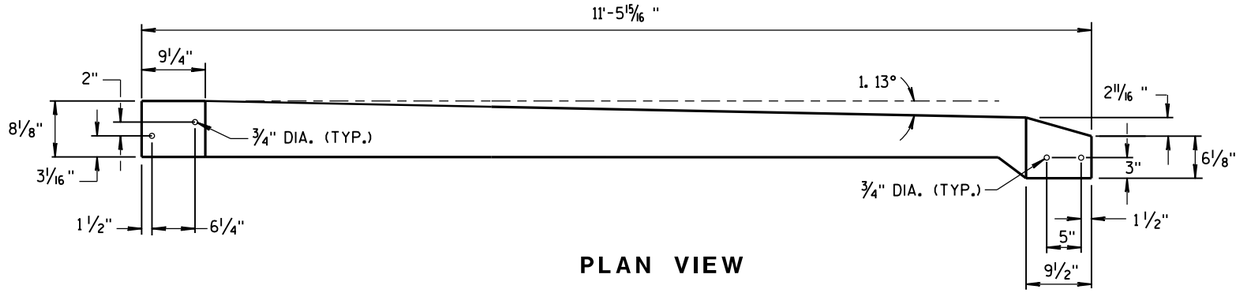


END VIEW



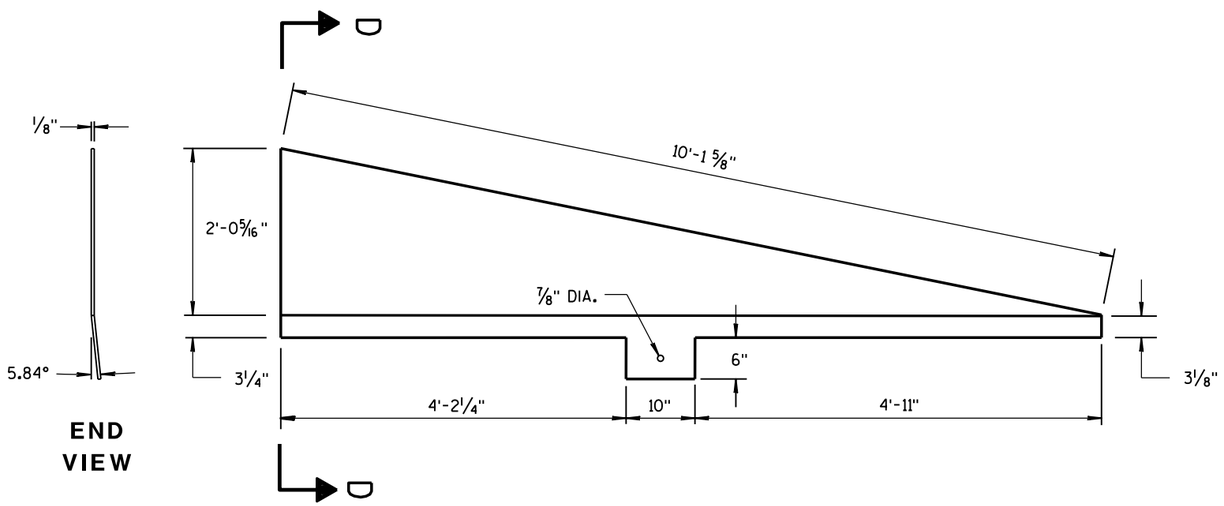
SIDE VIEW

TOP PLATE



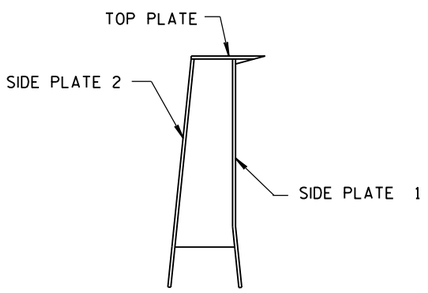
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

175

ENT

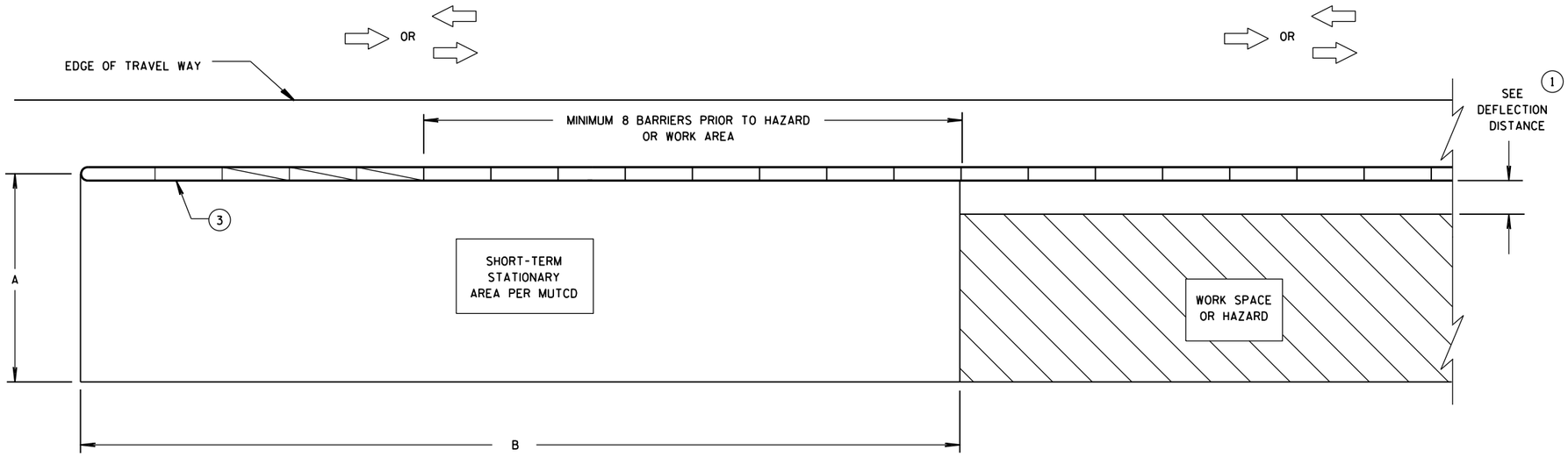
FHWA

6

S.D.D. 14 B 7-15i

6

S.D.D. 14 B 7-15i



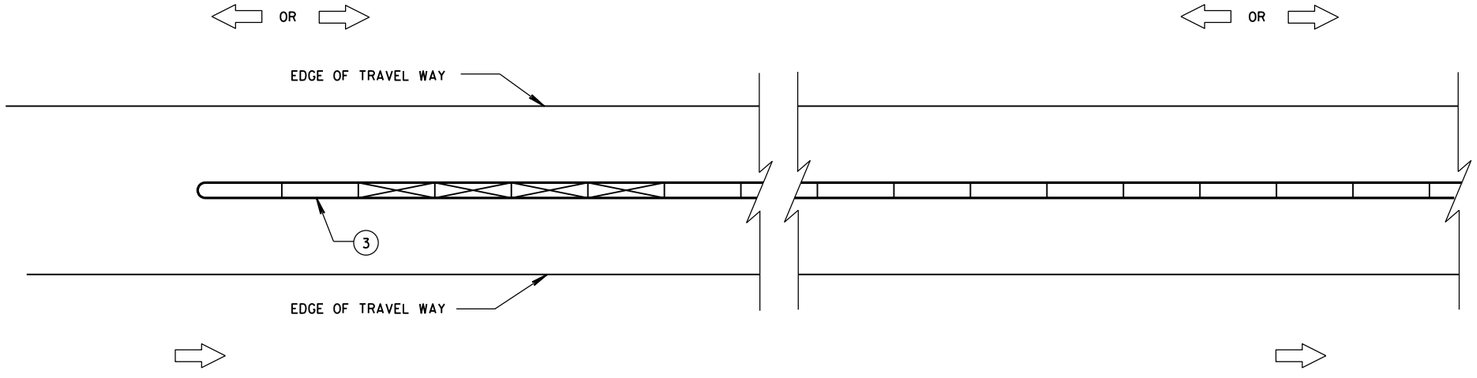
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

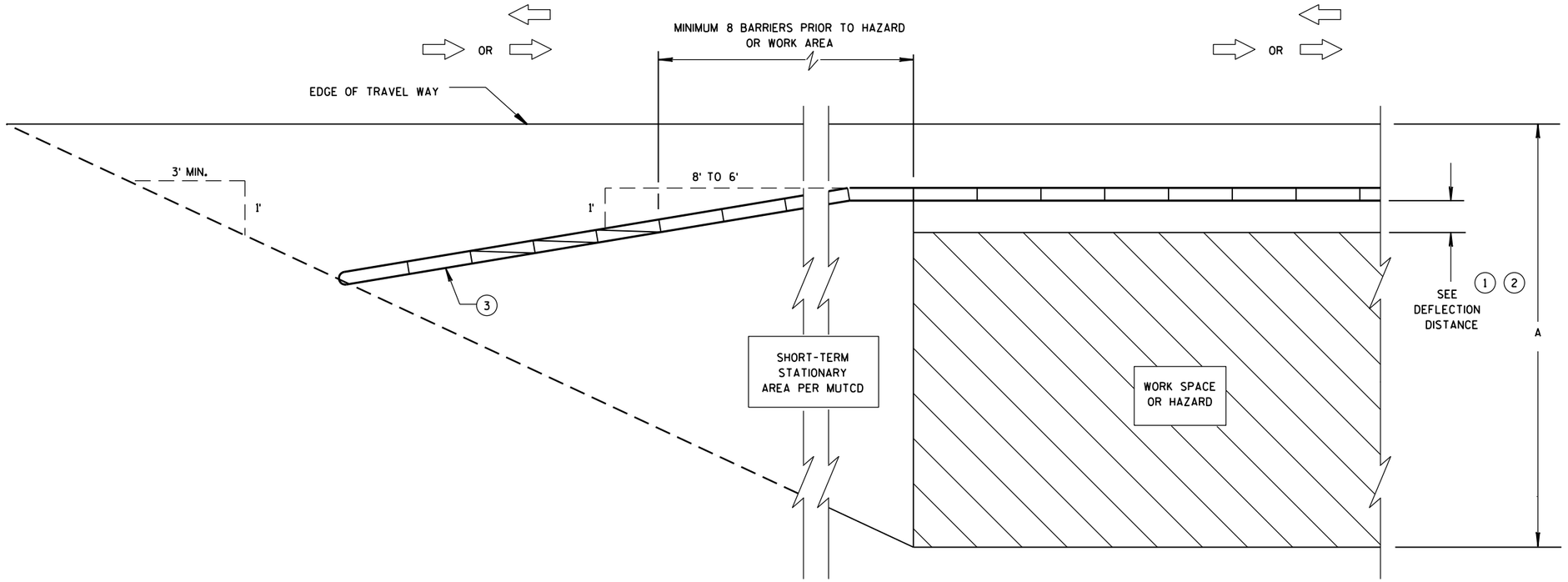
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

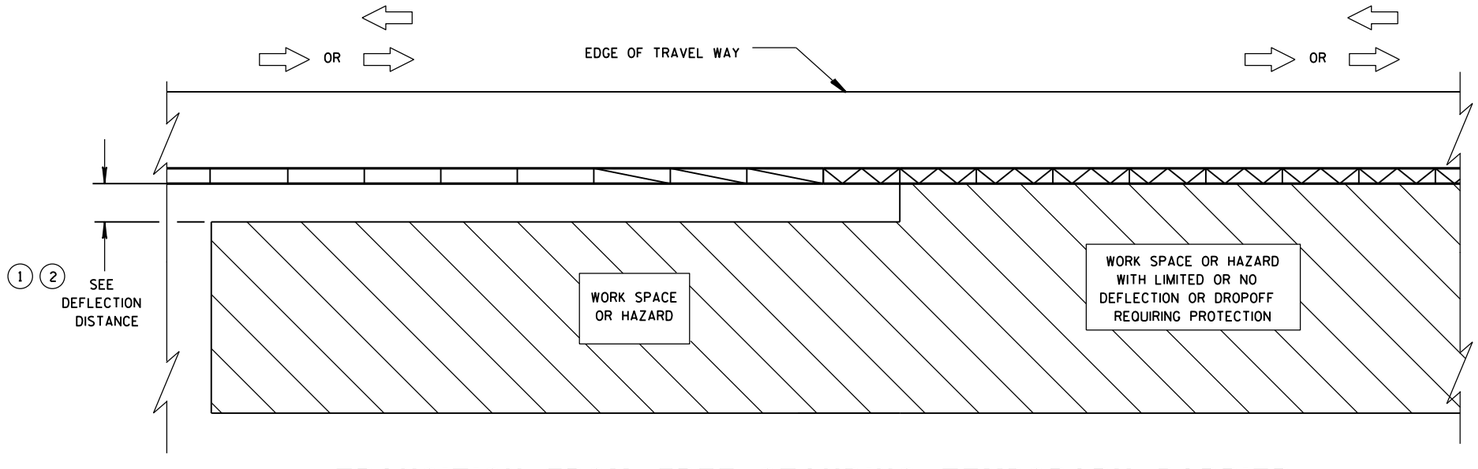
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

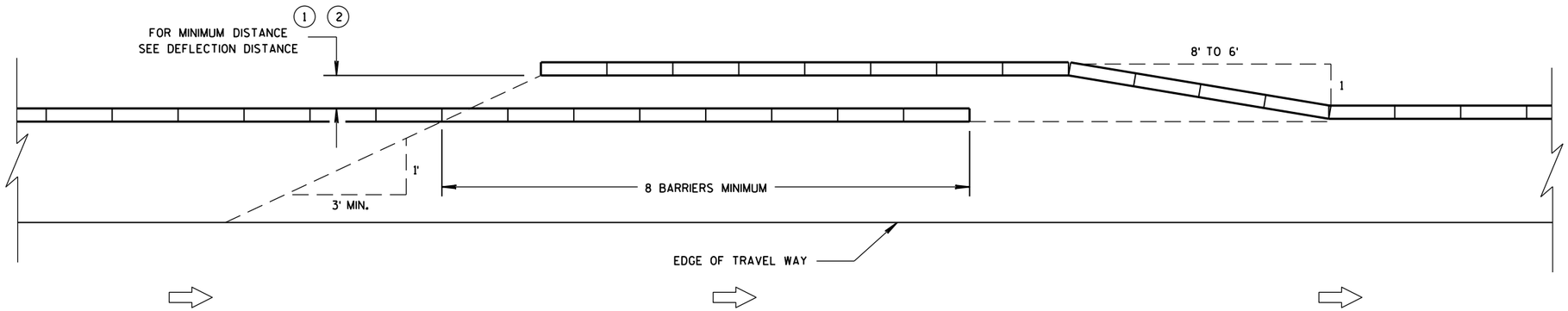
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

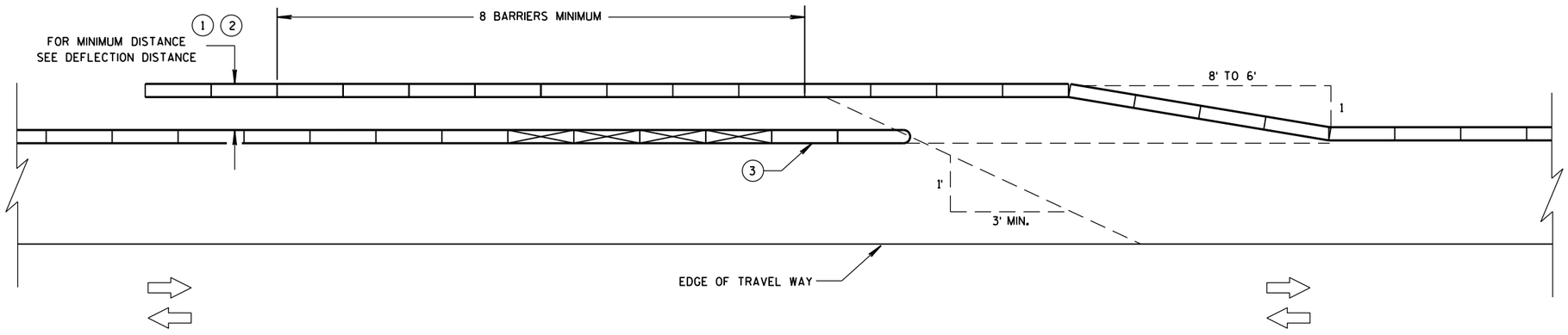
S.D.D. 14 B 8-2b

6

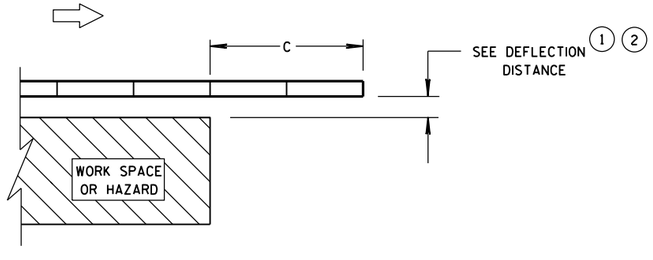
S.D.D. 14 B 8-2b



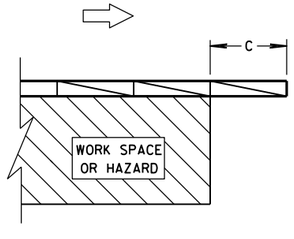
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

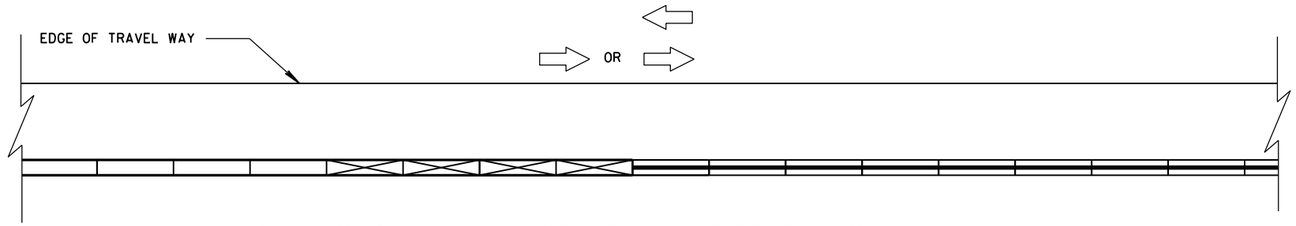
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

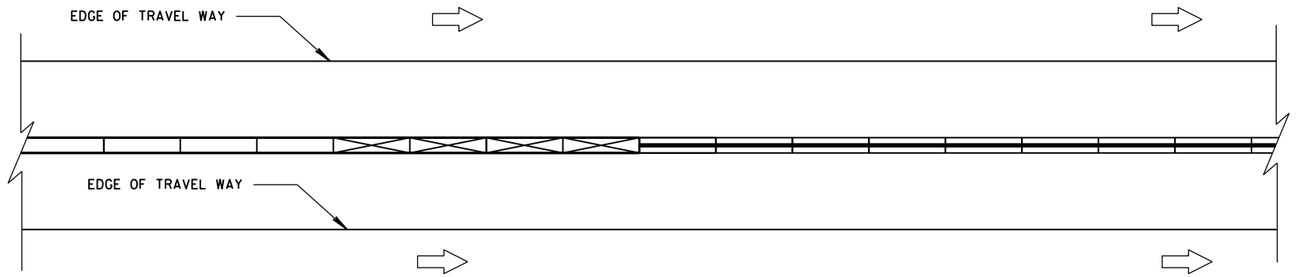
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



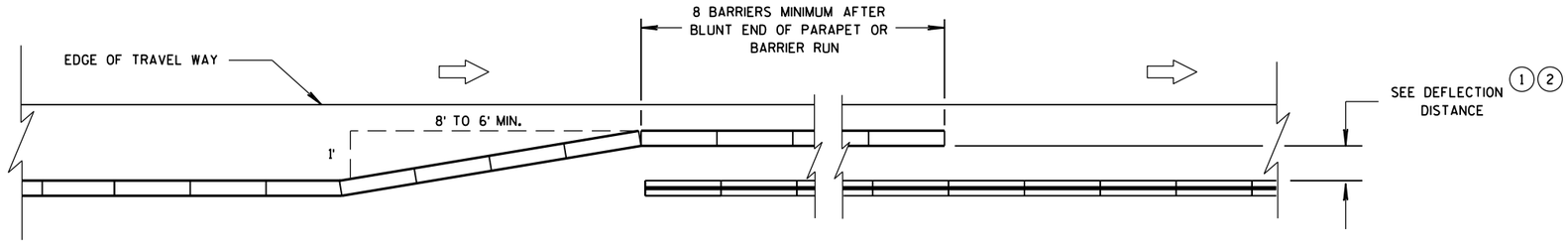
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



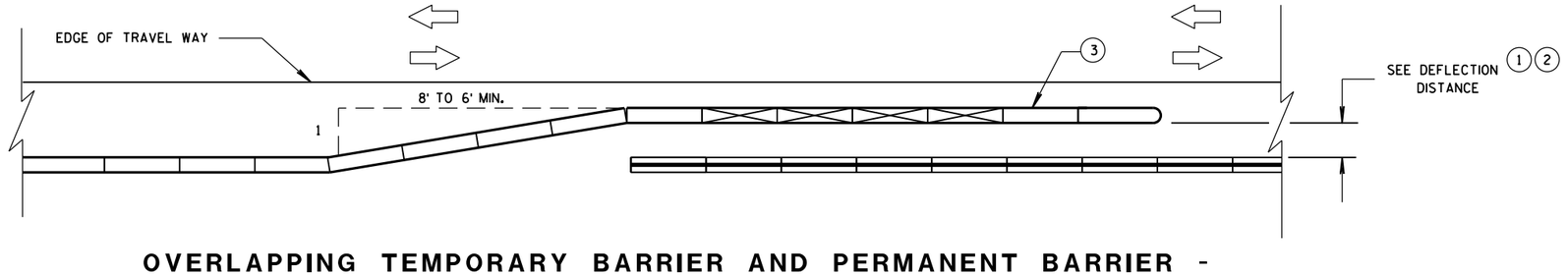
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

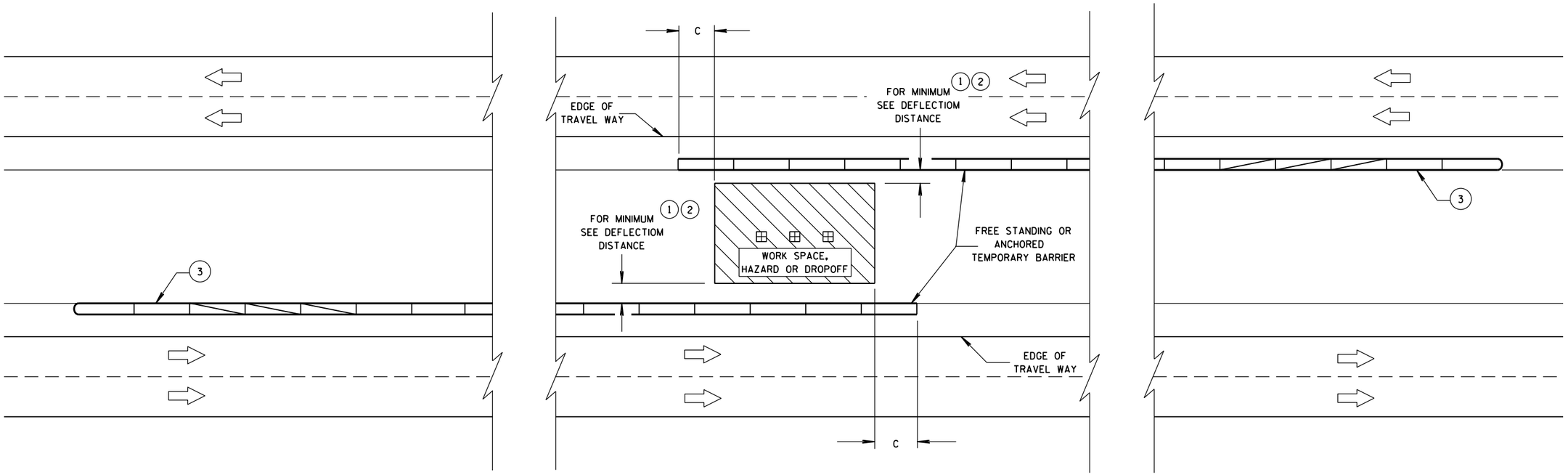
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



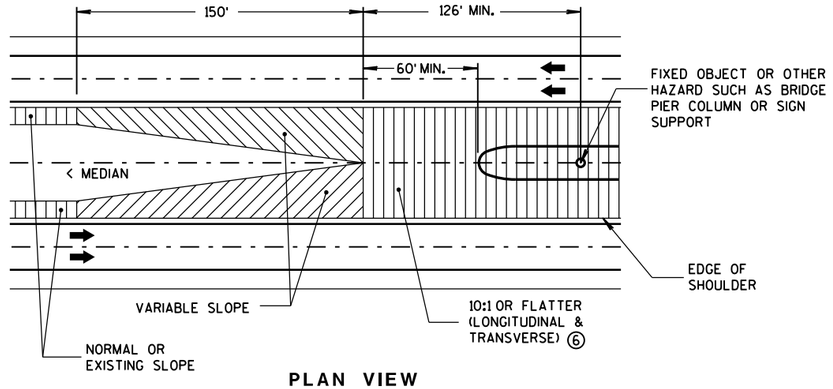
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

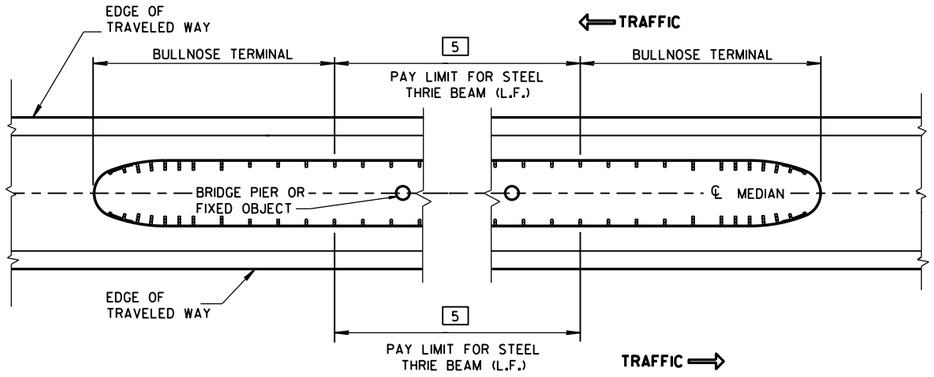
6

S.D.D. 14 B 8-2e

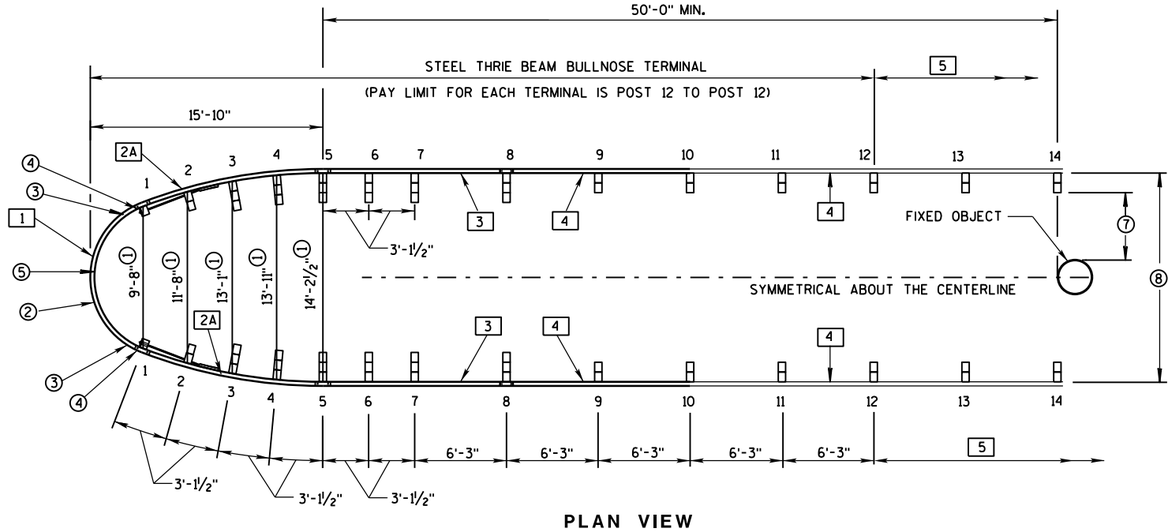


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

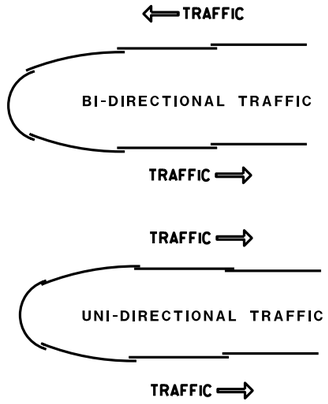


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

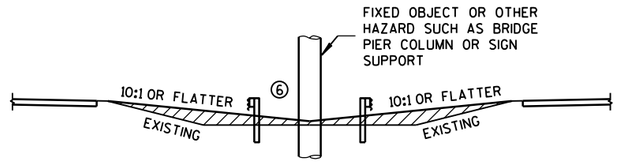
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

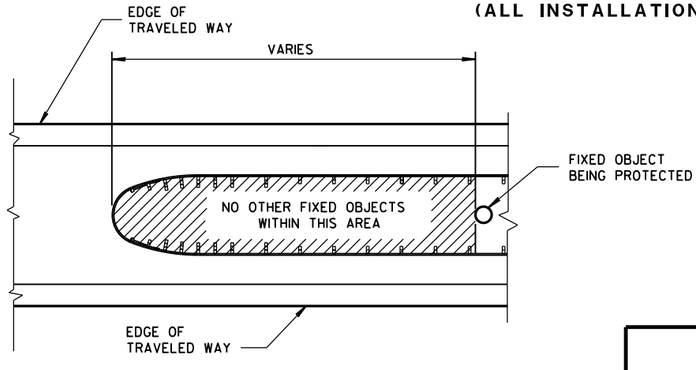
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)

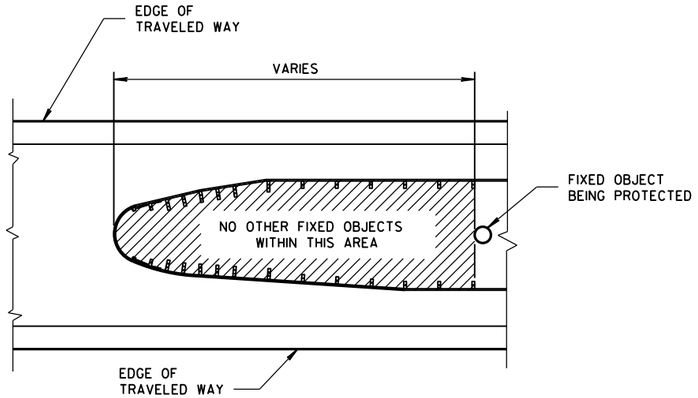


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

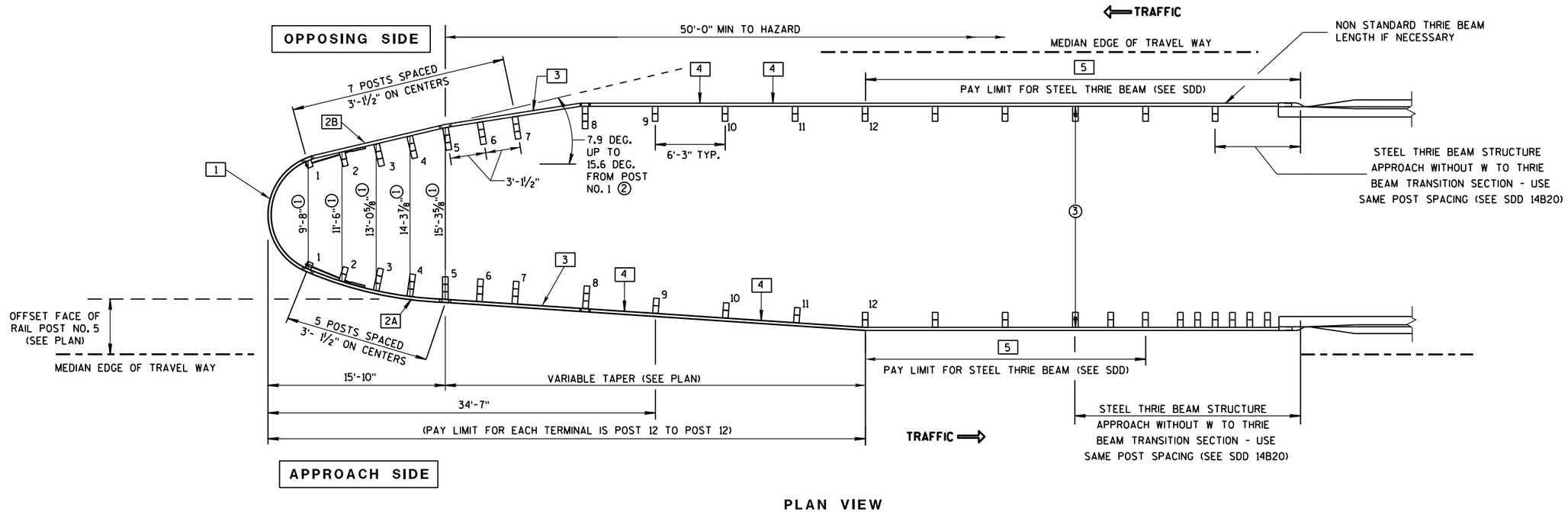
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

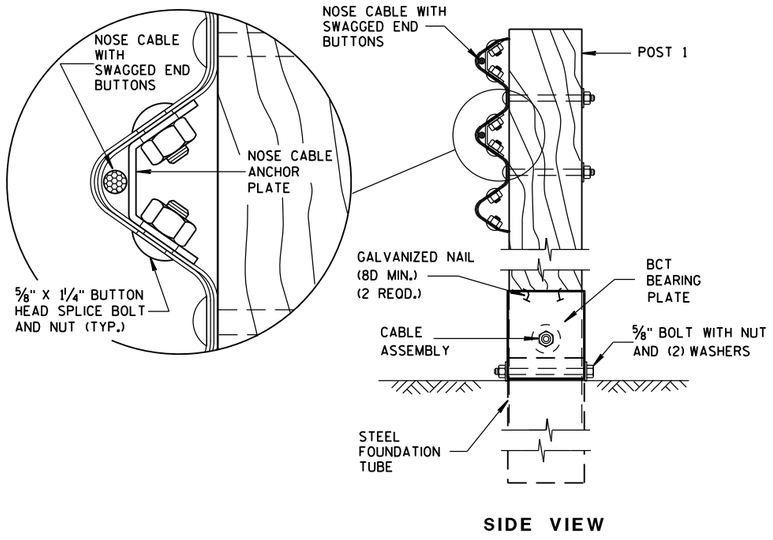
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

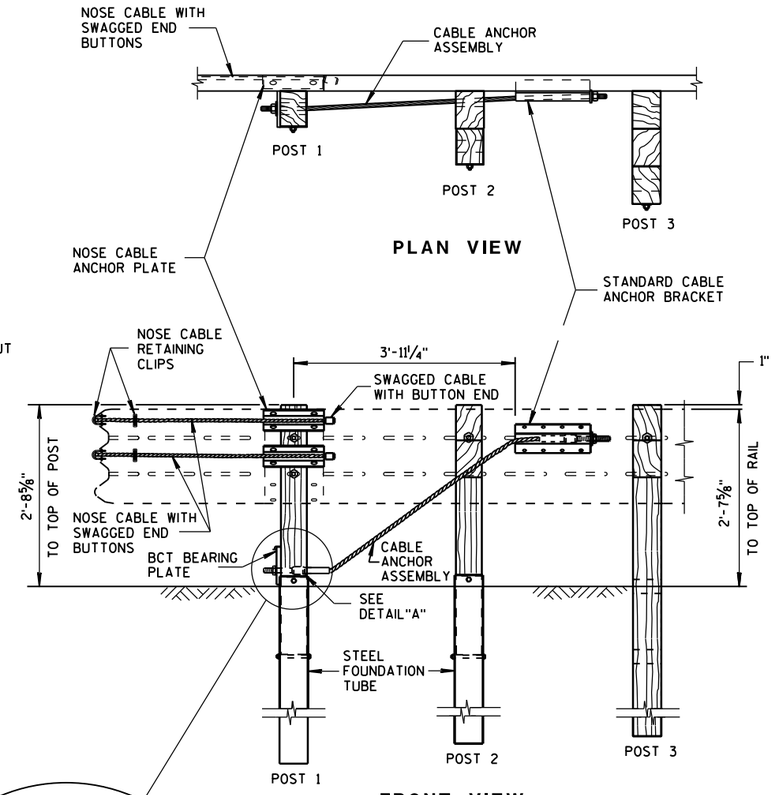
6

S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



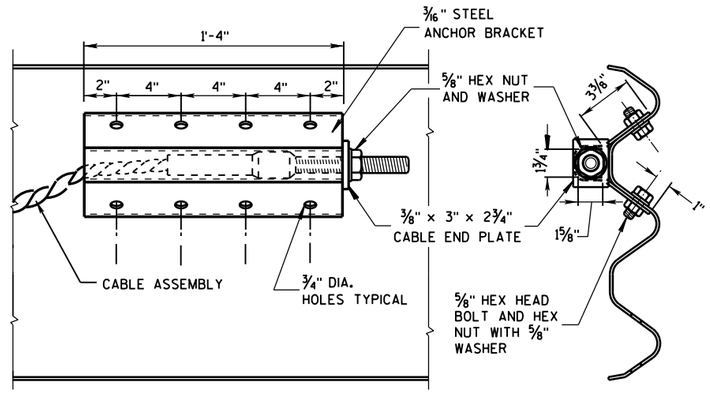
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

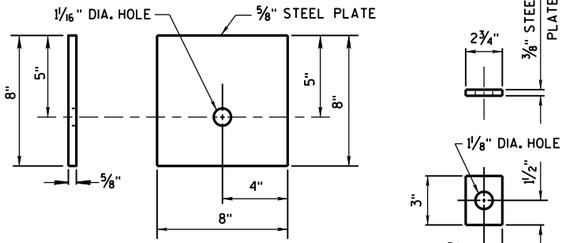
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



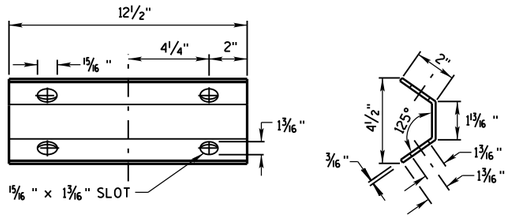
FRONT VIEW END VIEW

DETAILS OF CABLE ANCHOR BRACKET



BCT BEARING PLATE

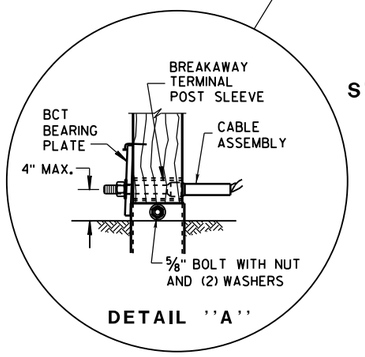
CABLE END PLATE



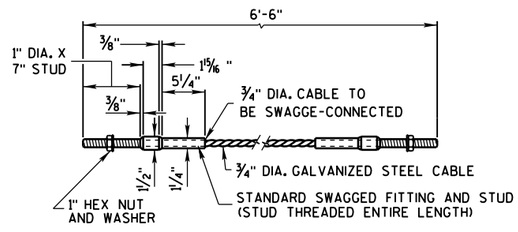
ELEVATION VIEW END VIEW

NOSE CABLE ANCHOR PLATE

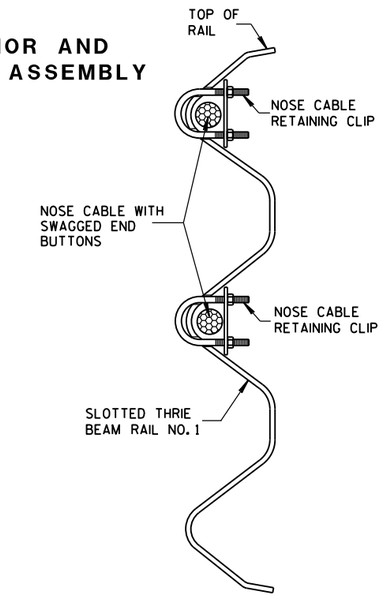
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



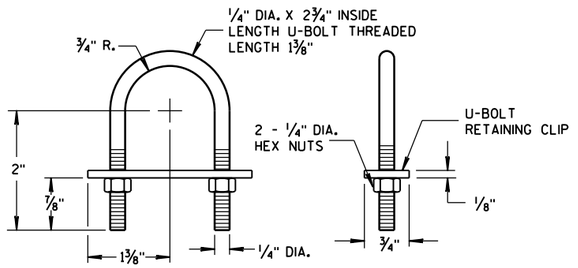
DETAIL ''A''



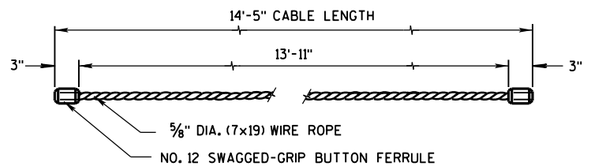
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

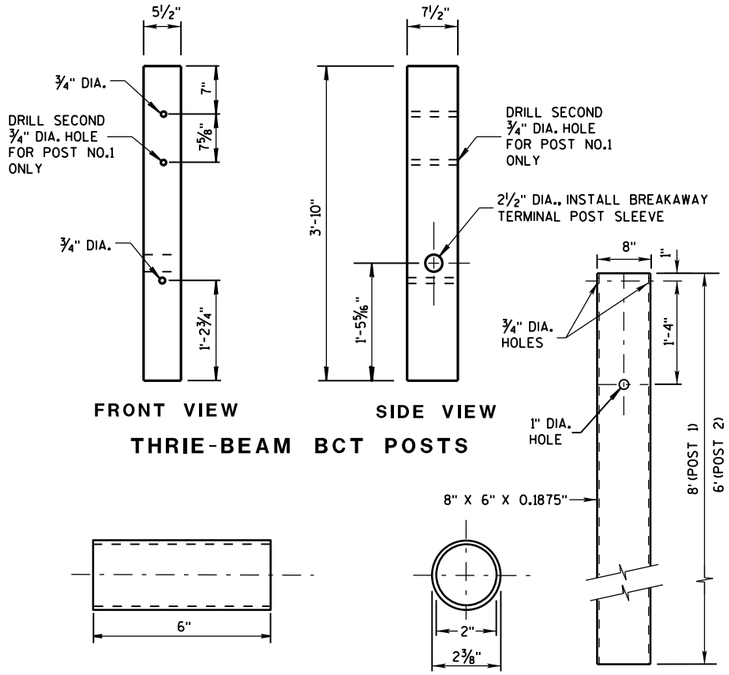
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 26-3c

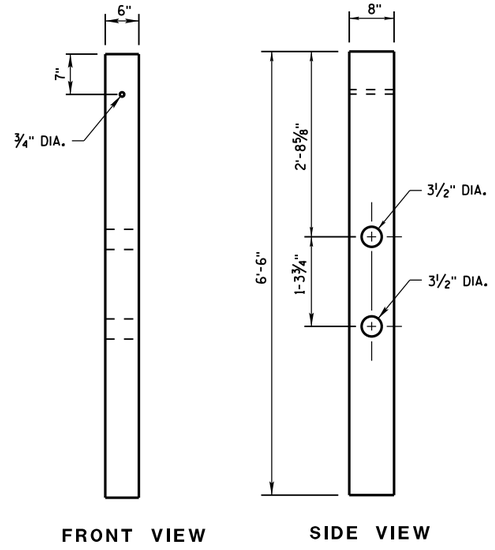


FRONT VIEW SIDE VIEW

THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE

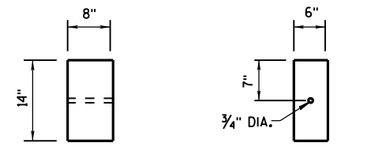


FRONT VIEW SIDE VIEW

THRIE-BEAM CRT WOOD POSTS

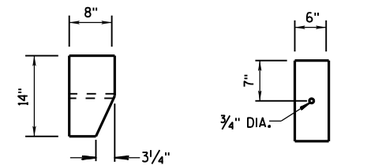
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



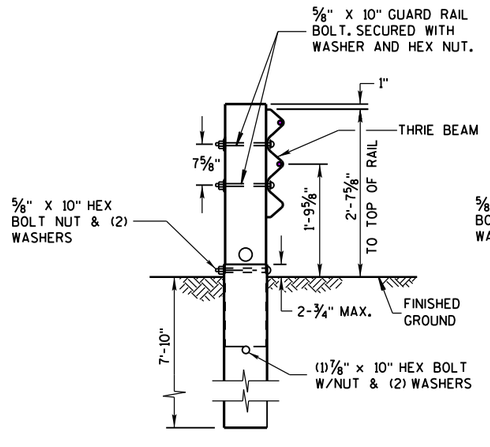
SIDE VIEW FRONT VIEW

STANDARD WOOD BLOCK



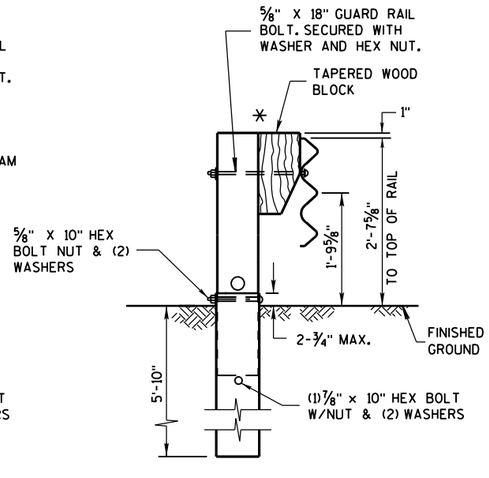
SIDE VIEW FRONT VIEW

TAPERED WOOD BLOCK



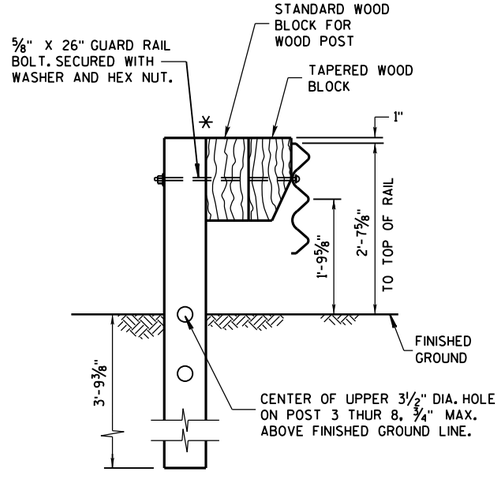
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



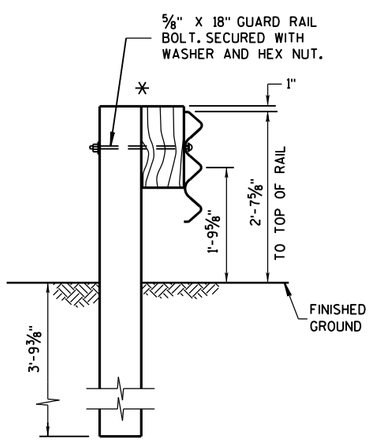
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12
(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

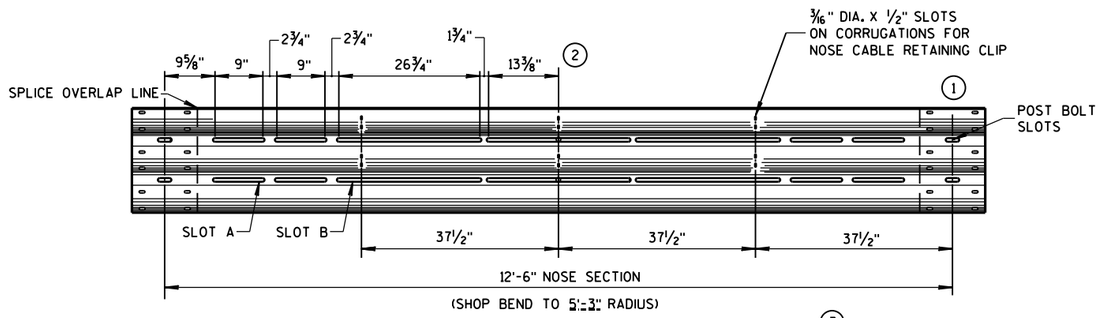
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

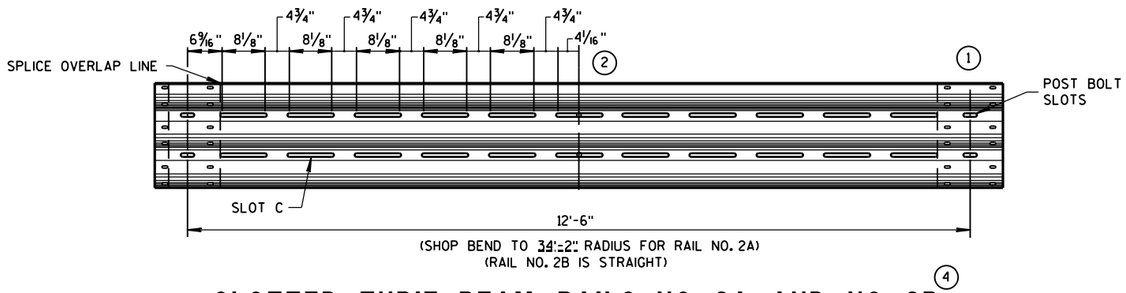
S.D.D. 14 B 26-3d

6

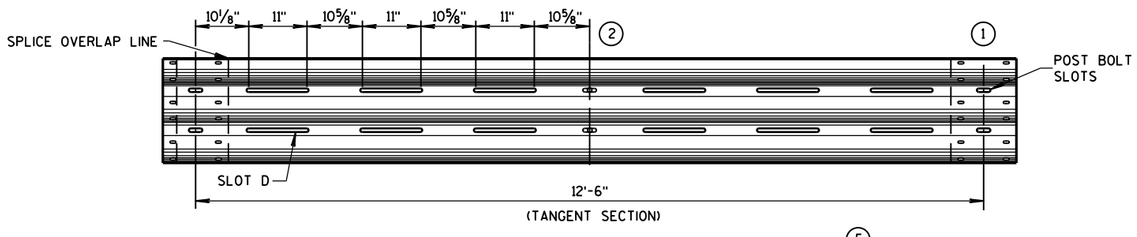
S.D.D. 14 B 26-3d



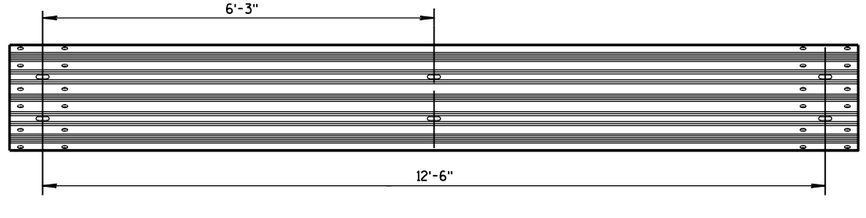
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

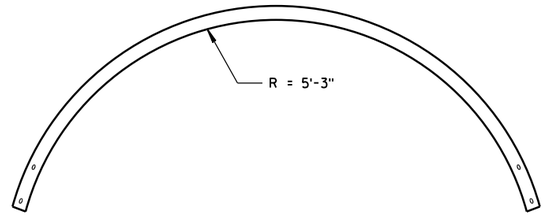
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

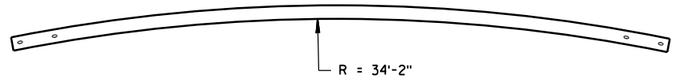
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



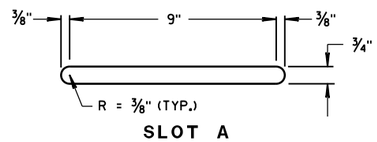
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

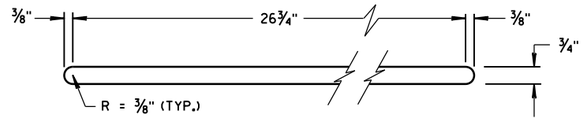


PLAN VIEW

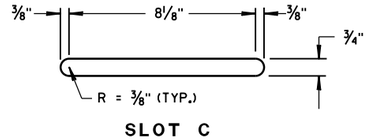
SLOTTED THRIE BEAM RAIL NO. 2A



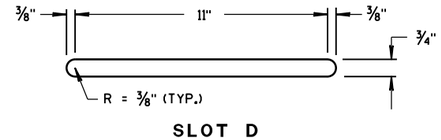
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

NT

6

S.D.D. 14 B 26-3e

6

S.D.D. 14 B 26-3e

① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

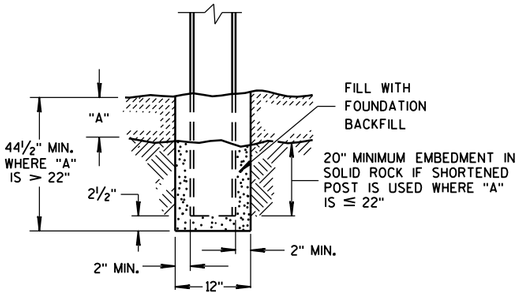
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

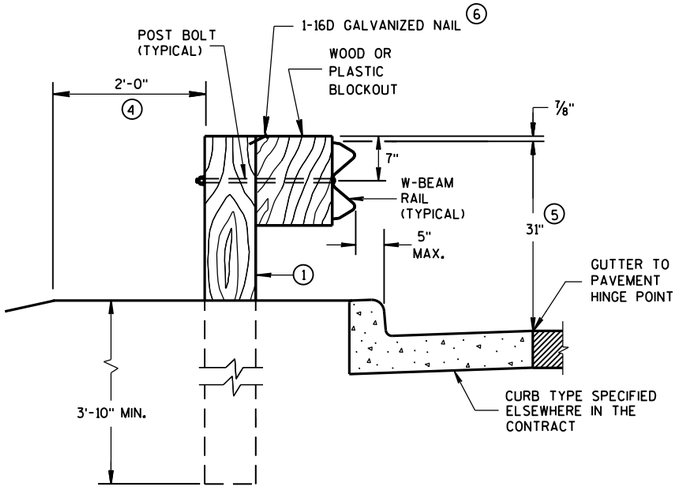
④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

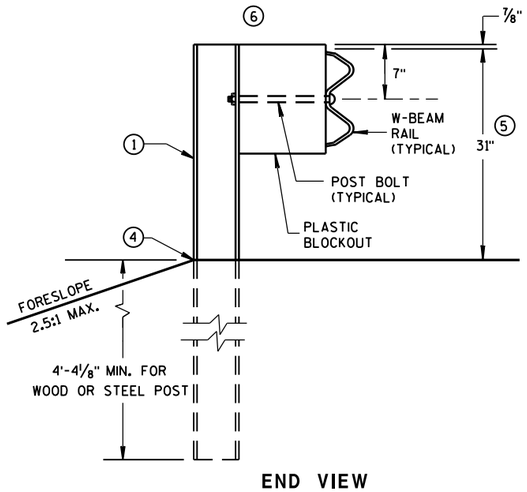
⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



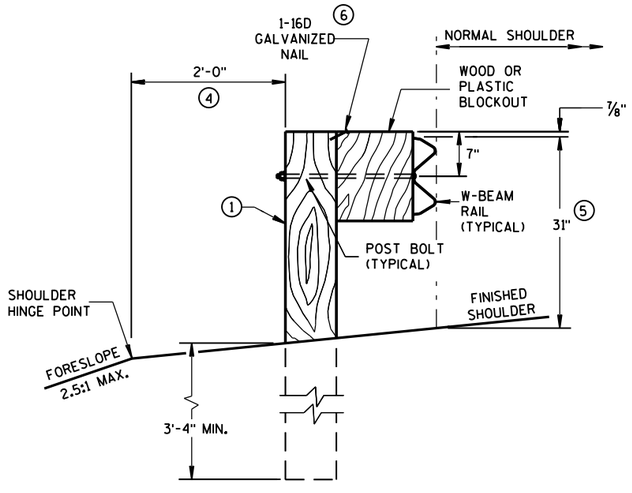
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



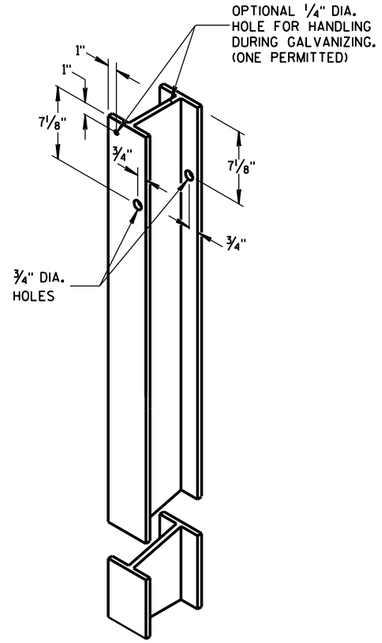
END VIEW
LOCATED ALONG A CURBED ROADWAY



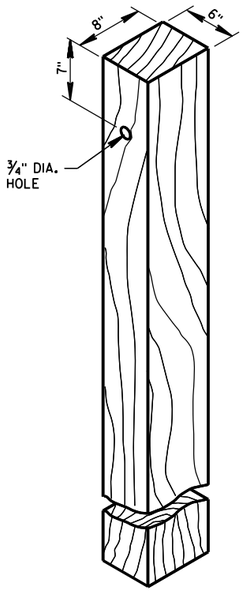
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



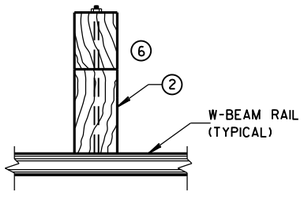
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



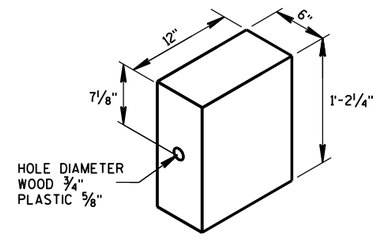
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



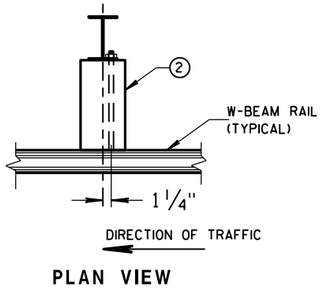
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



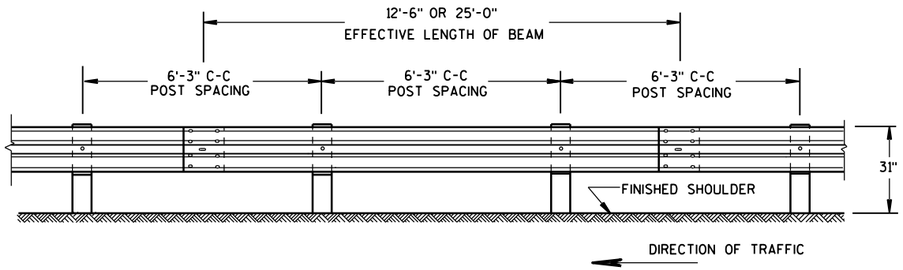
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

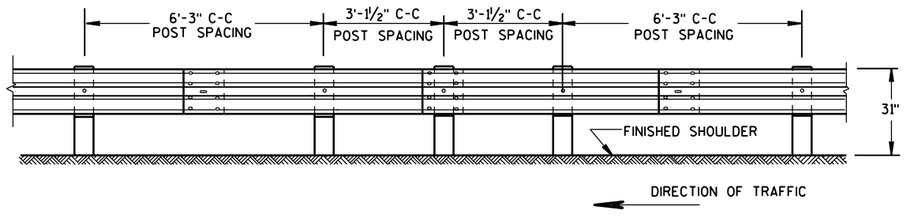
6

S.D.D. 14 B 42-5a



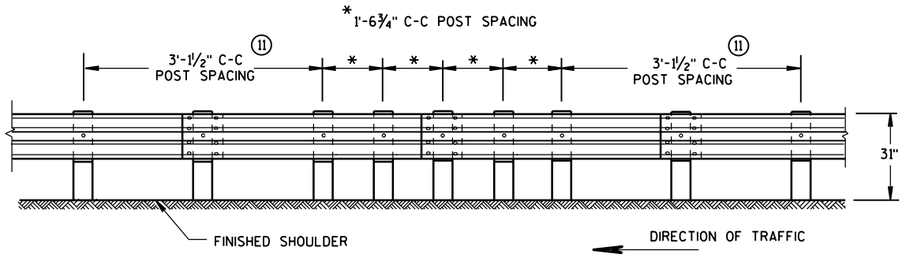
FRONT VIEW

POST SPACING STANDARD INSTALLATION



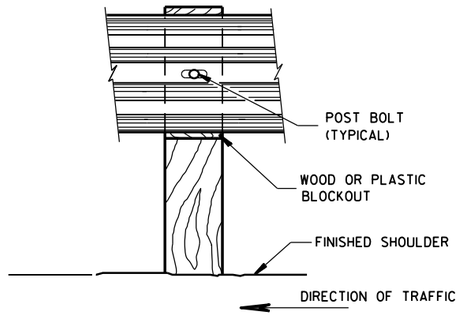
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

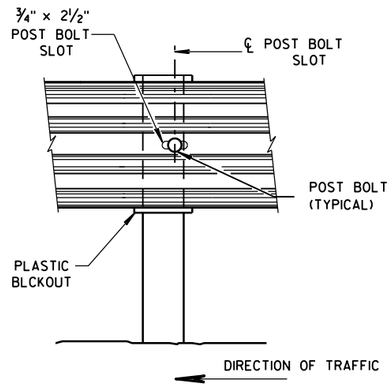


FRONT VIEW

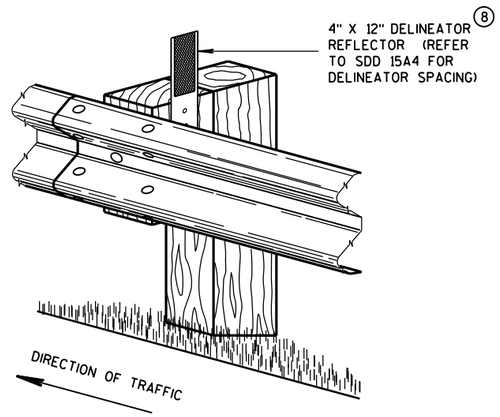
QUARTER POST SPACING (QS)



FRONT VIEW AT WOOD POST



FRONT VIEW AT STEEL POST



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

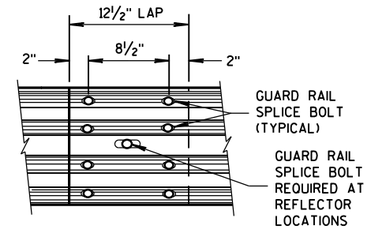
GENERAL NOTES

(8) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

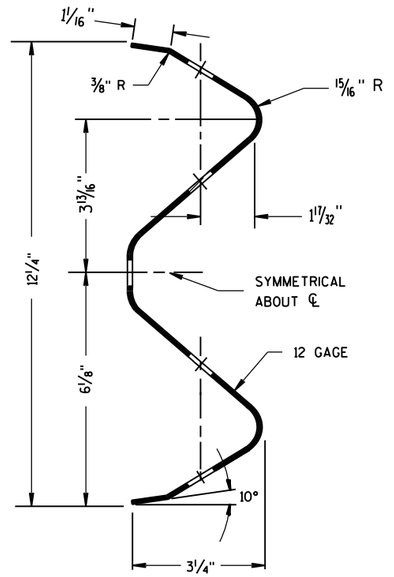
(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



FRONT VIEW
MID-SPAN BEAM SPLICE



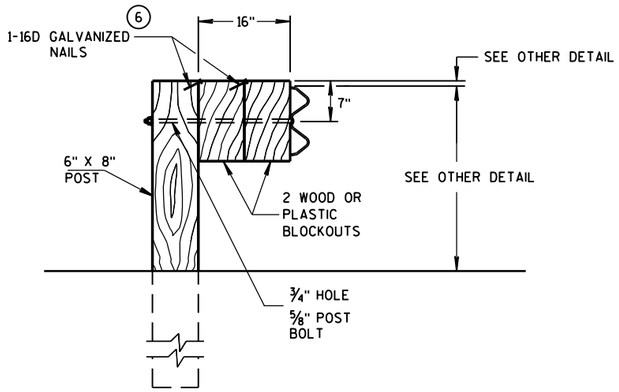
SECTION THRU W-BEAM RAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

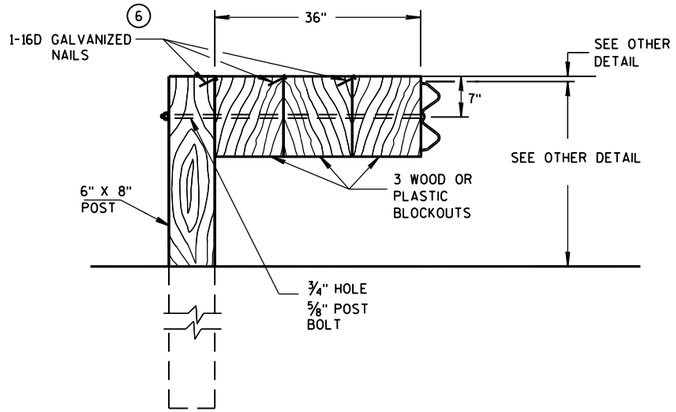
6

S.D.D. 14 B 42-5b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

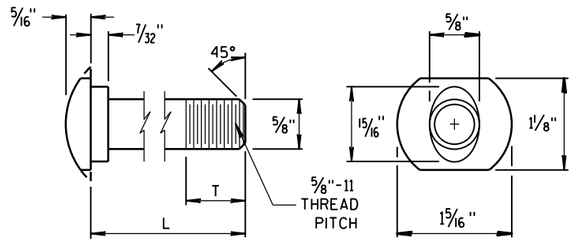


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

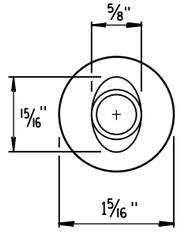
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

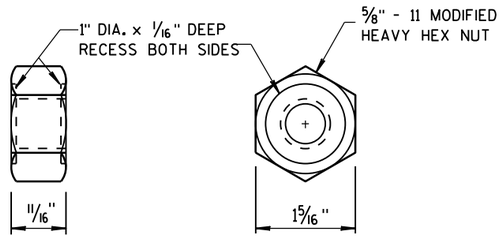


POST BOLT TABLE

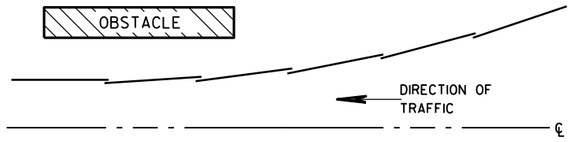
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

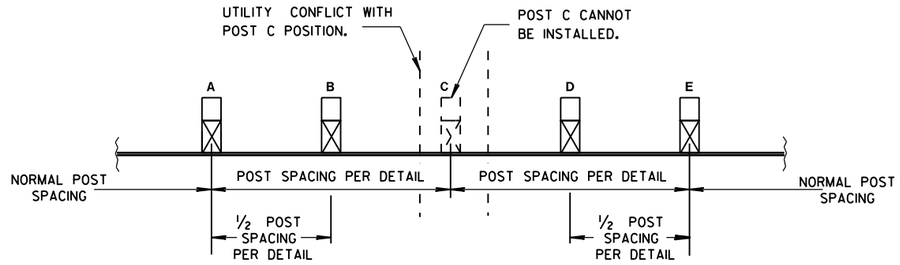


POST BOLT, SPLICE BOLT AND RECESS NUT

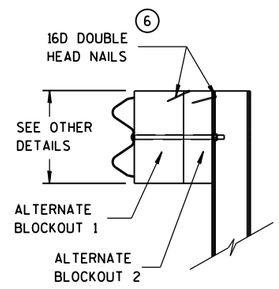


PLAN VIEW

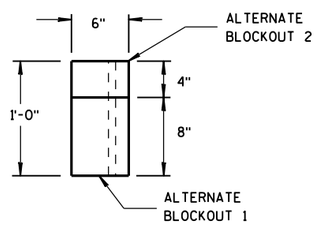
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

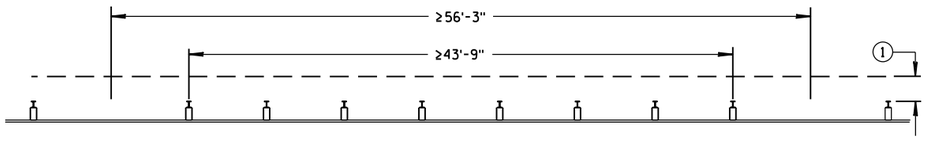
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

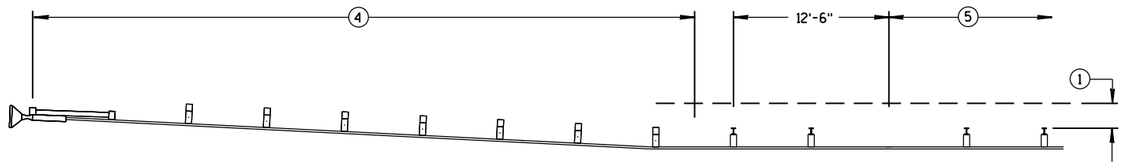
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

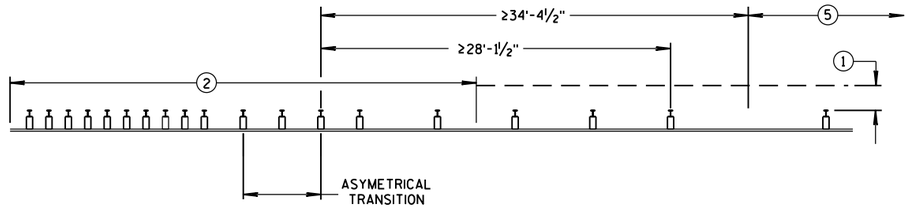
S.D.D. 14 B 42-5c



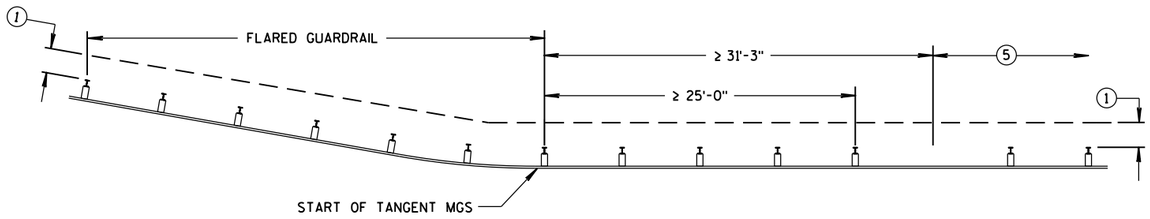
MISSING POST IN NORMAL BEAM GUARD RUN



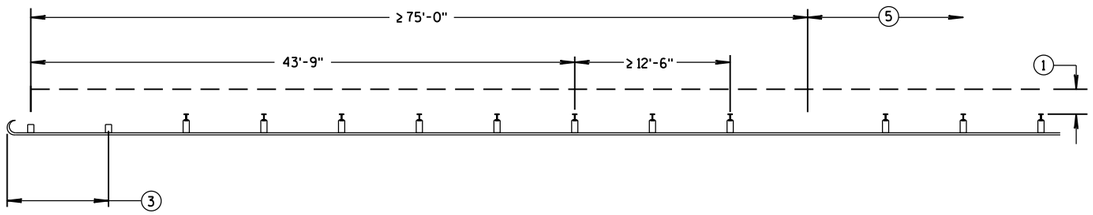
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



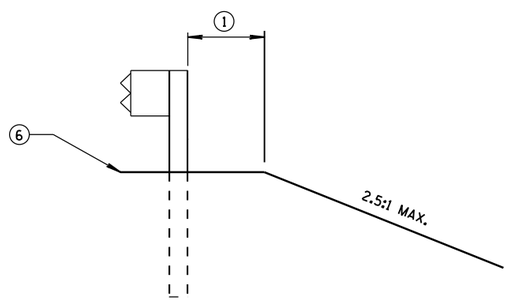
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

6

S.D.D. 14 B 42-5d

6

S.D.D. 14 B 42-5d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

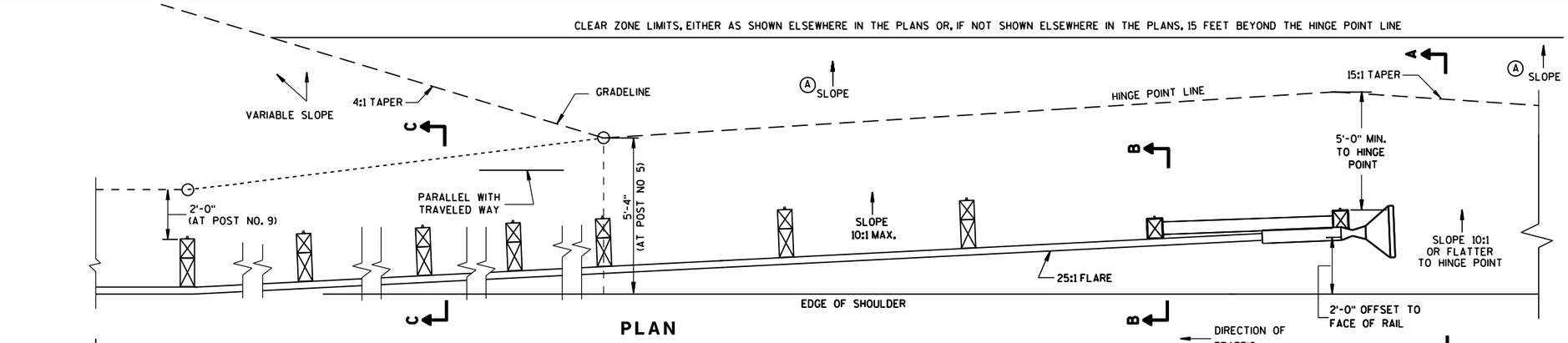
SEE SDD 14B42 FOR MORE INFORMATION.

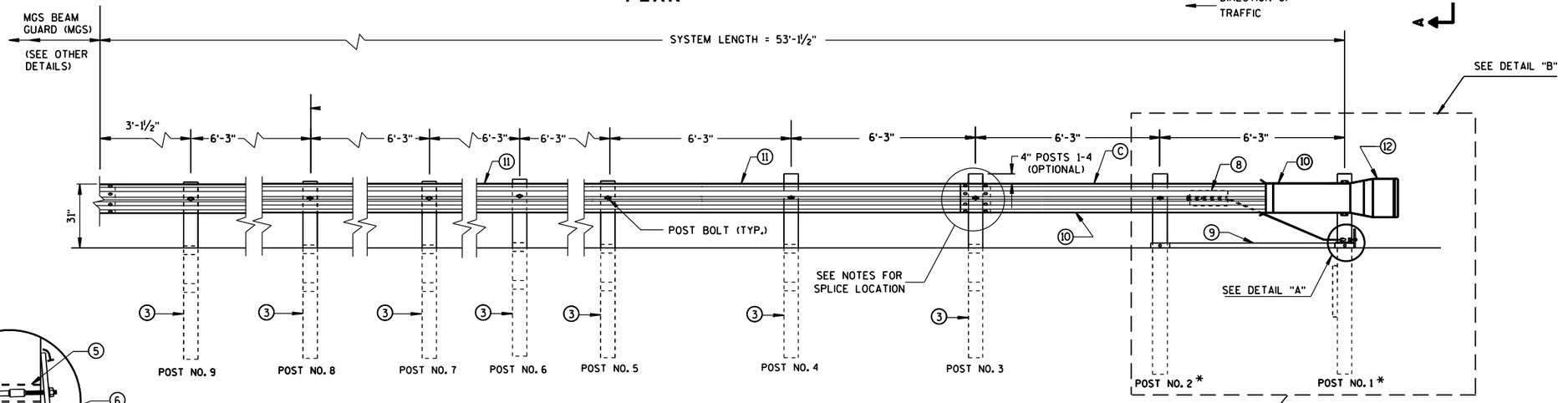
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

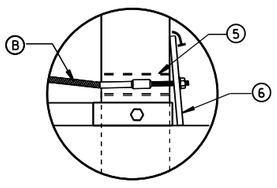
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

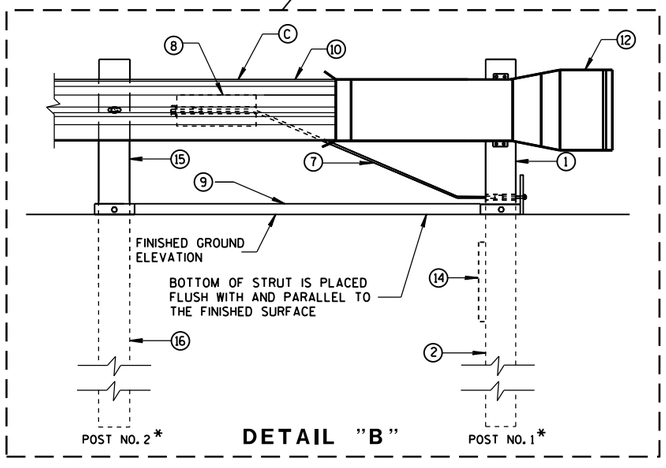
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

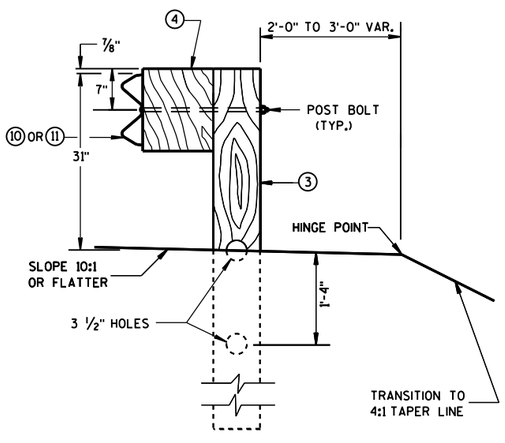
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

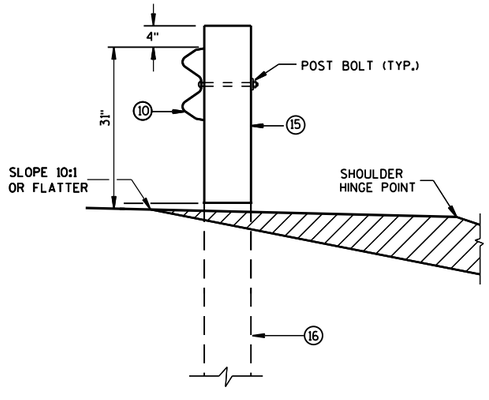


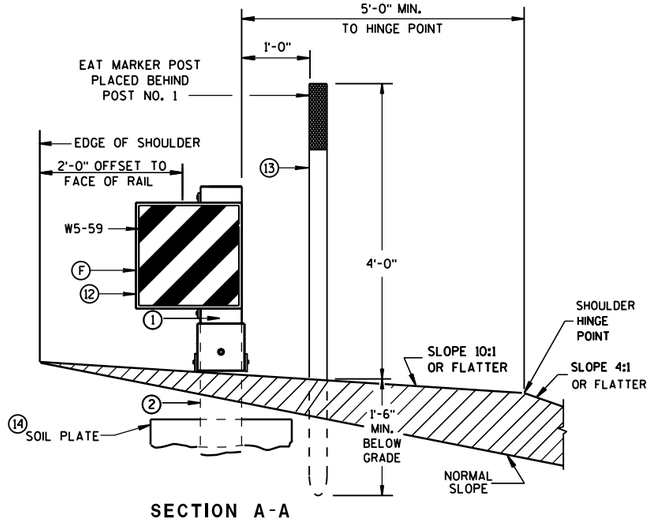












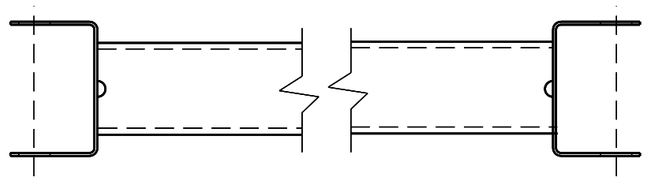
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPO	190

6

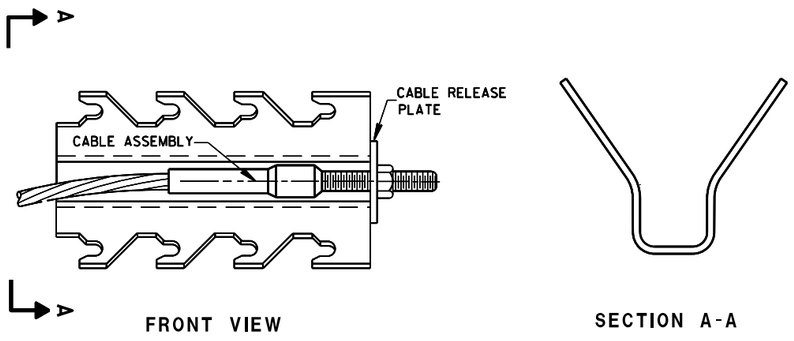
S.D.D. 14 B 44-3a

6

S.D.D. 14 B 44-3a



GENERIC GROUND STRUT (9) (H)



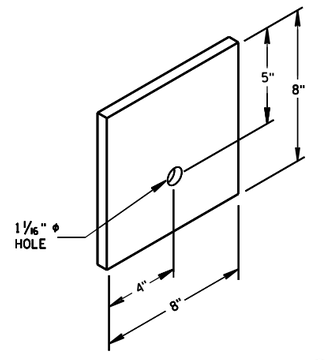
FRONT VIEW

SECTION A-A

GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



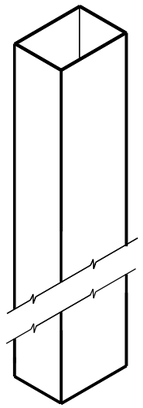
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

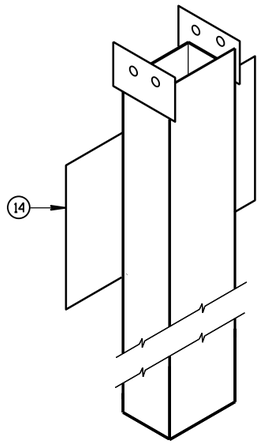
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

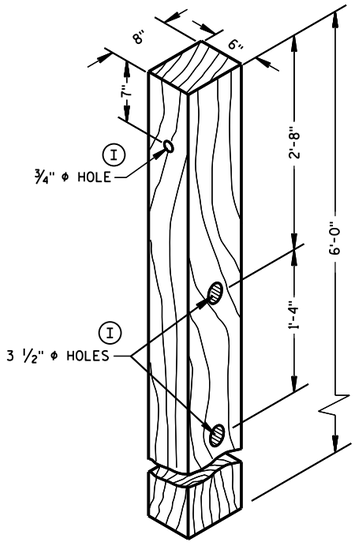
S.D.D. 14 B 44-3b



UPPER POST NO. 1 (1)

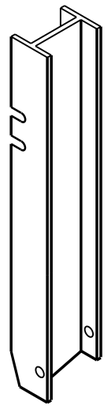


LOWER POST NO. 1 (2)

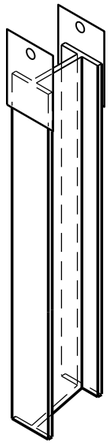


POSTS NUMBER 3-9

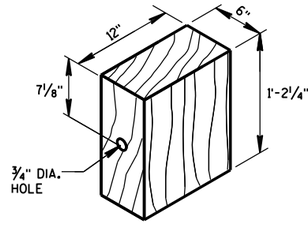
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

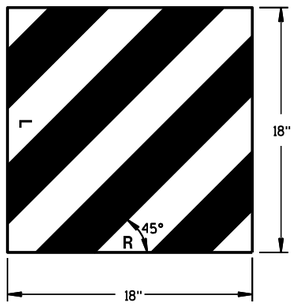


LOWER POST NO. 2 (16)



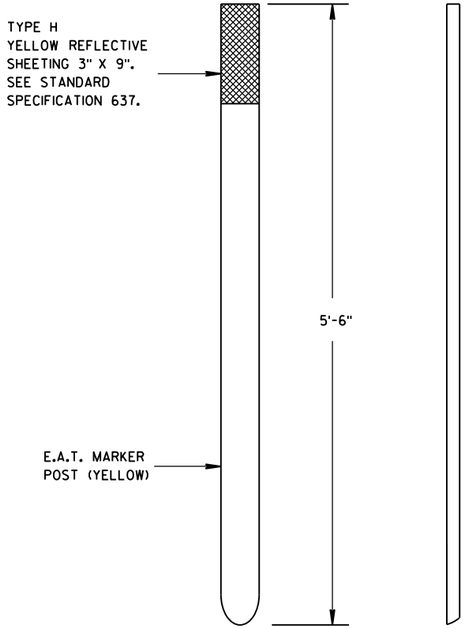
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



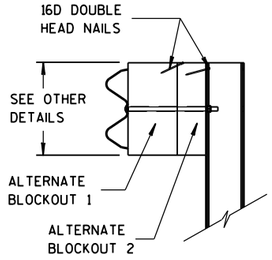
W5-59

REFLECTIVE SHEETING DETAIL (H)

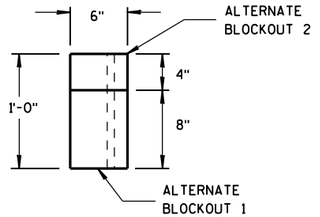


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

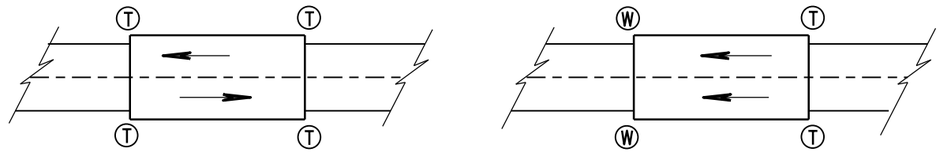
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

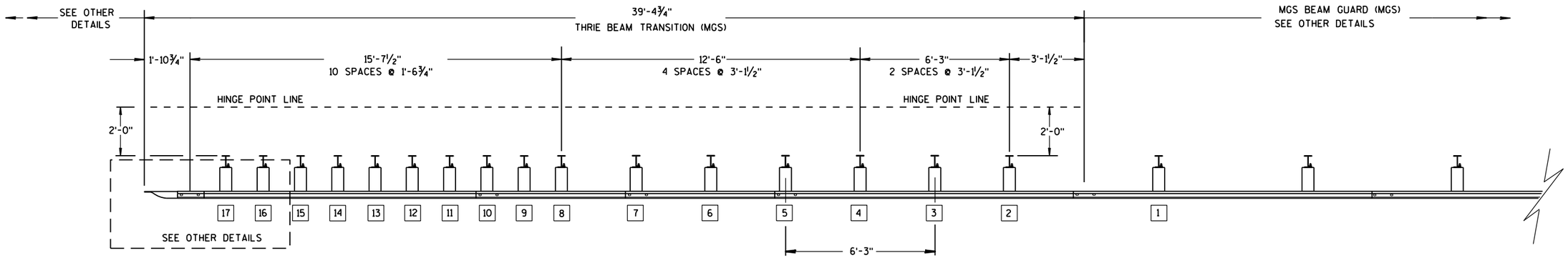
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

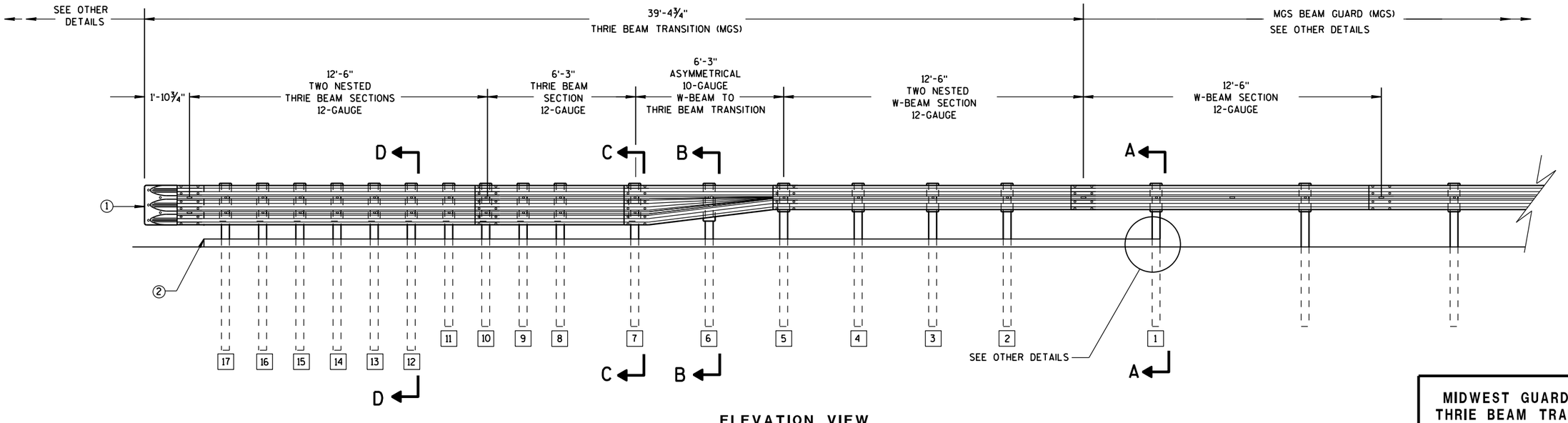
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

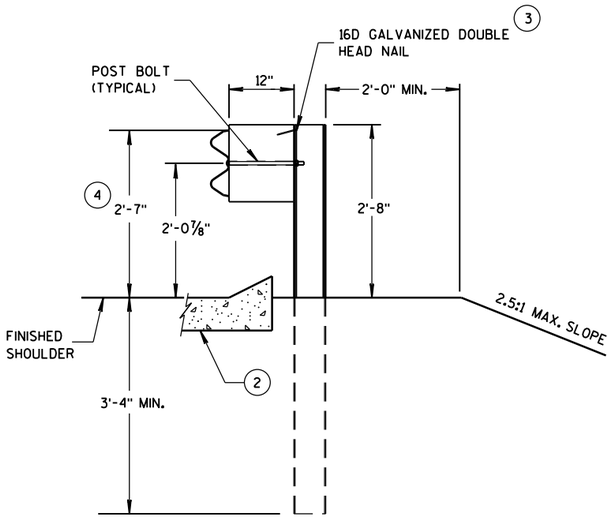
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

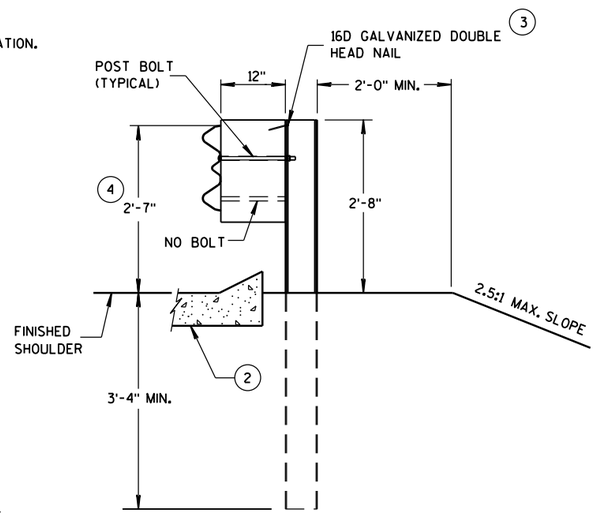
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



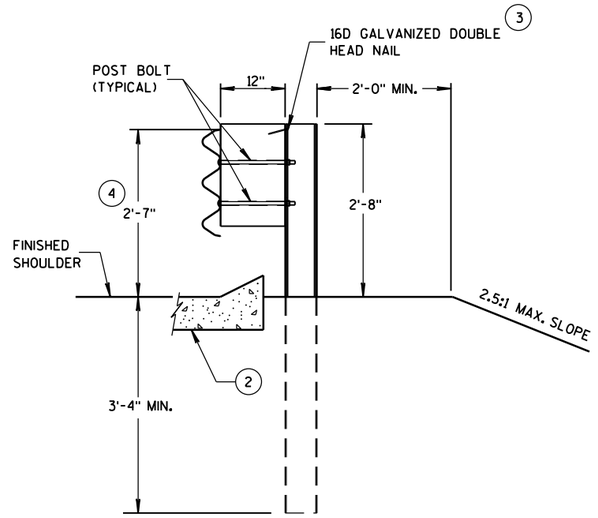
SECTION A-A

POSTS 1-5



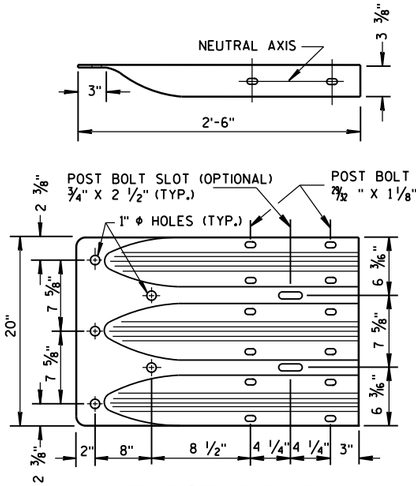
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

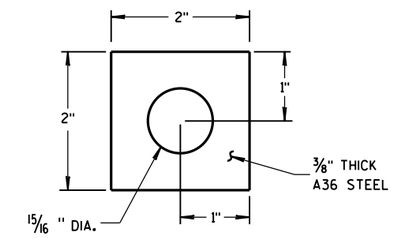
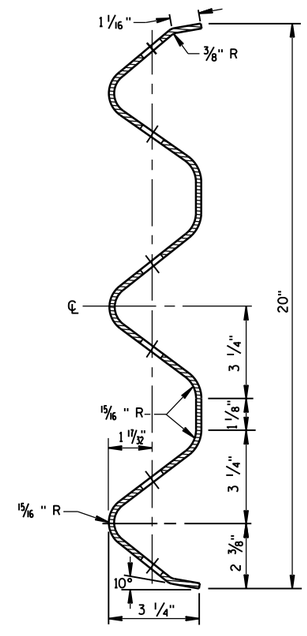
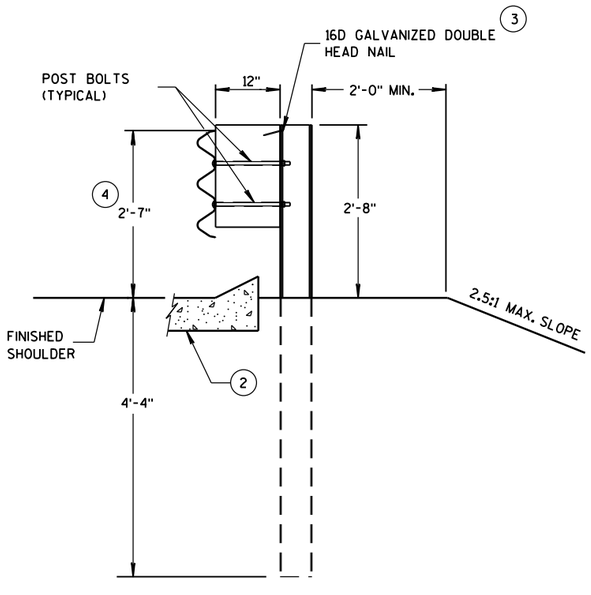


PLATE WASHER DETAIL

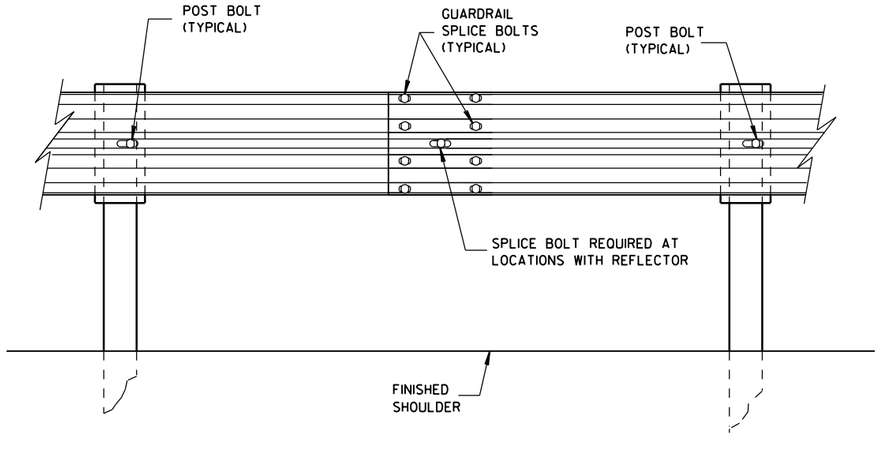


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



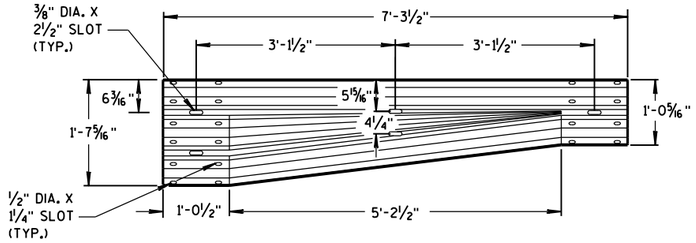
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

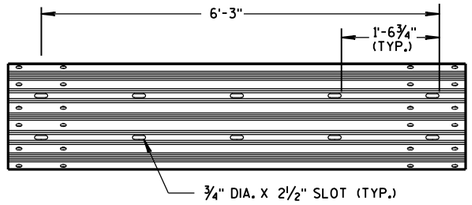
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

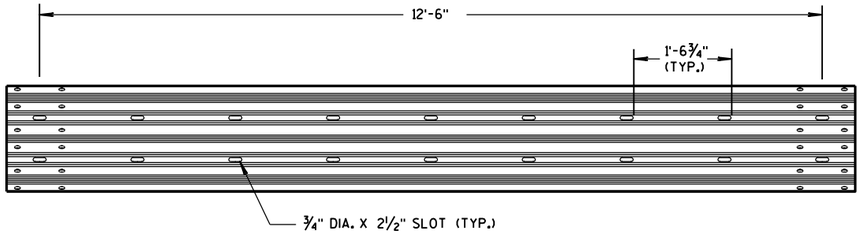
S.D.D. 14 B 45-4b



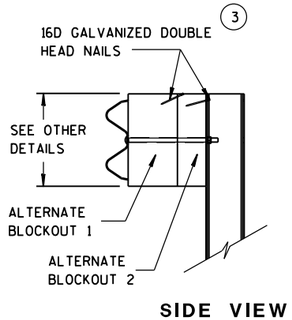
W-BEAM TO THRIE BEAM TRANSITION SECTION



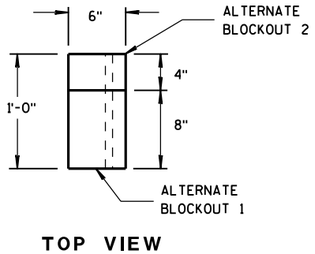
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

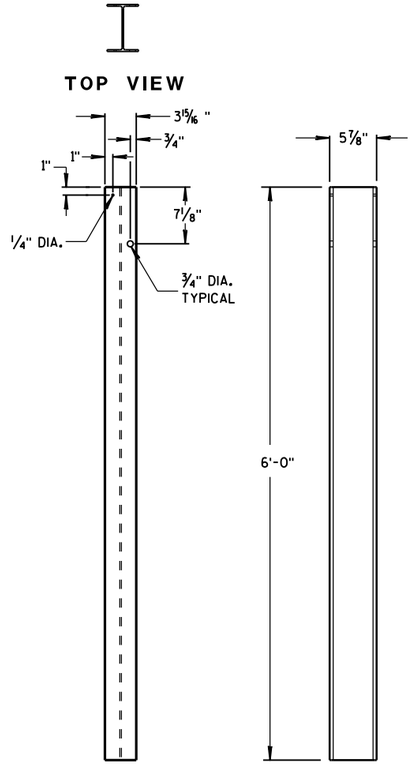


SIDE VIEW



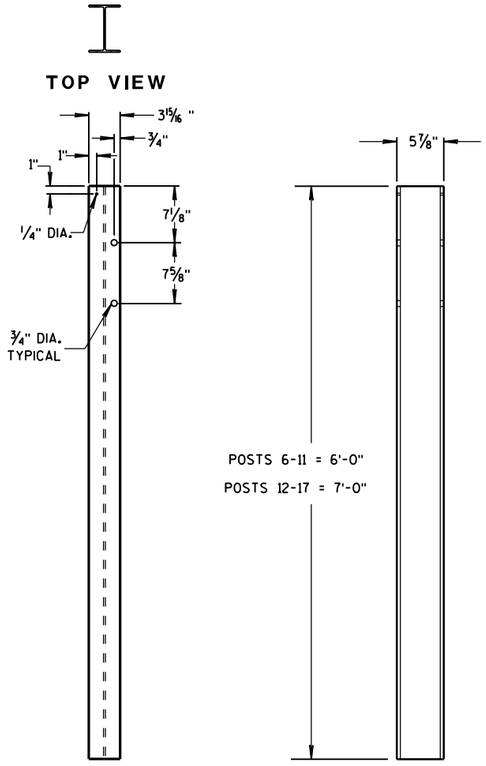
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



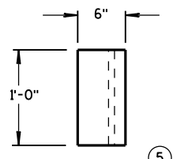
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

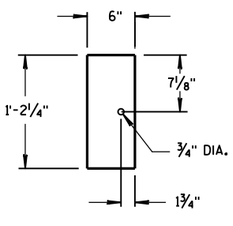


FRONT VIEW SIDE VIEW

STEEL POSTS 6-17

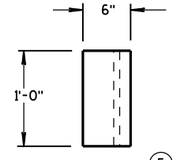


TOP VIEW

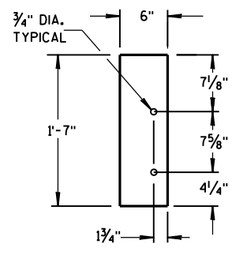


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

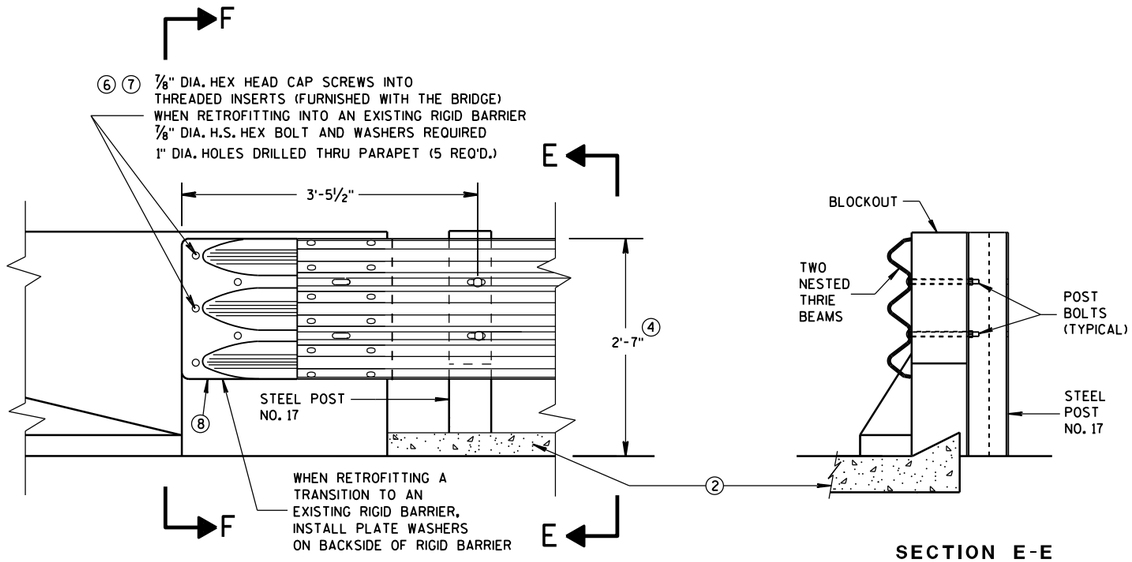
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4c
S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

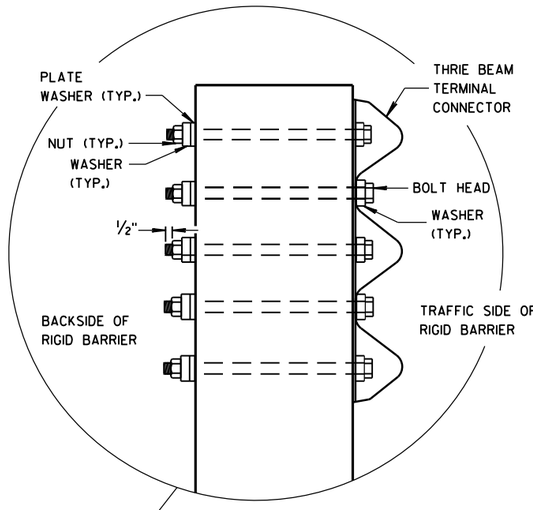
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

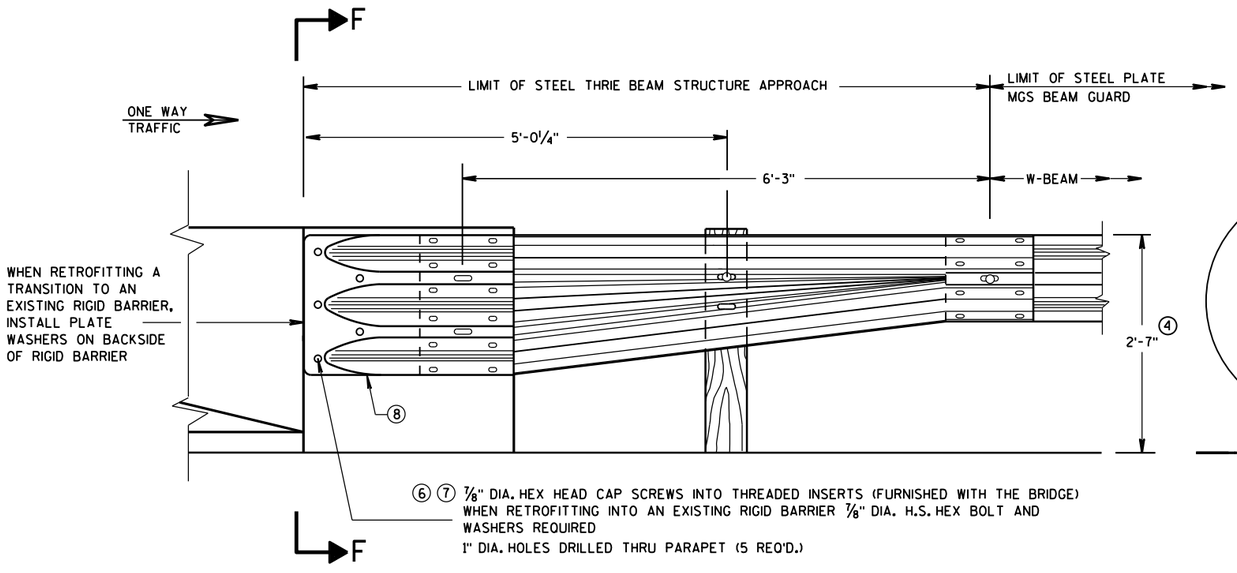
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

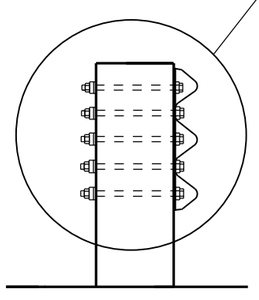
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

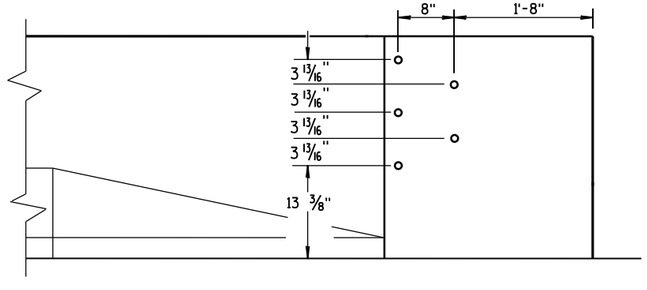




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
NT

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

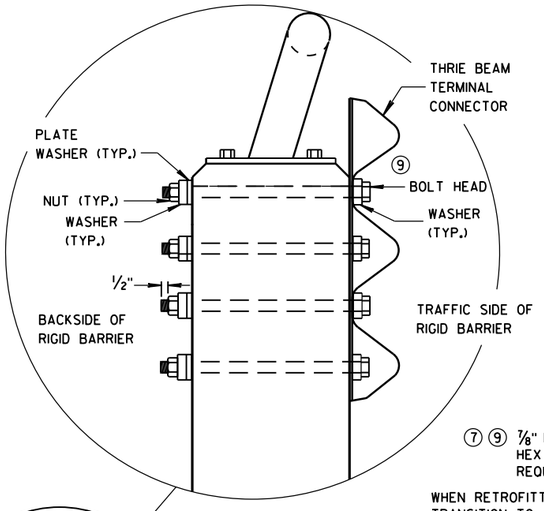
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

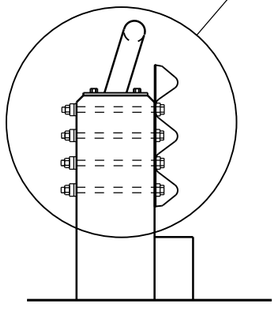
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

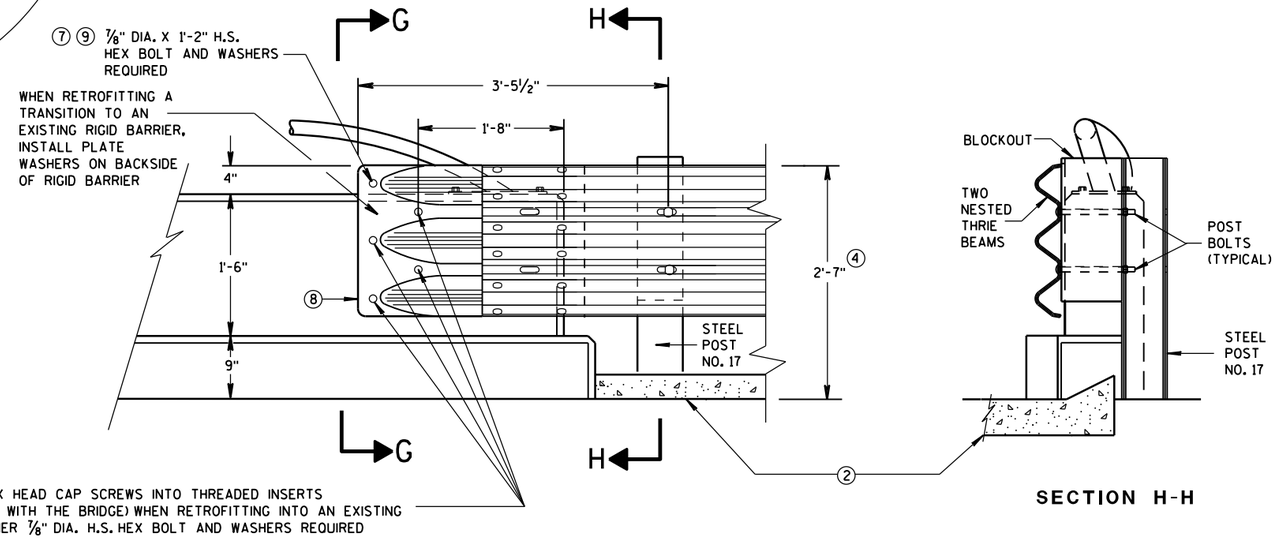
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





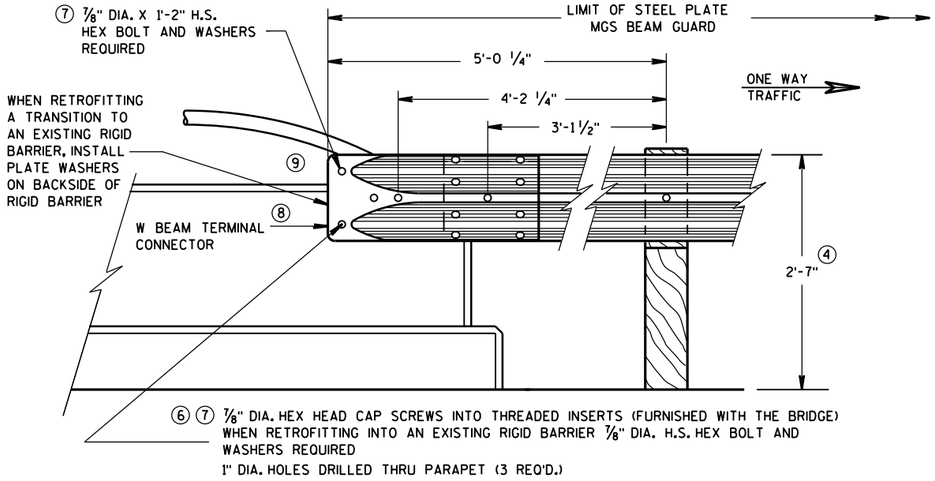
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

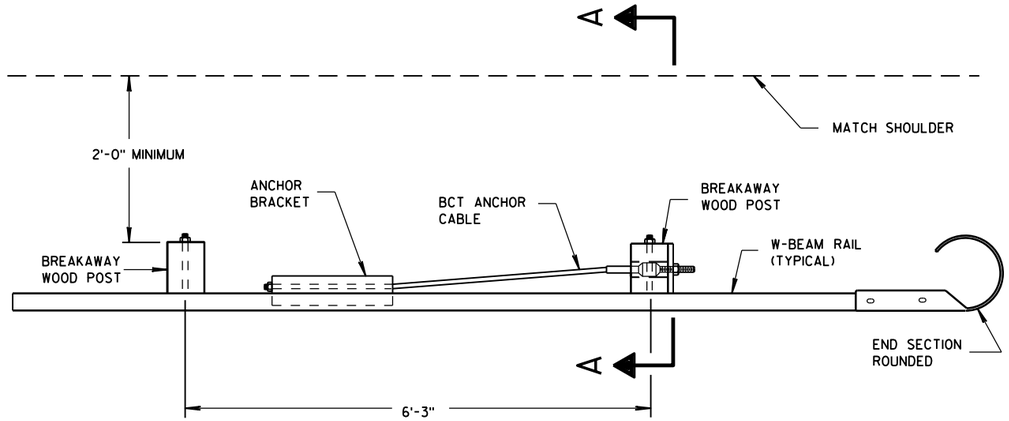
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

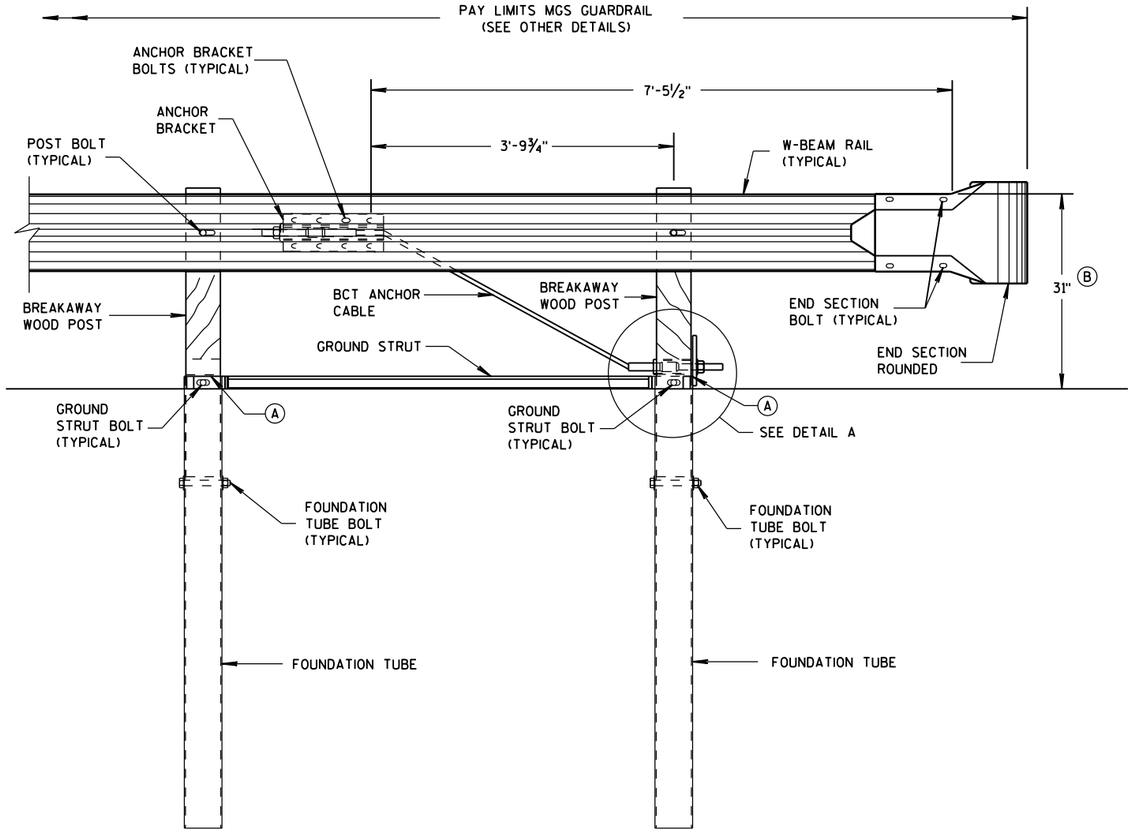
S.D.D. 14 B 45-4e

6

S.D.D. 14 B 45-4e

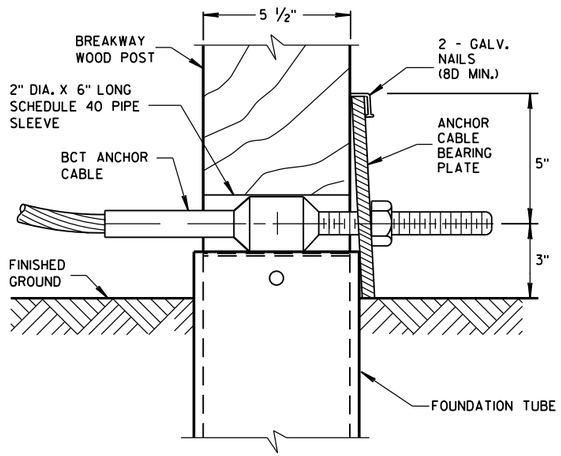


PLAN VIEW



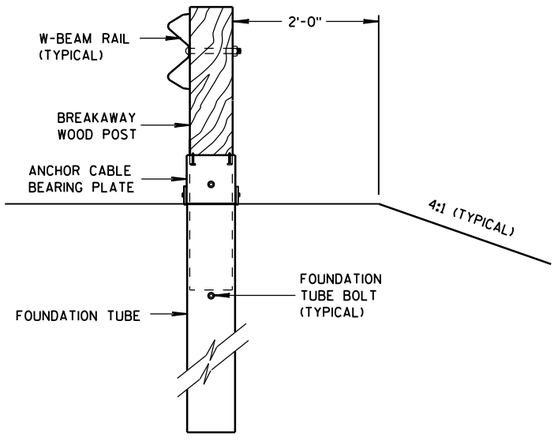
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

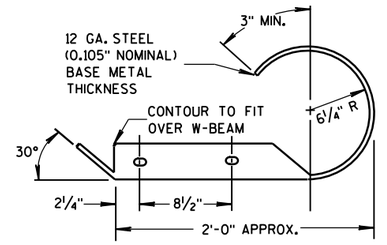
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

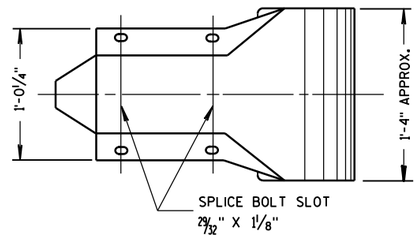
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



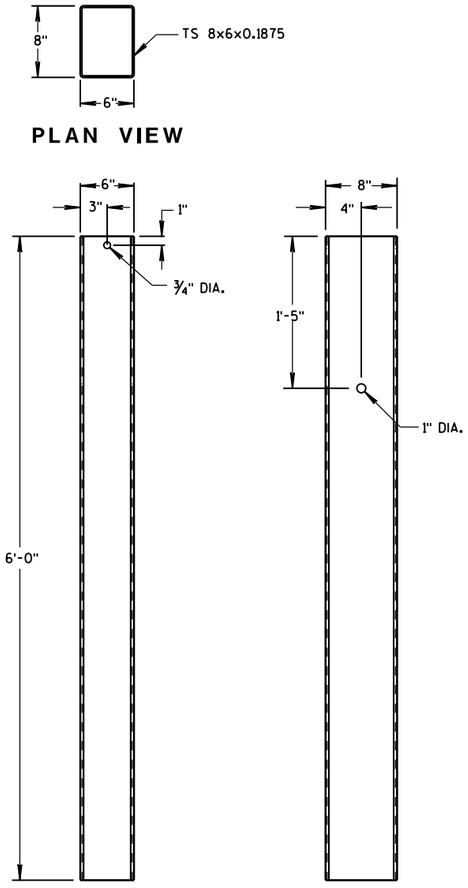
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

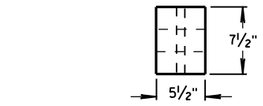
6
S.D.D. 14 B 47-2a



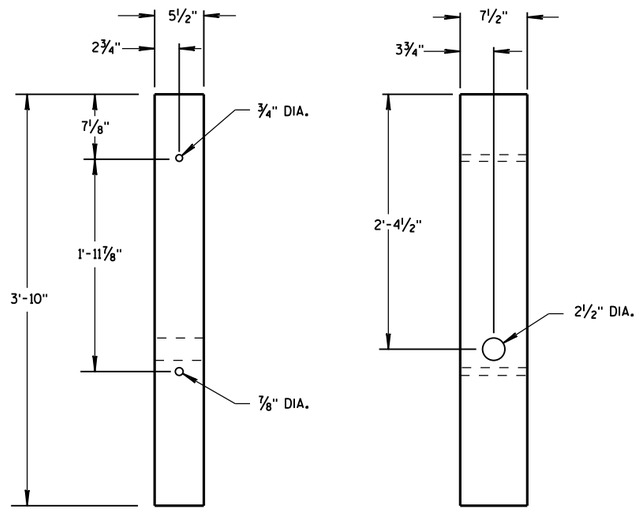
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW

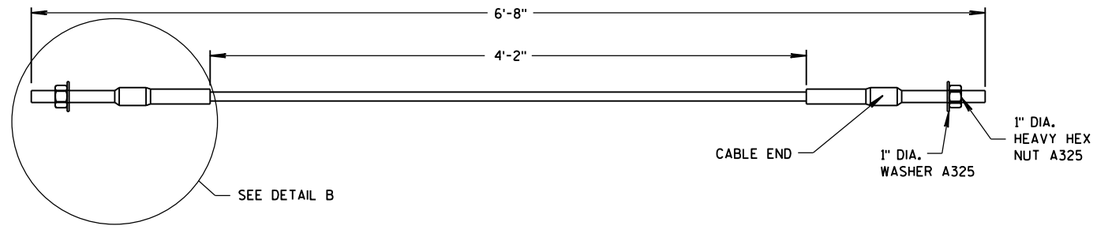


FRONT VIEW SIDE VIEW

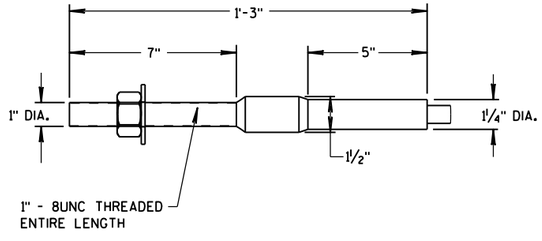
BREAKAWAY WOOD POST

GENERAL NOTES

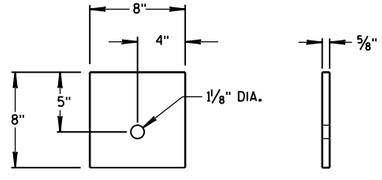
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

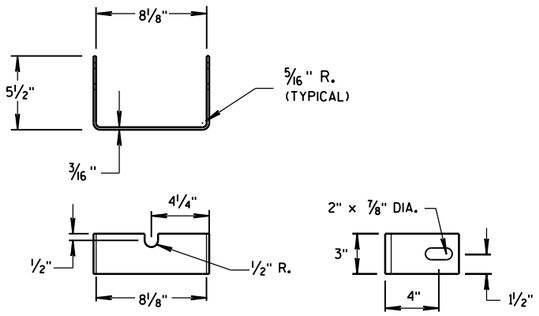
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

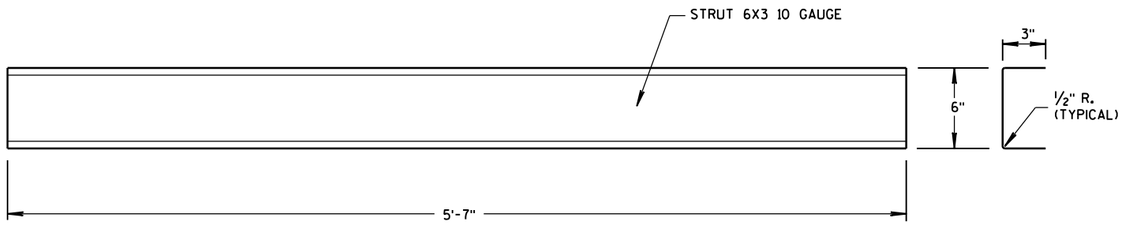
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

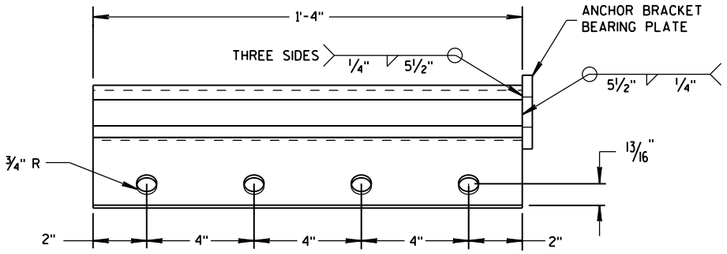
S.D.D. 14 B 47-2b

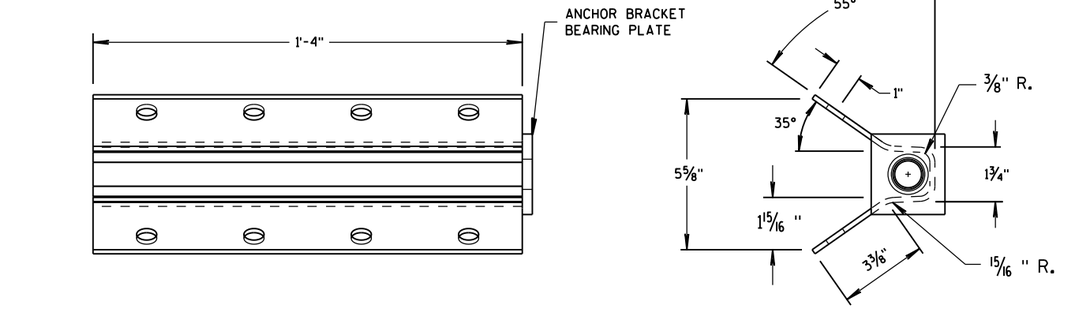


YOKE DETAIL

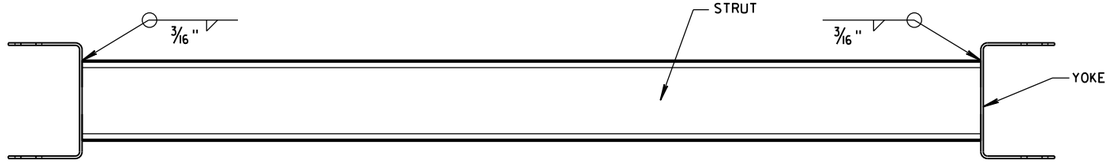


STRUT DETAIL

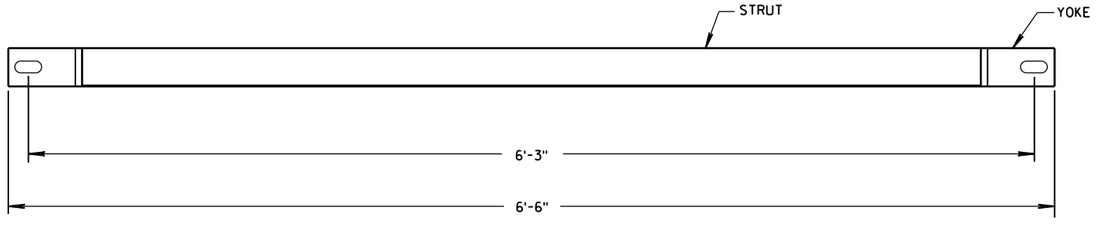




ANCHOR BRACKET

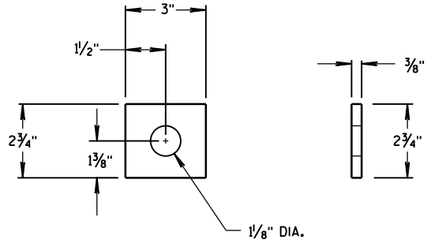


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

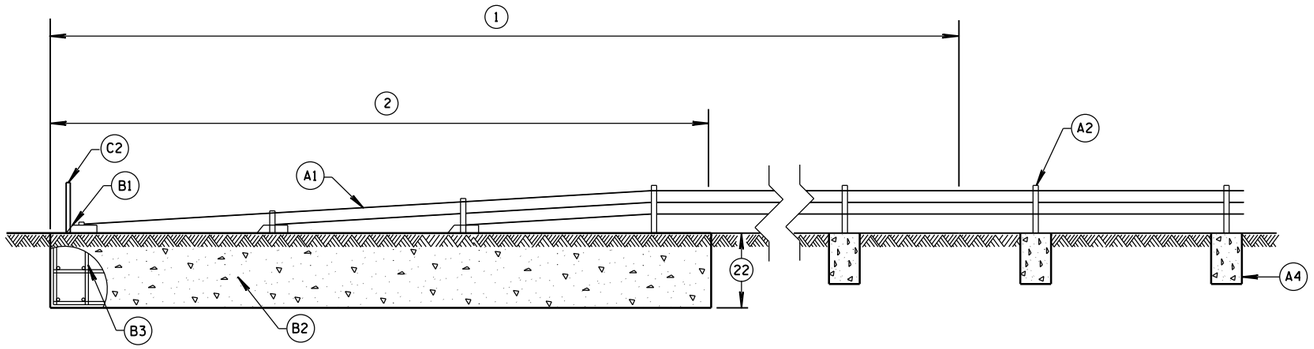
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

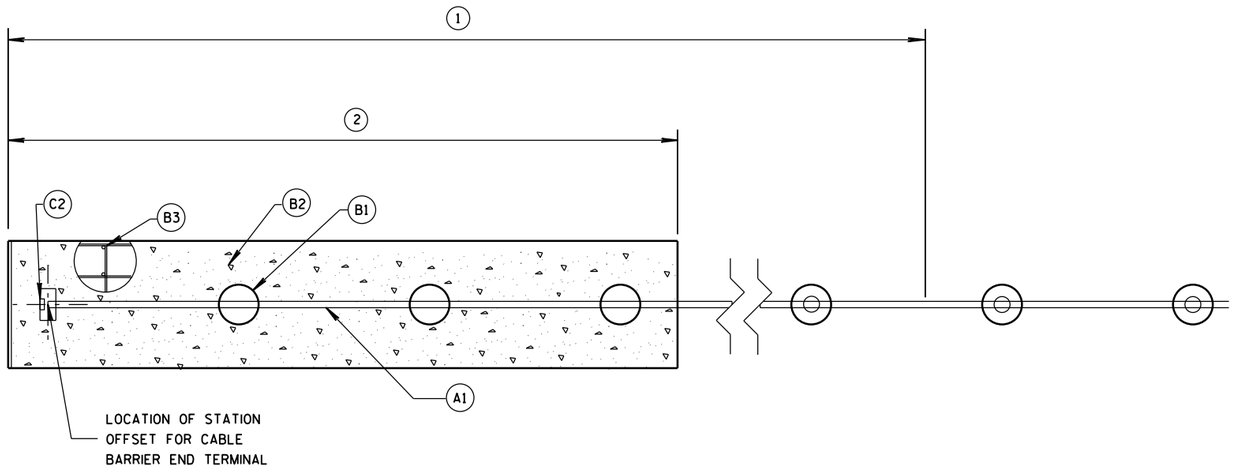
APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 47-2c

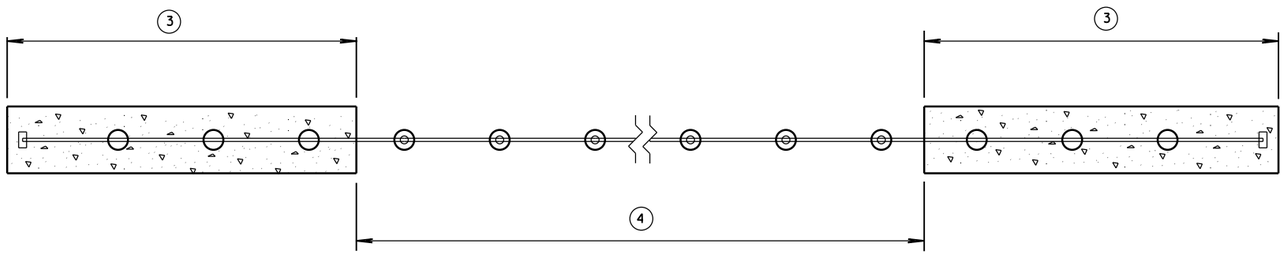


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.

DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS.
			AASHTO M30 TYPE 1 CLASS A (GALVANIATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

(1) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(2) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(3) CABLE BARRIER END TERMINAL

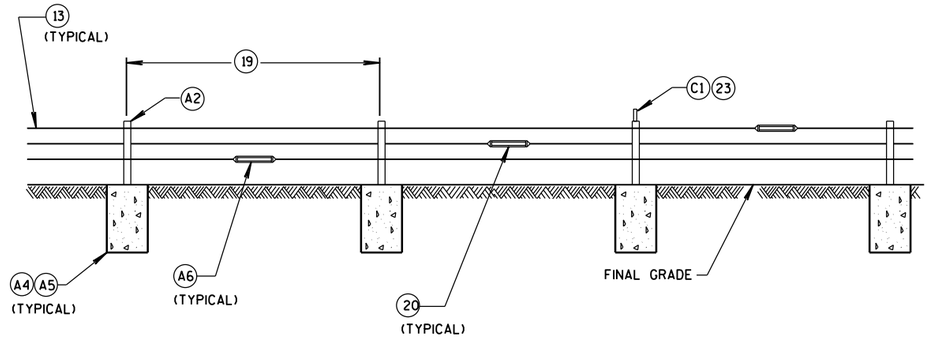
(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

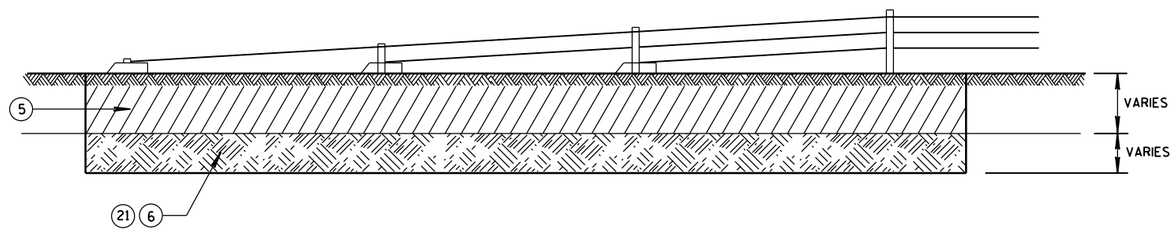
6

S.D.D. 14 B 52-1a



PROFILE VIEW

LINE POST INSTALLATION



CABLE BARRIER END TERMINAL ROCK EXCAVATION DETAIL

(5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).

(8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).

(9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

(10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

(11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.

(12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.

(14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.

(15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

(16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

(19) MAXIMUM POST SPACING IS 15 FEET.

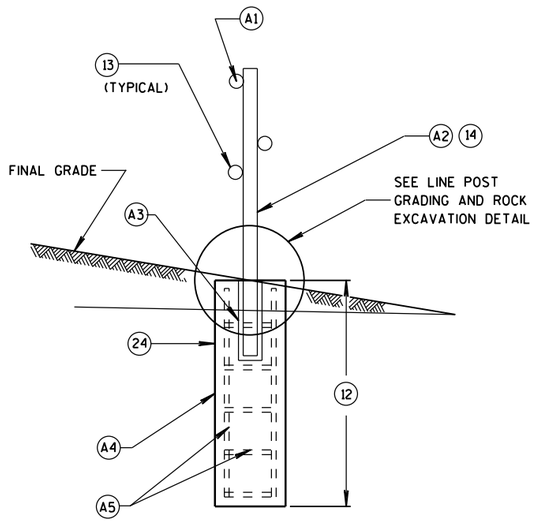
(20) STAGGER TURNBUCKLES (TYPICAL).

(21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

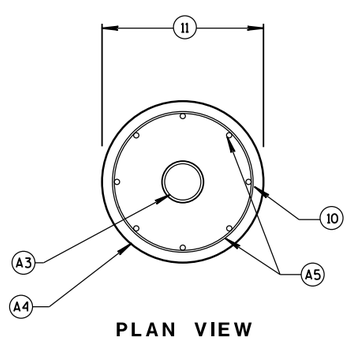
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(23) LINE POST DELINEATOR SPACING IS 100 FEET.

(24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

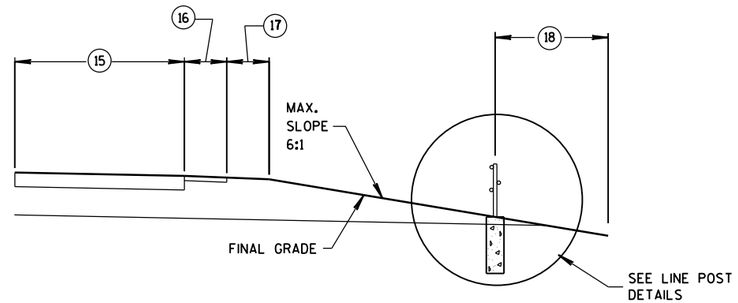


CROSS SECTION

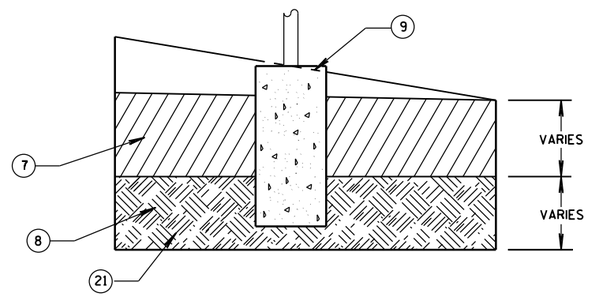


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1
LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

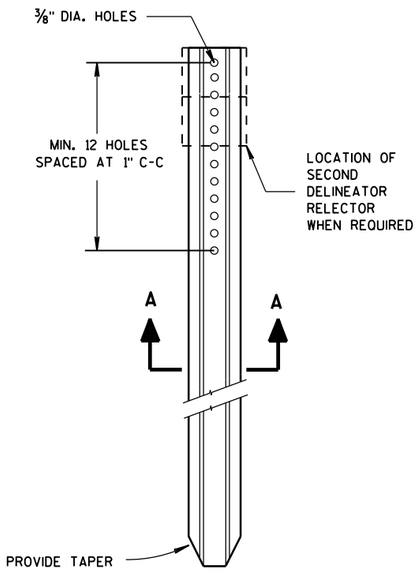
APPROVED
June. 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

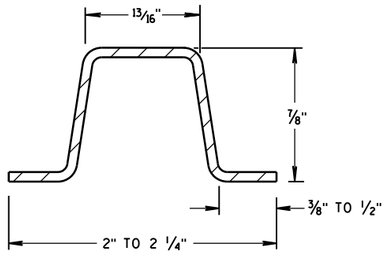
S.D.D. 14 B 52-1b

6

S.D.D. 14 B 52-1b

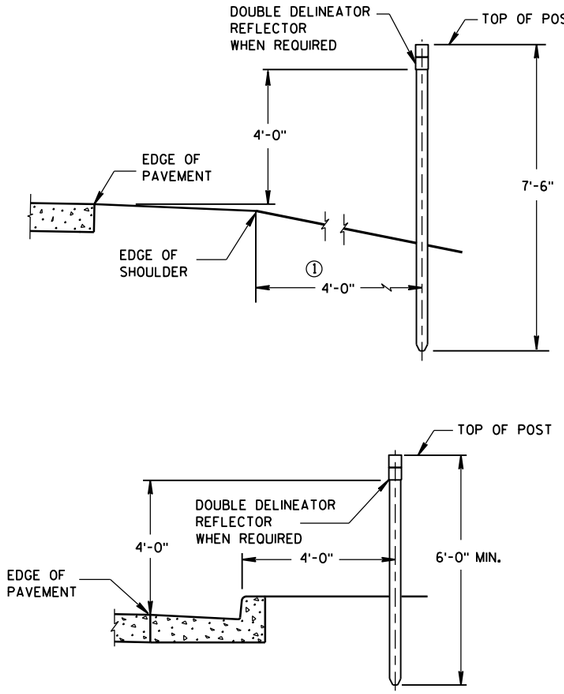


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

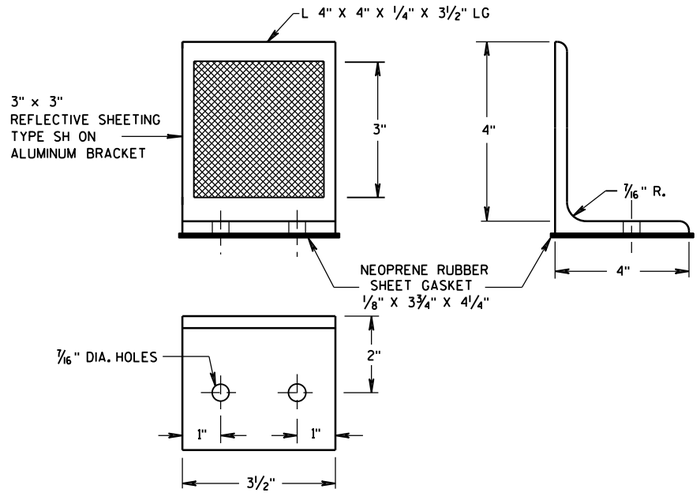


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

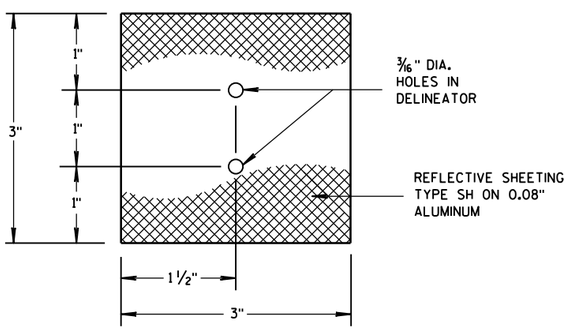
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

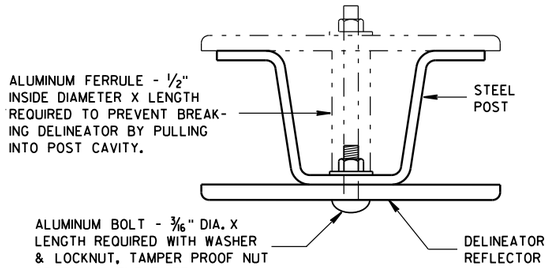
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



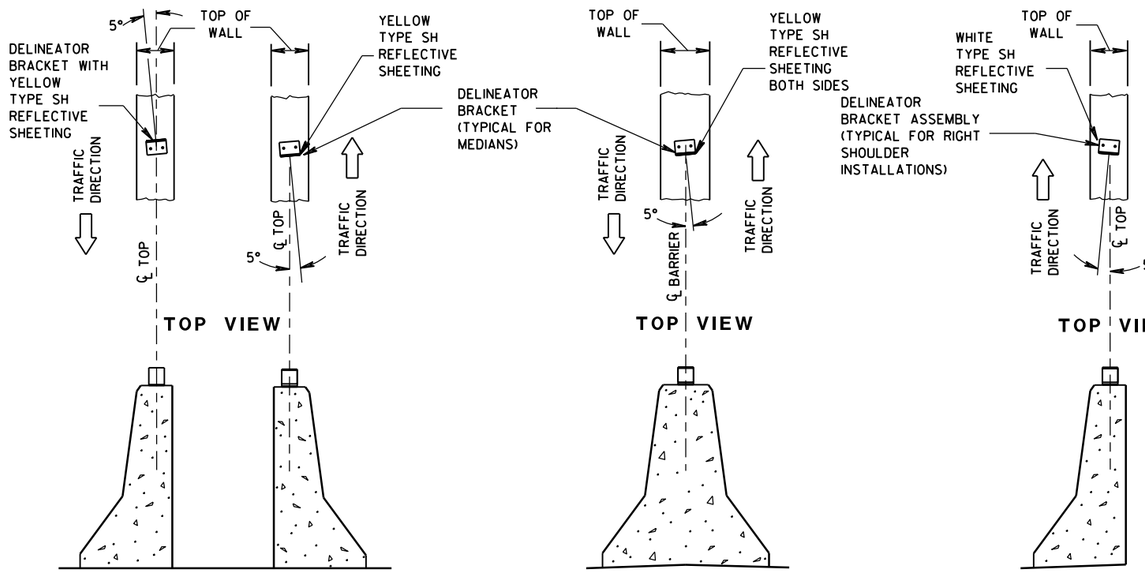
DELINEATOR BRACKET



3"x 3" DELINEATOR REFLECTOR

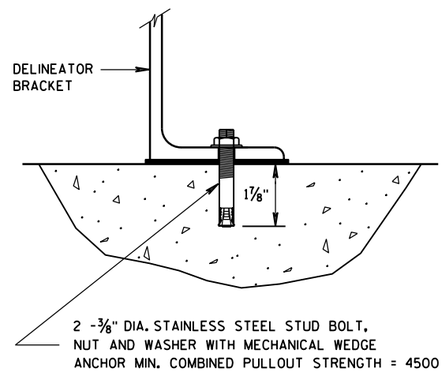


MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | MEDIAN BARRIER | BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

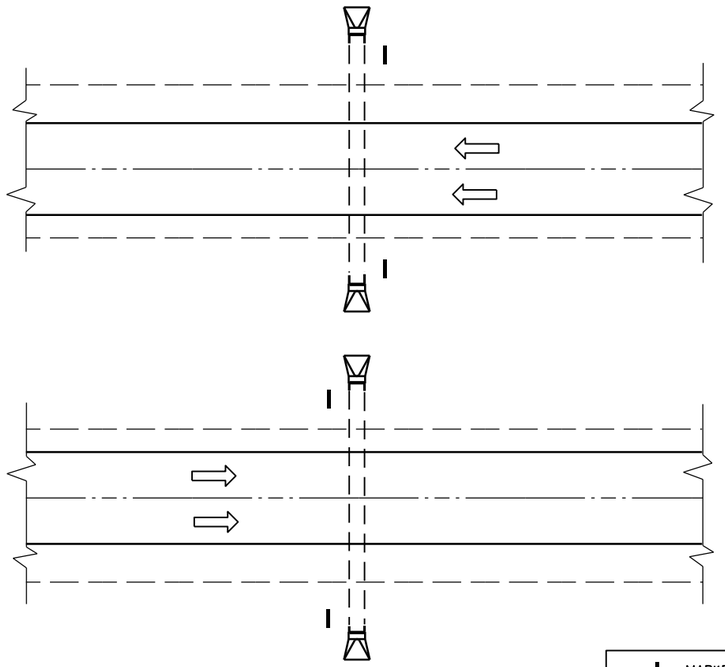
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] 203 [illegible]GINEER
FHWA

6

S.D.D. 15 A 2-9

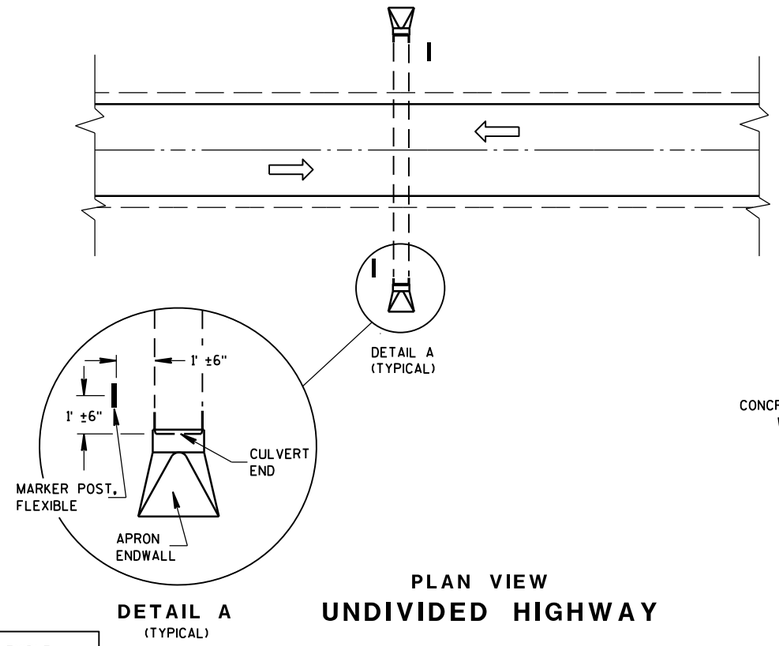
6

S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

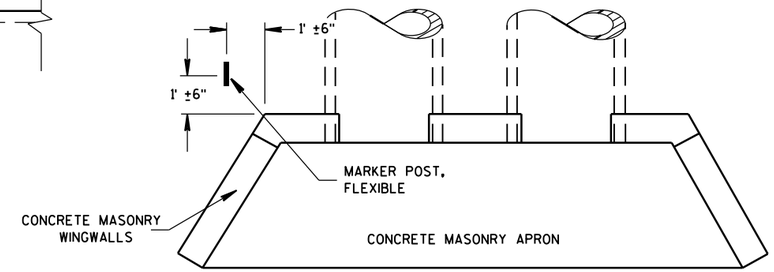
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

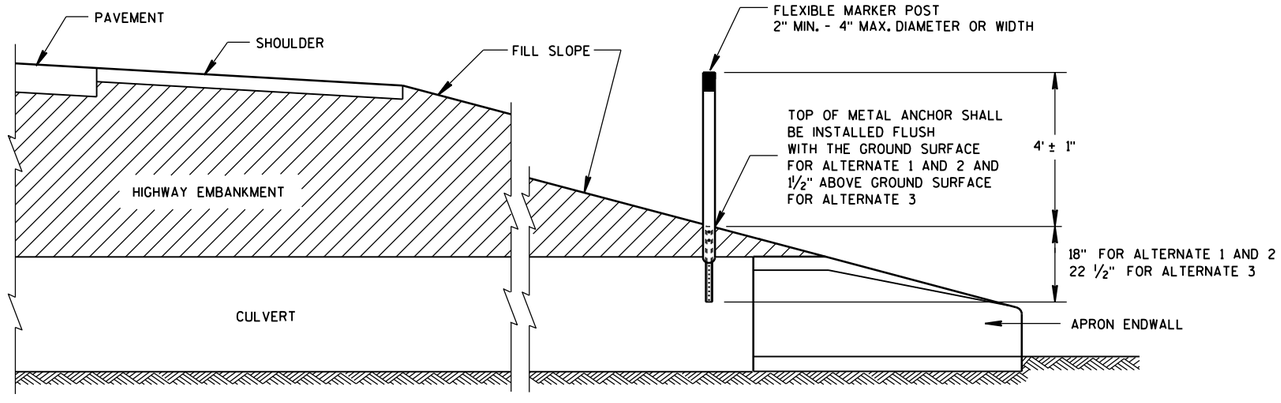
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

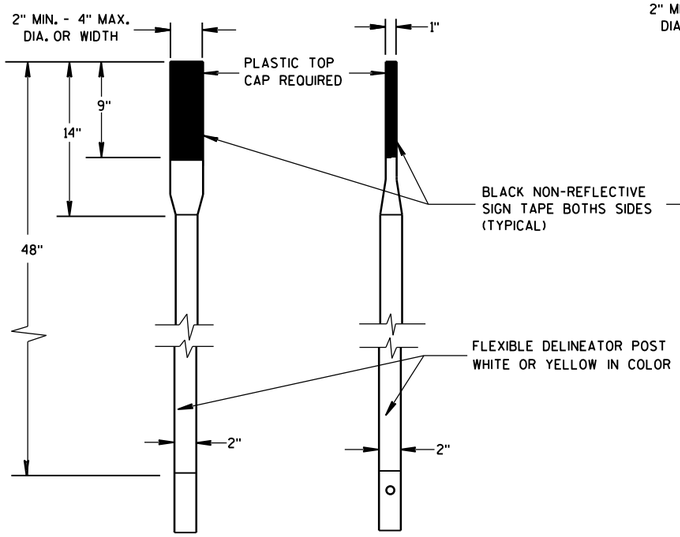
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

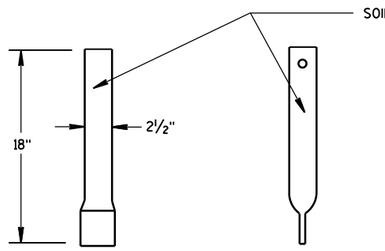
6

S.D.D. 15 A 3-2a

6

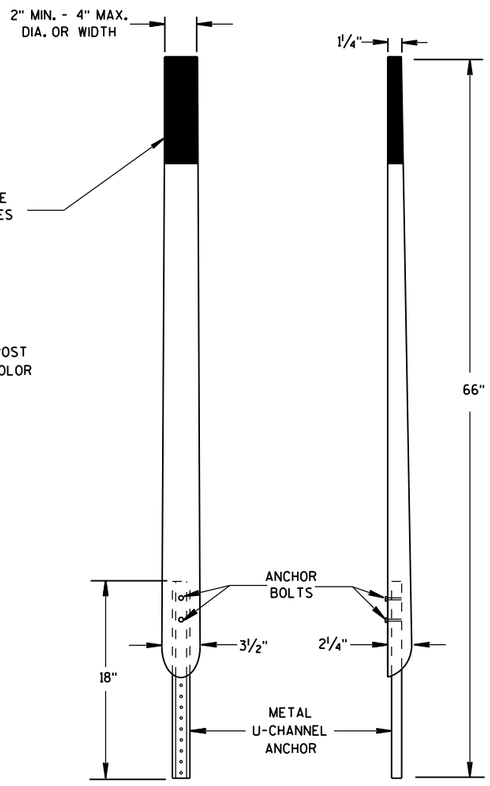
S.D.D. 15 A 3-2a





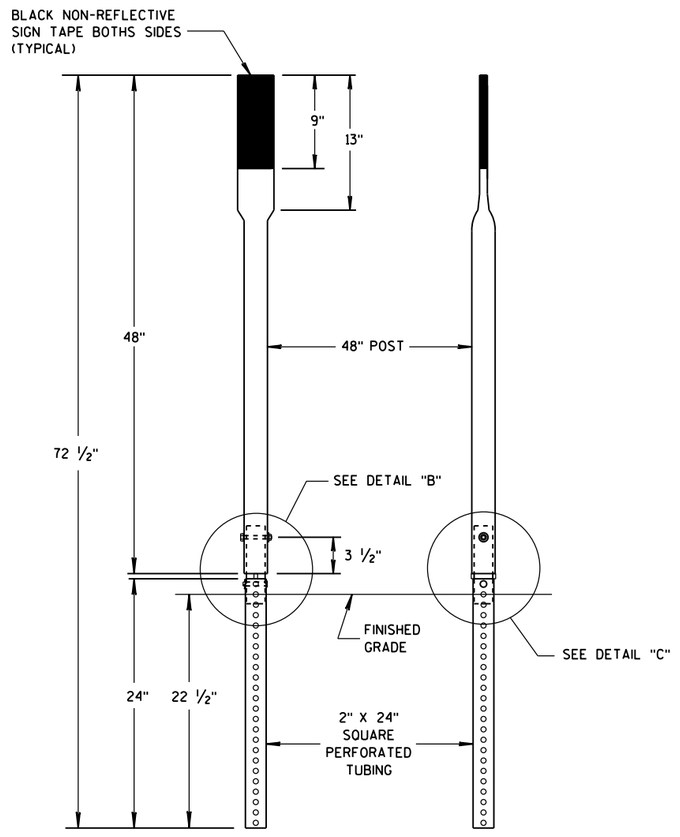
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

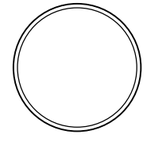
ALTERNATE 2



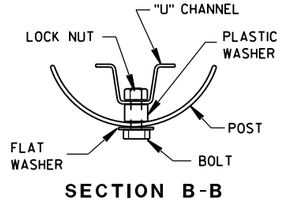
FRONT VIEW SIDE VIEW

ALTERNATE 3

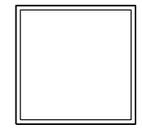
FLEXIBLE MARKER POSTS



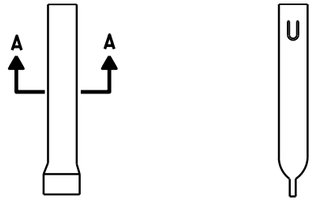
SECTION A-A



SECTION B-B

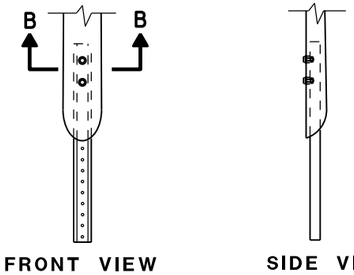


SECTION C-C



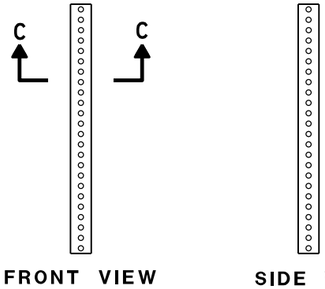
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

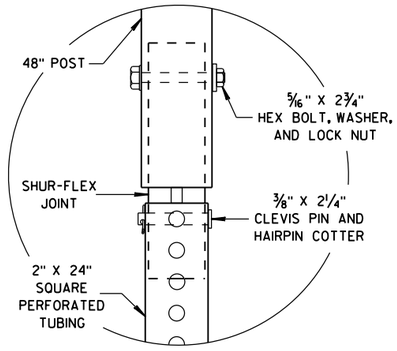
ALTERNATE 2



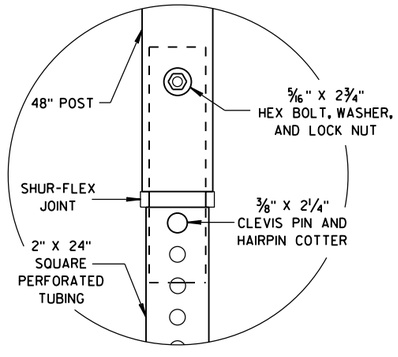
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

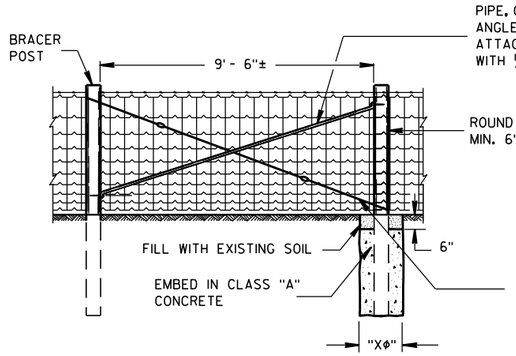
S.D.D. 15 A 3-2b

6

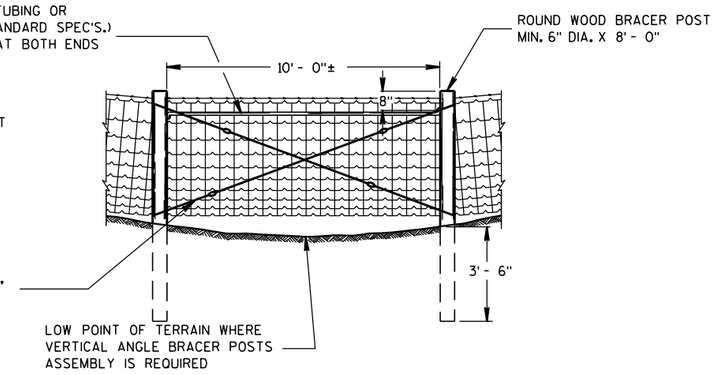
S.D.D. 15 A 3-2b

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

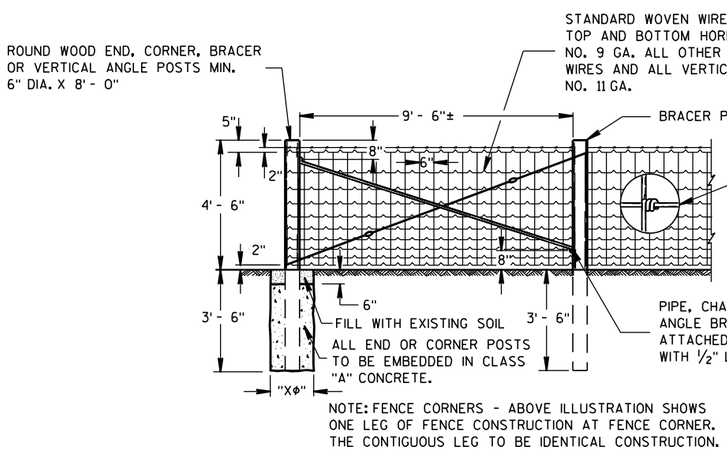
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

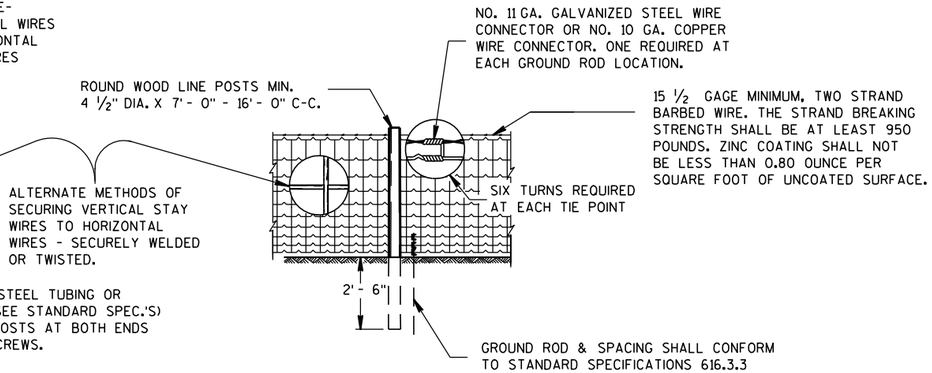
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



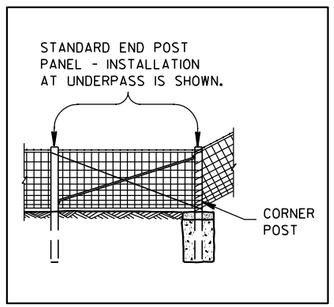
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

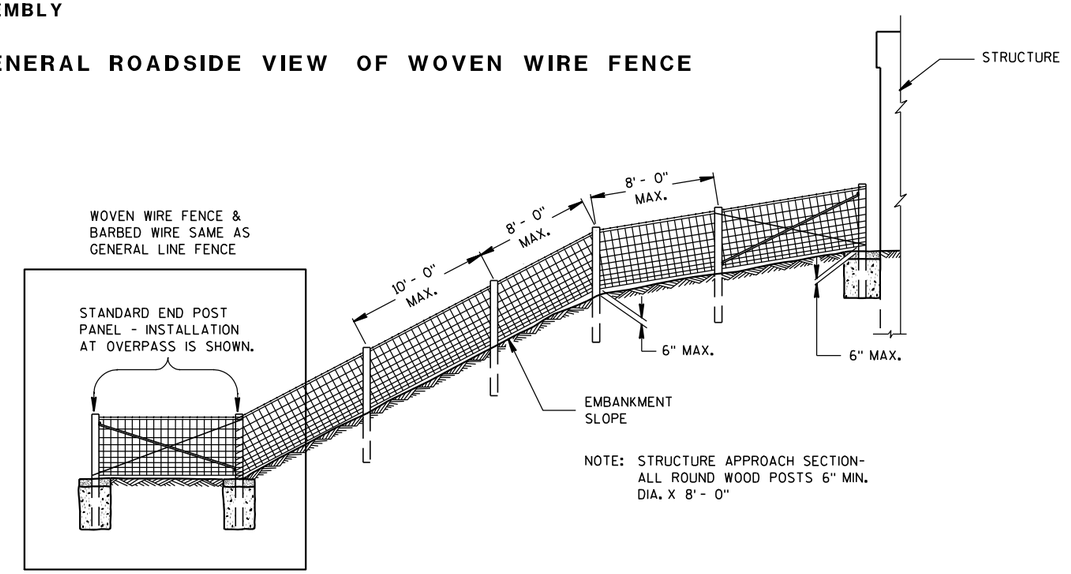


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

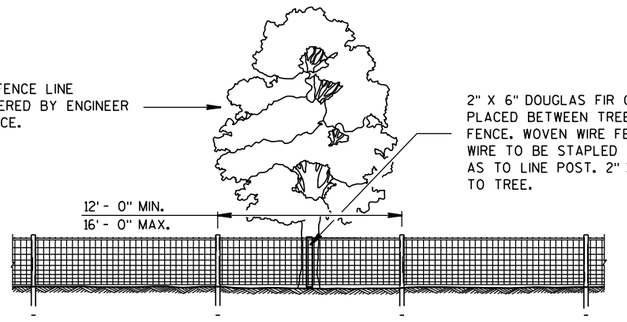
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

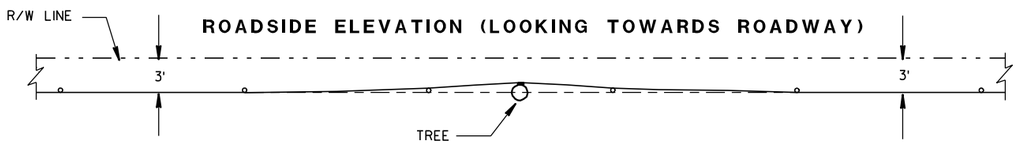
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

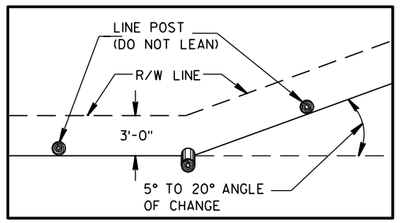


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

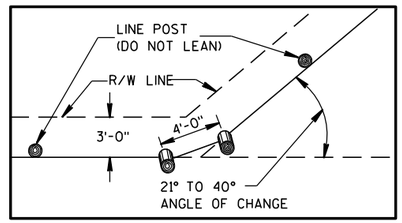


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

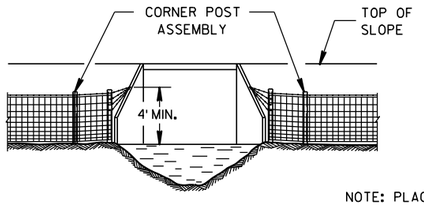


PLAN VIEW
DOUBLE POST CORNER

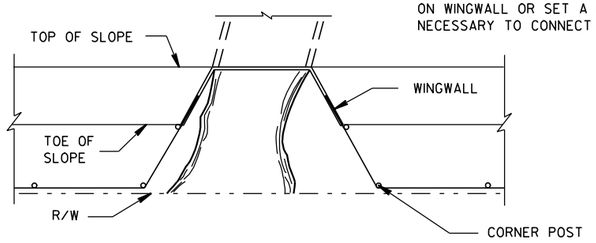
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

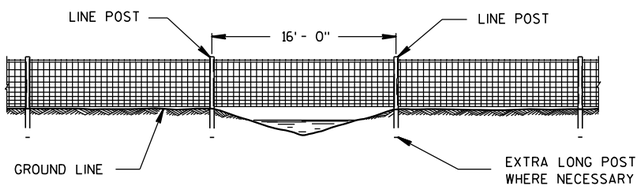
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



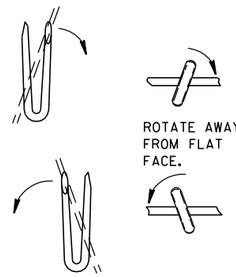
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

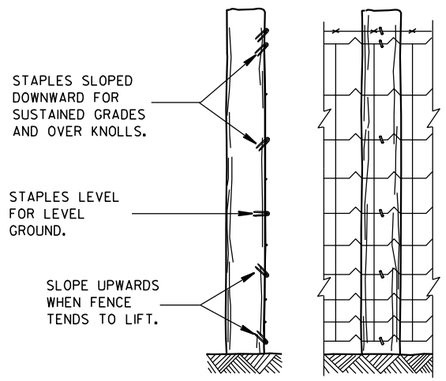


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

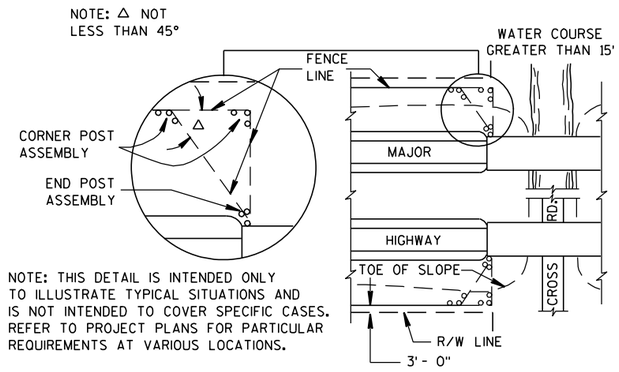


END ELEVATION

FARM SIDE ELEVATION

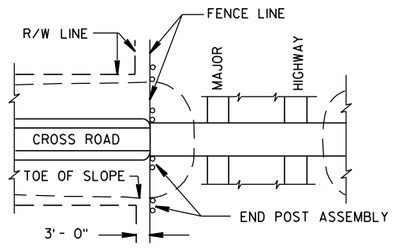
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

FENCE LOCATION AT STRUCTURES

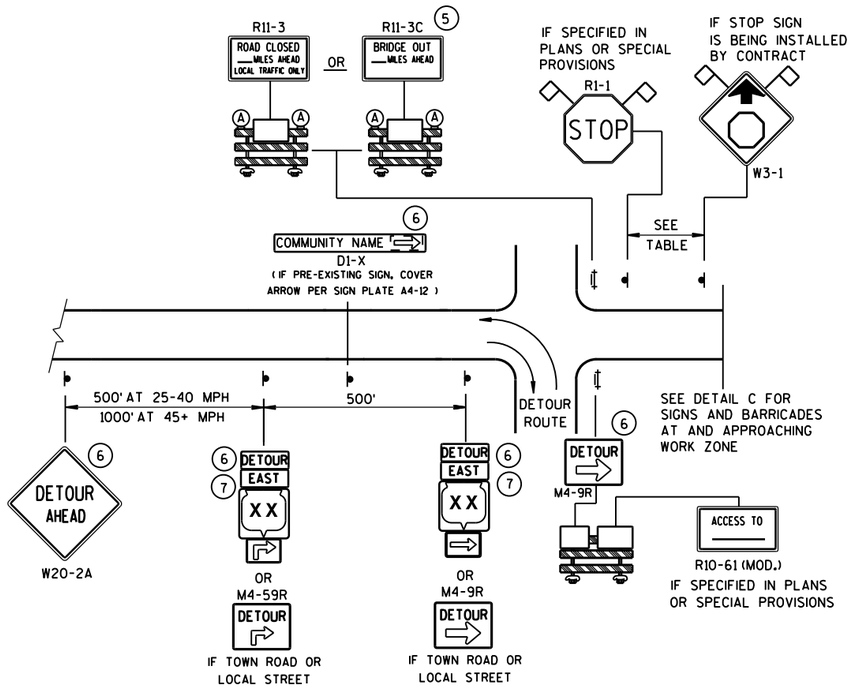
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

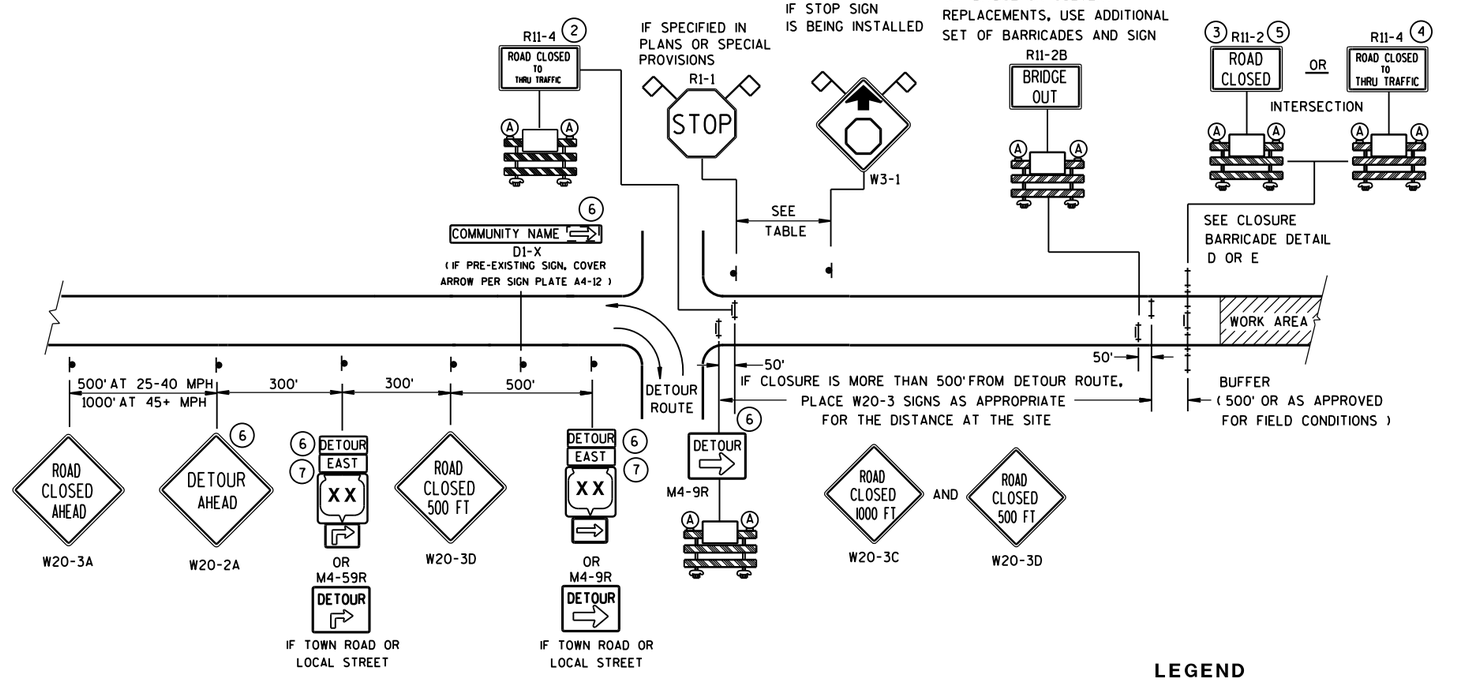
6

S.D.D. 15 B 1-8b



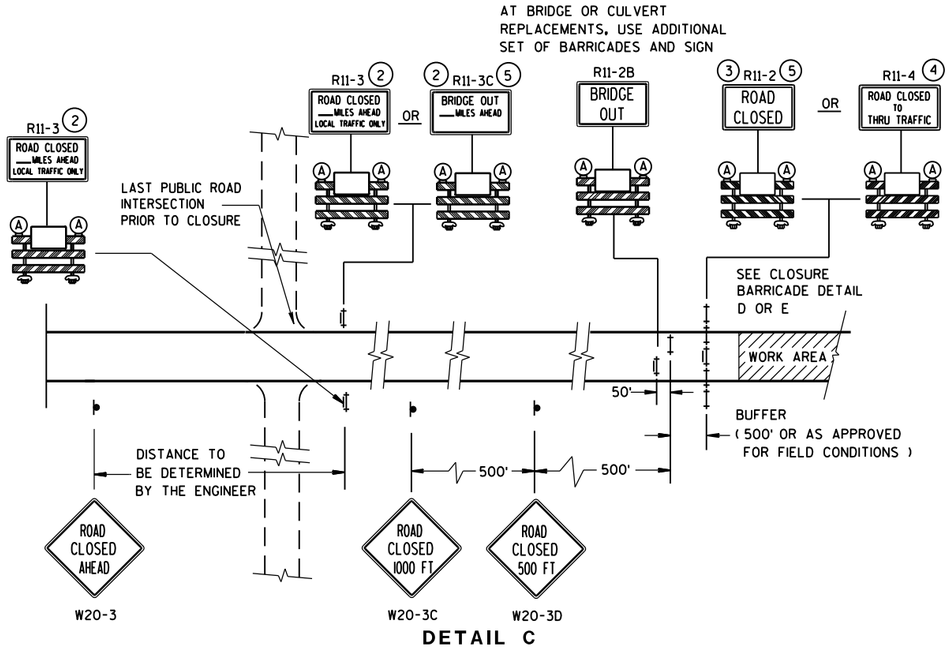
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

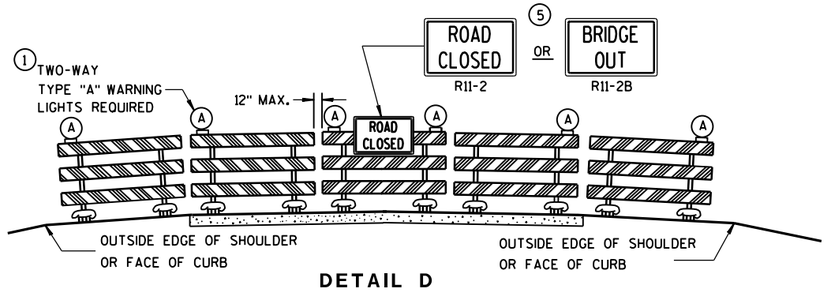
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

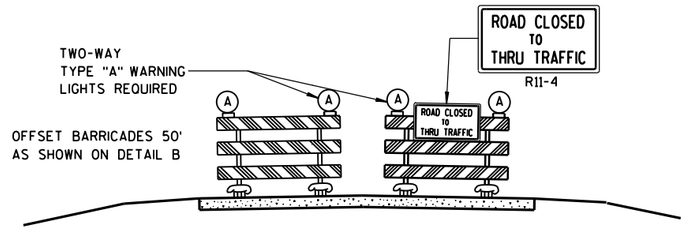
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

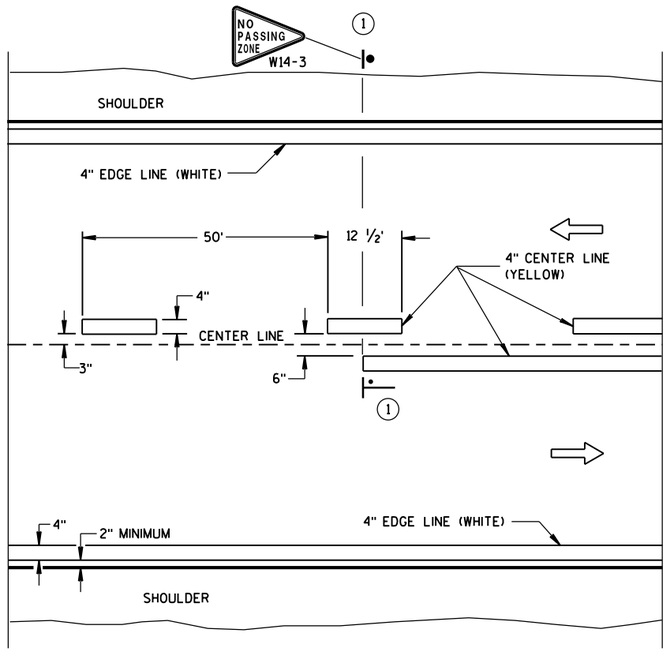
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

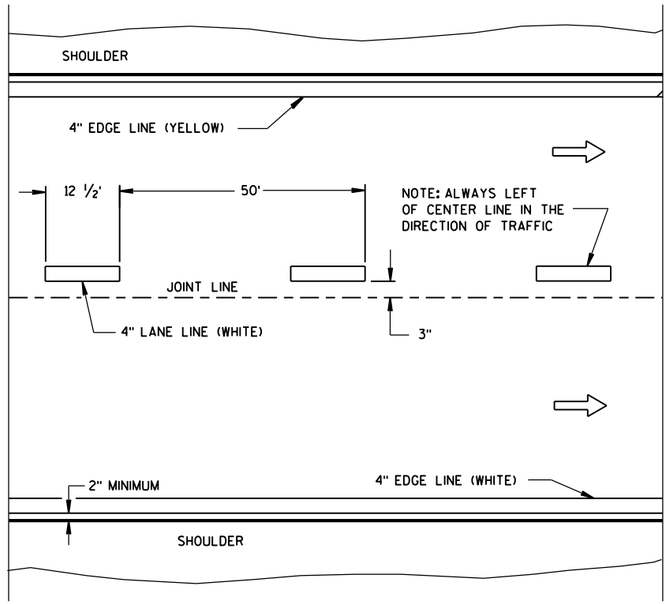
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC
FHWA

6

S.D.D. 15 C 2-6b



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

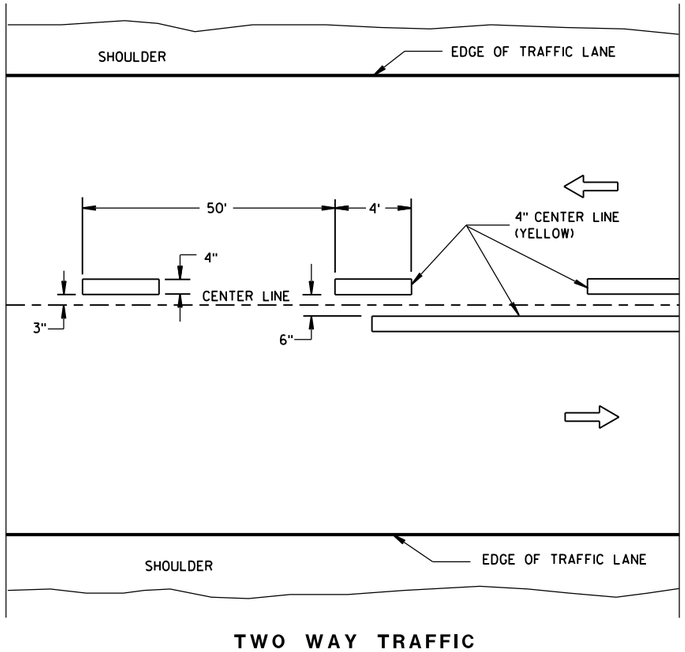
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

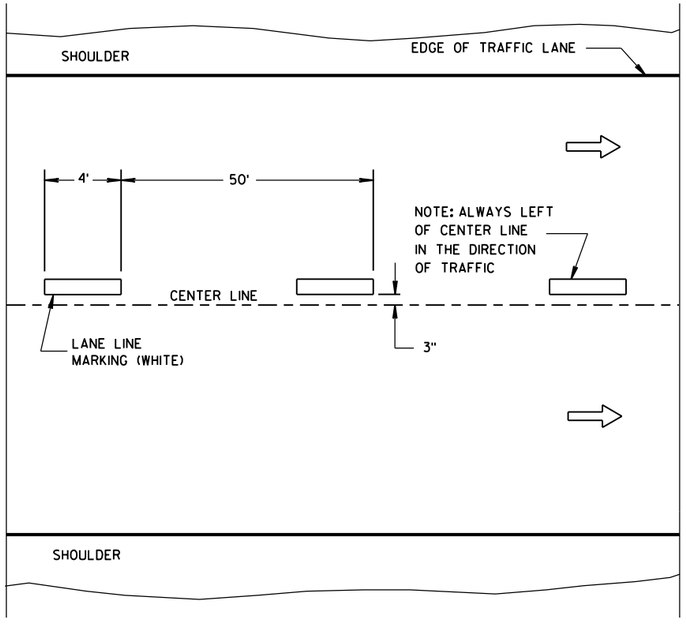
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

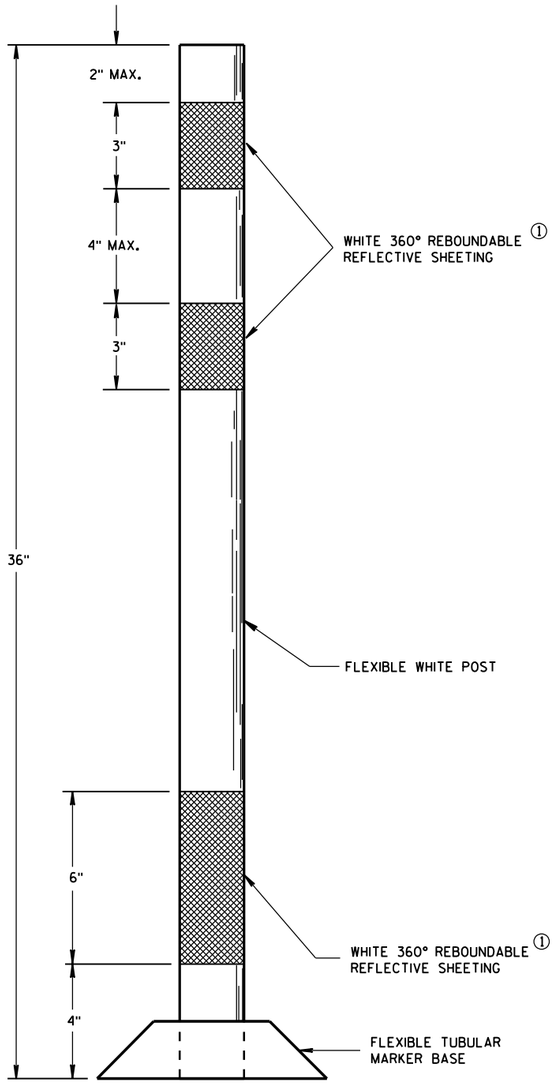
LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MAR ENGINEER
FHWA	

6

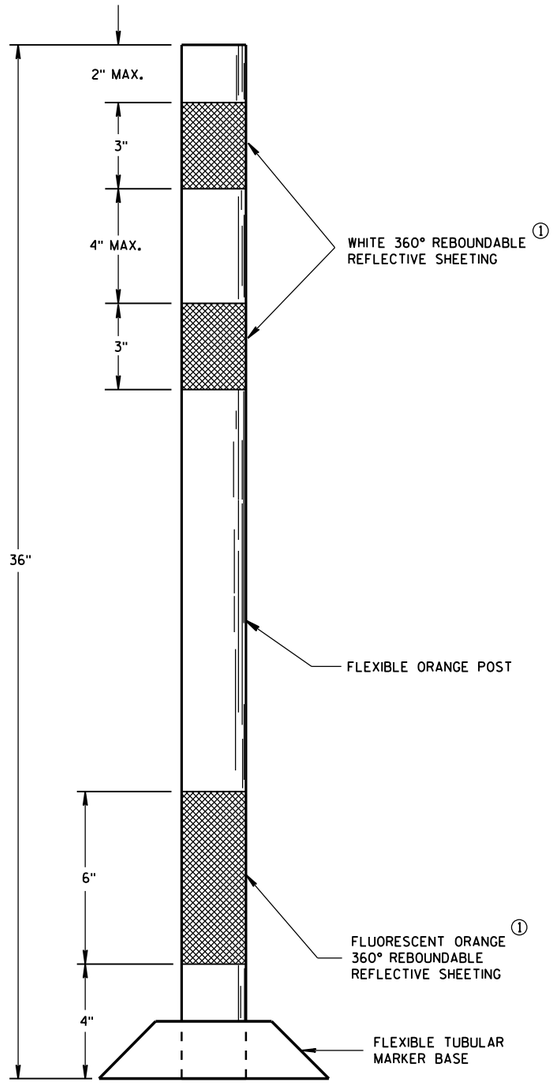
S.D.D. 15 C 8-18a

6

S.D.D. 15 C 8-18a



FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER



FLEXIBLE
TUBULAR MARKER POST
WORK ZONE

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

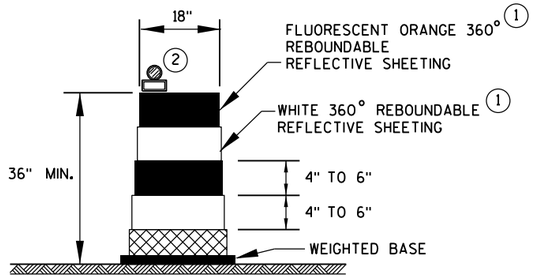
CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

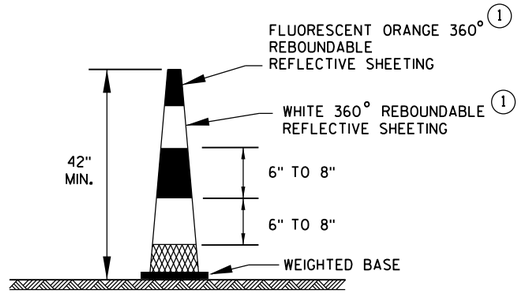
APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGR
FHWA

6

S.D.D. 15 C 11-7a



DRUM

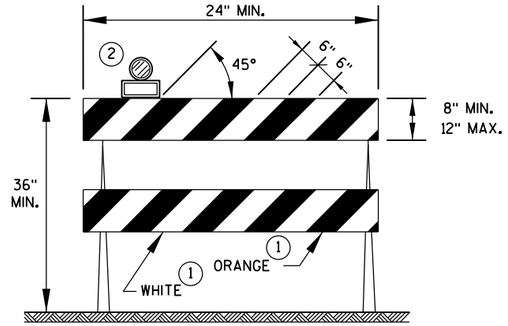


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

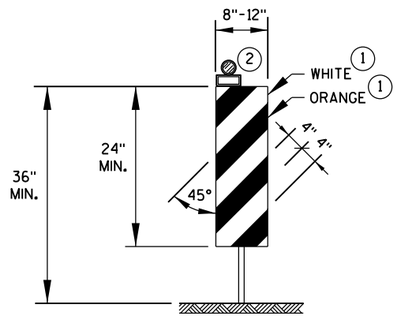
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



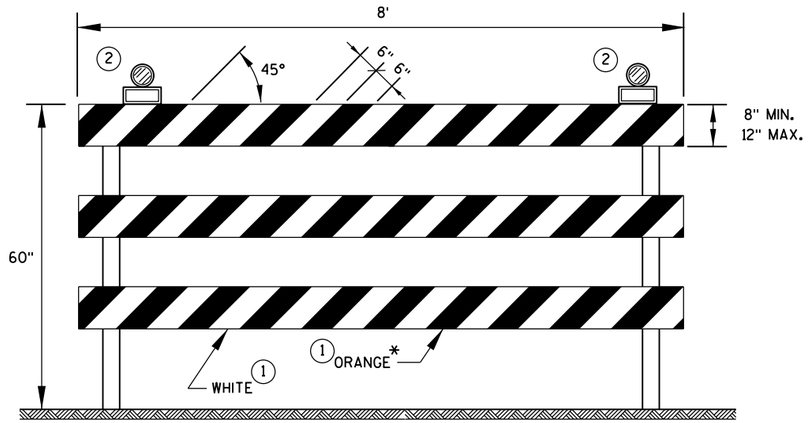
TYPE 2 BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE 3 BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 C 11-7b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

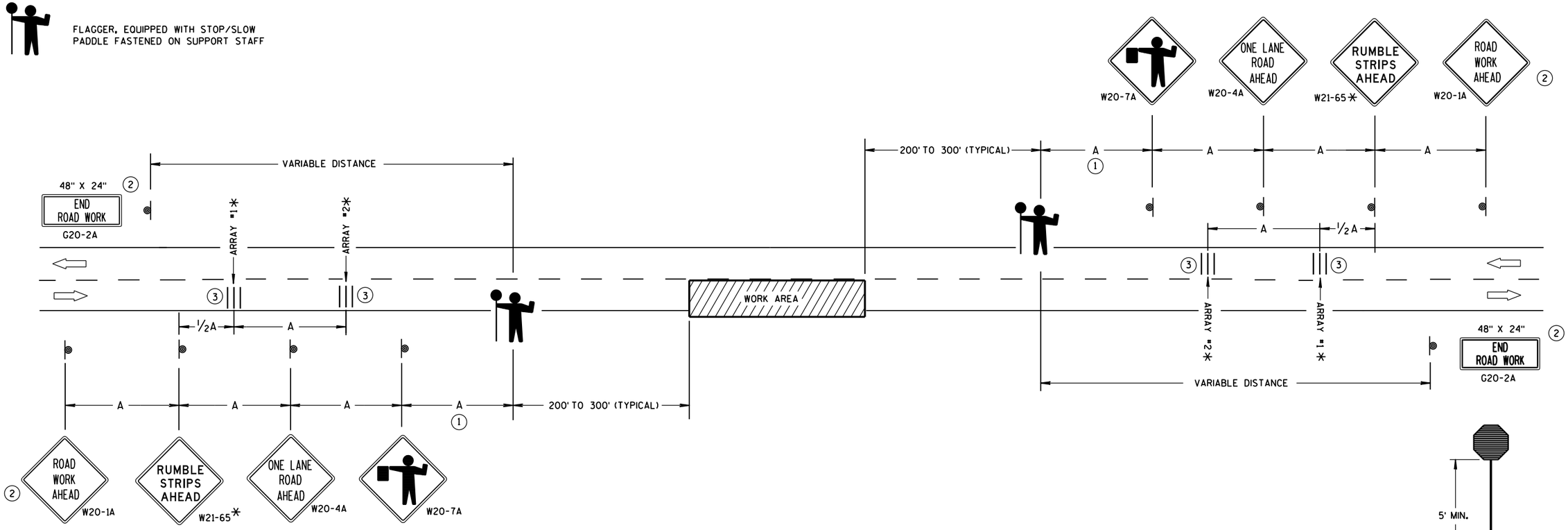
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

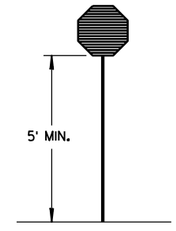
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

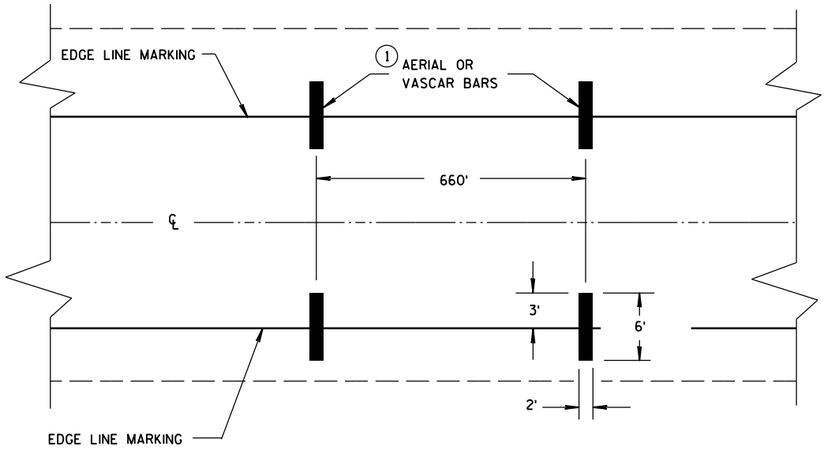
APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6
S.D.D. 15 C 12-6

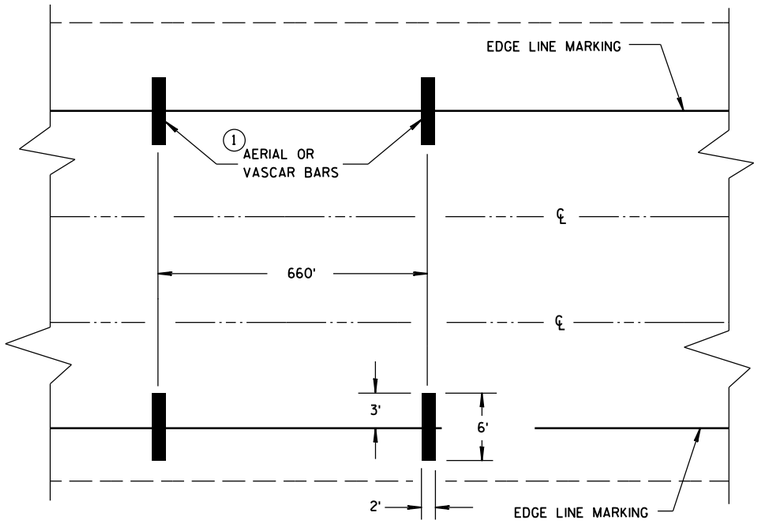
GENERAL NOTES

(1) PLACE TWO TO FIVE AERIAL OR VASCAR BARS AT 660 FOOT SPACING.

A CAR CAN BE PROVIDED BY THE WISCONSIN STATE PATROL FOR TRAFFIC CONTROL.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

6

S.D.D. 15 C 14-3

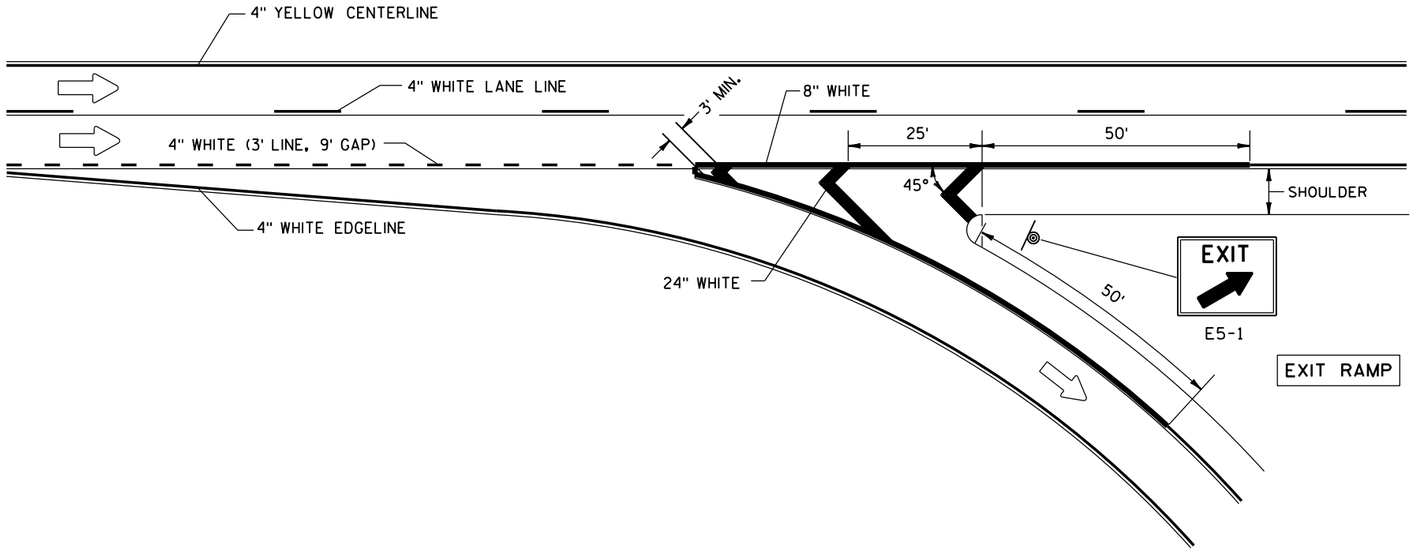
AERIAL ENFORCEMENT BARS
PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]INEER
FHWA

6

S.D.D. 15 C 14-3



PAVEMENT MARKING FOR EXIT RAMP

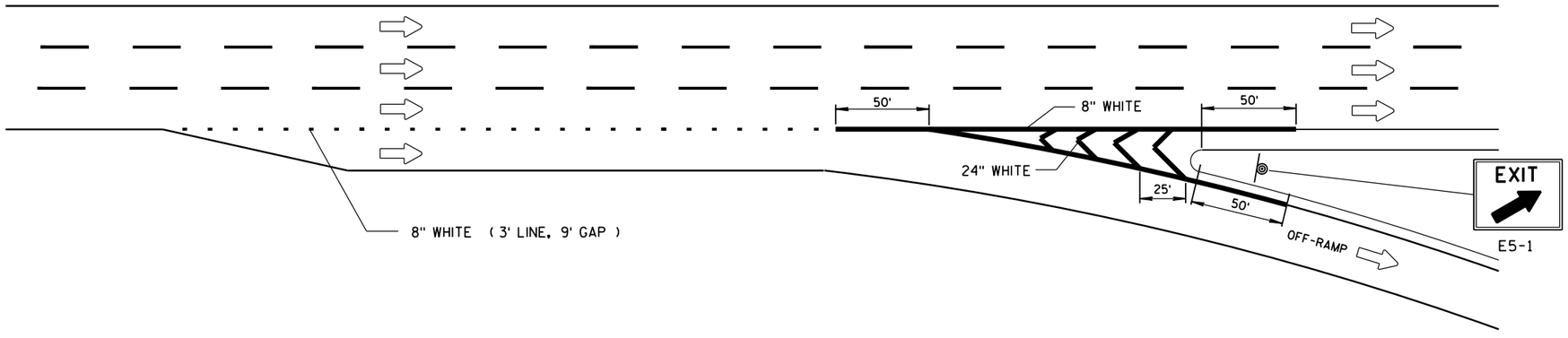
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

S.D.D. 15 C 31-3a

PAVEMENT MARKING (RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

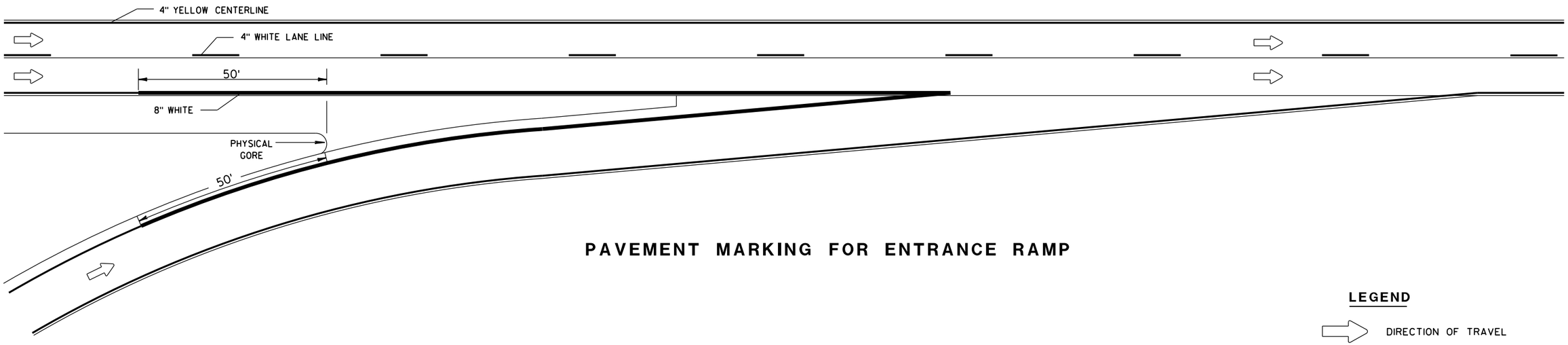
6

S.D.D. 15 C 31-3a

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

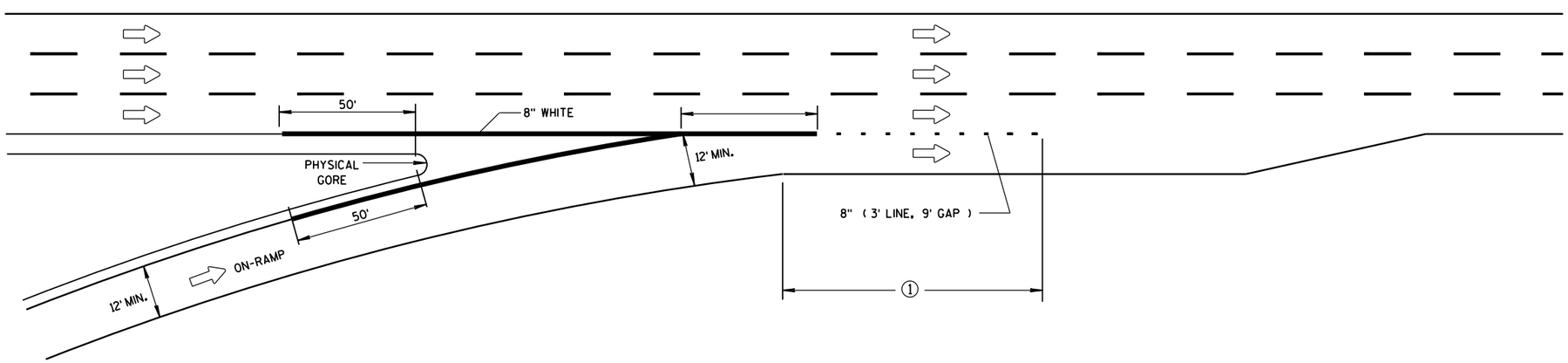
① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.



PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 31-3c

6

S.D.D. 15 C 31-3c

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

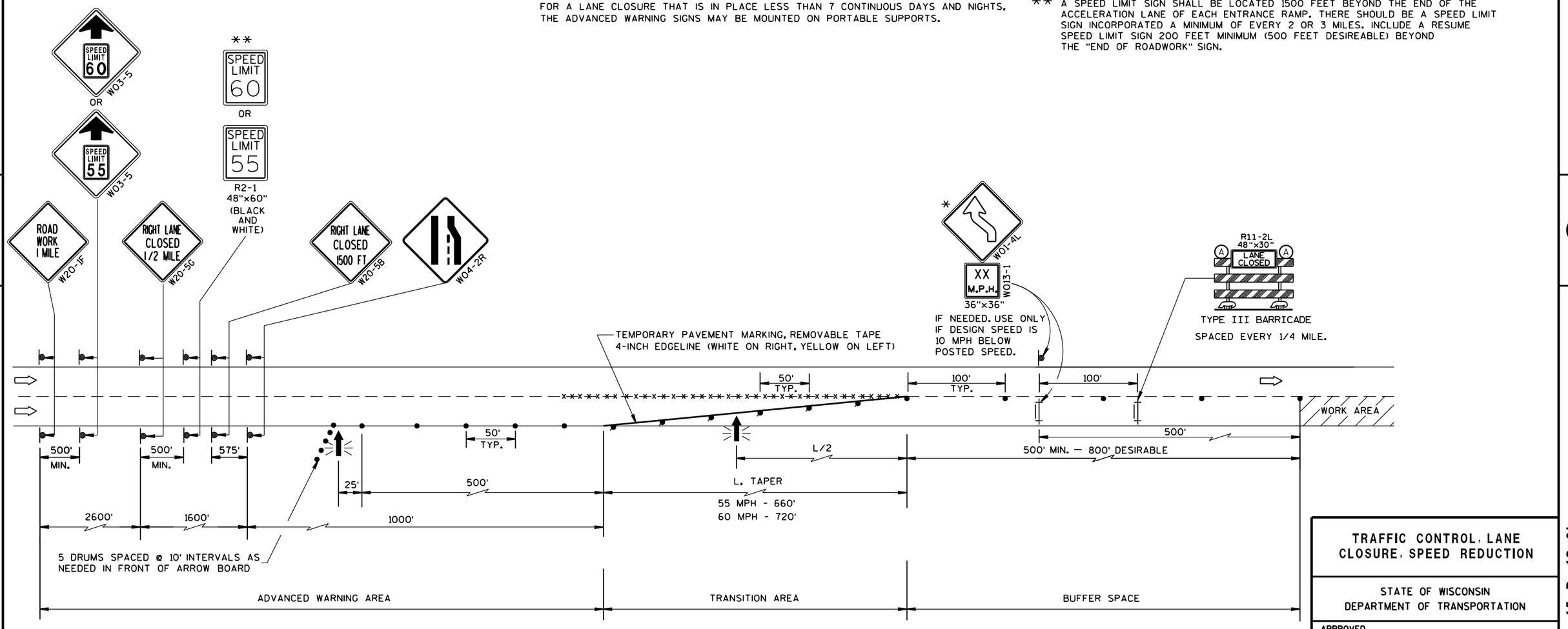
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

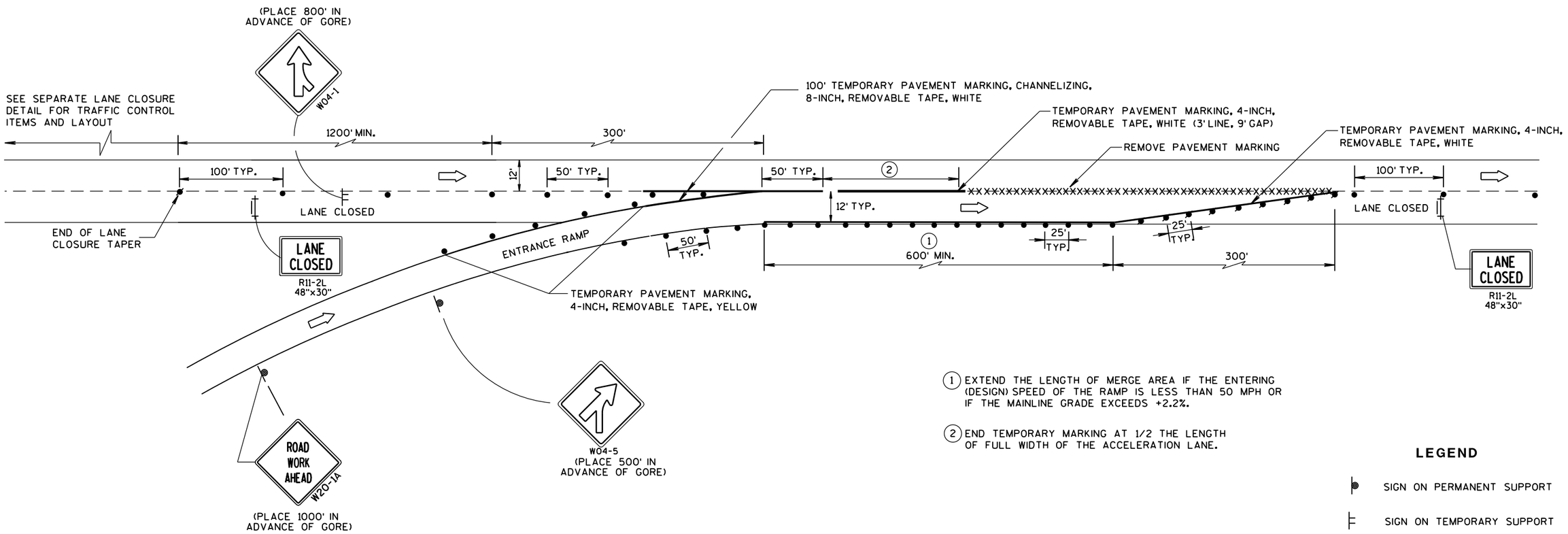
6

S.D.D. 15 D 12-6b

6

S.D.D. 15 D 12-6b

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE



1. EXTEND THE LENGTH OF MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS +2.2%.

2. END TEMPORARY MARKING AT 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

PARALLEL ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

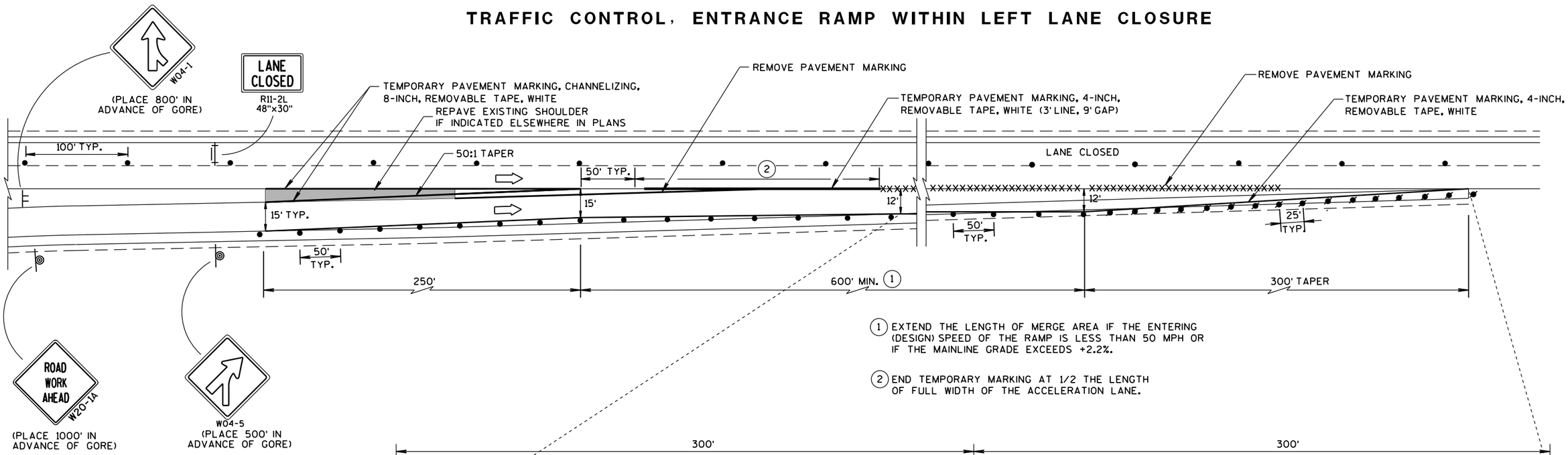
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENG
FHWA

6

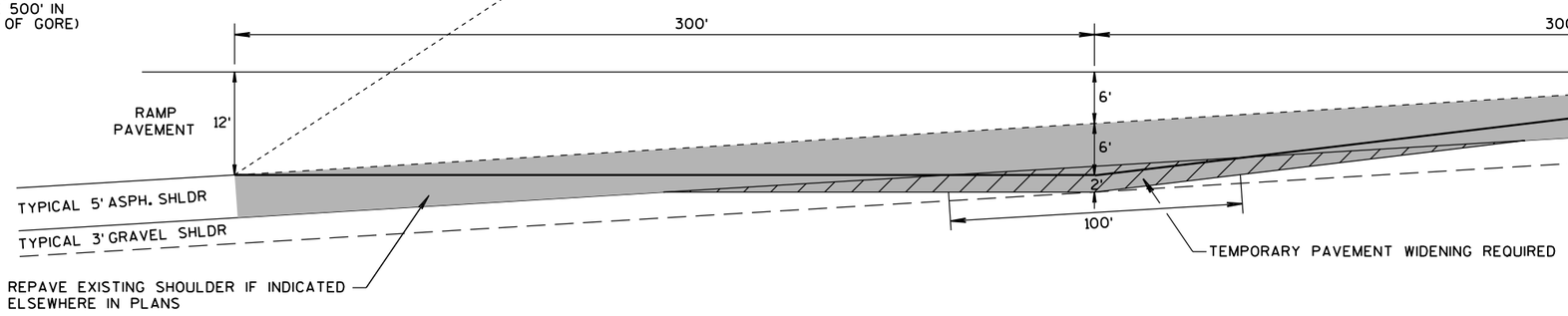
S.D.D. 15 D 15-4a

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LEFT LANE CLOSURE



(1) EXTEND THE LENGTH OF MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS +2.2%.

(2) END TEMPORARY MARKING AT 1/2 THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY. ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

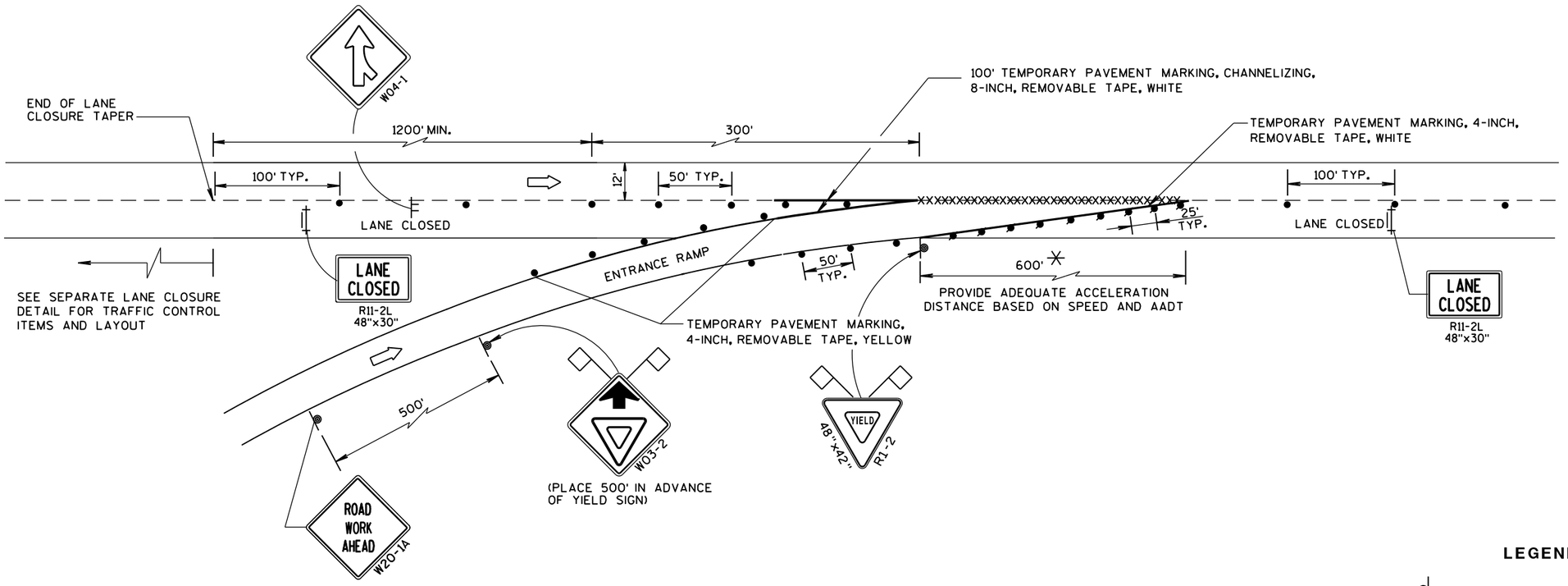
APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 D 15-4b

6

S.D.D. 15 D 15-4b



TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

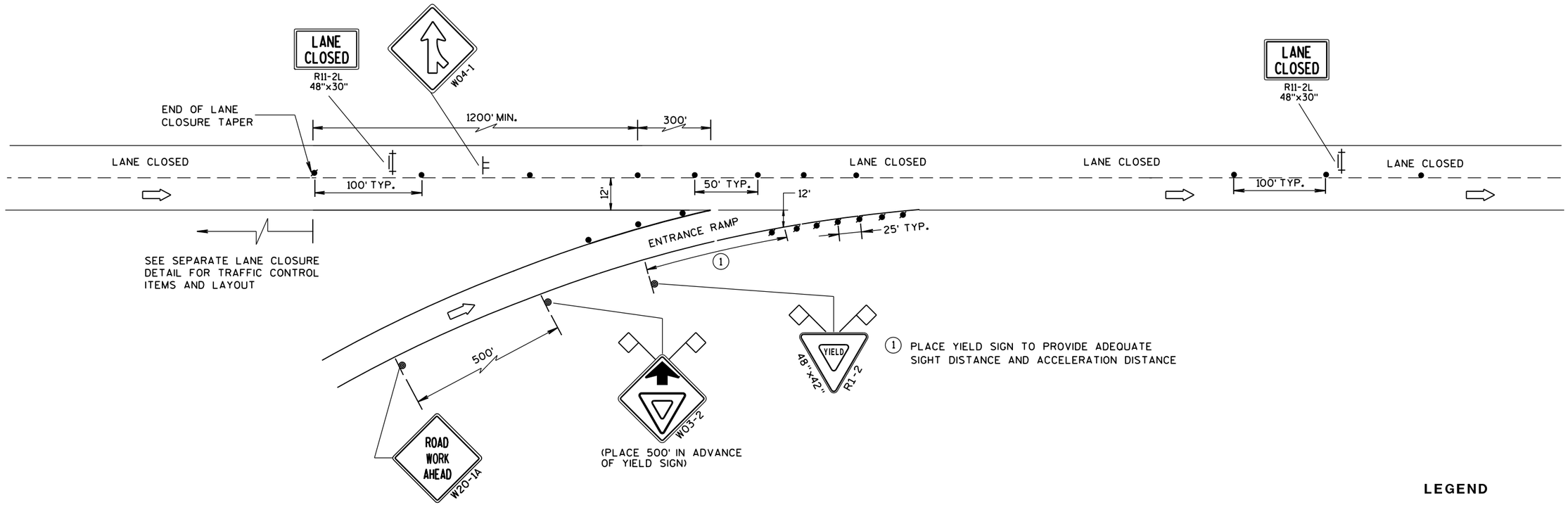
TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 D 15-4c



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

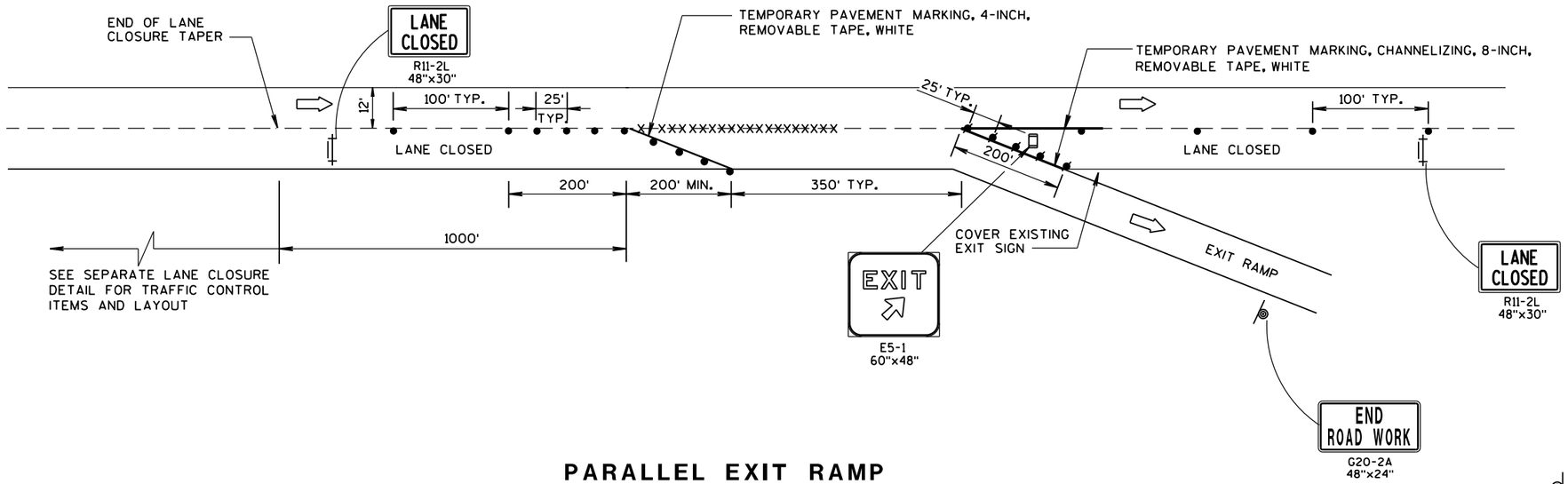
APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 D 15-4d

6

S.D.D. 15 D 15-4d



PARALLEL EXIT RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 D 15-4e

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

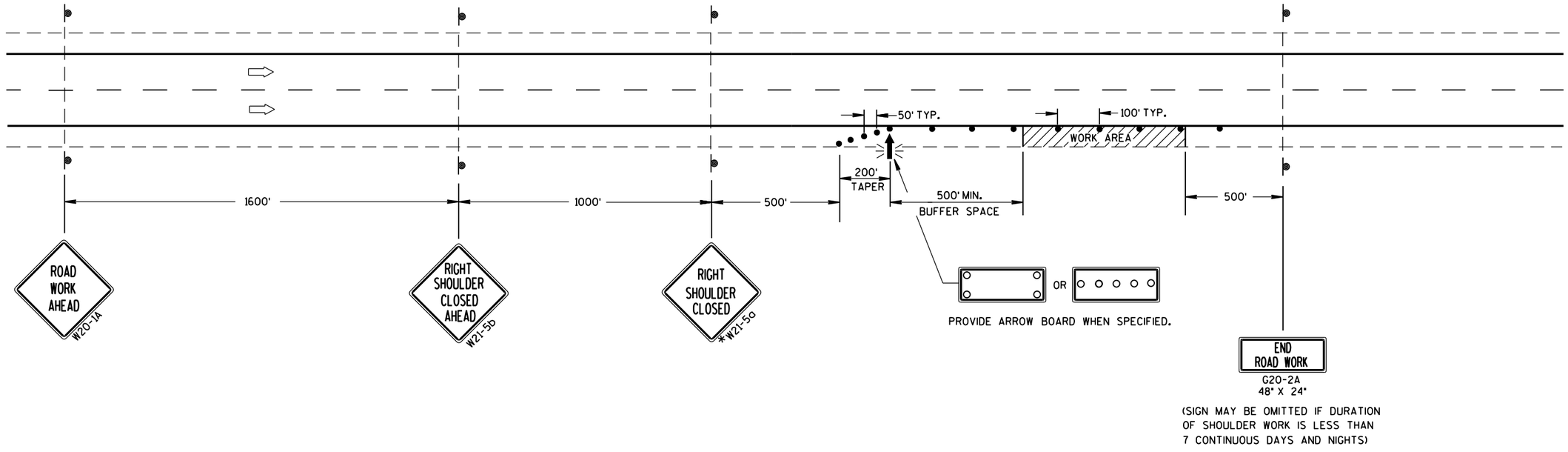
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

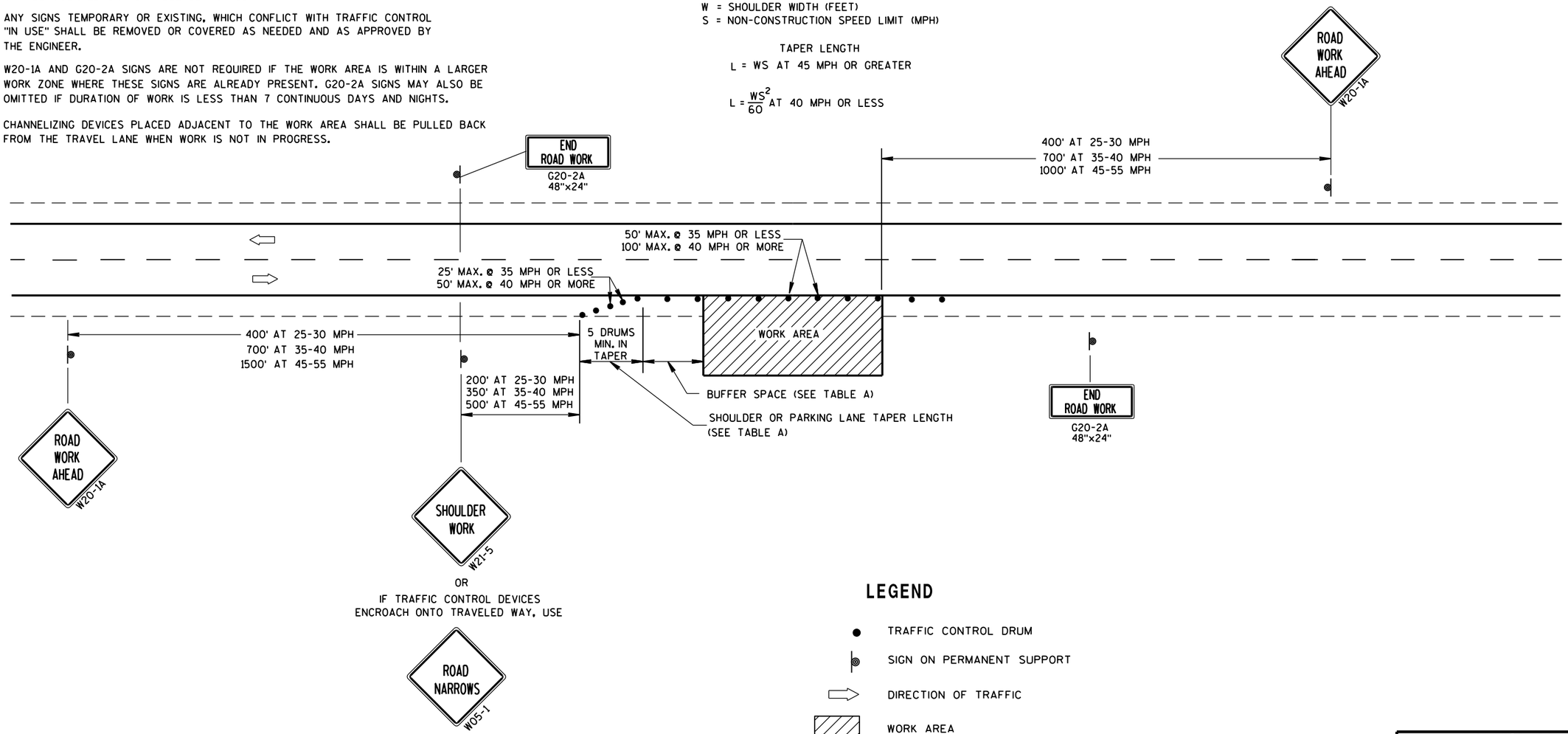
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

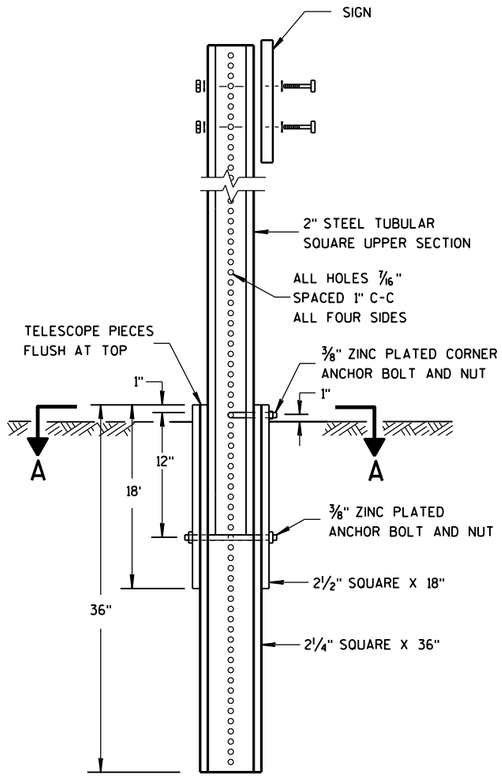
July 14, 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI

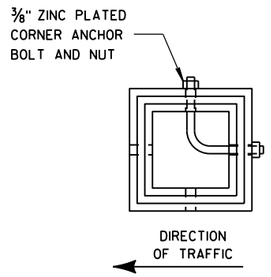
FHWA

6

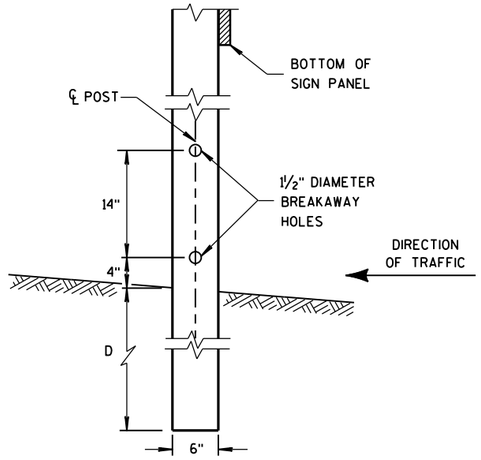
S.D.D. 15 D 28-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



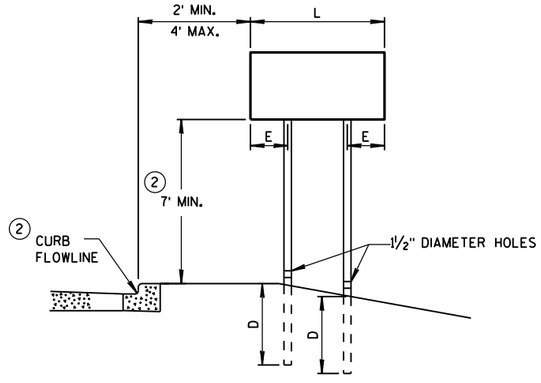
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

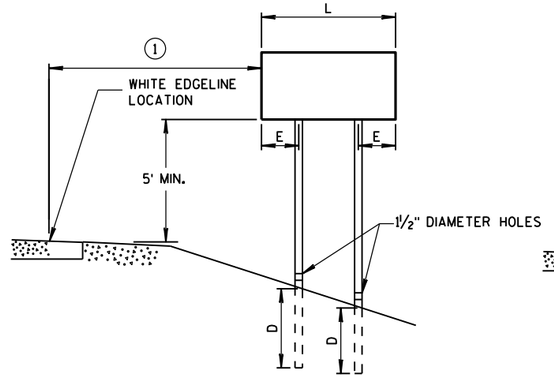
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

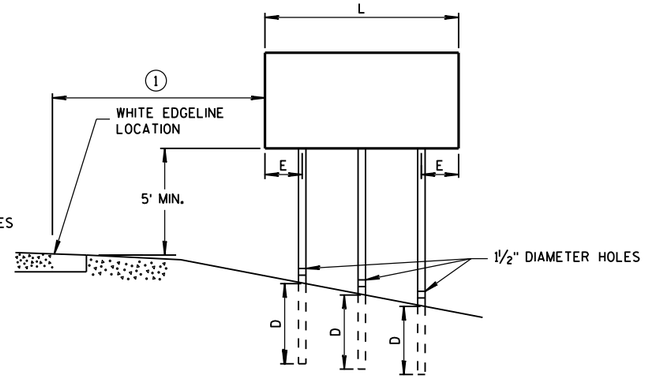
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

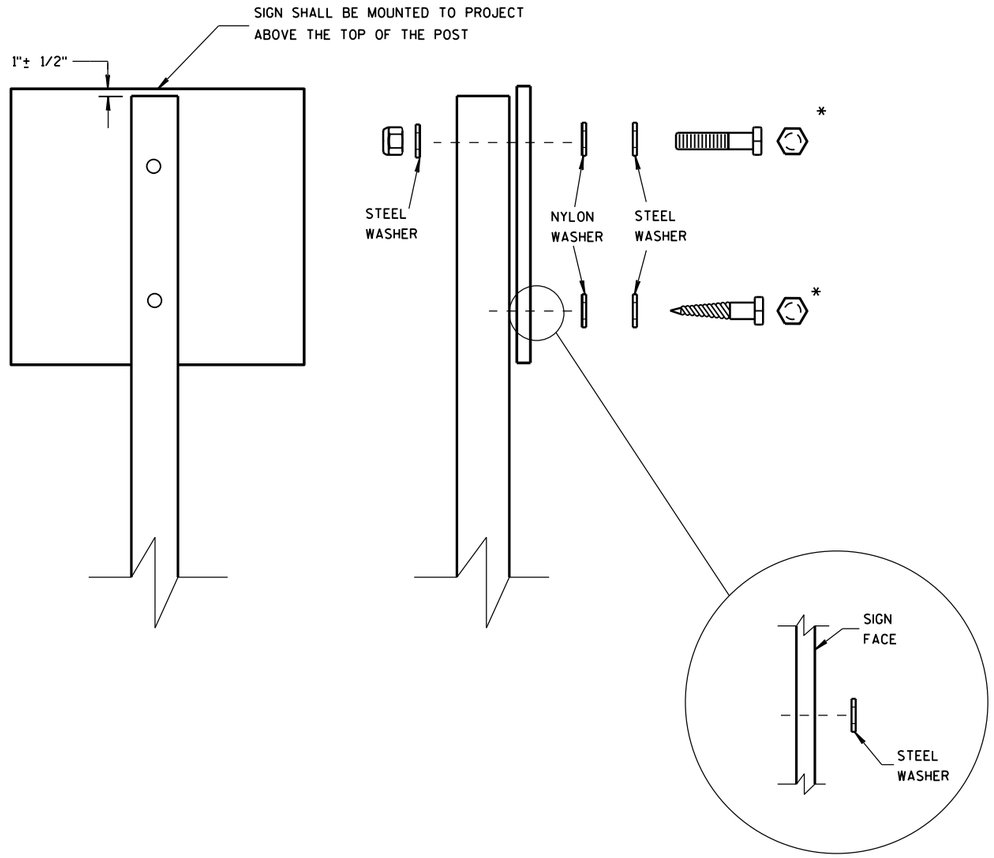
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR SHIFTING RIGHT LANE - REVERSE FOR SHIFTING LEFT LANE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

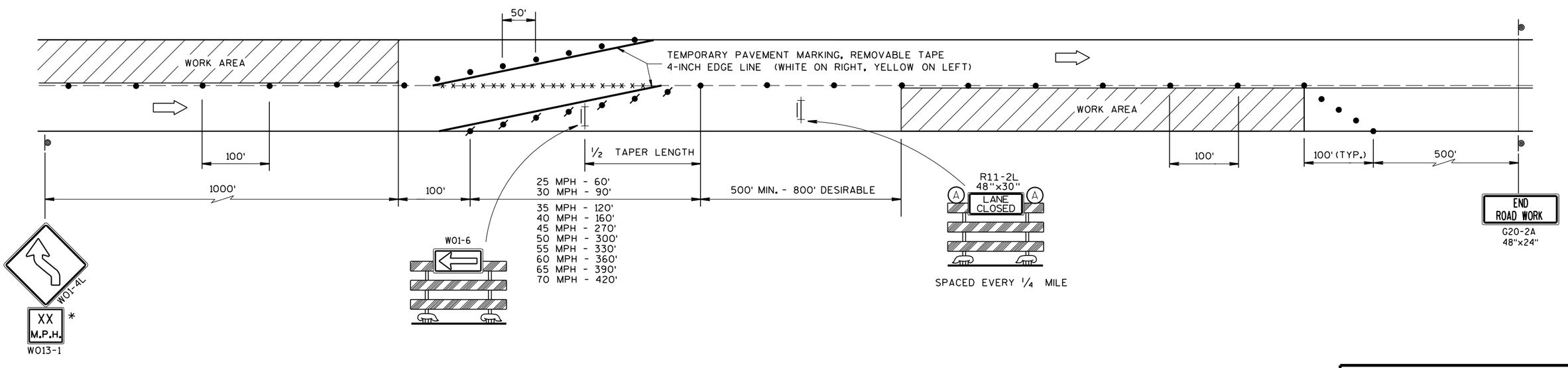
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.



* USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED

LANE SHIFT MULTI-LANE DIVIDED OR ONE WAY ROAD

TRAFFIC CONTROL, LANE SHIFT, MULTI-LANE DIVIDED OR ONE WAY ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

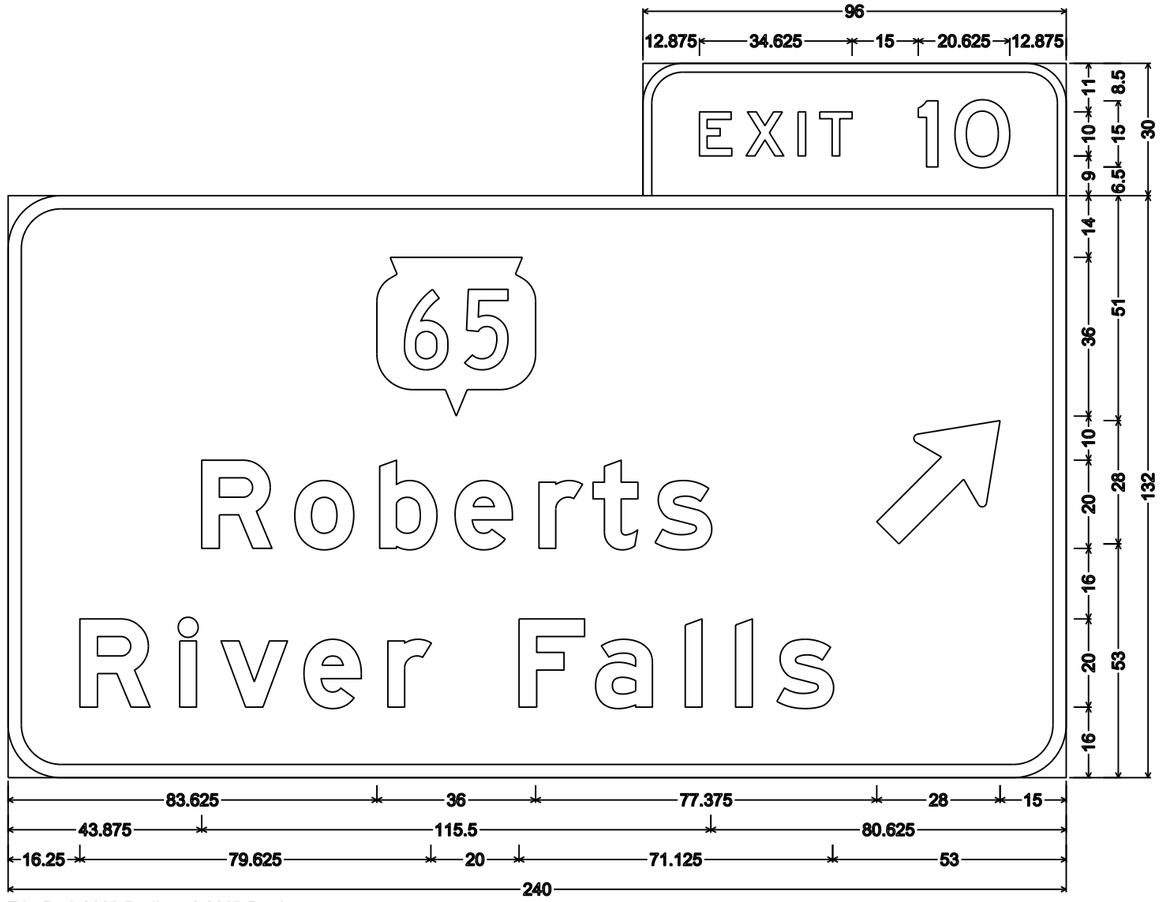
APPROVED
March 2018
DATE
/S/ Andrew I
WORK ZONE E
FHWA

6

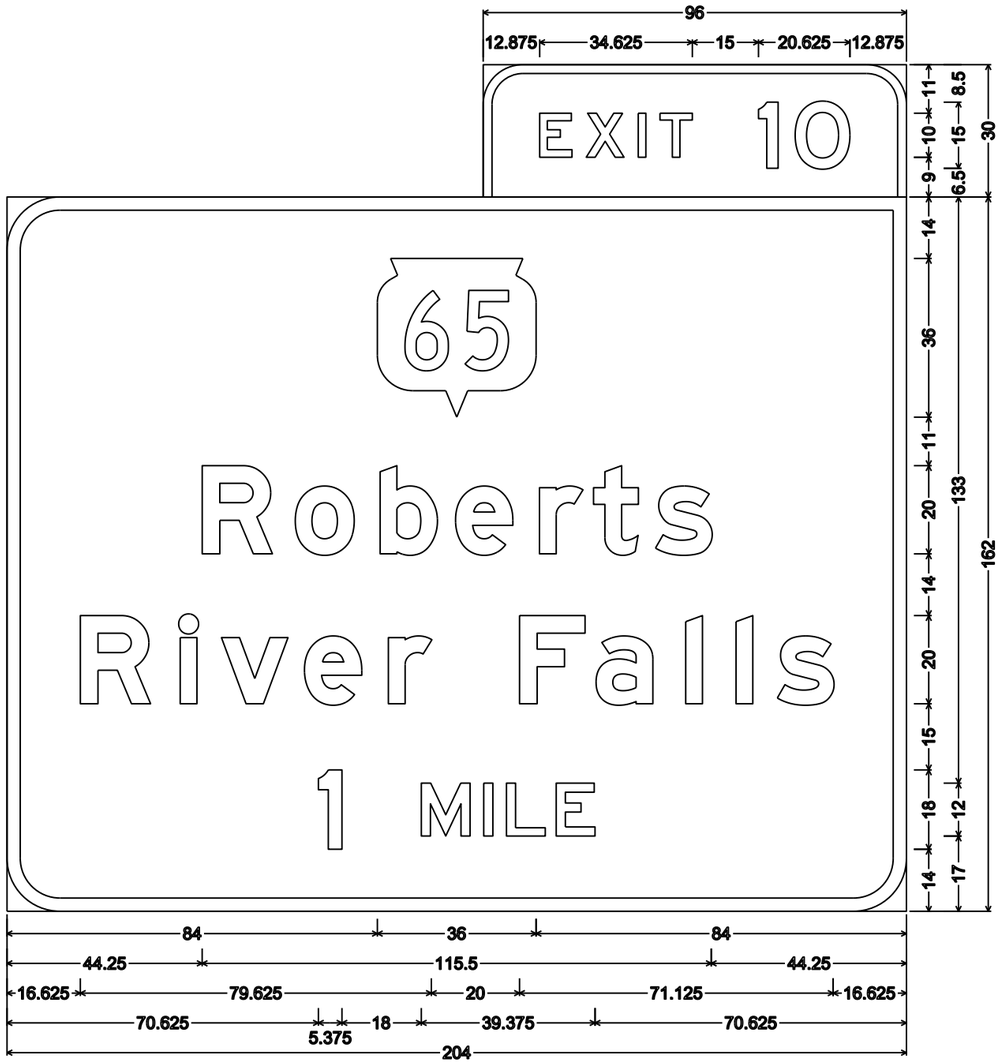
S.D.D. 15 D 40-1

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border,
E4-1A; 12.000" Radius, 3.000" Border



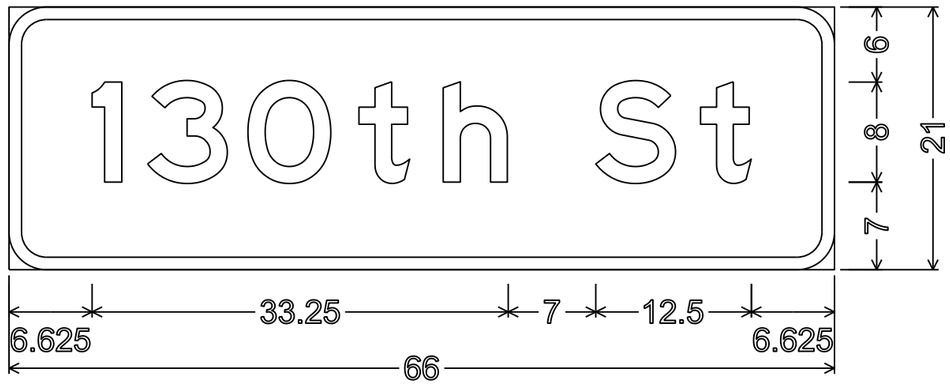
E1-5P; 9.000" Radius, 2.000" Border,
E1-1A; 12.000" Radius, 3.000" Border

7

7

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



M1-94;
3.000" Radius, 1.000" Border

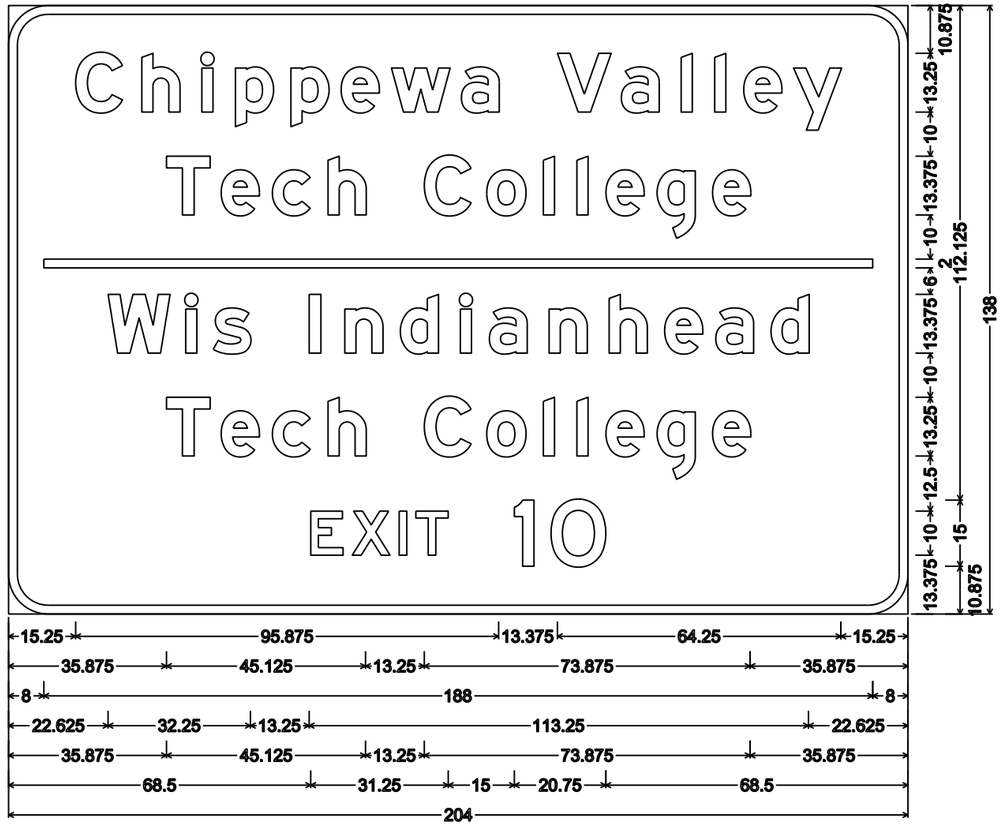
7

7

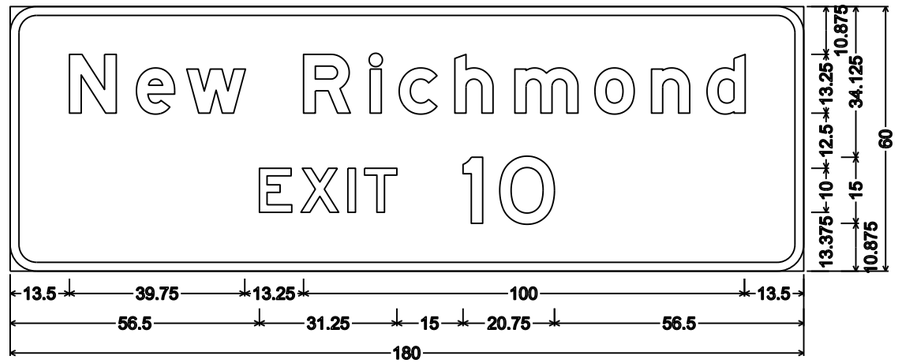
PROJECT NO: 1020-03-76 & 1020-03-77	HWY: IH 94	COUNTY: ST CROIX	PERMANENT SIGNING	SHEET NO: 229	E

NOTES

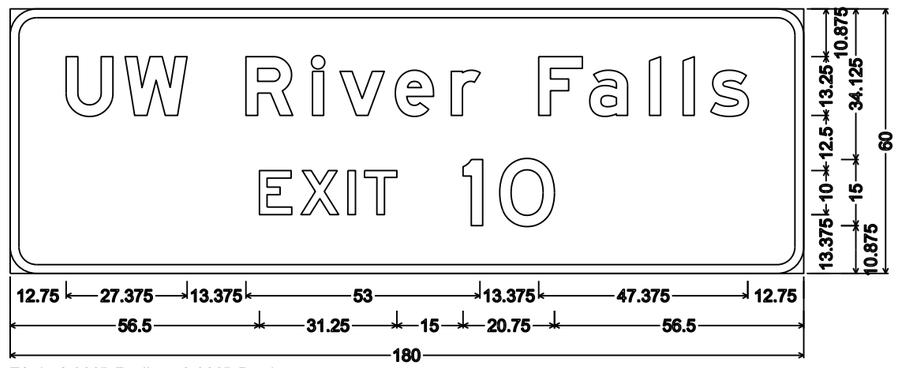
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



E3-1; 9.000" Radius, 2.000" Border



E3-1; 6.000" Radius, 2.000" Border



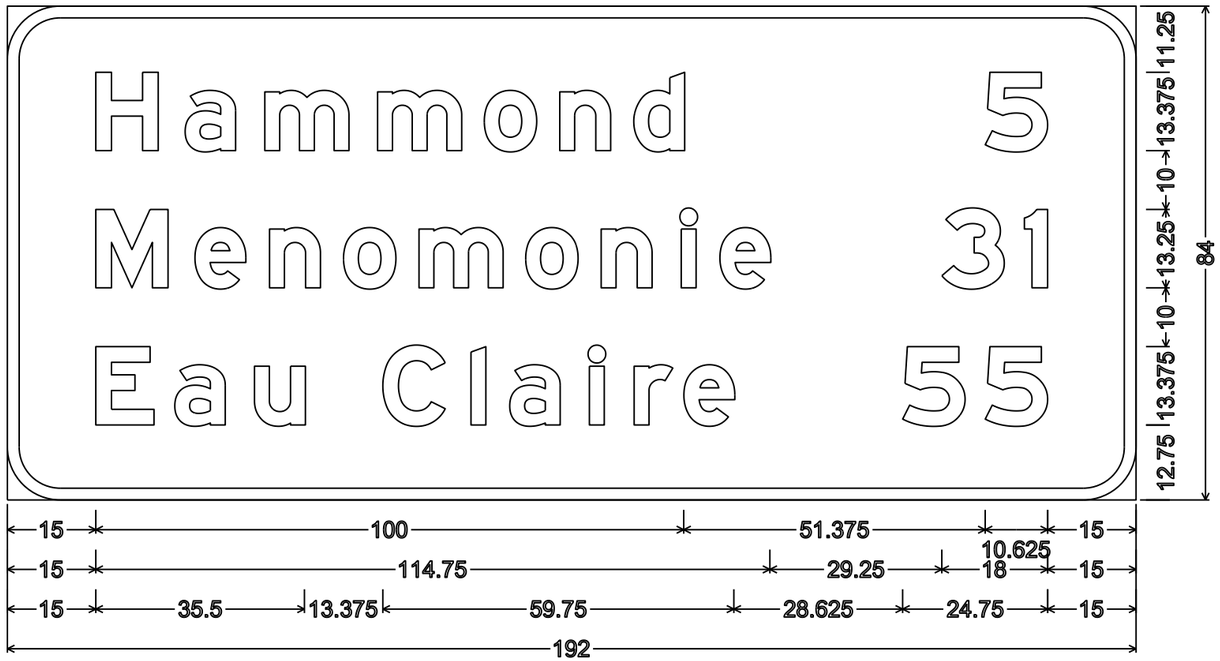
E3-1; 6.000" Radius, 2.000" Border

7

7

NOTES

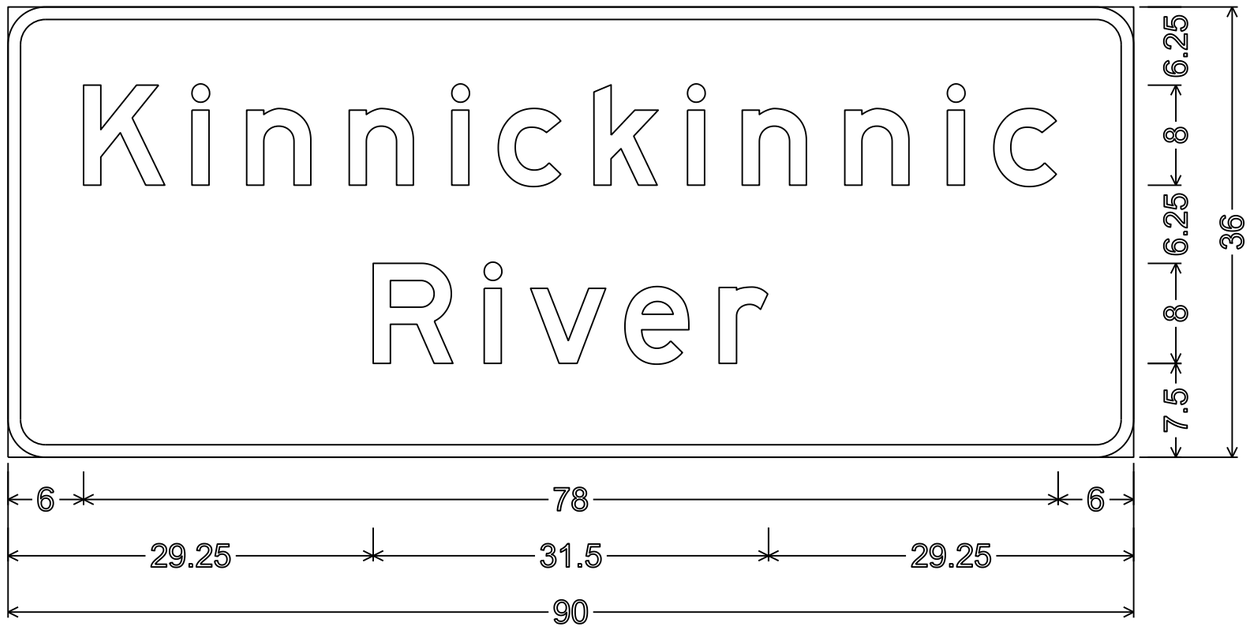
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



D2-3; 9.000" Radius, 2.000" Border

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



I3-1; 3.000" Radius, 1.000" Border

7

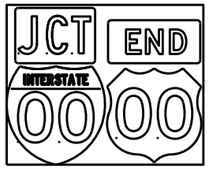
7

PROJECT NO: 1020-03-78 & 1020-03-79	HWY: IH 94	COUNTY: ST CROIX	PERMANENT SIGNING	SHEET NO: 232	E

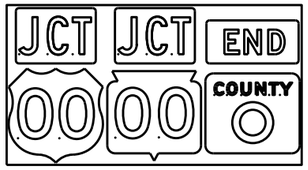
TYPICAL ASSEMBLIES



J1-1



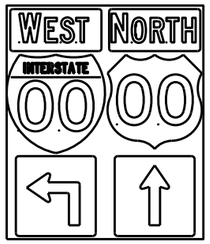
J1-2



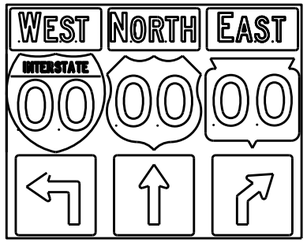
J1-3



J2-1



J2-2

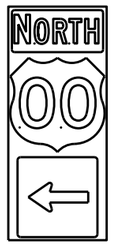


J2-3

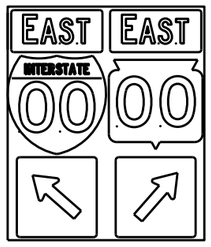


JV

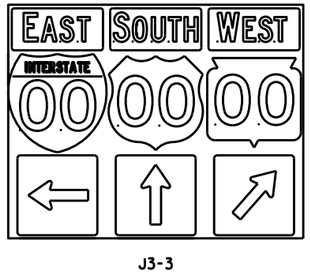
(Typical Vertical J-Assembly
See Note 10 and 11)



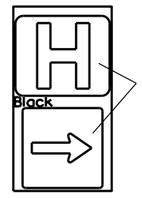
J3-1



J3-2



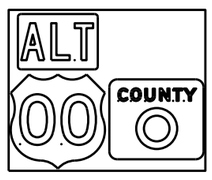
J3-3



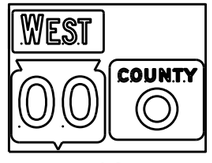
JH-1



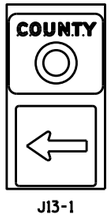
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

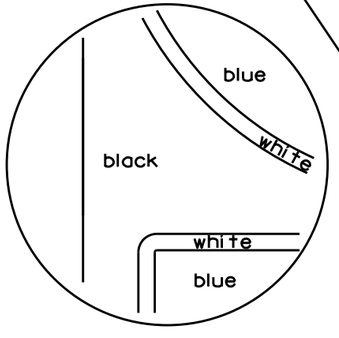


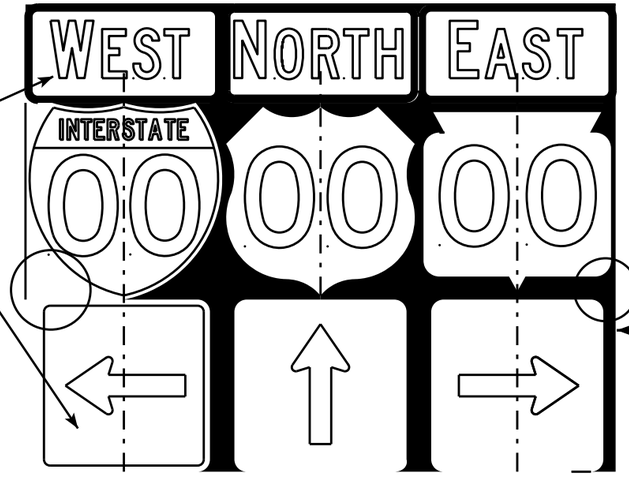
J23-1

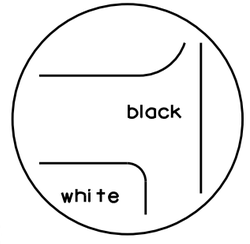


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

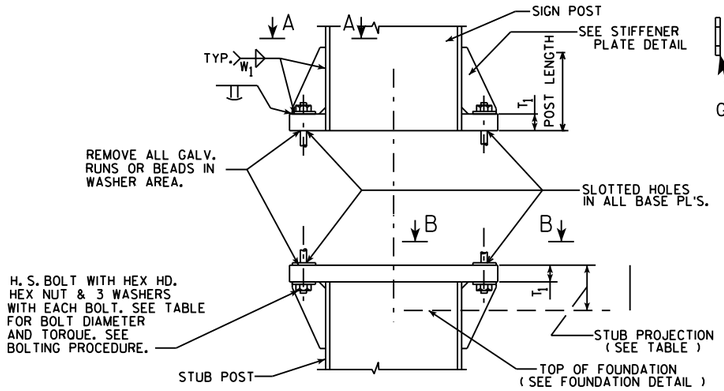
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

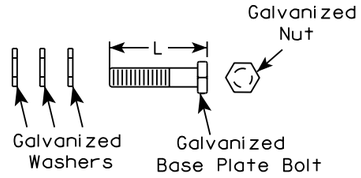
PROJECT NO: SHEET NO: E

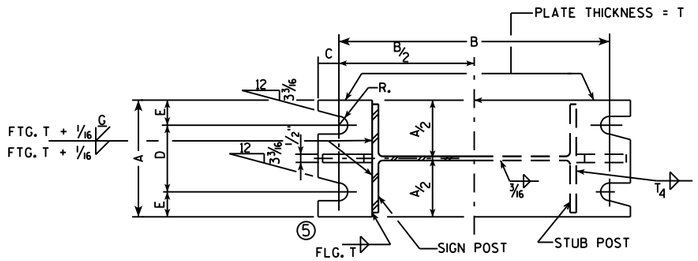
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



SIGN POST AND STUB POST ELEVATION





DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

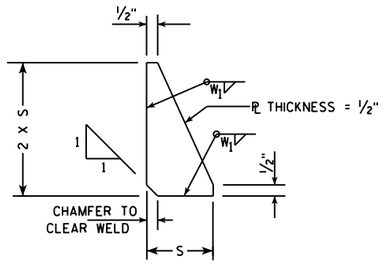
GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND[4]	140

[4] 25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

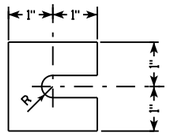
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123. ⑨
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.



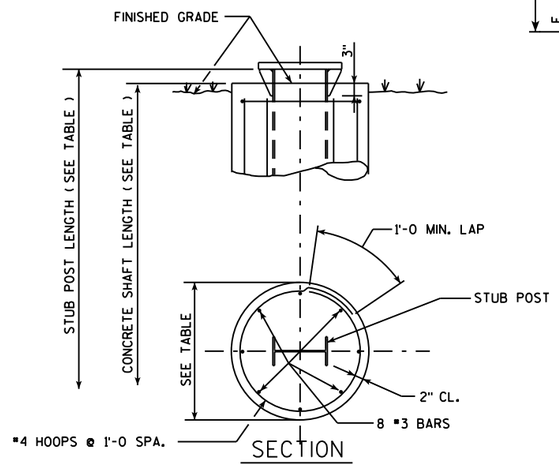
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

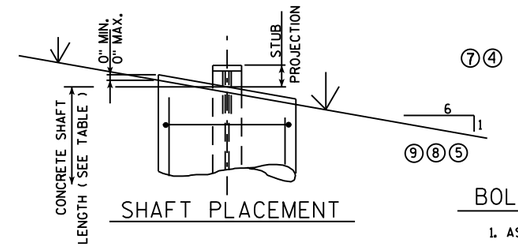


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

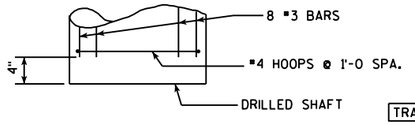
SHIM DETAIL



SECTION



SHAFT PLACEMENT ⑦④ ⑨⑧⑤

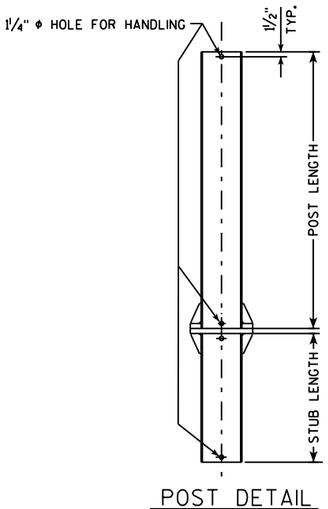


FOUNDATION DETAIL

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



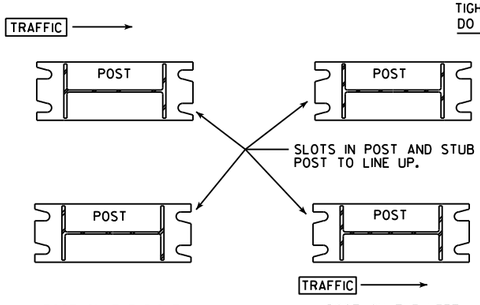
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

⑦

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

⑦



POST SLOT ORIENTATION ⑦

L	X	TYPE	POST SIZE	WEIGHT PER FT	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② K
3 3/4	④	A	W10"X12.0	12.0 LBS	3/4" ø @ 75"-FT.	5 1/4"	1'-0 3/8"	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32"	2 1/8"	3'-6	3"	2'-0 ø	5'-0	76.0" ④
4 3/4	④	B	W12"X16.0	16.0 LBS	7/8" ø @ 85"-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32"	3"	5'-6	3"	2'-0 ø	7'-0	146.5" ④
5		C	W12"X19.0	19.0 LBS	7/8" ø @ 85"-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 ø	7'-6	182.1"
5		D	W12"X22.0	22.0 LBS	7/8" ø @ 85"-FT.	5 1/2"	1'-4 1/4"	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	15/32"	3"	6'-6	3"	2'-0 ø	8'-0	210.5"
5	③	E	W12"X26.0	26.0 LBS	1" ø @ 90"-FT.	7"	1'-4 1/4"	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32"	3"	7'-0	3"	2'-0 ø	8'-6	293.0" ③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/22/17 PLATE NO. A3-1.17

NO.	DATE	REVISION
⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE & WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 . T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET

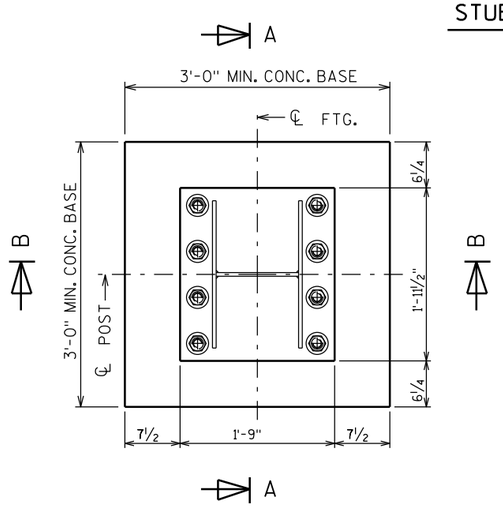
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 234 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 22-AUG-2017 09:41 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 5.415383:1.000000

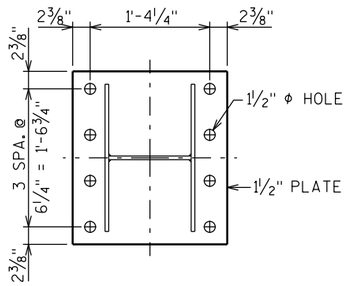
WISDOT/CADDS SHEET 42

7 7

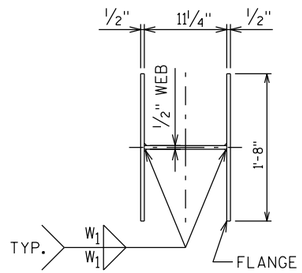
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



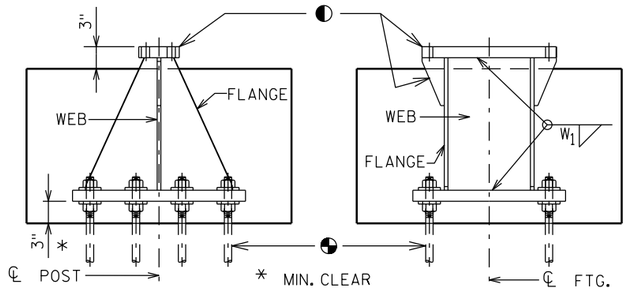
BASE PLATE



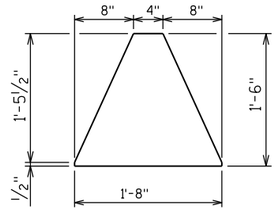
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



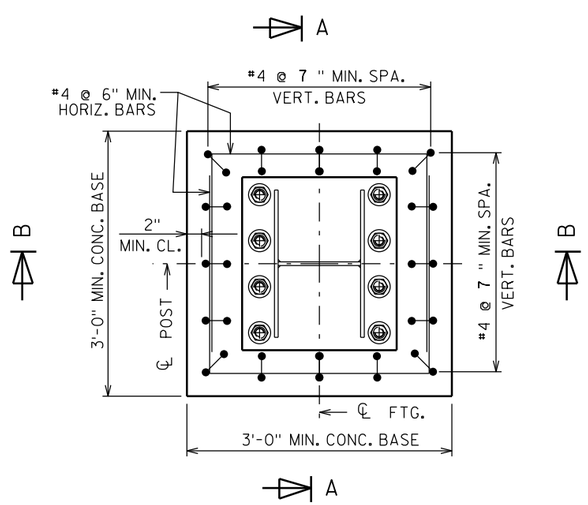
FLANGE

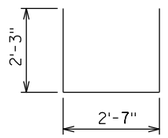
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

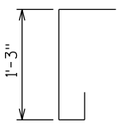
CONCRETE BASE SECTION





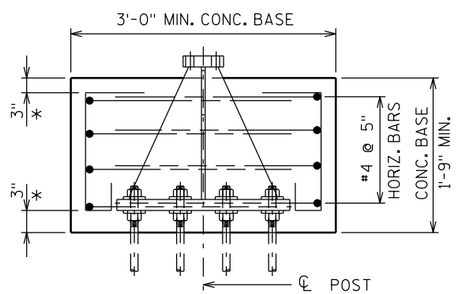
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



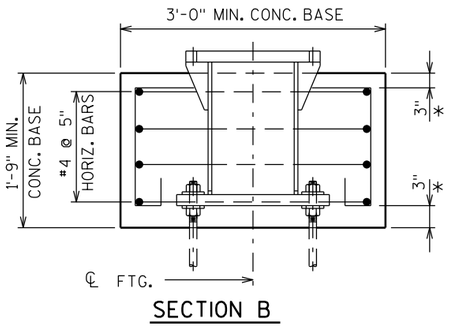
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

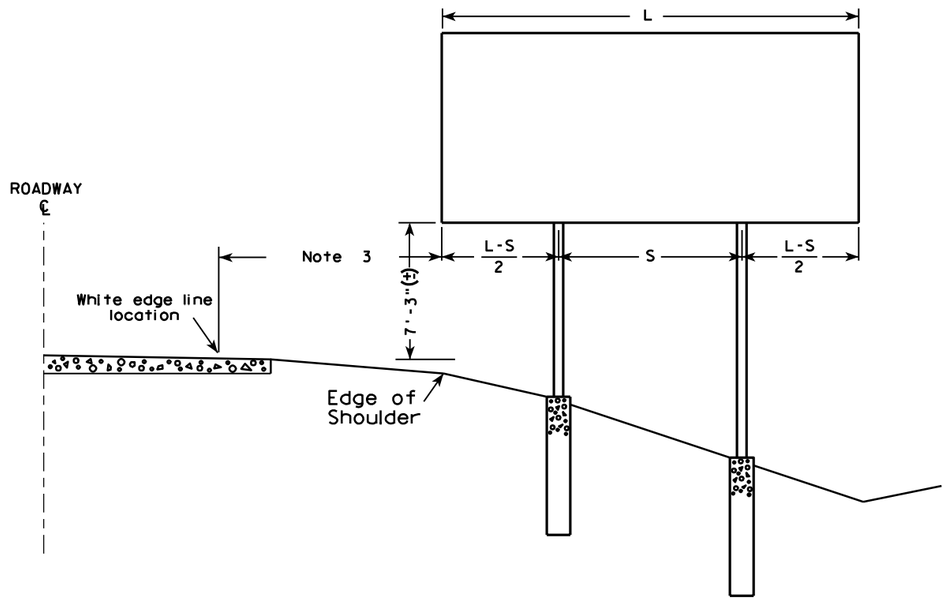
APPROVED Matthew R Rauch
for State Traffic Engineer

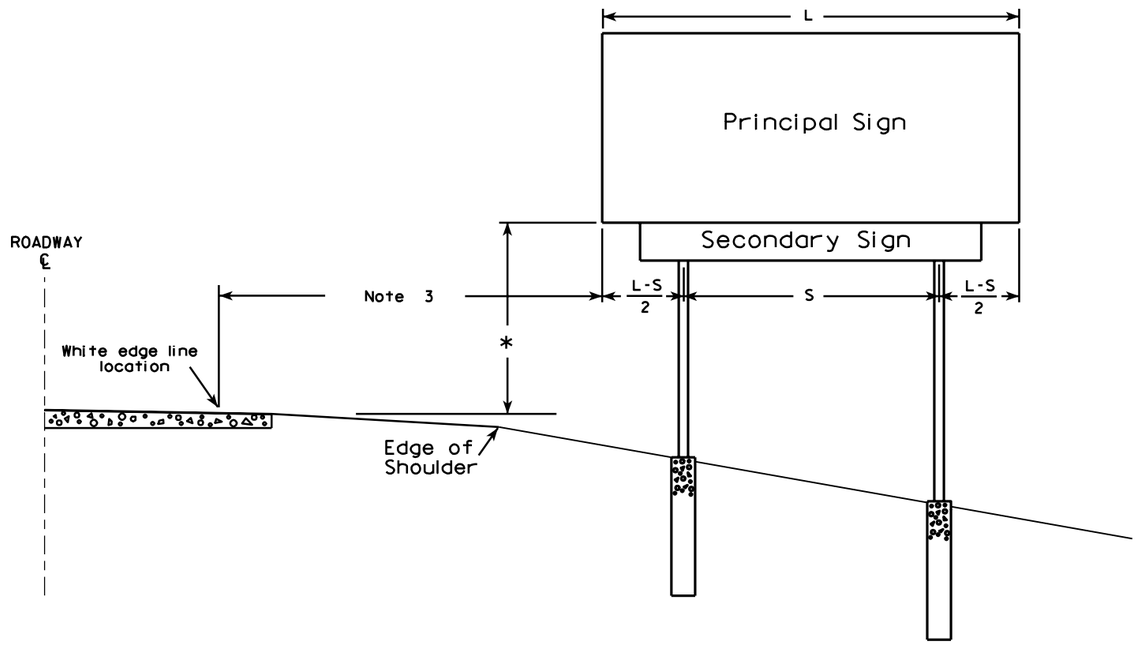
DATE 2/06/2014 PLATE A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000

WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

TYPICAL INSTALLATION
OF TYPE I SIGNS

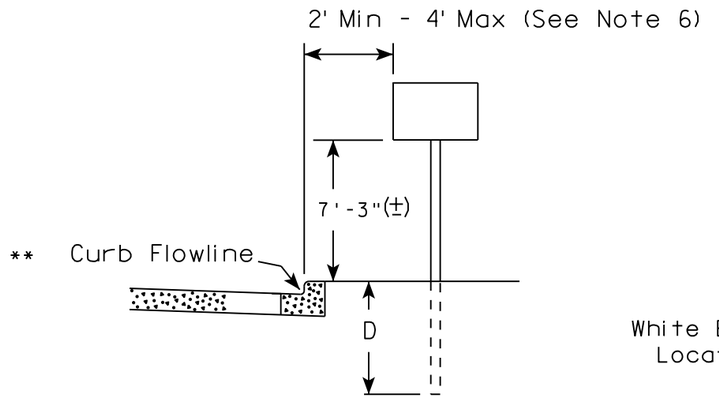
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

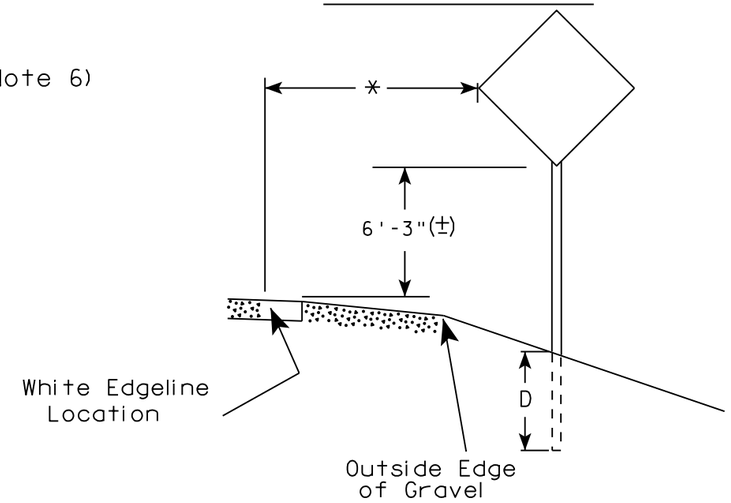
DATE 4/02/08 PLATE NO. A4-1.9

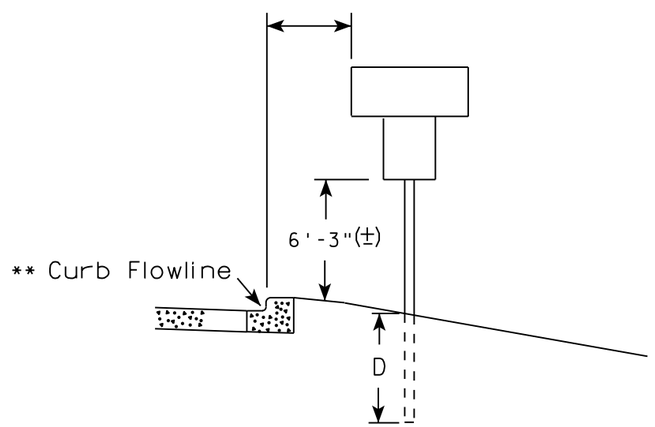
PROJECT NO:				SHEET NO: 236	E

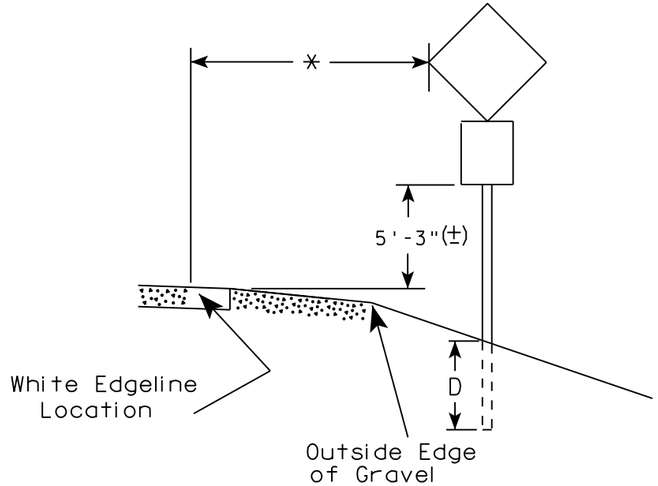
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

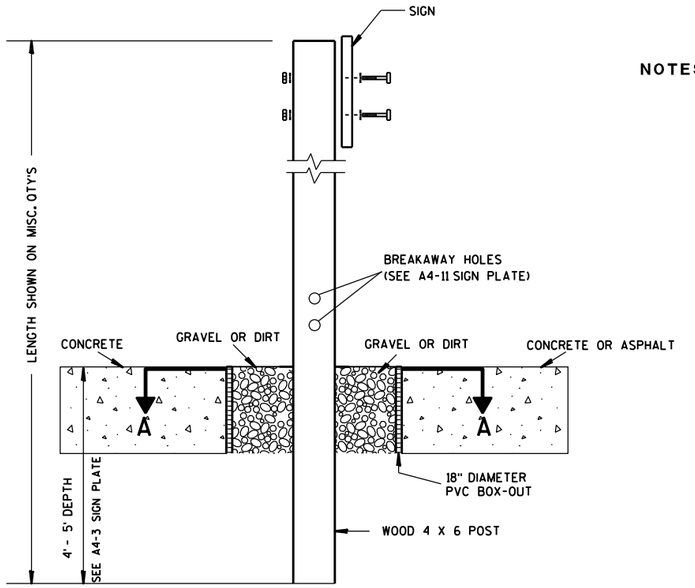
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

7 7

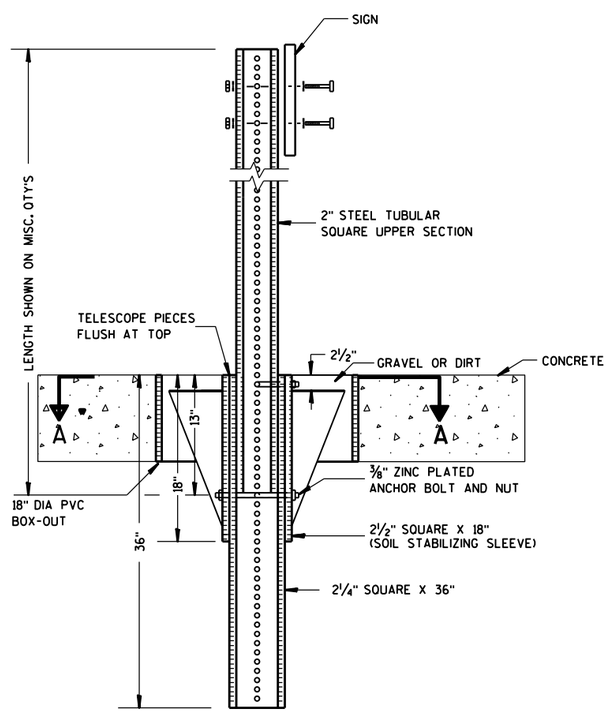
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 237	E



ELEVATION VIEW

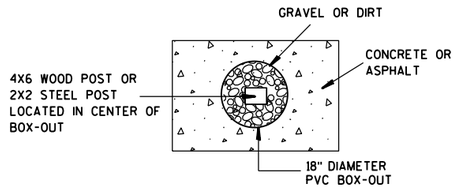
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

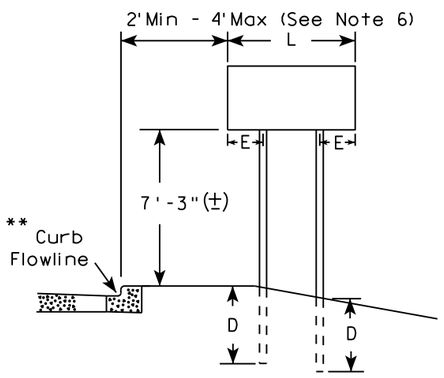
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

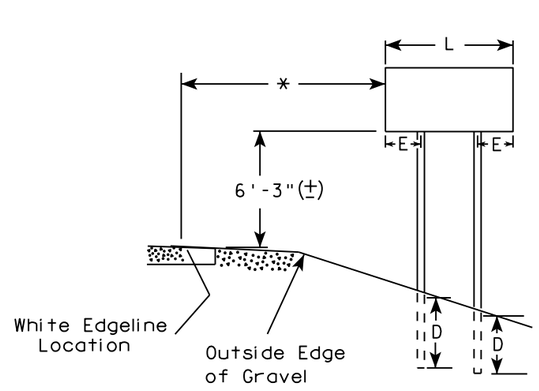
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

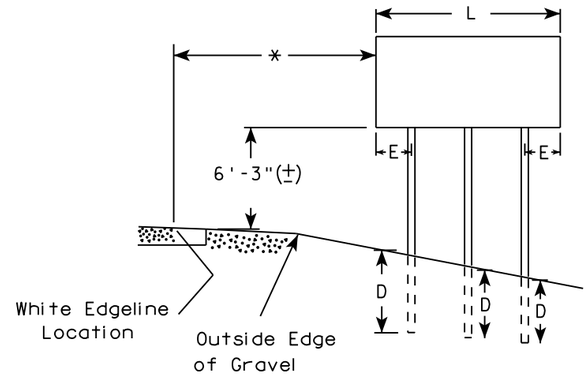
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

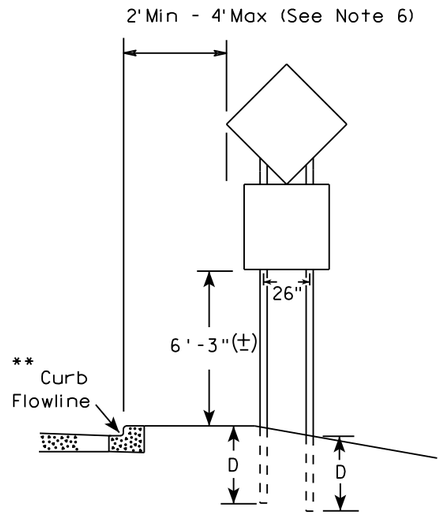
URBAN AREA



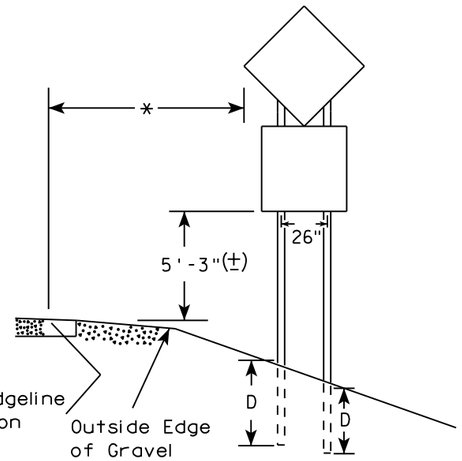
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

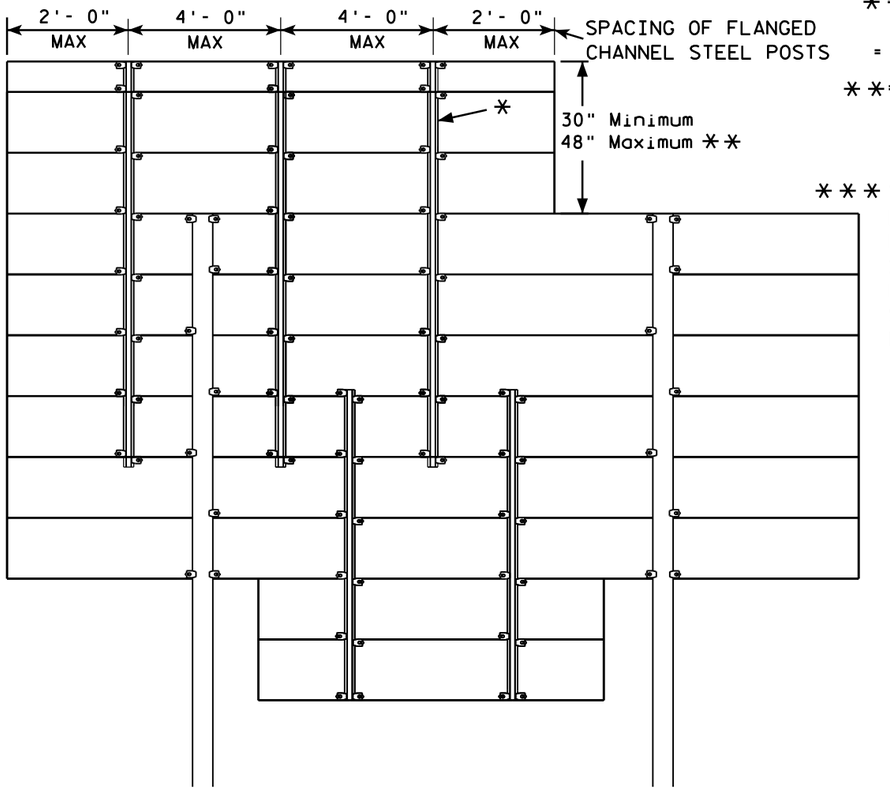
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 239	E

GROUND MOUNTED SIGN

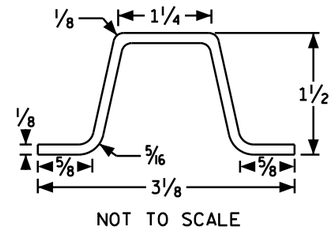


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

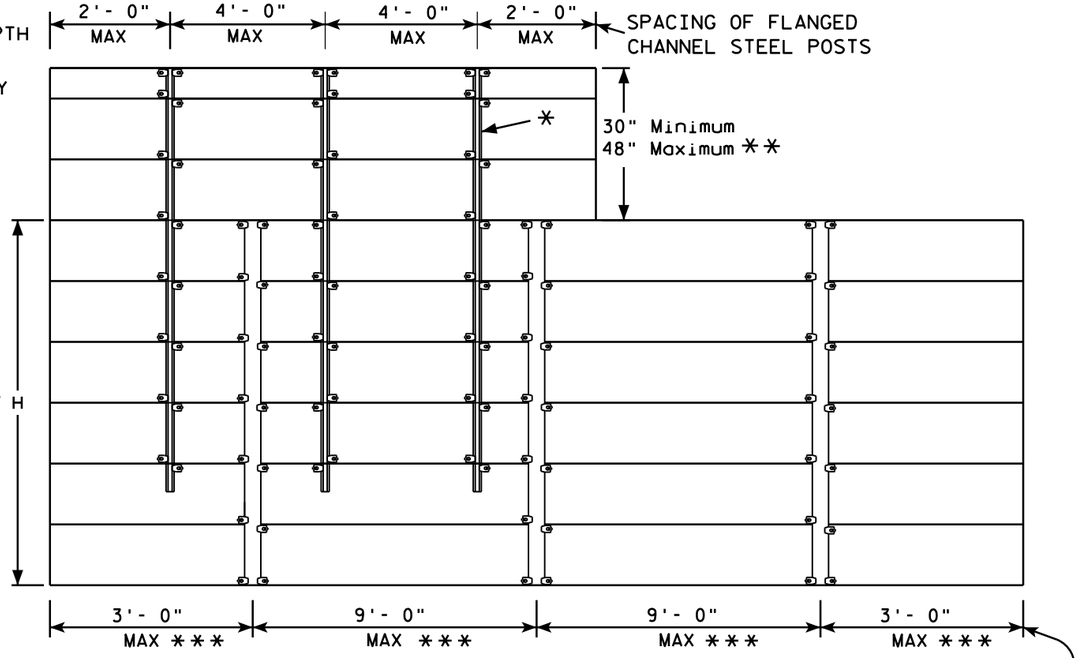
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

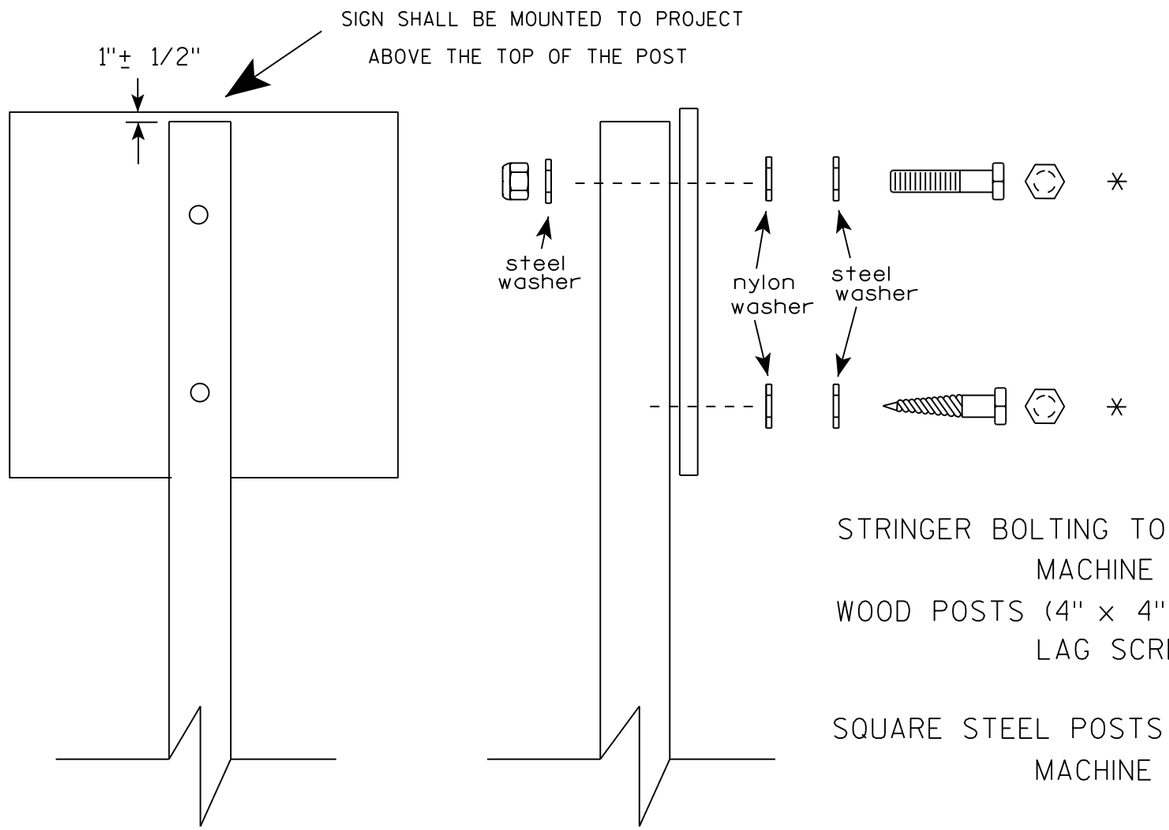
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 240 A4-6.12

PROJECT NO: | SHEET NO: E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

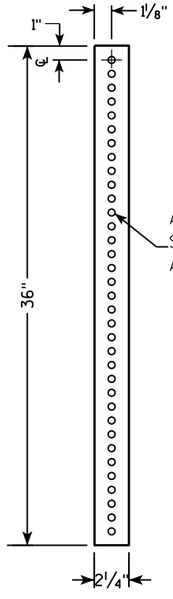
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

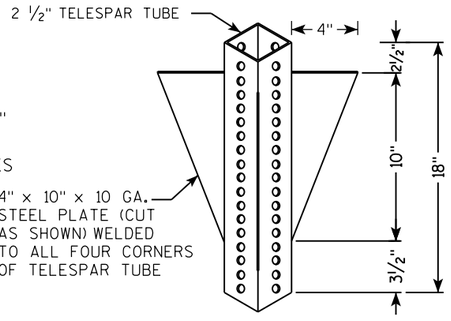
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

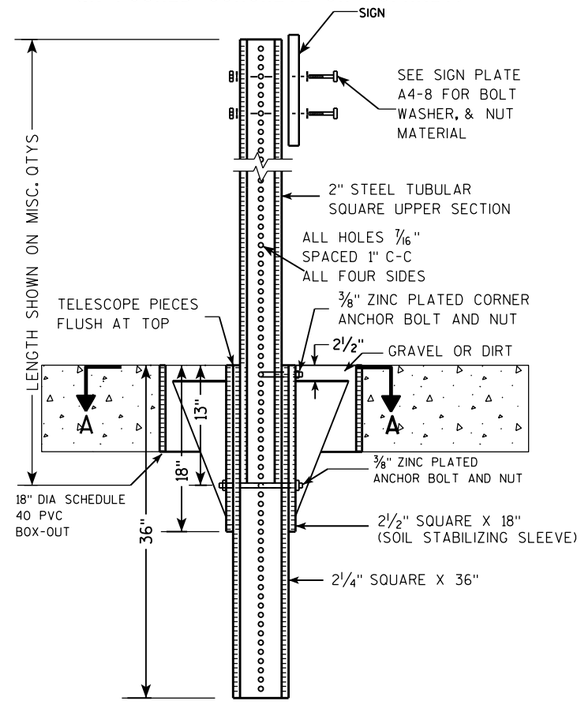
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



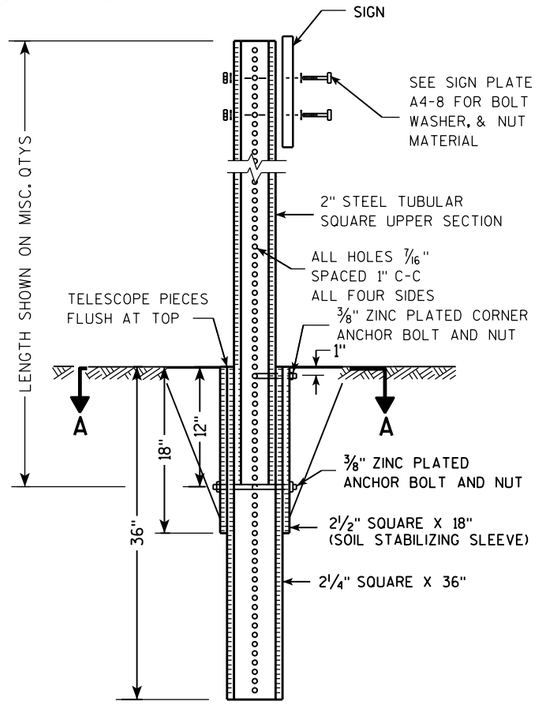
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

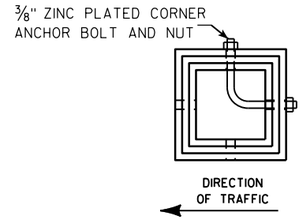


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

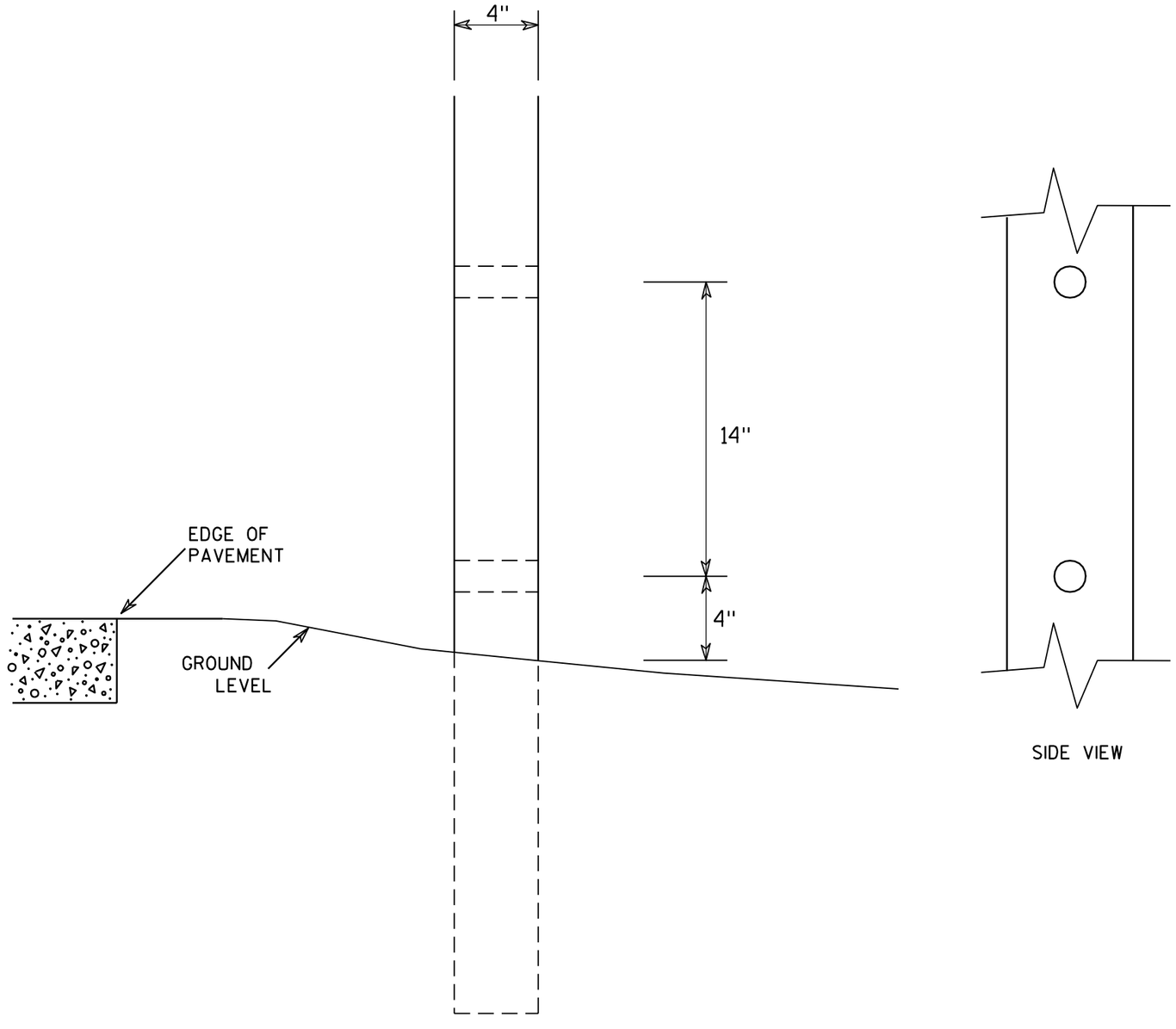
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 242 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

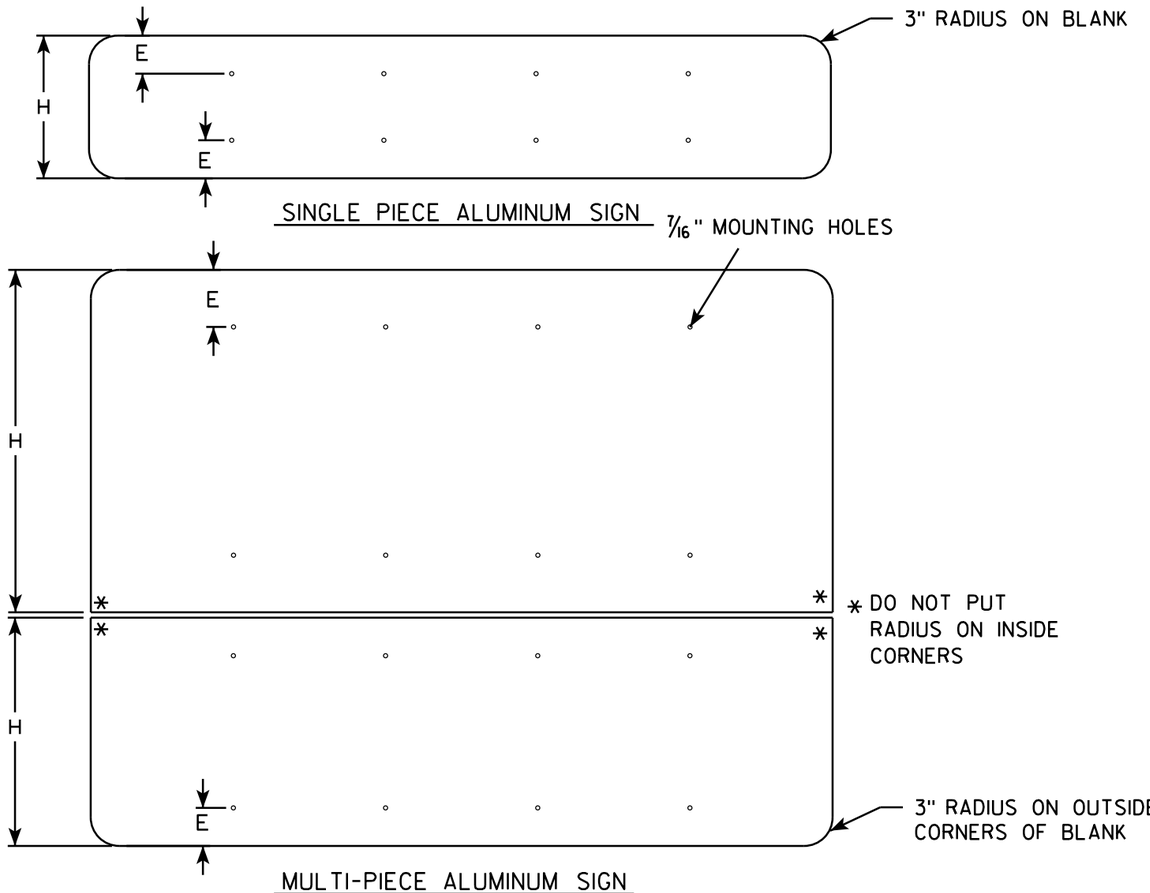
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

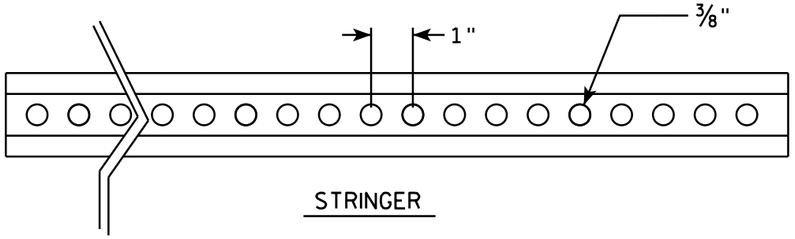
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 243	E



GENERAL NOTES

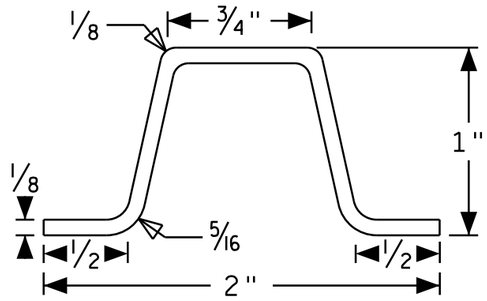
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

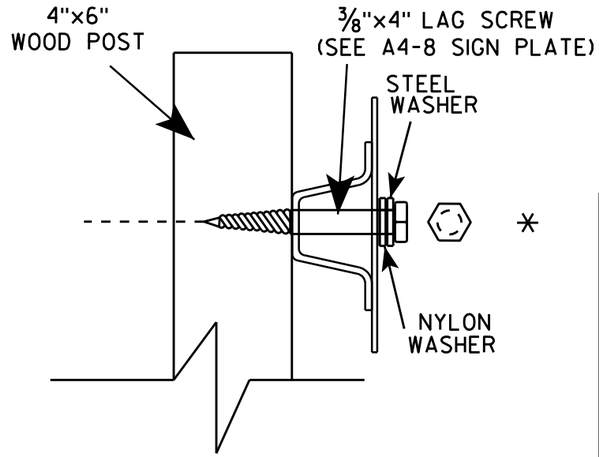


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

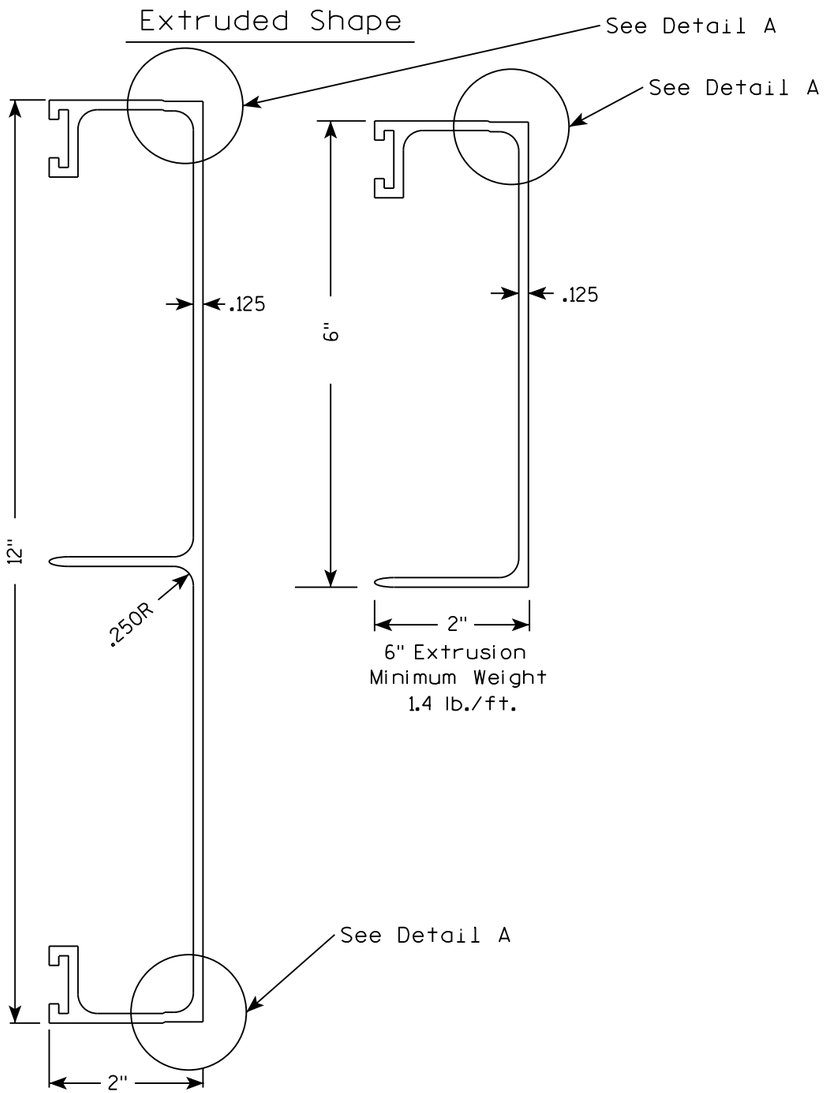
for State Traffic Engineer

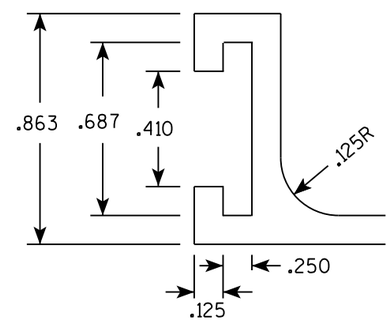
DATE 4/26/16 PLATE NO A4-18.1

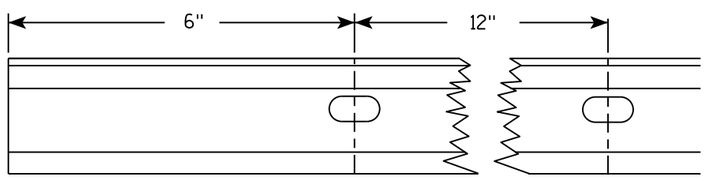
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000

Extruded Shape







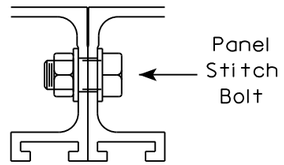
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

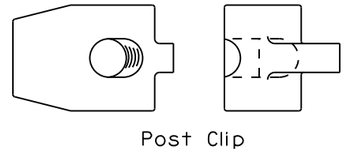
The hardware includes:

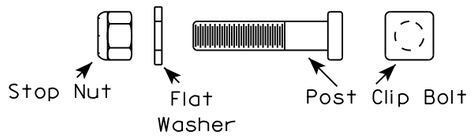
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

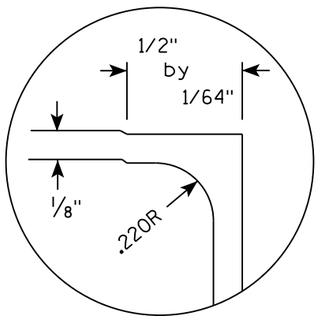
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

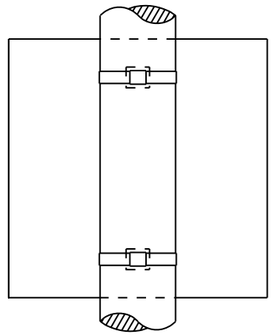
APPROVED Matthew R Rauch
for State Traffic Engineer

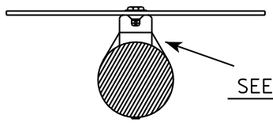
DATE 11/30/16 PLATE NO. A5-2.10

PROJECT NO:				SHEET NO: 245	E

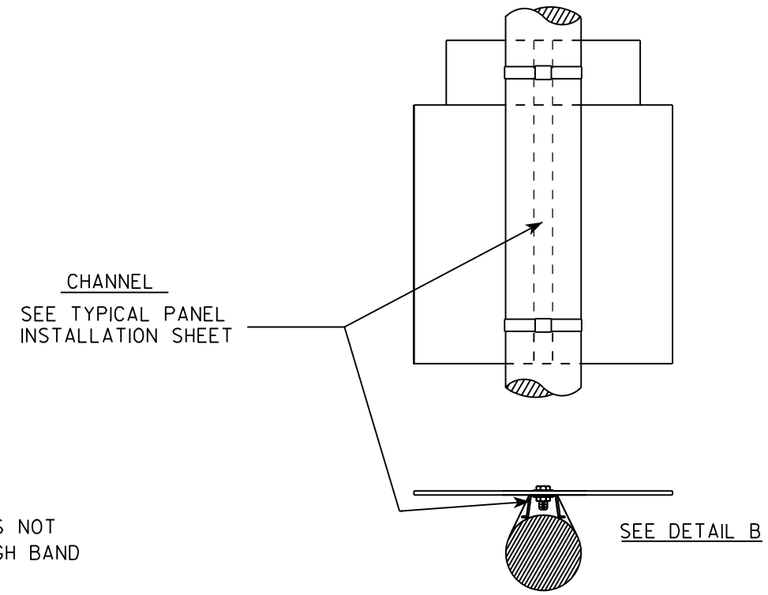
BANDING

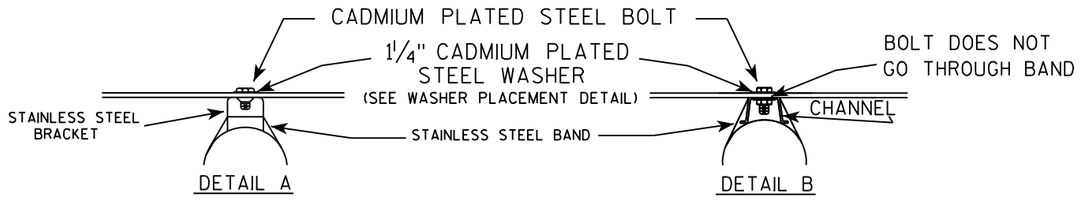
SINGLE SIGN



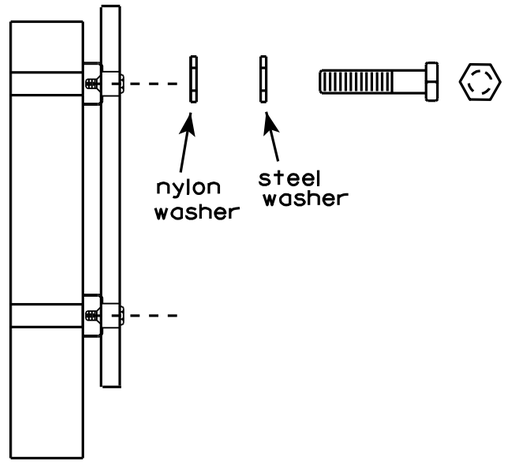


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

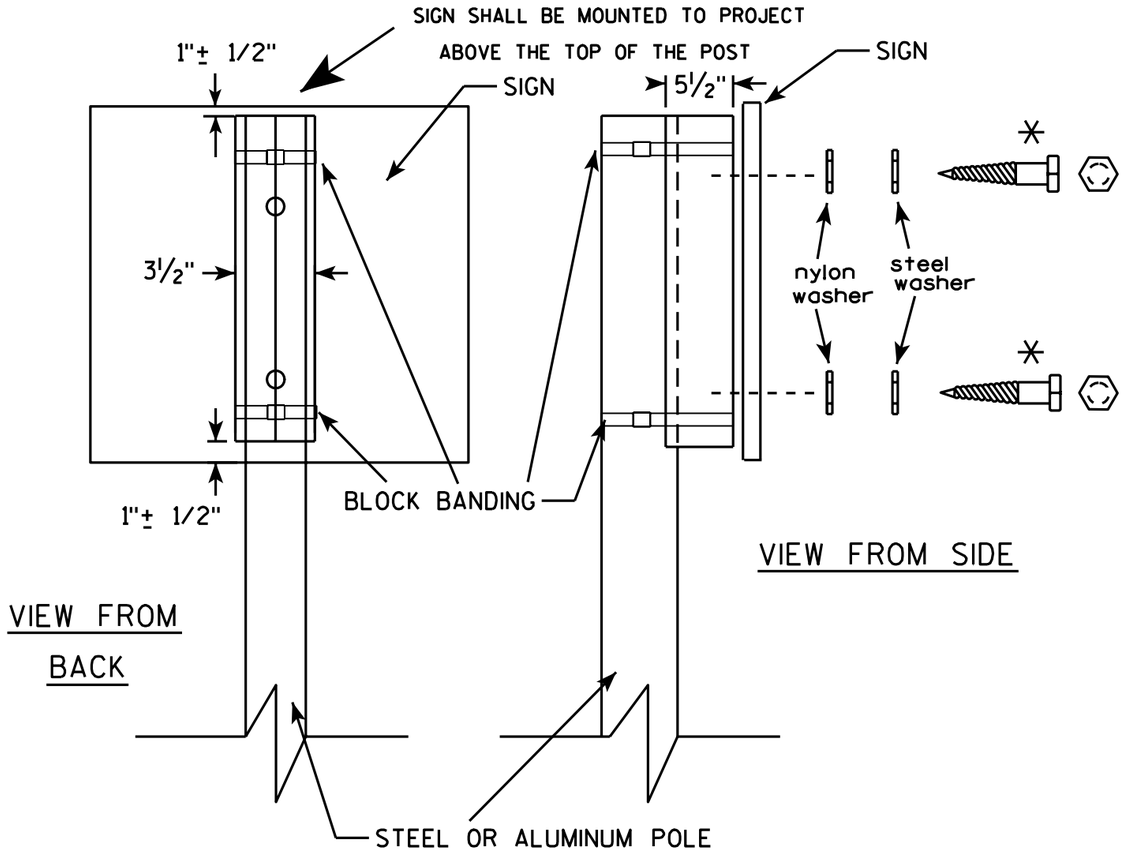
STANDARD SIGN
SIGN BANDING DETAILS

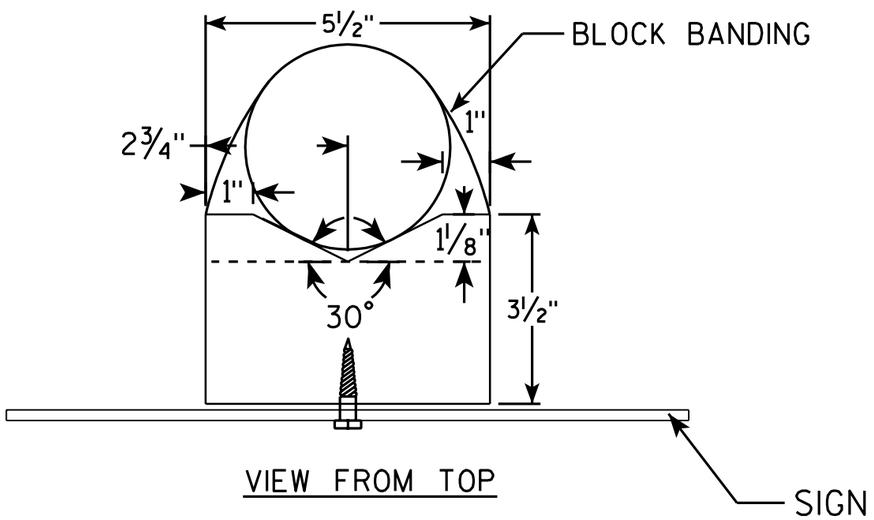
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 246	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

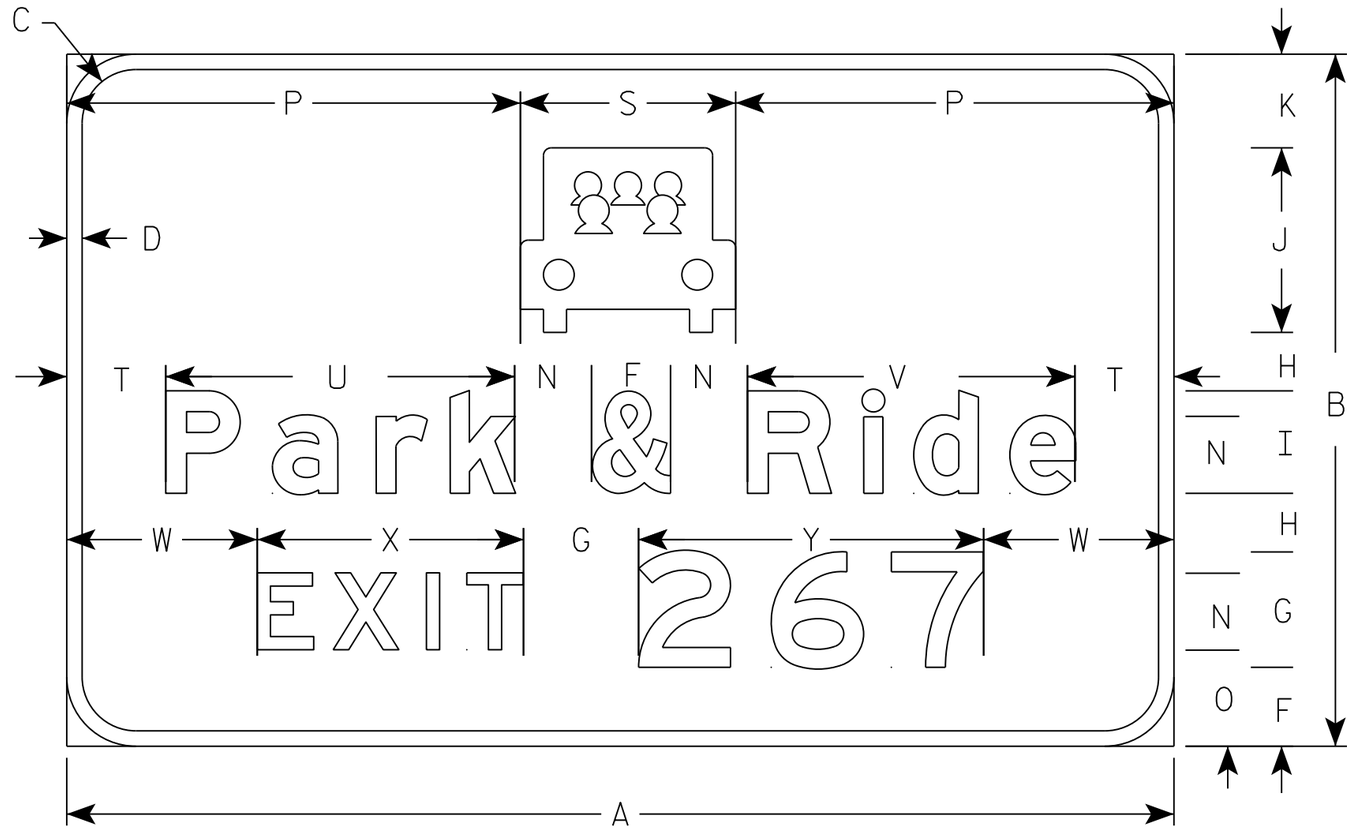
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 247 E



D4-4

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - Series E Modified.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	90	9	2		10 1/4	15	7 5/8	13 7/8	24	12 1/4			10	12 1/2	58			28	12 7/8	45 3/8	42 5/8	24 3/4	34 5/8	44 7/8		90.0
5	144	90	9	2		10 1/4	15	7 5/8	13 7/8	24	12 1/4			10	12 1/2	58			28	12 7/8	45 3/8	42 5/8	24 3/4	34 5/8	44 7/8		90.0

STANDARD SIGN
D4-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/14/17 PLATE NO. D4-4.3

PROJECT NO:

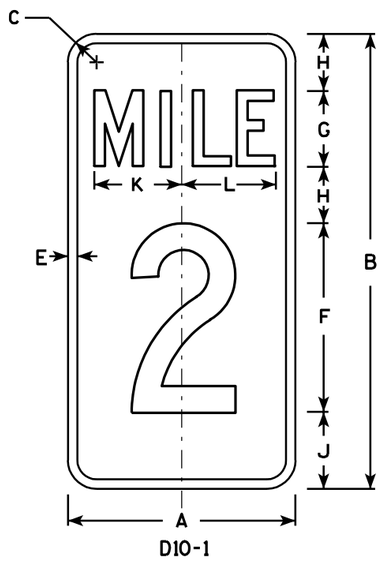
SHEET NO: 248 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\D44.DGN PLOT DATE : 14-MAR-2017 11:01 PLOT BY : $$...plotuser...$$

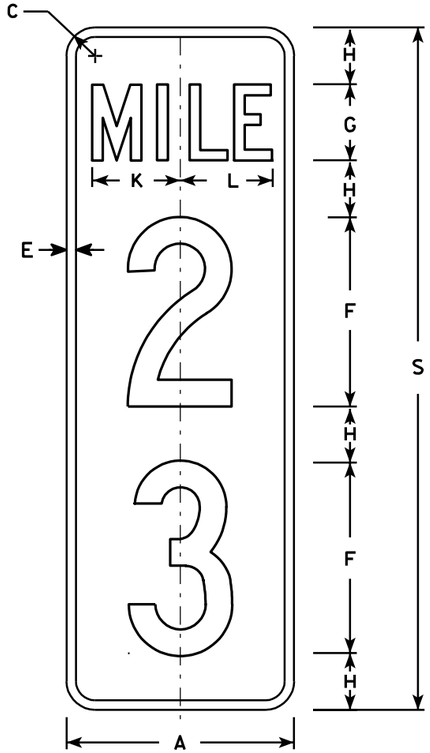
WISDOT/CADDS SHEET 42

7

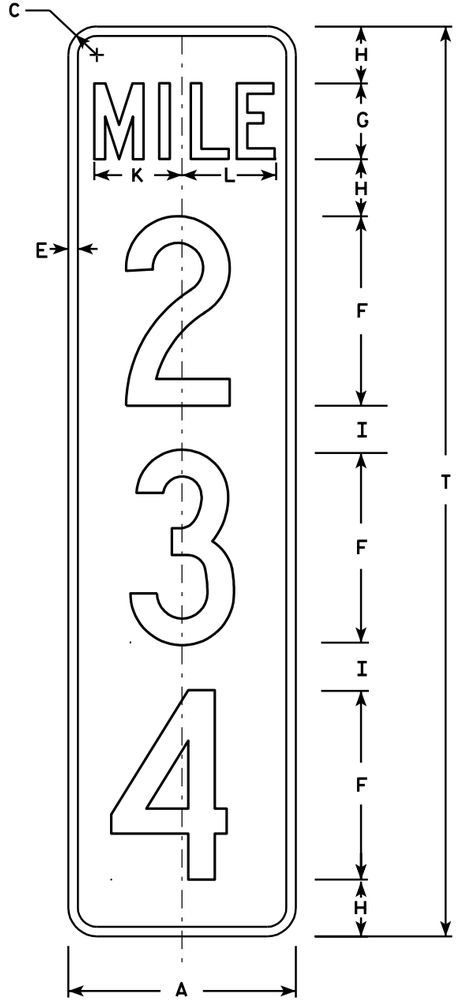
7



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

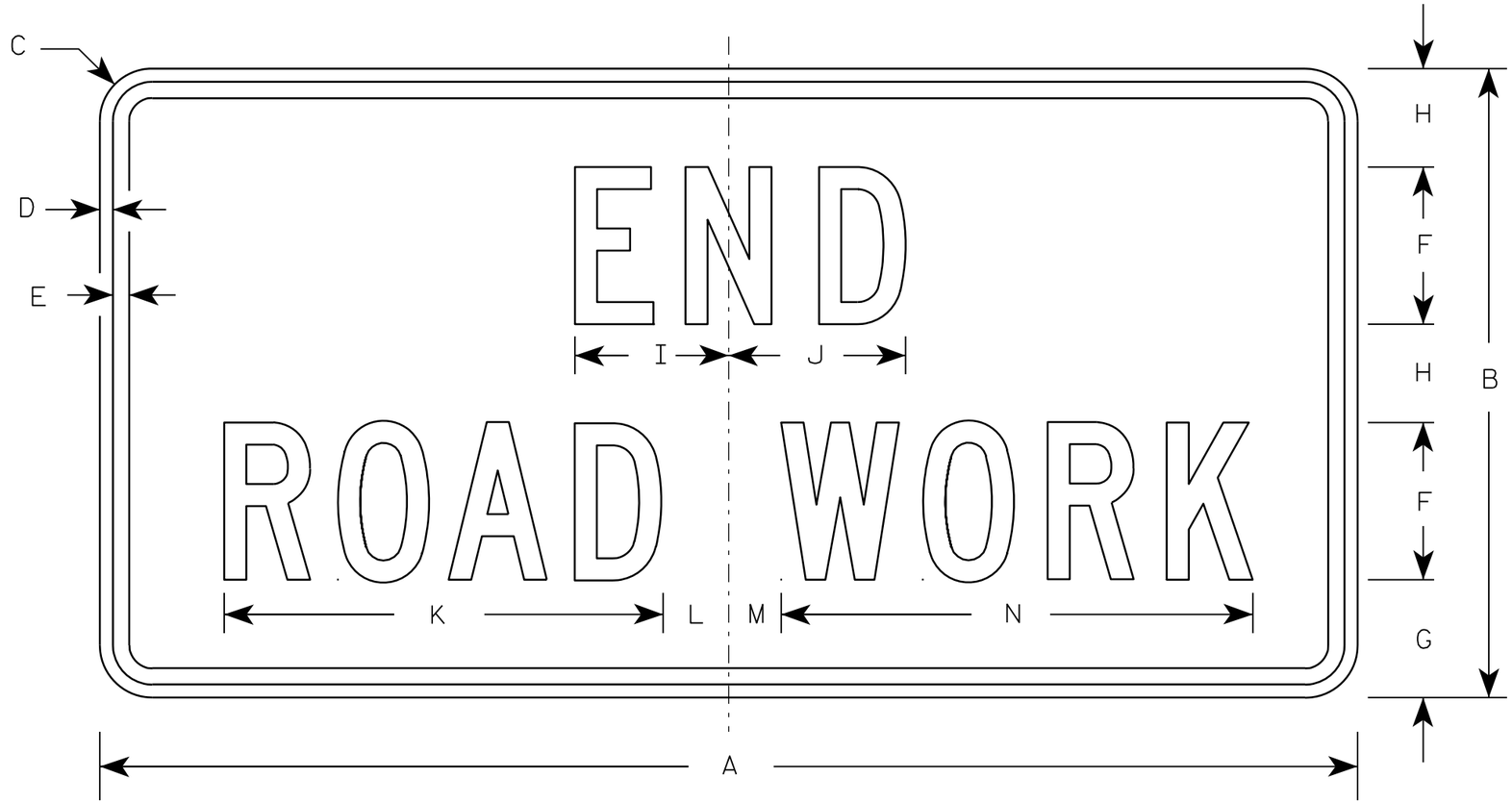
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 249 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

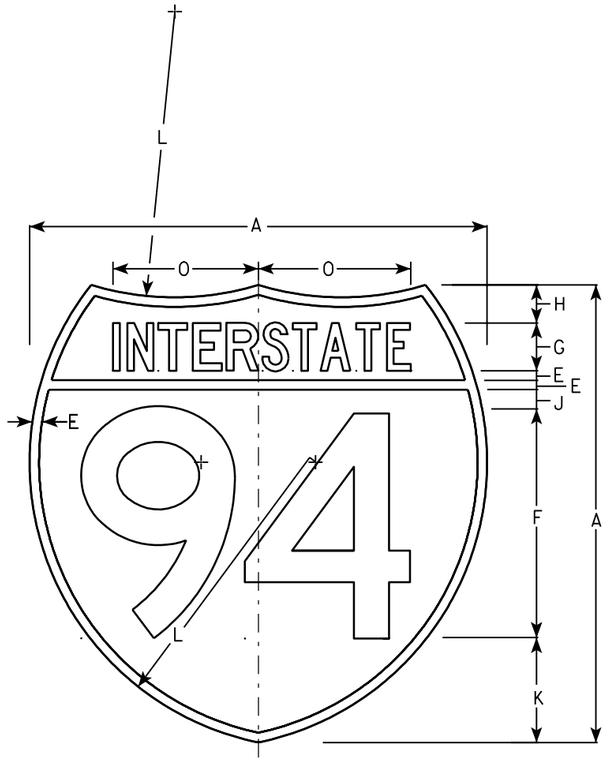
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

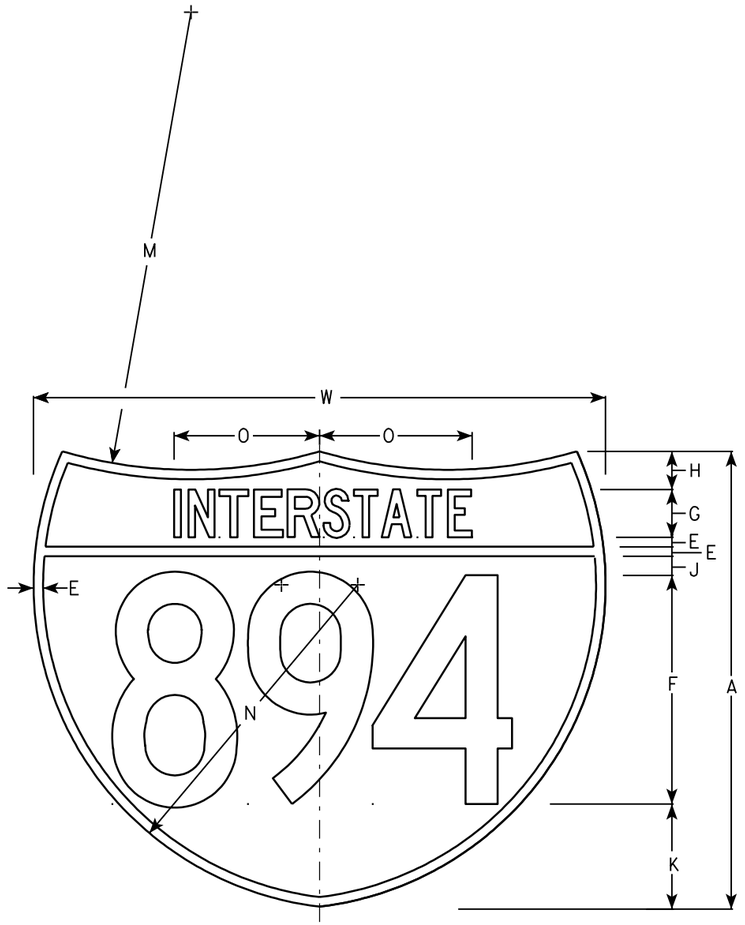
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 250	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

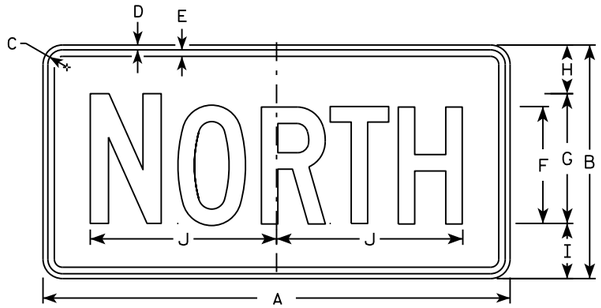
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

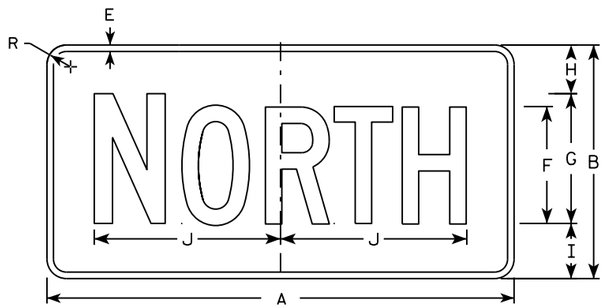
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 251	E



M3-1
MM3-1
MP3-1



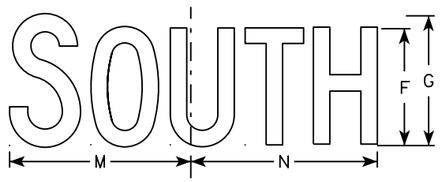
MB3-1
MK3-1
MN3-1



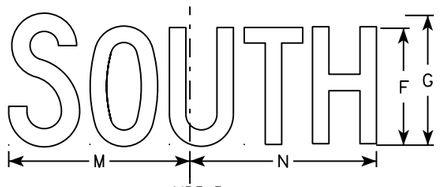
M3-2
MM3-2
MP3-2



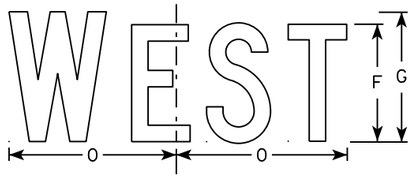
MB3-2
MK3-2
MN3-2



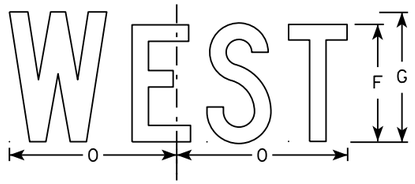
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

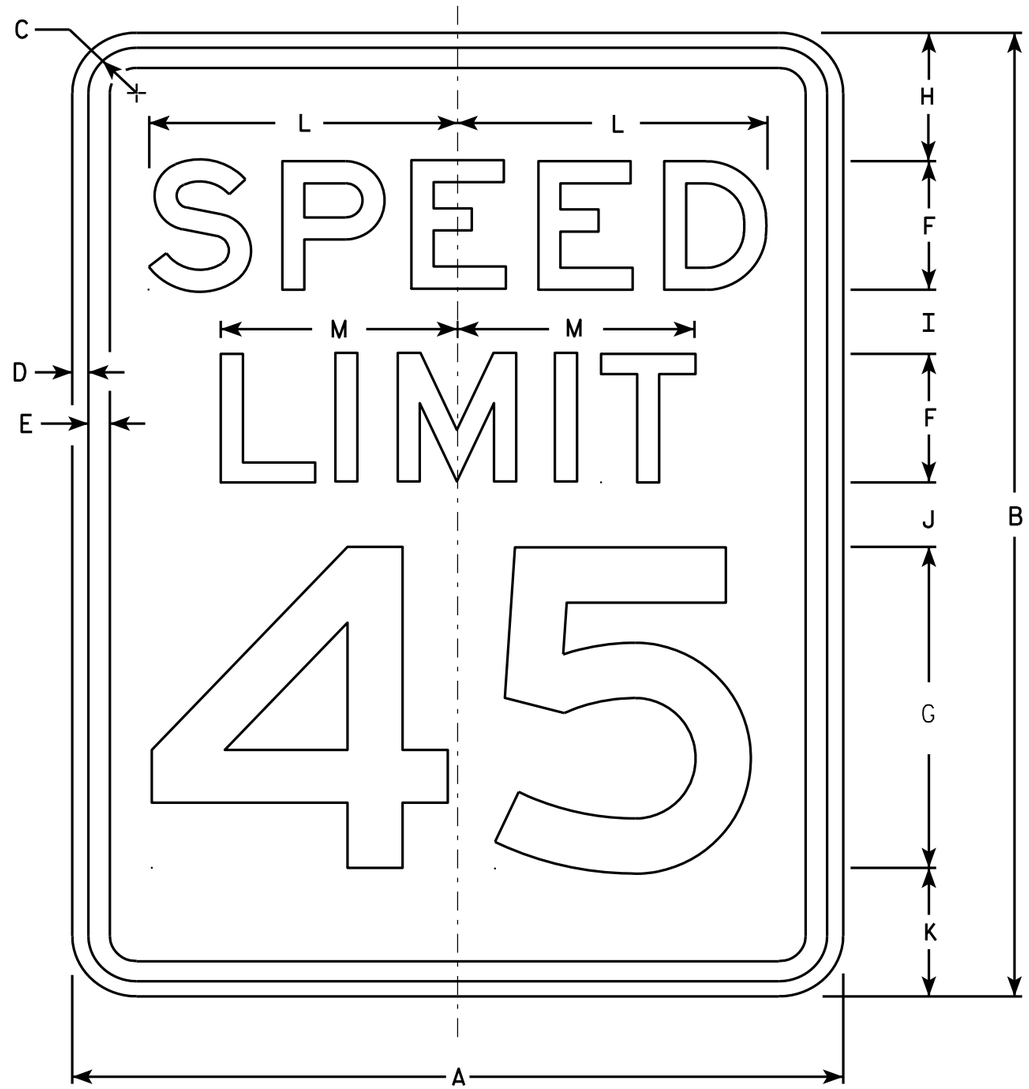
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

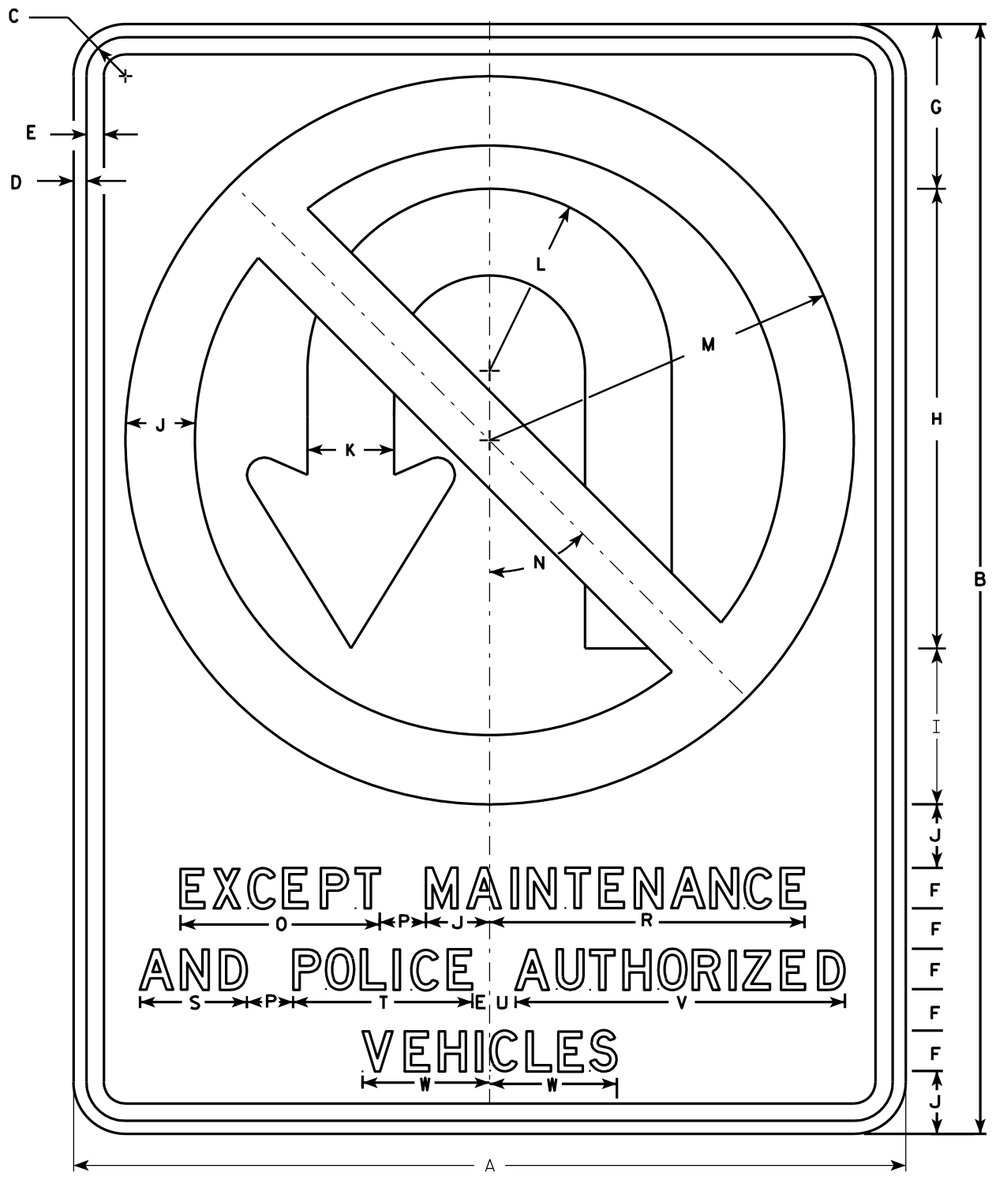
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

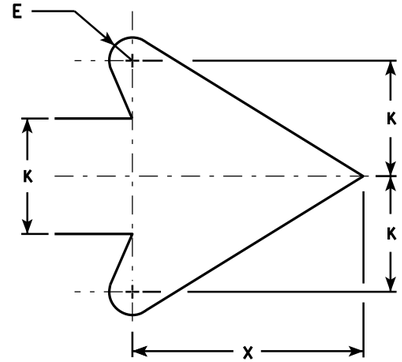
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 253 | E



R3-4B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

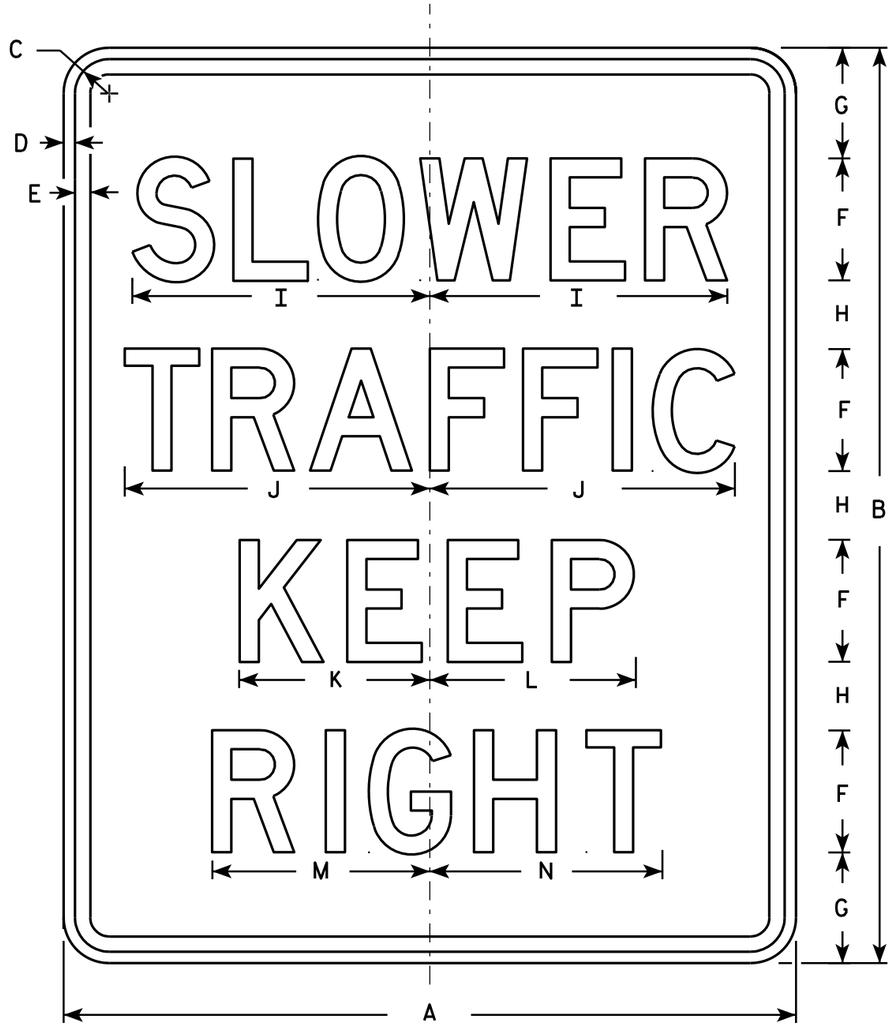
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 254	E



R4-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

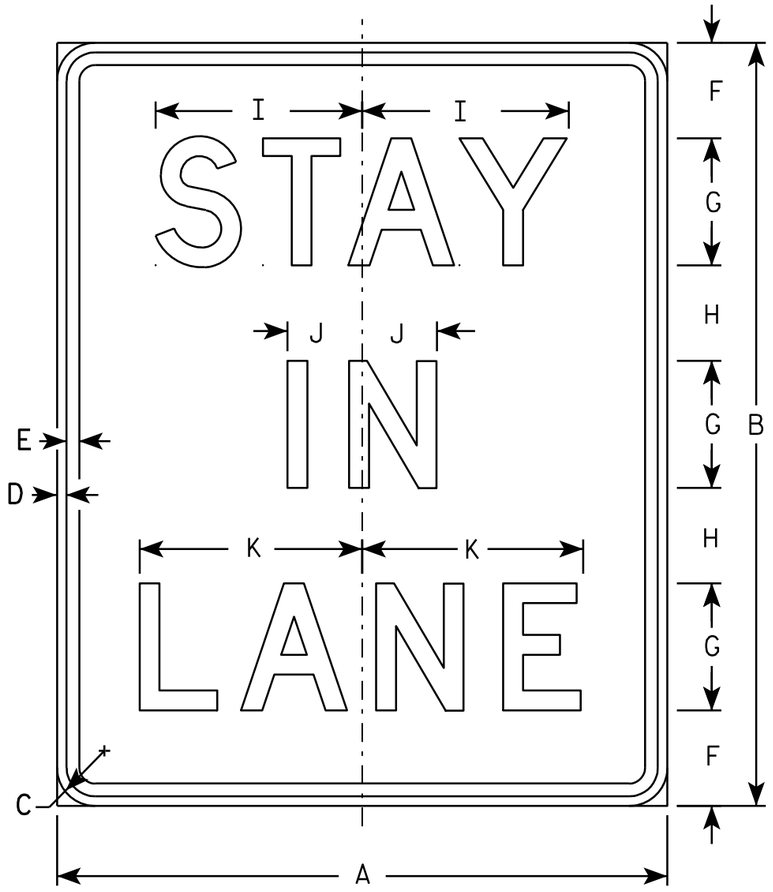
SHEET NO: 255 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7



R4-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	3/8	3	4	3	6 1/2	2 3/8	7																3.0
2S	24	30	1 1/8	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
2M	24	30	1 1/8	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
3	36	48	1 3/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
4	36	48	1 3/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
5	48	60	2 1/4	3/4	1	7 1/2	10	7 1/2	16 1/4	5 7/8	17 1/2																20.0

STANDARD SIGN
R4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-9.2

PROJECT NO:

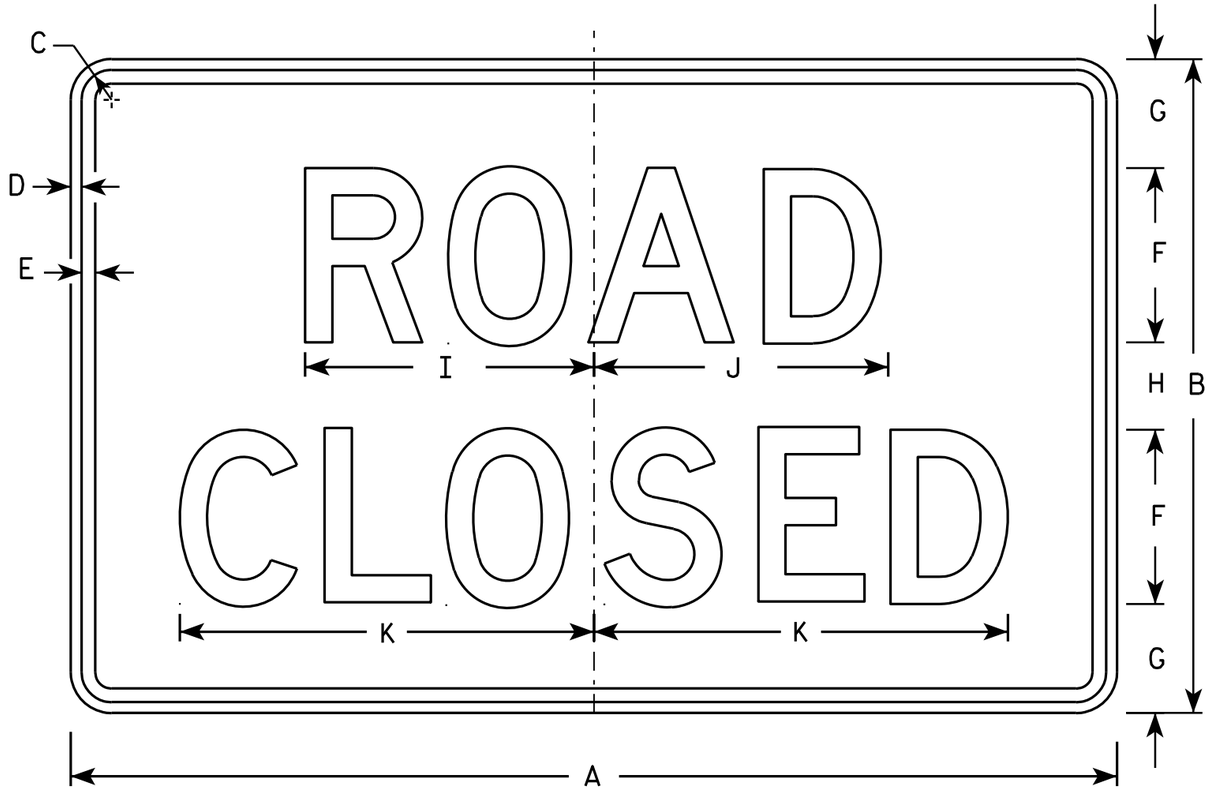
SHEET NO: 256 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R49.DGN PLOT DATE : 25-MAR-2011 14:17 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

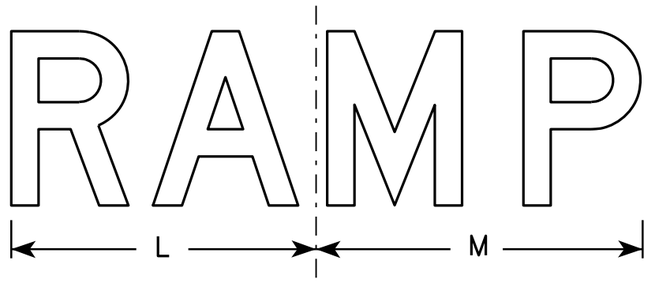
7



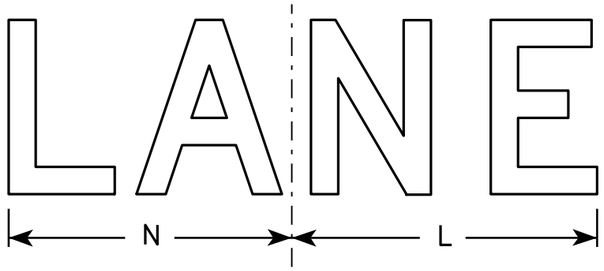
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

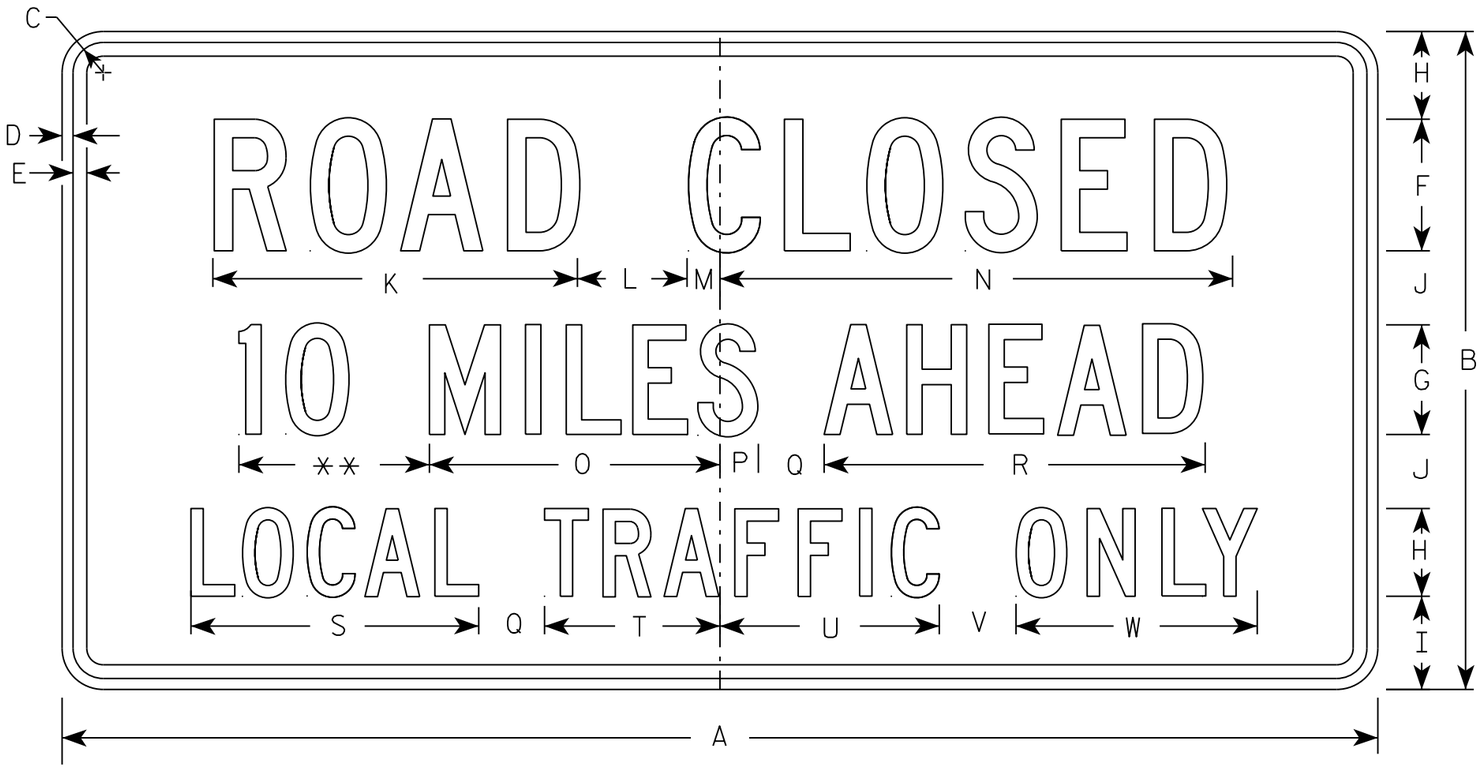
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 257	E

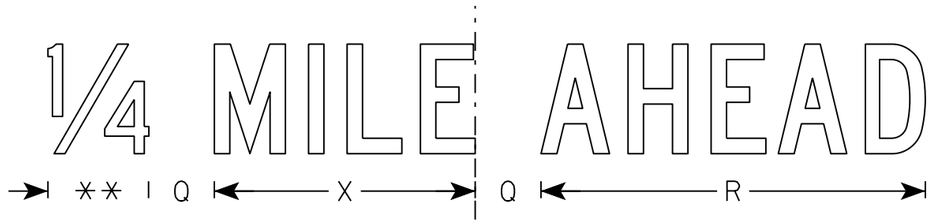
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

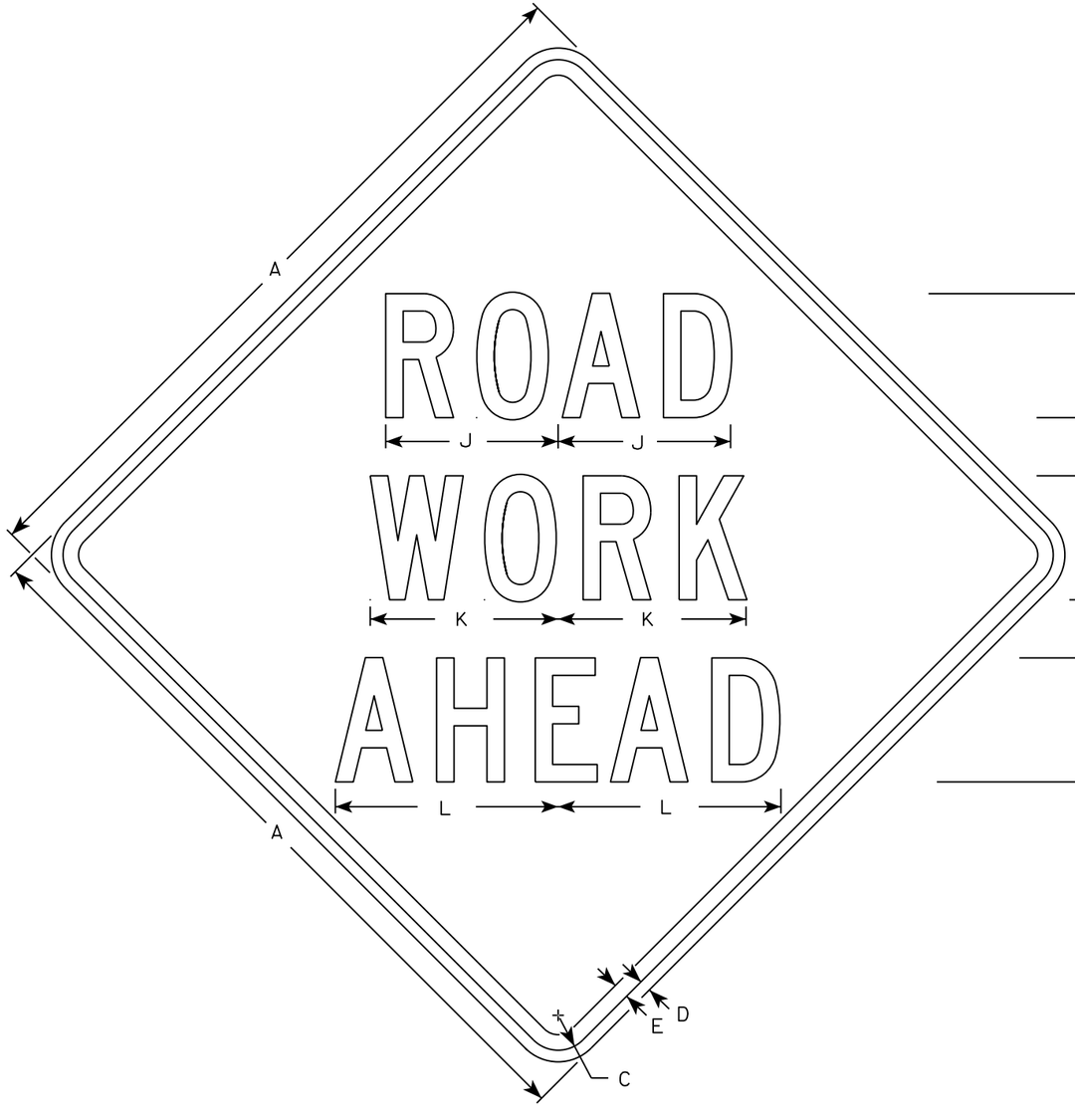
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

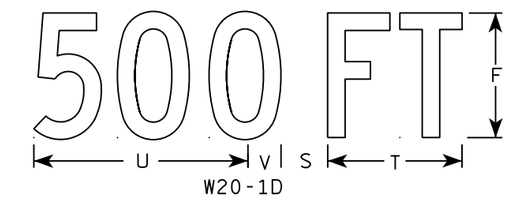
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/17 PLATE NO. R11-3.8

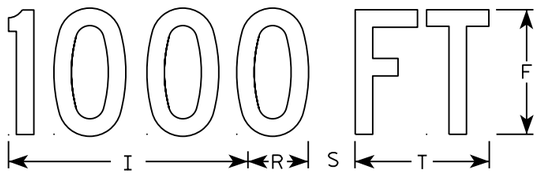
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 258	E



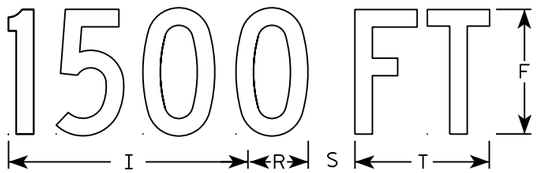
W20-1A



W20-1D



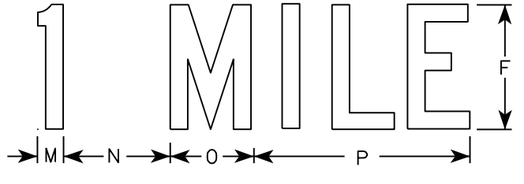
W20-1C



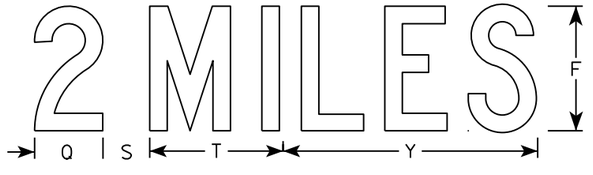
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

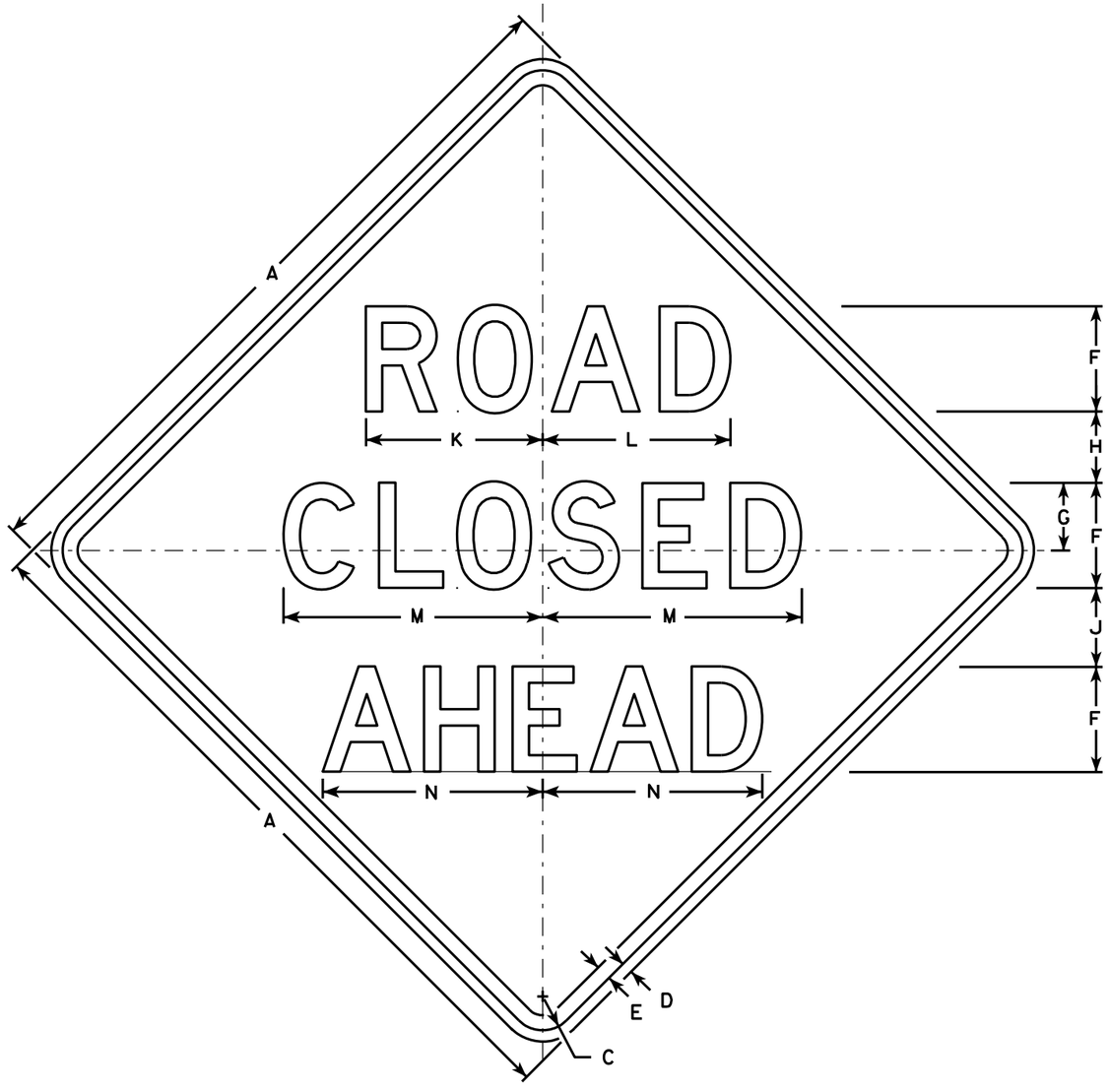
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

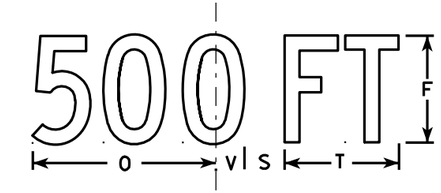
PROJECT NO:

SHEET NO: E

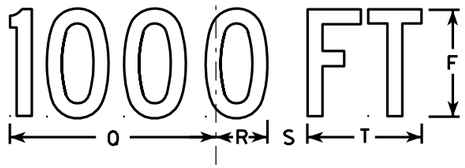
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



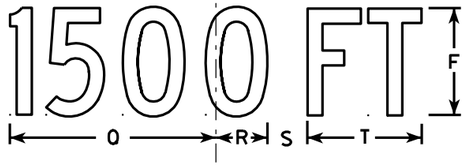
W20-3A



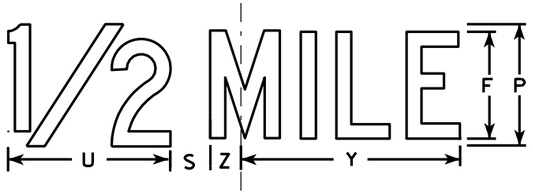
W20-3D



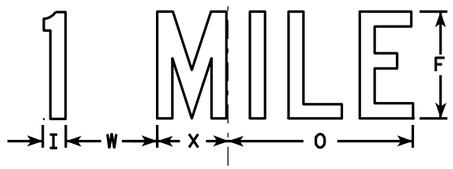
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

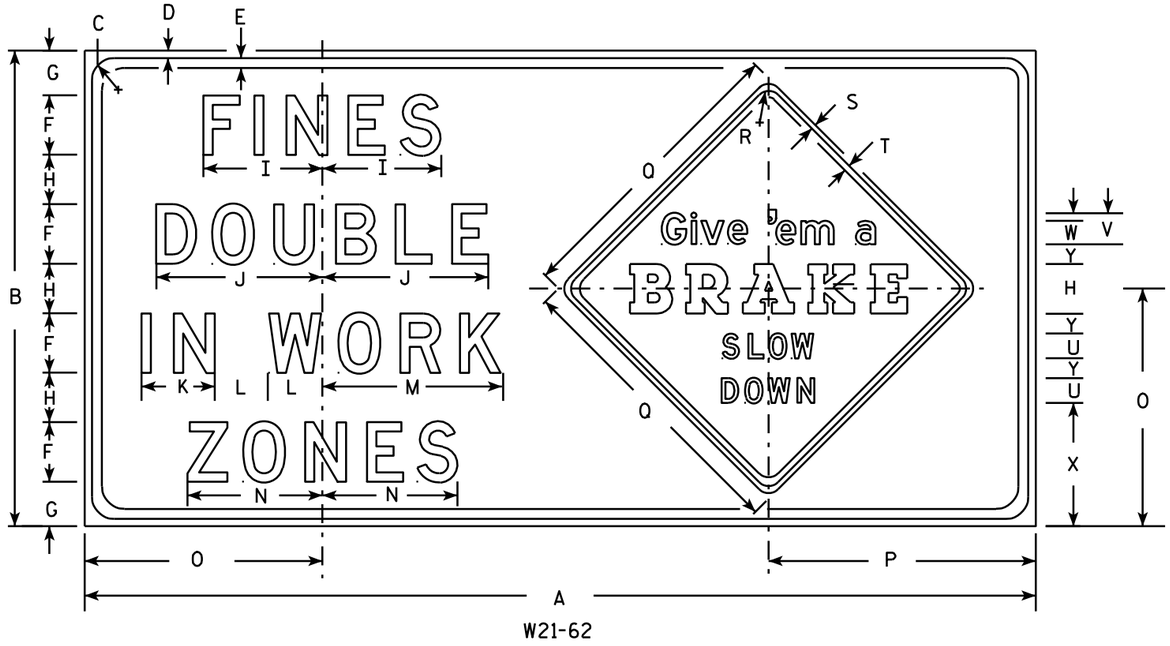
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 260 | E

7

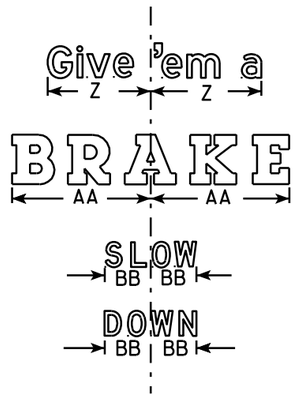
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



W21-62

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - (See Note 5)
   Message - Black
3. Message Series -
   Fines Double Message - All lines are Series D
   Give 'em a Brake -
   Line one is Series E, line two is a Special Graphic Series and lines three and four are Series D.
4. The base material shall be plywood. Corners may be square or rounded, but borders shall be rounded as shown. The base material for Give 'em a Brake sign can be a seperate sheet of aluminum with the corners and borders rounded as shown. This seperate panel shall then be attached to the plywood with aluminum or stainless steel sheet metal screws.
5. Background for the Give 'em a Brake sign shall be Type F reflective orange.





W21-62P

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	Area sq. ft.
1																															
2S																															
2M																															
3	96	48	2 1/4	3/4	1	6	4 1/2	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24	27	30	1 3/8	1/2	5/8	2 1/2	3 1/8	2 3/8	12 1/2	2	10 3/4	14	4 5/8	34 1/2	4	32.0
4																															
5																															

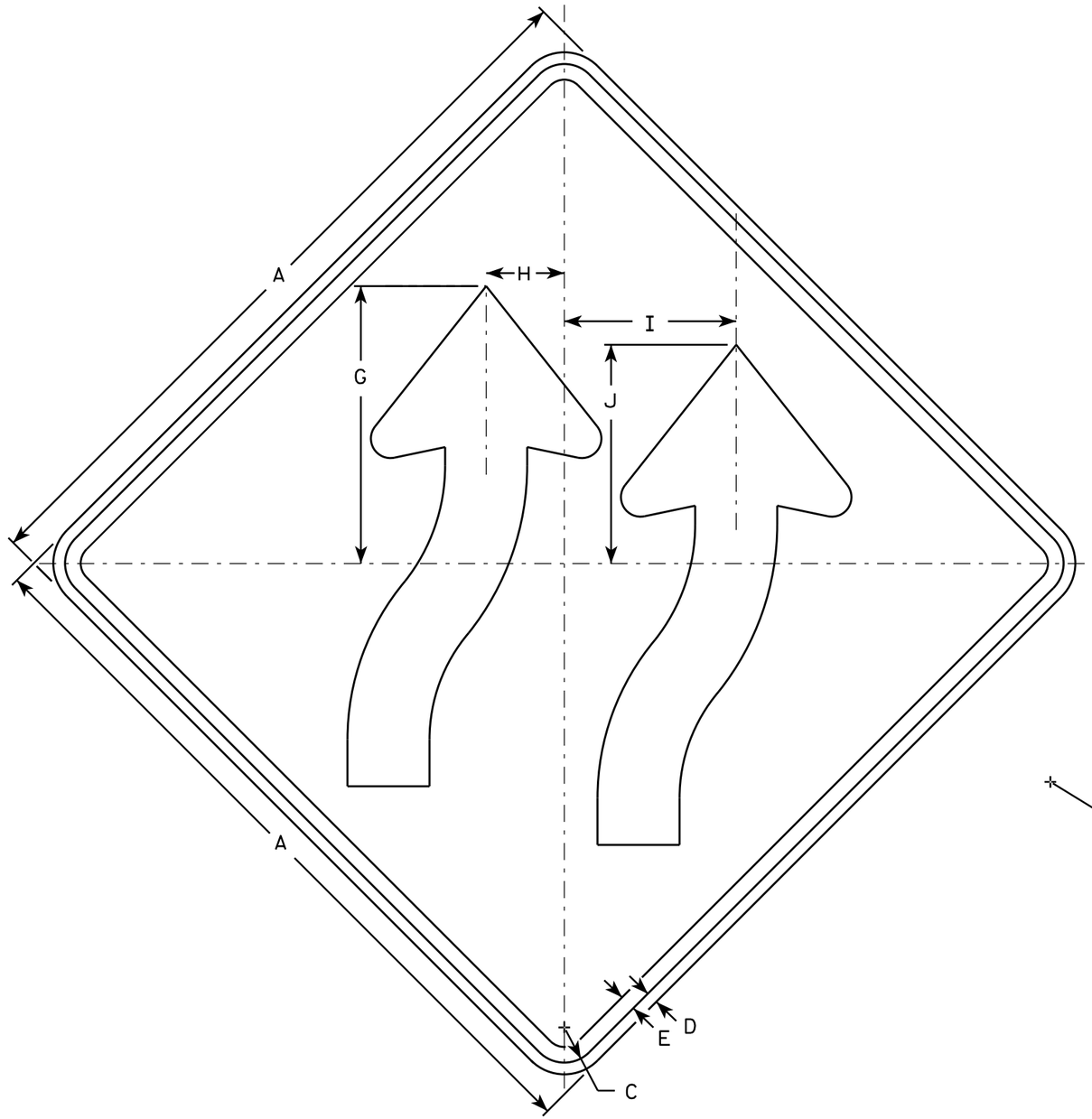
STANDARD SIGN
W21-62

WISCONSIN DEPT OF TRANSPORTATION

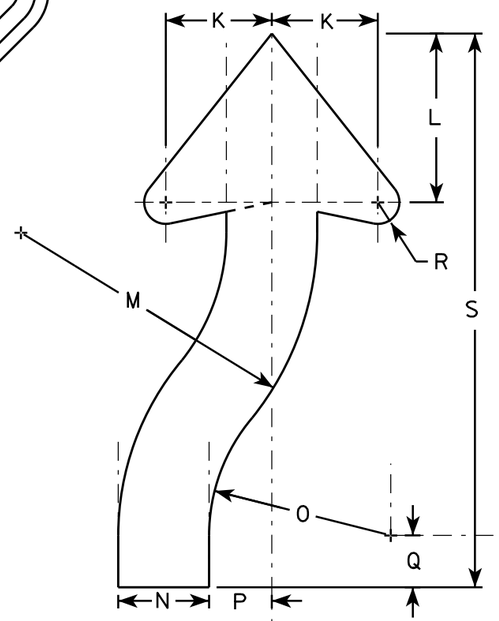
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-62.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 261 | E



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

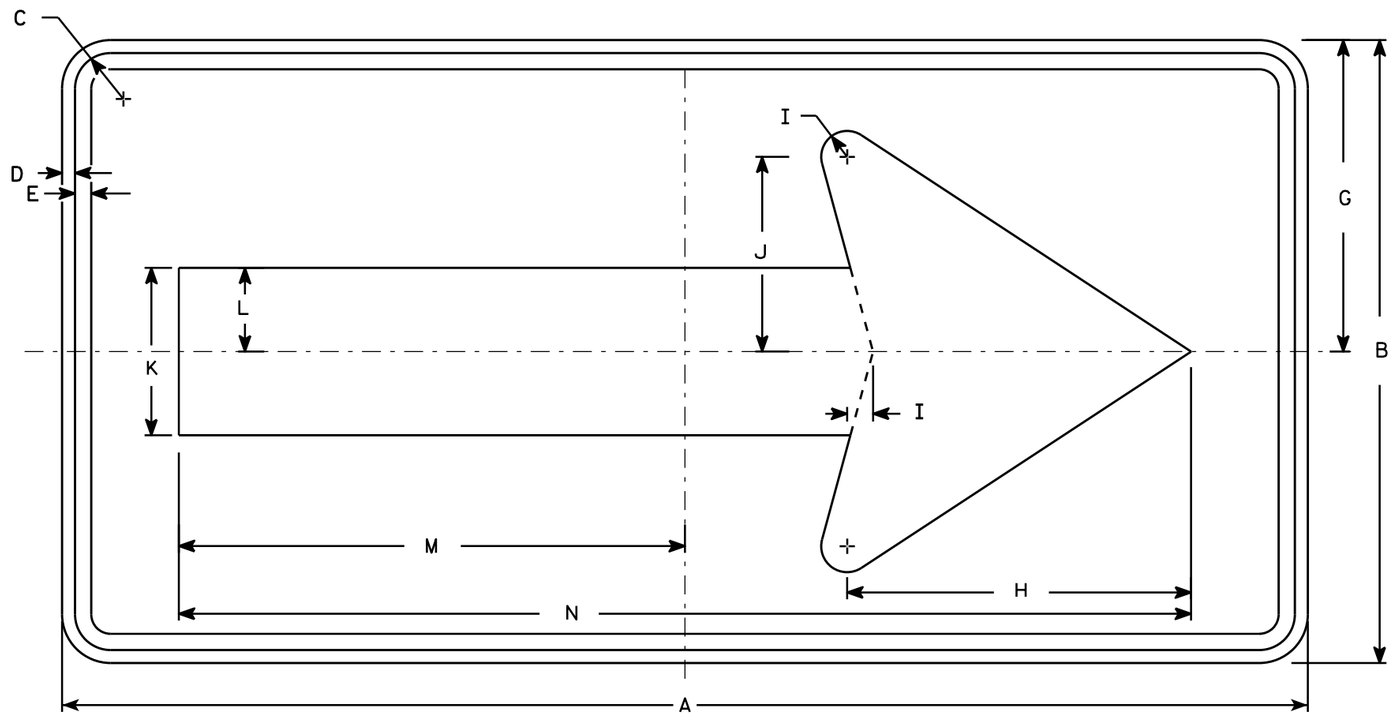
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

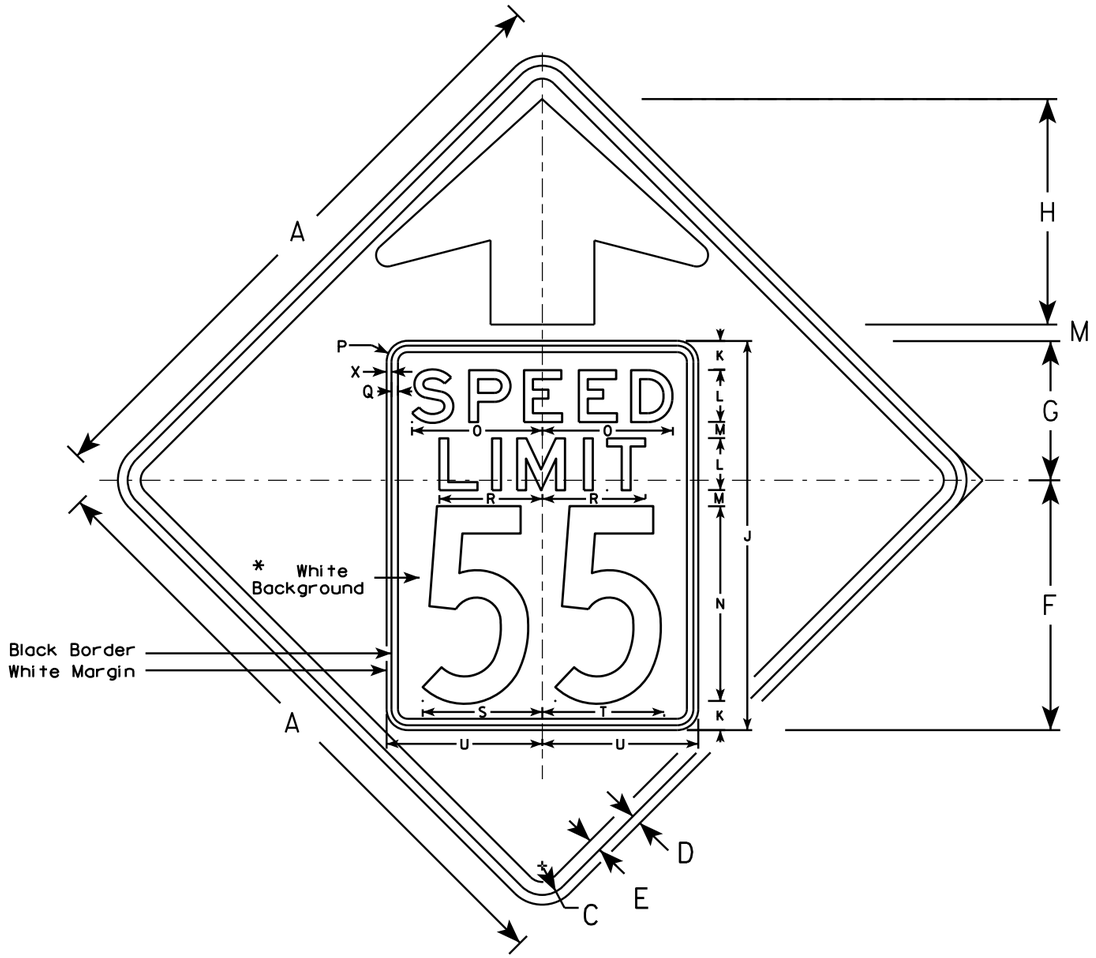
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42

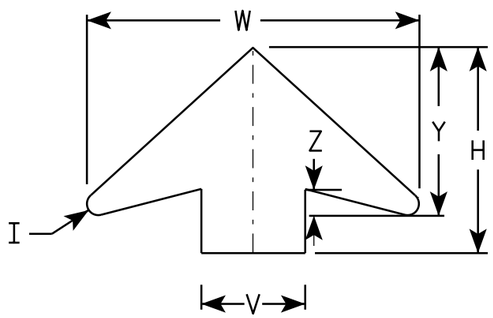


W03-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - ORANGE*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W03-5

WISCONSIN DEPT OF TRANSPORTATION

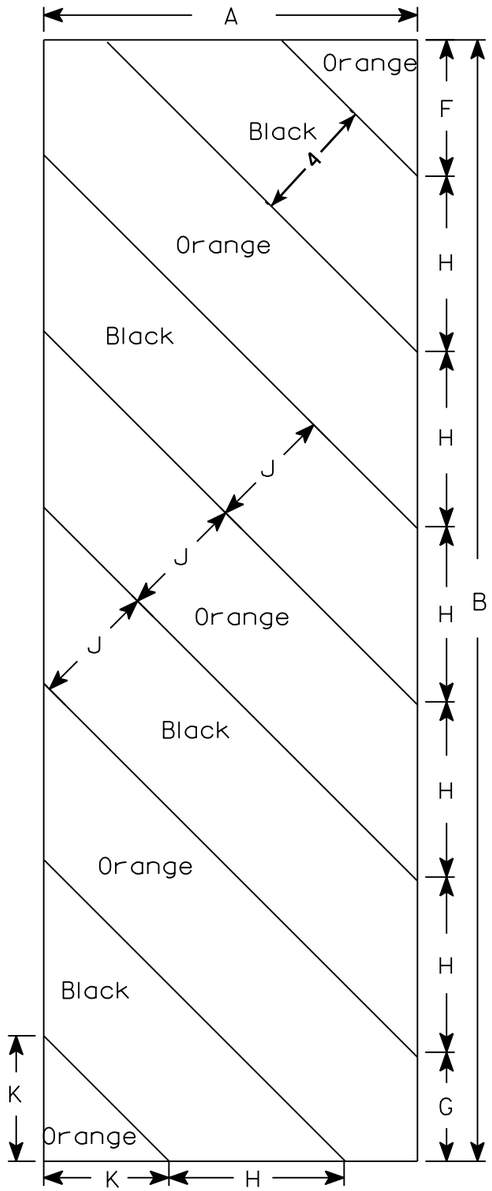
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-5.1

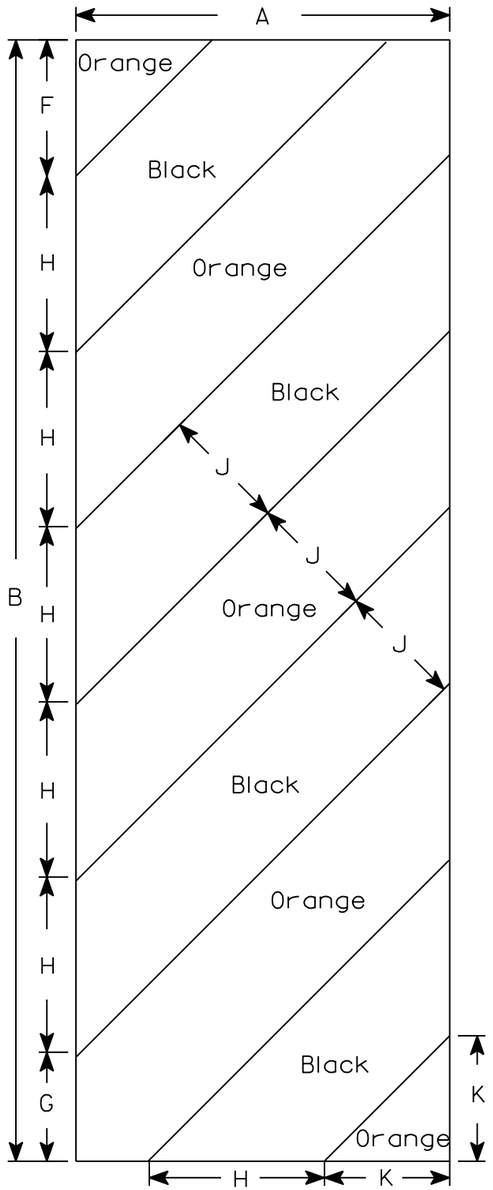
PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W035.DGN PLOT DATE : 20-NOV-2013 11:32 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



W05-52L



W05-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

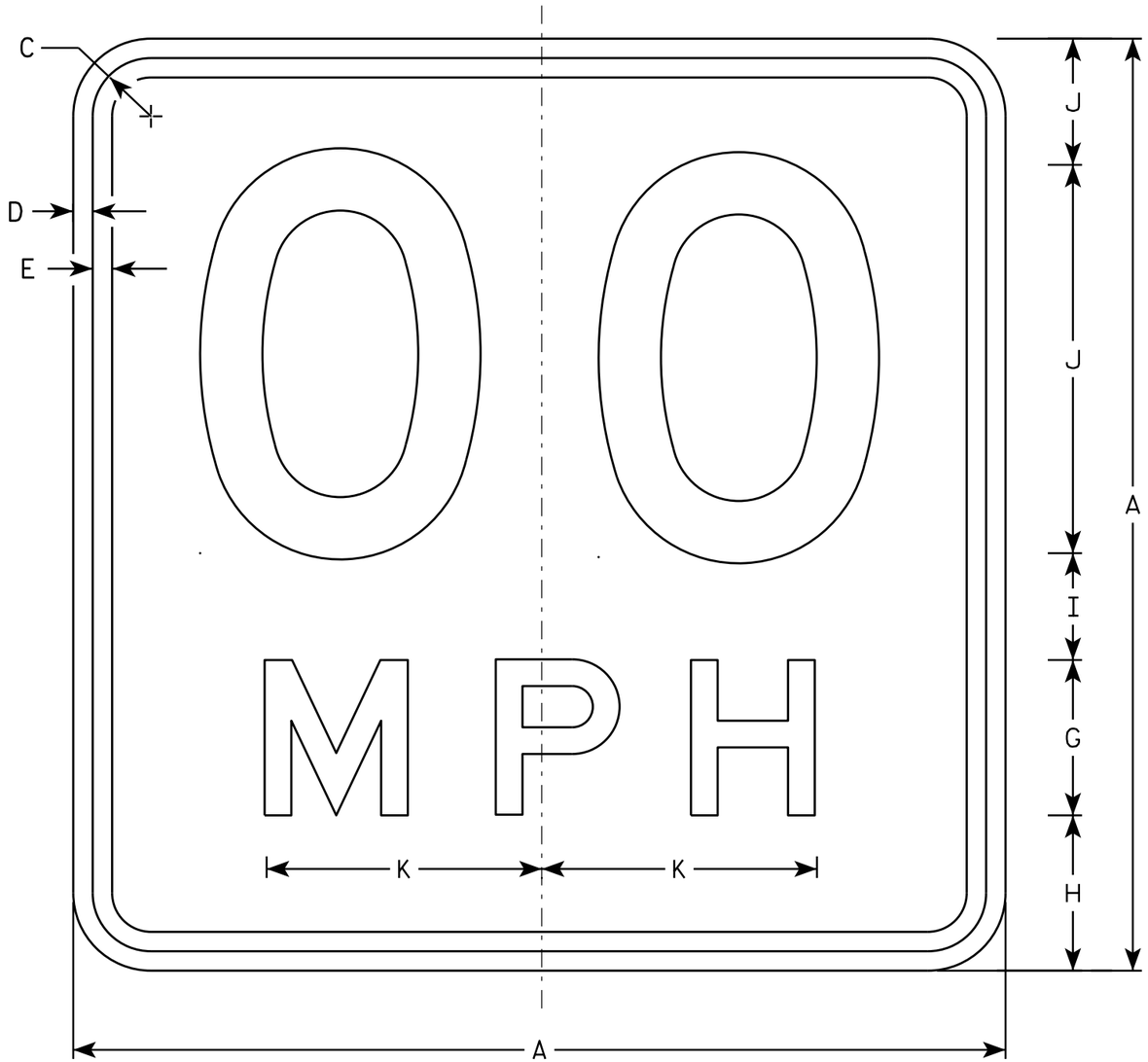
STANDARD SIGN
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

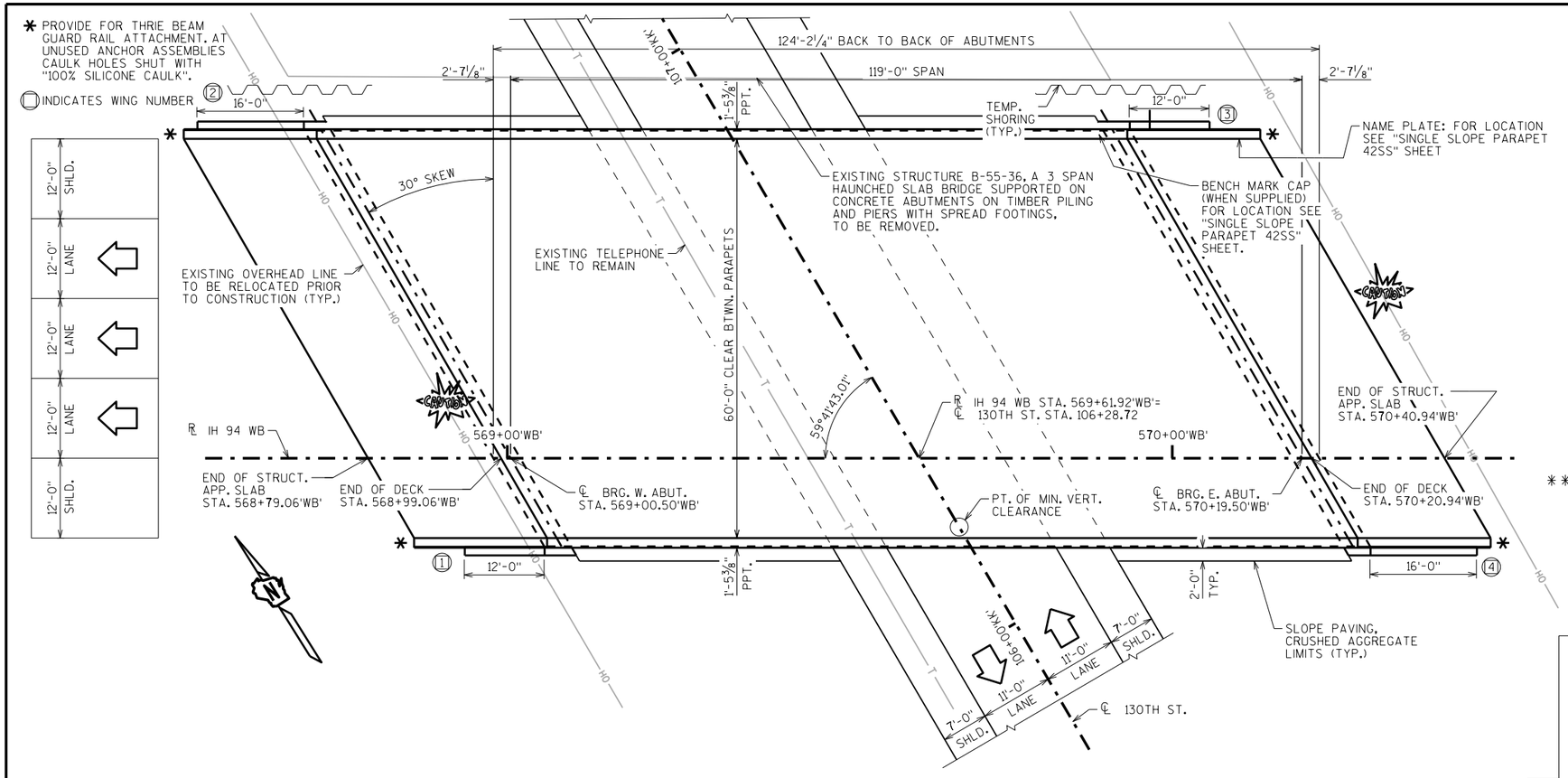
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 266 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

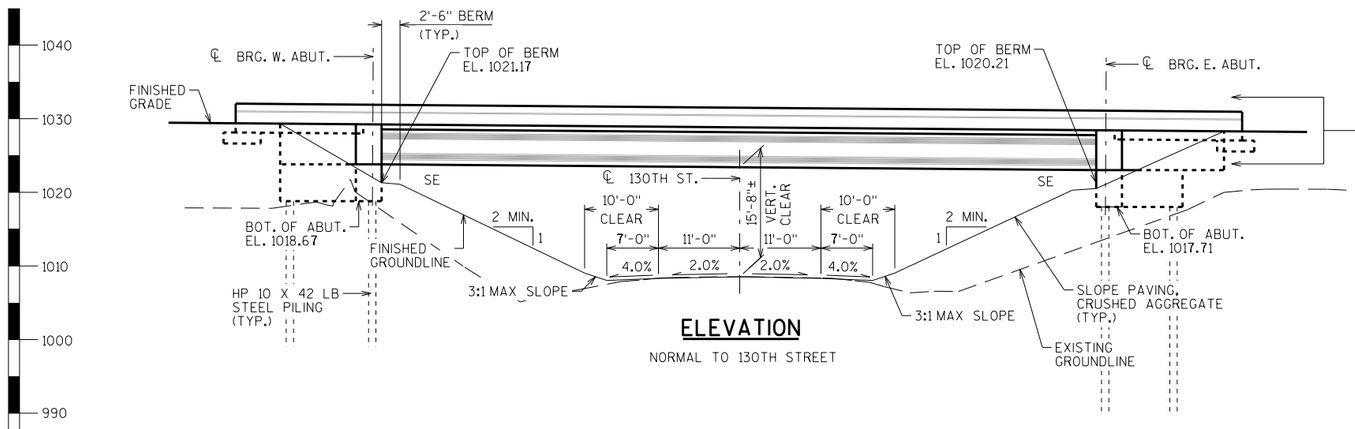
STATE PROJECT NUMBER

1020-03-76



PLAN

SINGLE SPAN 54W" PRESTRESSED GIRDERS



ELEVATION

NORMAL TO 130TH STREET

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.11
OPERATING RATING FACTOR: RF = 1.71
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

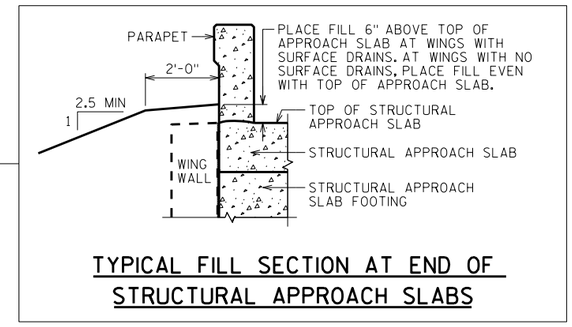
ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 20' LONG AT WEST ABUTMENT.
ESTIMATED 50' LONG AT EAST ABUTMENT.
PILE POINTS ARE REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH 94 WB
ADT = 22,700 (2039)
R.D.S. = 75 M.P.H.

130TH ST.
ADT = 390 (2039)
R.D.S. = 55 M.P.H.



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

STRUCTURE DESIGN CONTACTS:
MICHAEL LARSON (608) 267-4539
LAURA SHADEWALD (608) 267-9592

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. 54W" PRESTRESSED GIRDER DETAILS 1
9. 54W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGMS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. WEST STRUCTURAL APPROACH SLAB
14. EAST STRUCTURAL APPROACH SLAB
15. SINGLE SLOPE PARAPET 42SS
16. SLOPE PAVING (CRUSHED AGGREGATE)
17. ALTERNATE CONSTRUCTION JOINT

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher III 8/13/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-254

IH 94 WB OVER 130TH STREET

COUNTY: ST. CROIX | TOWN: KINNICKINNIC

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MJL	MWB	DDS	MJL

GENERAL PLAN

SHEET 1 OF 17

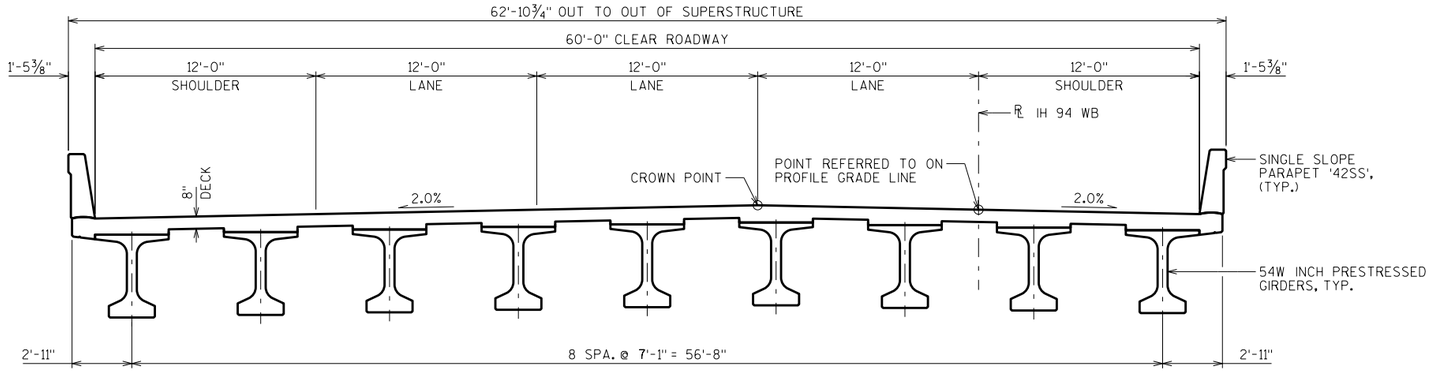
267

I.D. 1020-03-06 DATE: JUNE 2018

SCALE = 10.00

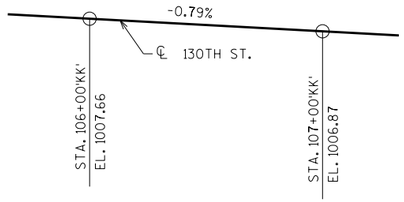
8

8

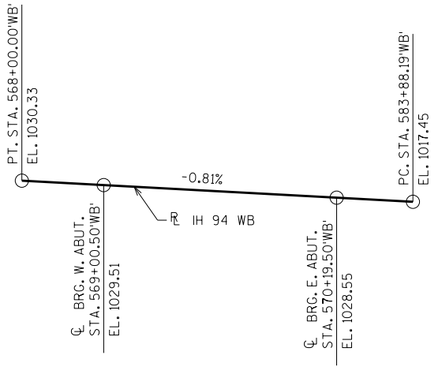


CROSS SECTION THRU ROADWAY

LOOKING EAST



PROFILE GRADE LINE 130TH ST.



PROFILE GRADE LINE - IH 94 WB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH SLAB	WEST ABUTMENT	EAST ABUTMENT	EAST APPROACH SLAB	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 569+50'WB'	LS	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-254	LS	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	335	335	———	670
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	215	———	———	215	430
501.1000.S	ICE HOT WEATHER CONCRETING	LB	2,655	660	540	540	660	5,055
502.0100	CONCRETE MASONRY BRIDGES	CY	354	88	72	72	88	674
502.3200	PROTECTIVE SURFACE TREATMENT	SY	845	134	———	———	134	1,113
502.3210	PIGMENTED SURFACE SEALER	SY	122	20	———	———	20	162
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1,080	———	———	———	———	1,080
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	4,910	4,910	———	9,820
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	51,680	15,180	1,830	1,800	15,180	85,670
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,150	———	———	———	———	2,150
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	18	———	———	———	———	18
506.4000	STEEL DIAPHRAGMS B-55-254	EACH	16	———	———	———	———	16
511.1200	TEMPORARY SHORING B-55-254	SF	———	———	82	76	———	158
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	26	———	6	6	———	38
550.0500	PILE POINTS	EACH	———	———	18	18	———	36
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	———	360	900	———	1,260
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	———	———	325	295	———	620
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	125	125	———	250
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	———	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	66	66	———	132
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½", ¾", 1½"

STATE PROJECT NUMBER

1020-03-76

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN ON THIS SHEET.

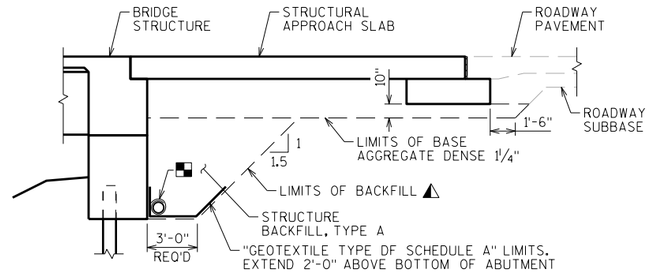
PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE "GENERAL PLAN" SHEET AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET.

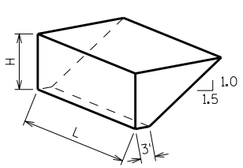
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▩ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS/MWB | PLANS CK'D. MJL

CROSS SECTION & QUANTITIES

SHEET 2

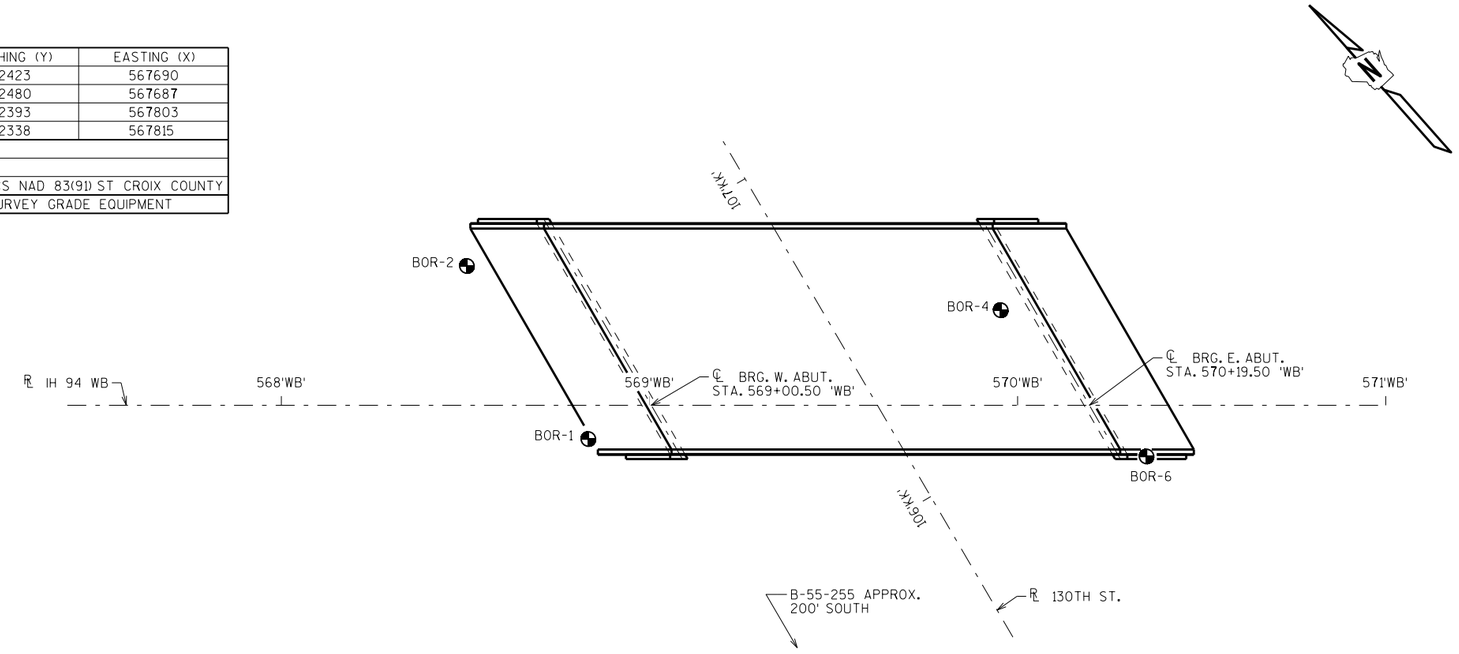
268

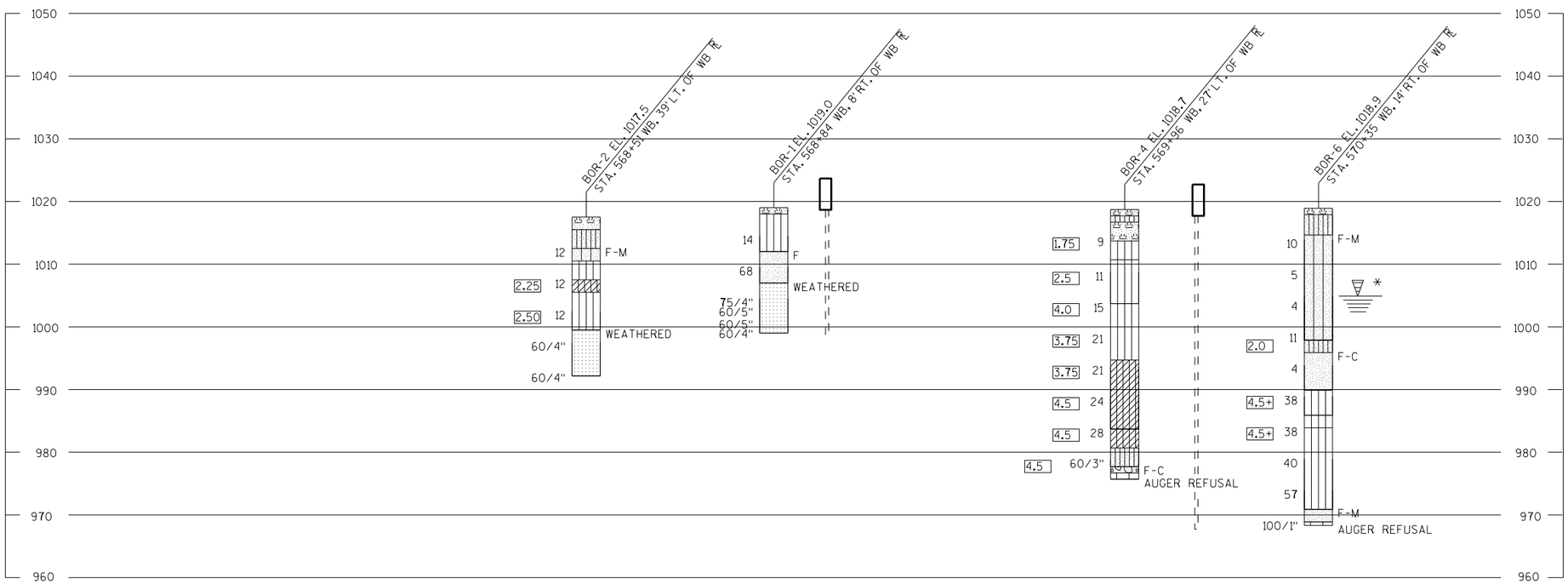
8

8

SCALE = 4.00

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/19/2017	332423	567690
2	9/19/2017	332480	567687
4	9/20/2017	332393	567803
6	9/21/2017	332338	567815
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

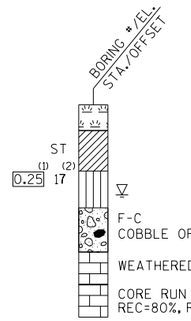
STATE PROJECT NUMBER

1020-03-76

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY TLP/MWB | PLANS CK'D. MJL

SUBSURFACE EXPLORATION

SHEET 3

269

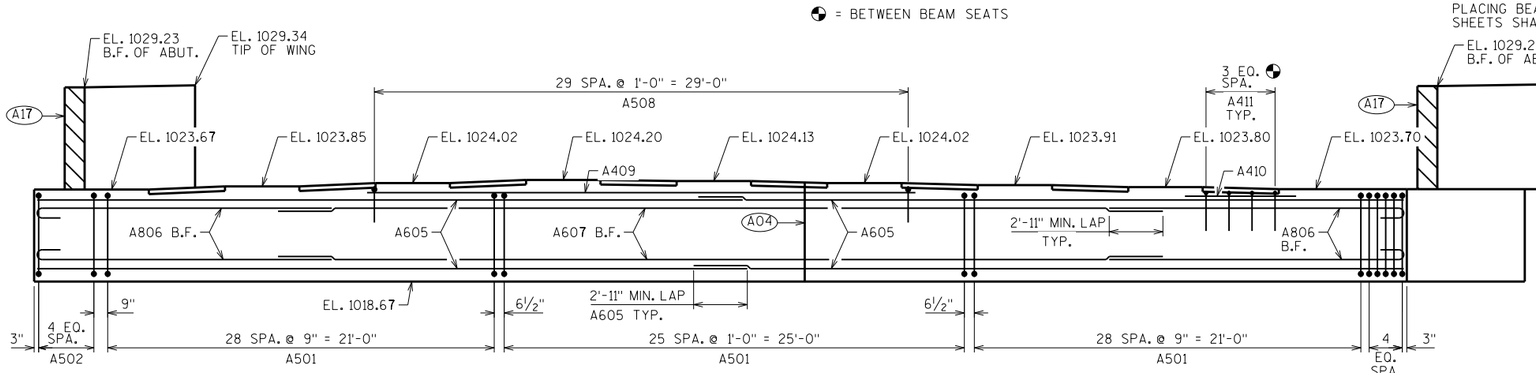
SCALE = 20.00

8

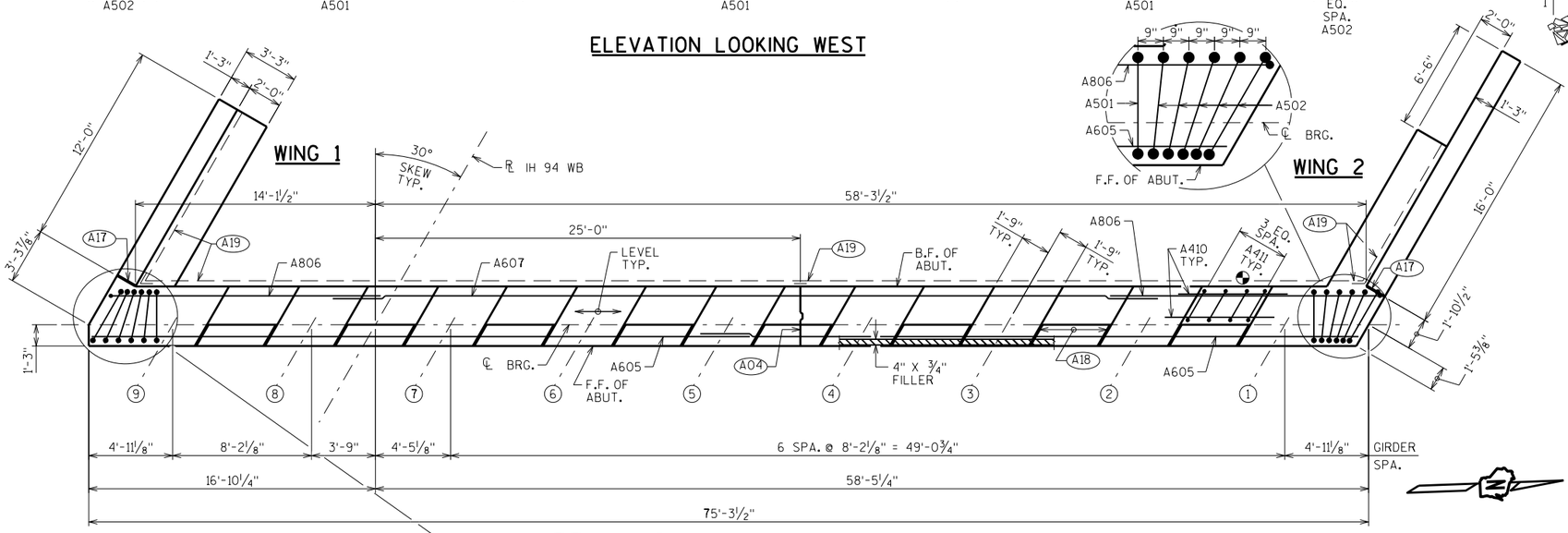
8

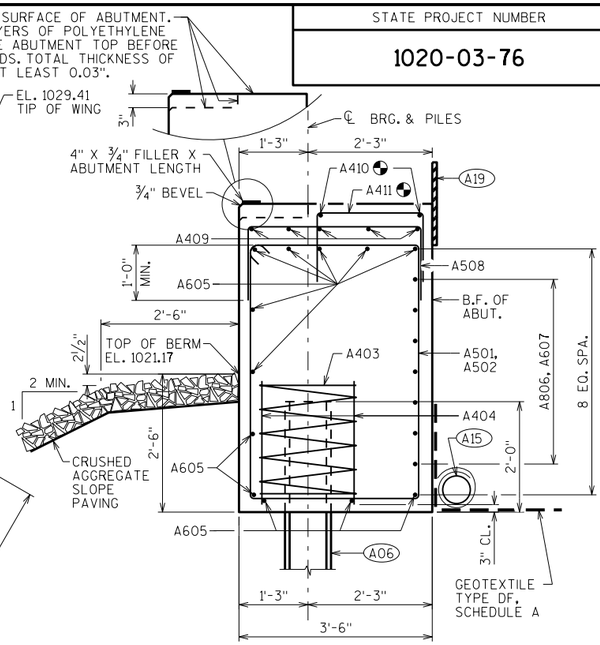
STATE PROJECT NUMBER

1020-03-76

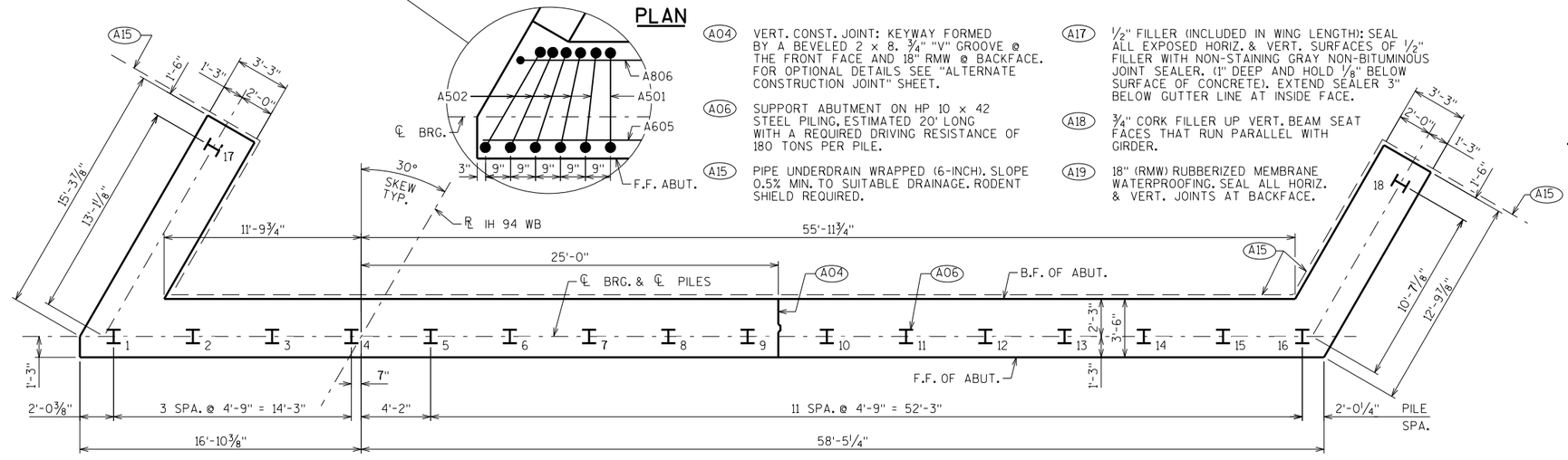


ELEVATION LOOKING WEST





SECTION THRU BODY



PLAN

A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 20' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

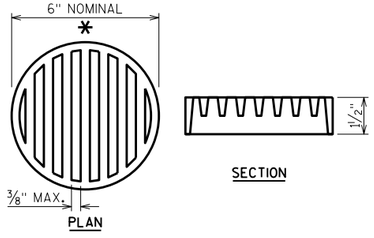
A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A18 ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

PILE PLAN



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

WEST ABUTMENT

SHEET 4

270

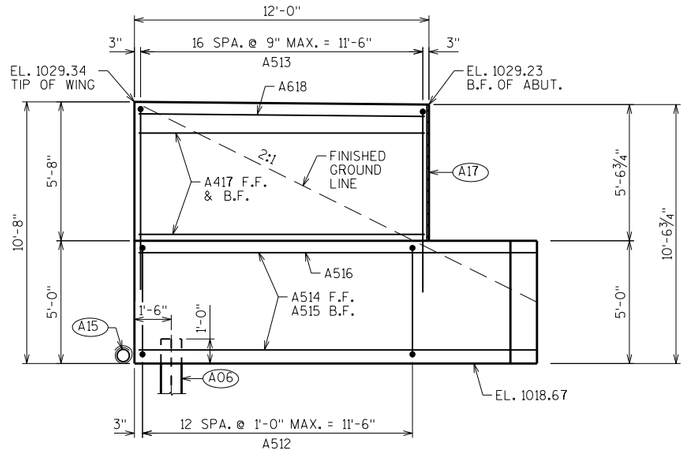
SCALE = 4.00

8

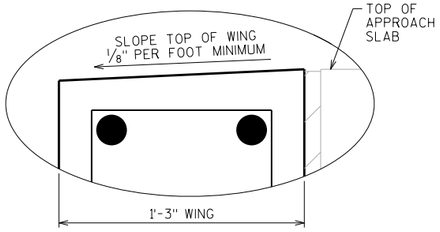
8

STATE PROJECT NUMBER

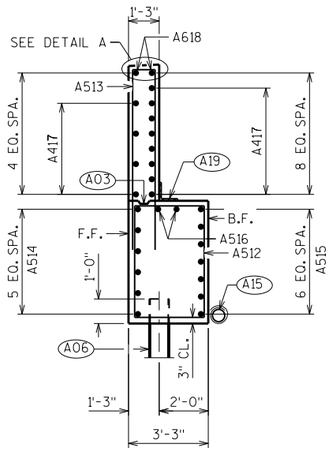
1020-03-76



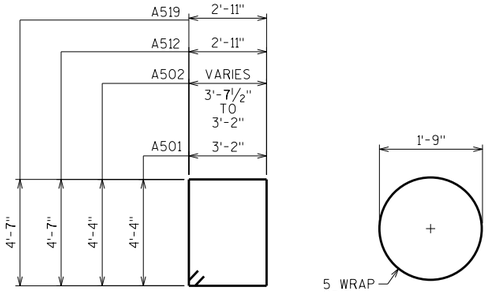
ELEVATION - WING 1



DETAIL A

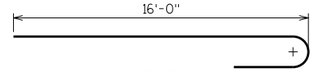


SECTION THRU WING 1

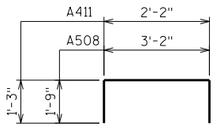


A501, A502, A512, A519

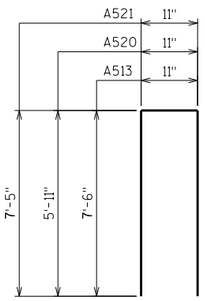
A403



A806



A508, A411



A513, A520, A521

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

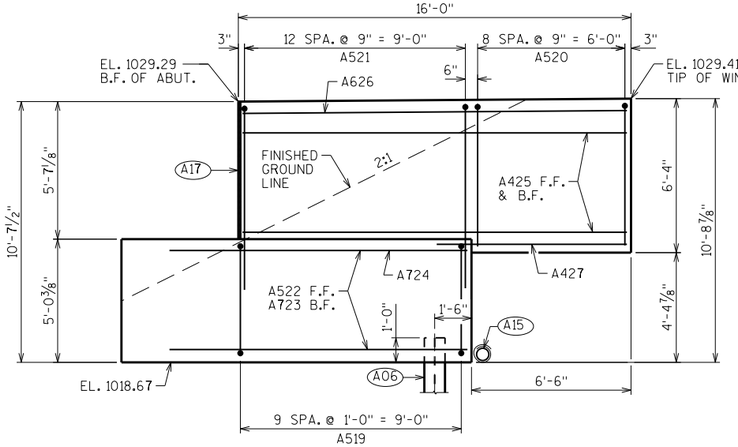
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		84	15'-8"	X		BODY - STIRRUP
A502		10	16'-2"	X	◭	BODY - STIRRUP - ENDS
A403		16	28'-0"	X		PILE - VERT. - 1 PER BODY PILE
A404		32	2'-3"			PILE - VERT. - 2 PER BODY PILE
A605		24	38'-11"			BODY - HORIZ.
A806		14	16'-11"	X		BODY - HORIZ. - B.F.
A607		7	48'-7"			BODY - HORIZ. - B.F.
A508		30	6'-5"	X		BODY - VERT. - TOP
A409		5	29'-10"			BODY - HORIZ. - TOP
A410		16	6'-6"			BODY - HORIZ. - TOP
A411		32	4'-6"	X		BODY - VERT. - TOP
A512	X	13	15'-8"	X		WING 1 - STIRRUP
A513	X	17	15'-8"	X		WING 1 - VERT.
A514	X	6	15'-3"			WING 1 - HORIZ. - BASE F.F.
A515	X	7	13'-11"			WING 1 - HORIZ. - BASE B.F.
A516	X	2	14'-9"			WING 1 - HORIZ. - BASE TOP
A417	X	12	11'-7"			WING 1 - HORIZ. - TOP, F.F. & B.F.
A618	X	2	11'-7"			WING 1 - HORIZ. - TOP
A519	X	10	15'-8"	X		WING 2 - STIRRUP
A520	X	9	12'-6"	X		WING 2 - VERT. - TOP
A521	X	13	15'-6"	X		WING 2 - VERT. - TOP
A522	X	6	12'-7"			WING 2 - HORIZ. - BASE F.F.
A723	X	7	12'-4"			WING 2 - HORIZ. - BASE B.F.
A724	X	2	13'-3"			WING 2 - HORIZ. - BASE TOP
A425	X	12	15'-7"			WING 2 - HORIZ. - F.F. & B.F.
A626	X	2	15'-7"			WING 2 - HORIZ. - TOP
A427	X	2	7'-9"			WING 2 - HORIZ.

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

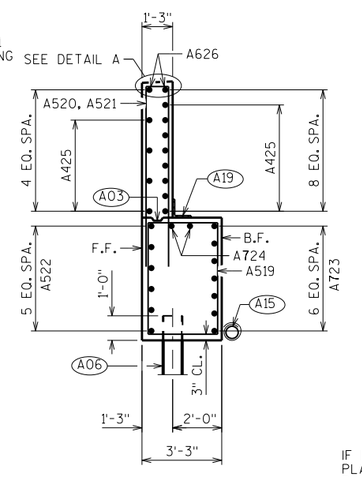
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A502	2 SERIES OF 5	15'-8" TO 16'-7"

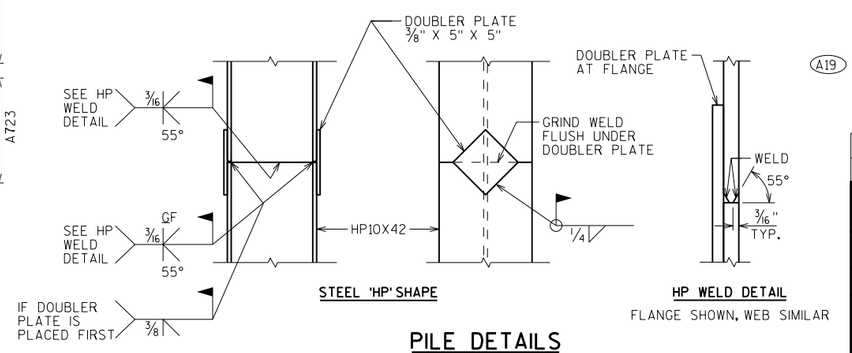
BUNDLE AND TAG EACH SERIES SEPARATELY.



ELEVATION - WING 2



SECTION THRU WING 2



PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 20' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

WEST ABUTMENT DETAILS

SHEET 5

271

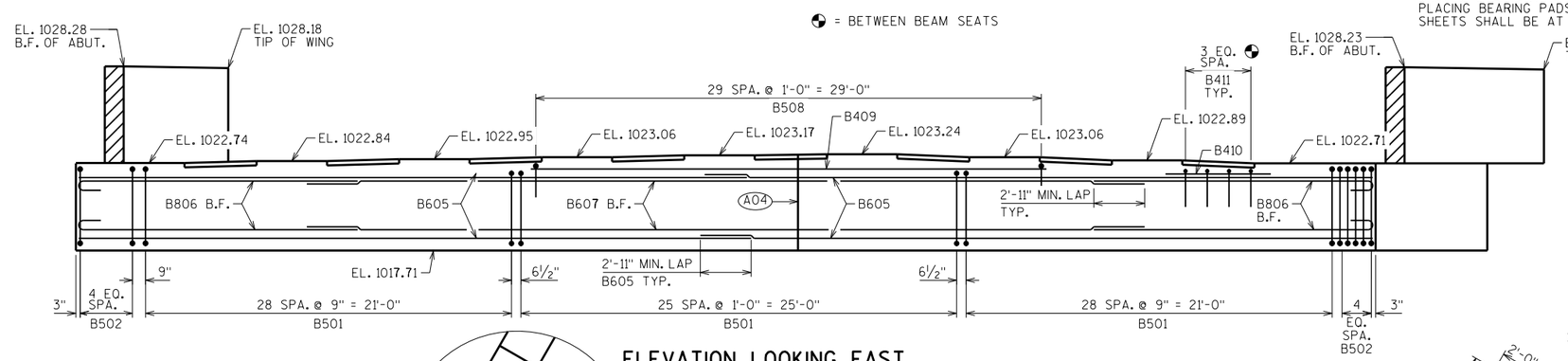
8

8

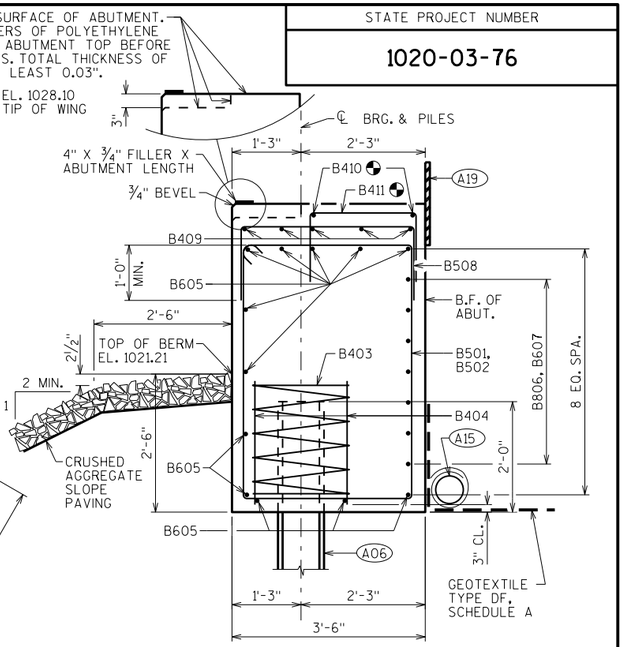
SCALE = 3.00

STATE PROJECT NUMBER

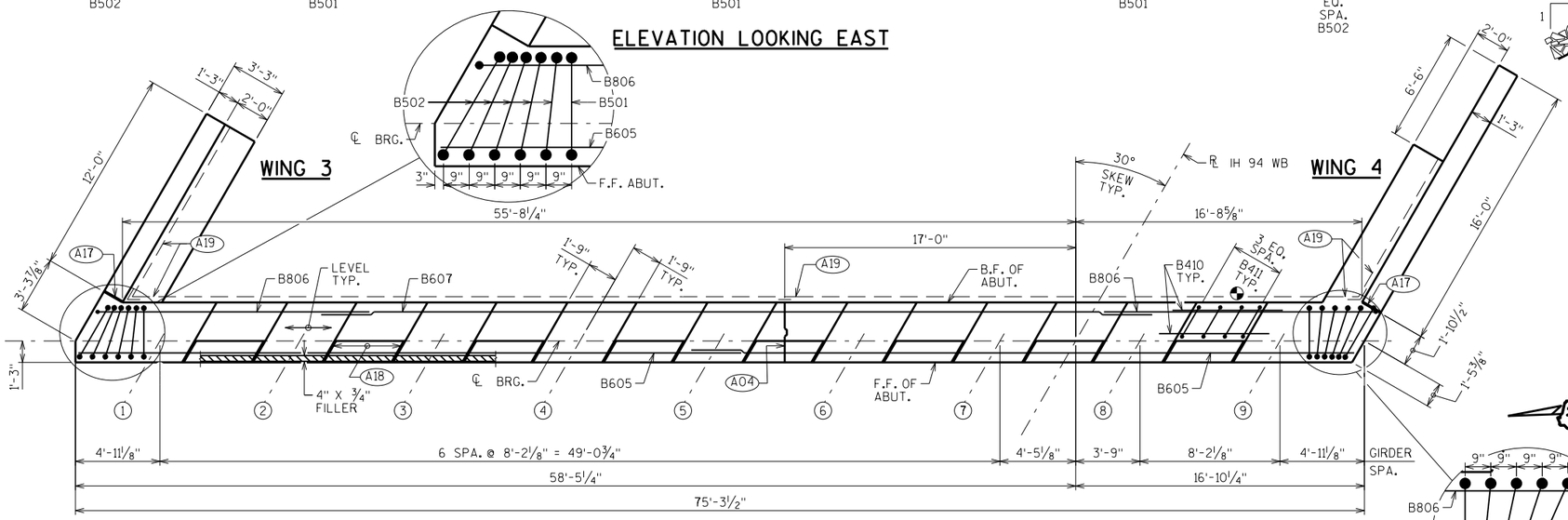
1020-03-76



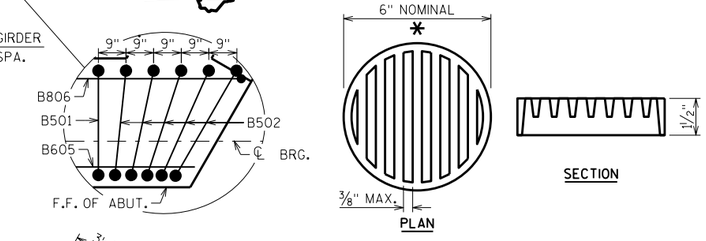
ELEVATION LOOKING EAST



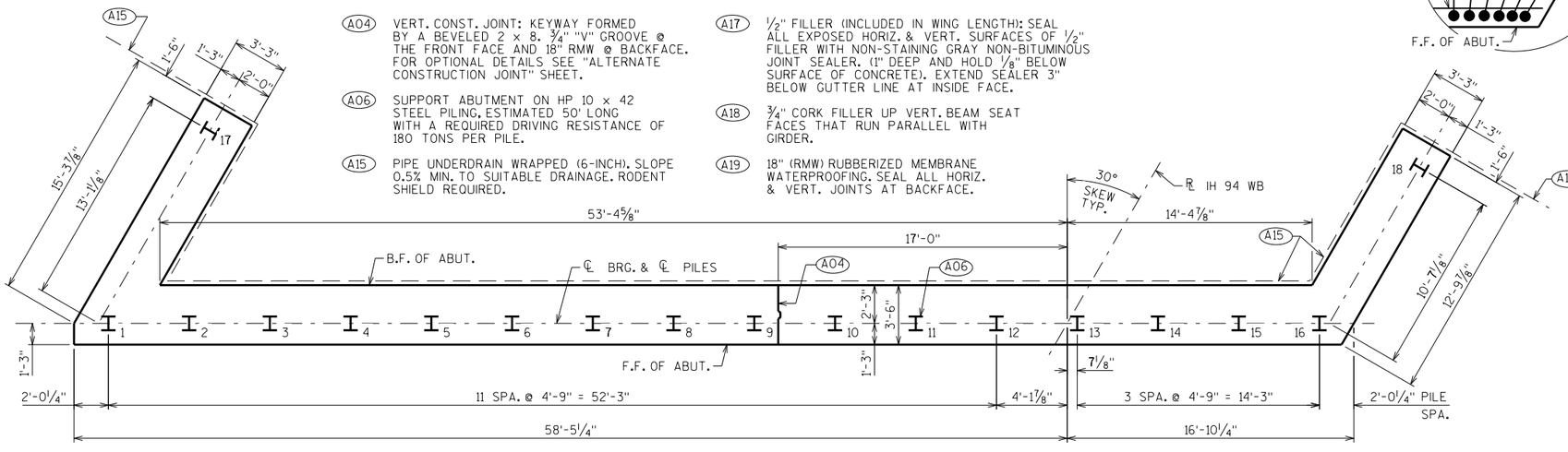
SECTION THRU BODY



PLAN



RODENT SHIELD DETAIL



PILE PLAN

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY	DDS	PLANS CK'D.	MJL

EAST ABUTMENT

SHEET 6

272

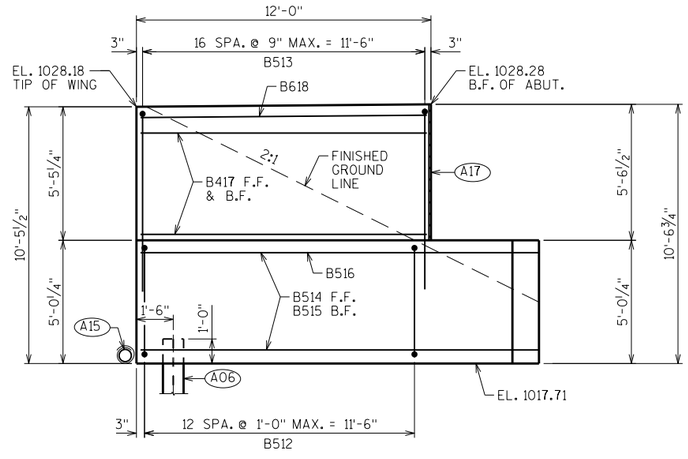
SCALE = 4.00

8

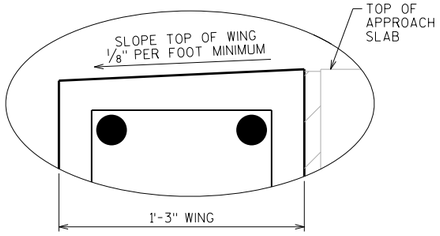
8

STATE PROJECT NUMBER

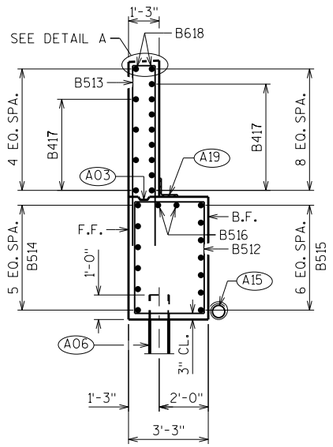
1020-03-76



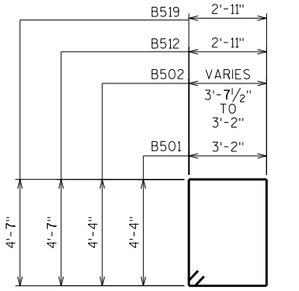
ELEVATION - WING 3



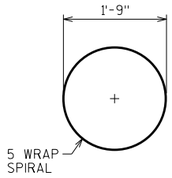
DETAIL A



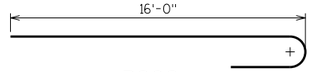
SECTION THRU WING 3



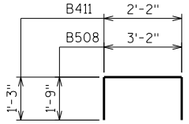
B501, B502, B512, B519



B403



B806



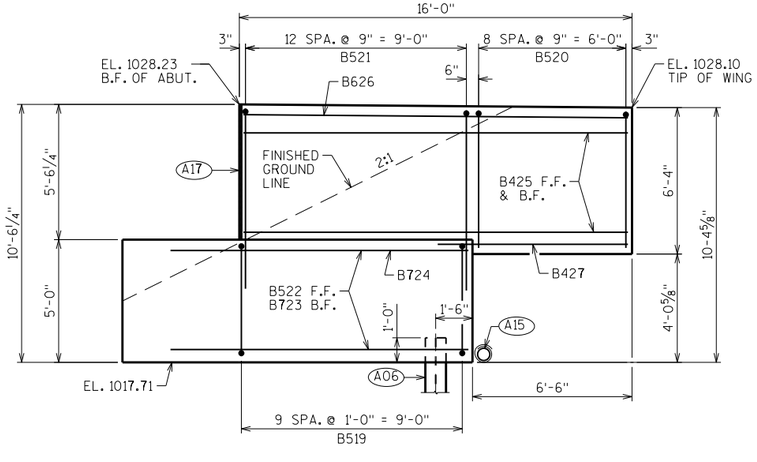
B508, B411

BILL OF BARS

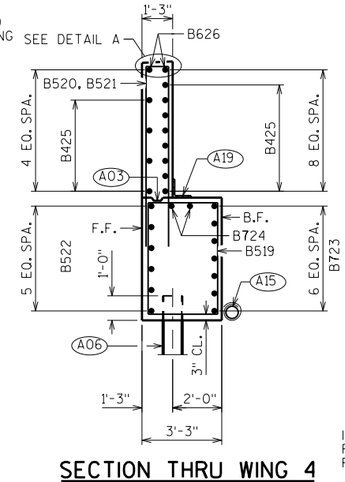
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		84	15'-8"	X		BODY - STIRRUP
B502		10	16'-2"	X	◭	BODY - STIRRUP - ENDS
B403		16	28'-0"	X		PILE - VERT. - 1 PER BODY PILE
B404		32	2'-3"			PILE - VERT. - 2 PER BODY PILE
B605		24	38'-11"			BODY - HORIZ.
B806		14	16'-11"	X		BODY - HORIZ. - B.F.
B607		7	48'-7"			BODY - HORIZ. - B.F.
B508		30	6'-5"	X		BODY - VERT. - TOP
B409		5	29'-10"			BODY - HORIZ. - TOP
B410		16	6'-6"			BODY - HORIZ. - TOP
B411		32	4'-6"	X		BODY - VERT. - TOP
B512	X	13	15'-8"	X		WING 3 - STIRRUP
B513	X	17	15'-6"	X		WING 3 - VERT.
B514	X	6	15'-3"			WING 3 - HORIZ. - BASE F.F.
B515	X	7	13'-11"			WING 3 - HORIZ. - BASE B.F.
B516	X	2	14'-9"			WING 3 - HORIZ. - BASE TOP
B417	X	12	11'-7"			WING 3 - HORIZ. - TOP, F.F. & B.F.
B618	X	2	11'-7"			WING 3 - HORIZ. - TOP
B519	X	10	15'-8"	X		WING 4 - STIRRUP
B520	X	9	12'-8"	X		WING 4 - VERT. - TOP
B521	X	13	15'-6"	X		WING 4 - VERT. - TOP
B522	X	6	12'-7"			WING 4 - HORIZ. - BASE F.F.
B723	X	7	12'-4"			WING 4 - HORIZ. - BASE B.F.
B724	X	1	13'-3"			WING 4 - HORIZ. - BASE TOP
B425	X	12	15'-7"			WING 4 - HORIZ. - F.F. & B.F.
B626	X	2	15'-7"			WING 4 - HORIZ. - TOP
B427	X	2	7'-9"			WING 4 - HORIZ.

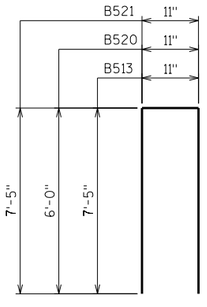
◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



ELEVATION - WING 4



SECTION THRU WING 4

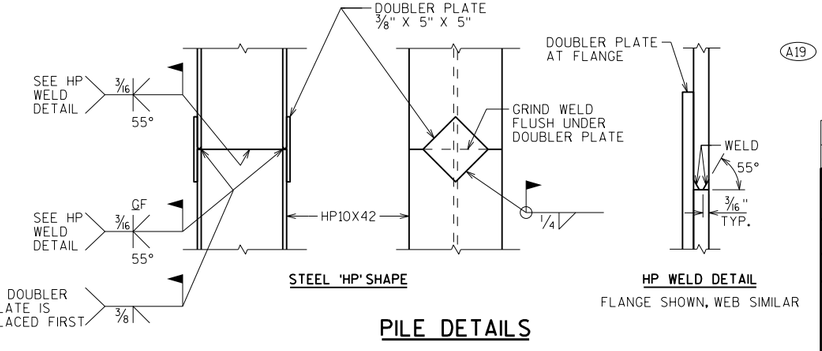


B513, B520, B521

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B502	2 SERIES OF 5	15'-8" TO 16'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 × 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 × 42 STEEL PILING, ESTIMATED 50' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY	DDS	PLANS CK'D.	MJL

EAST ABUTMENT DETAILS

SHEET 7

273

SCALE = 3.00

8

8

STATE PROJECT NUMBER

1020-03-76

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

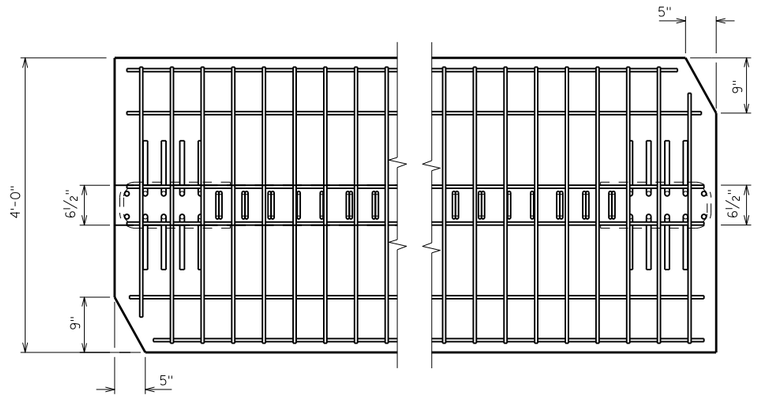
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

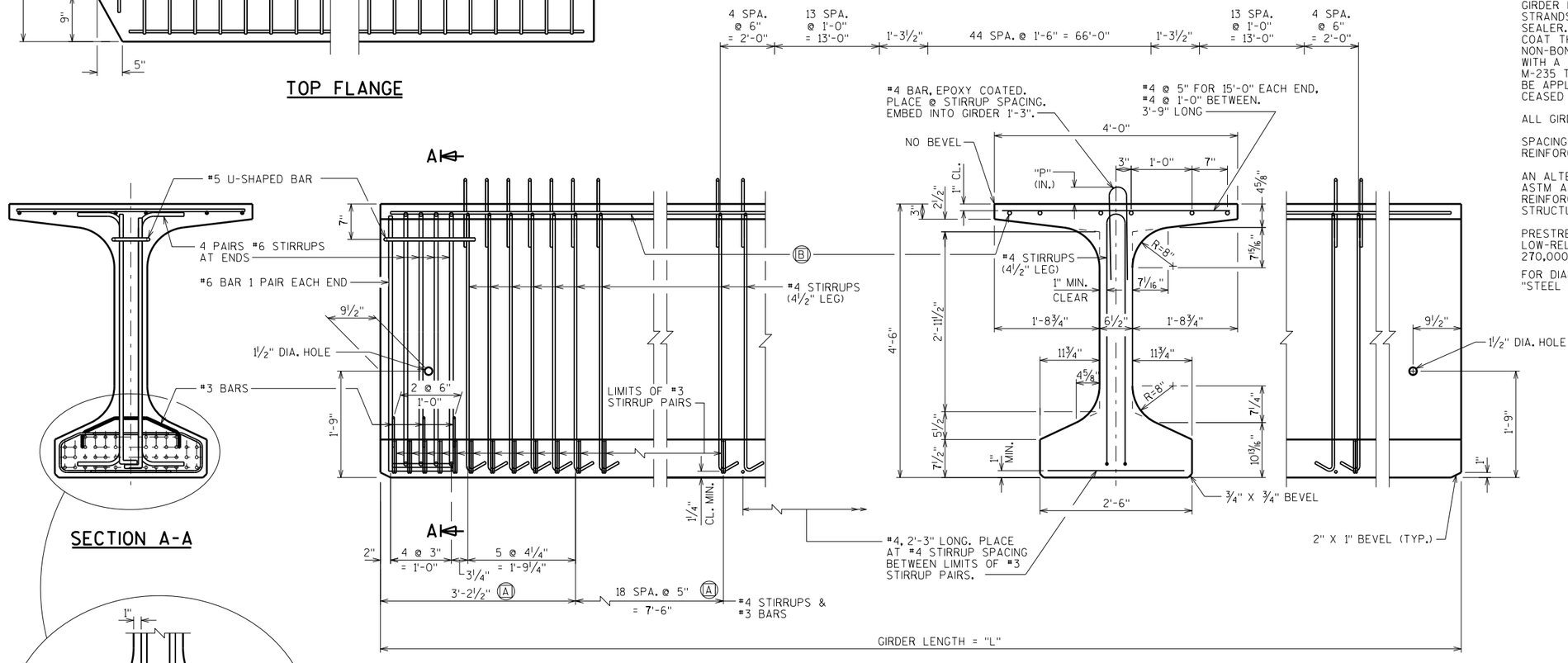
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



TOP FLANGE

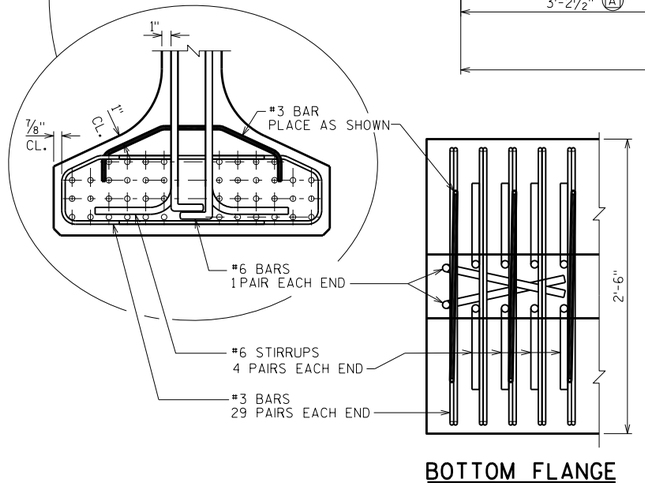


SECTION A-A

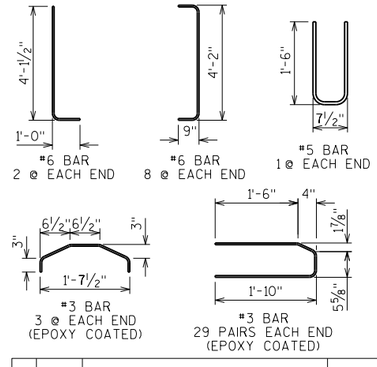
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDERS	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1&9	120'	0.6	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.6	8,000	7.5"	7"	7.5"	0.6	38	6,400	49	16	19	5		
1	2-8	120'	0.7	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.7	8,000	7.5"	7"	7.5"	0.6	38	6,400	49	16	19	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

274

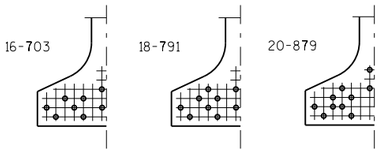
SCALE = 1.00

8

8

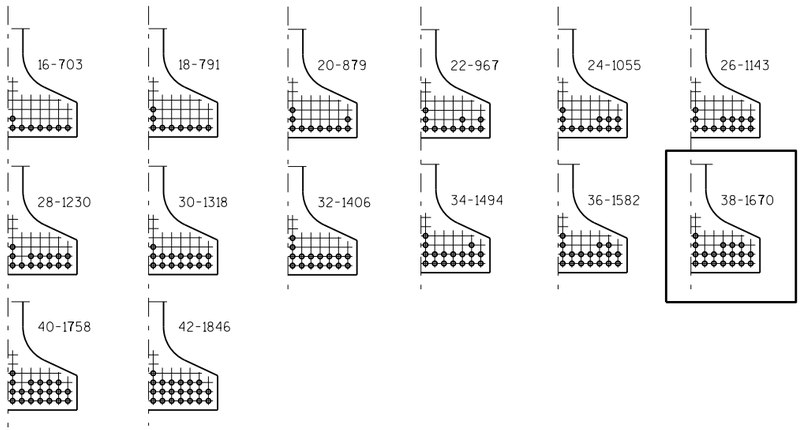
STATE PROJECT NUMBER

1020-03-76



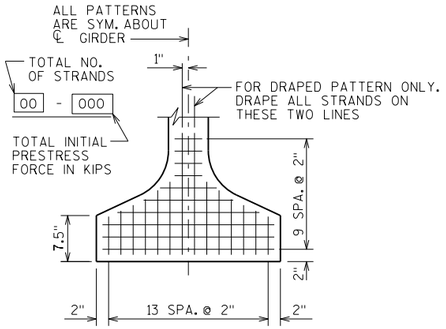
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

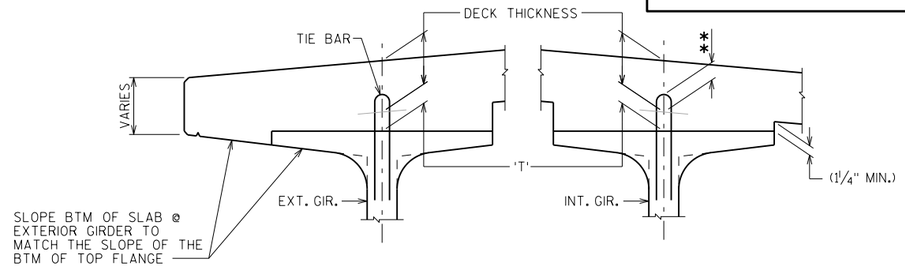


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

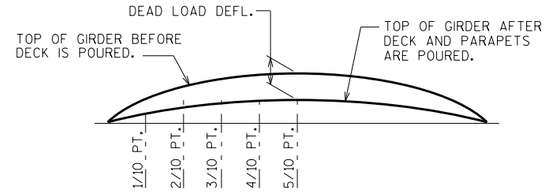
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

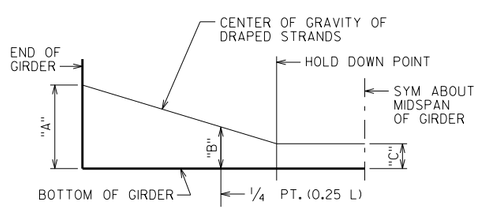
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3¼" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.98

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

275

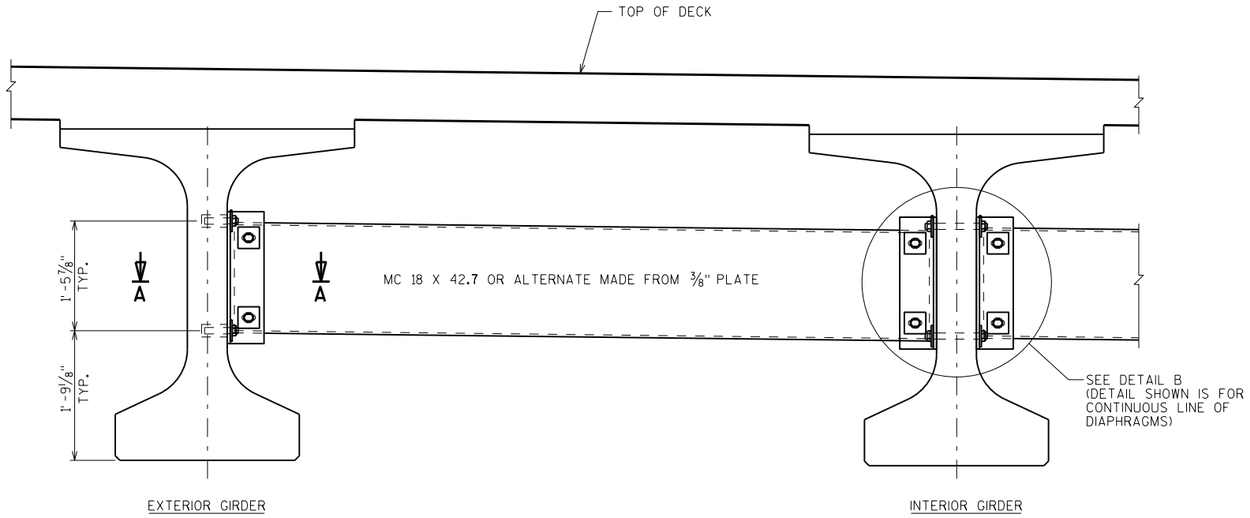
SCALE = 1.00

8

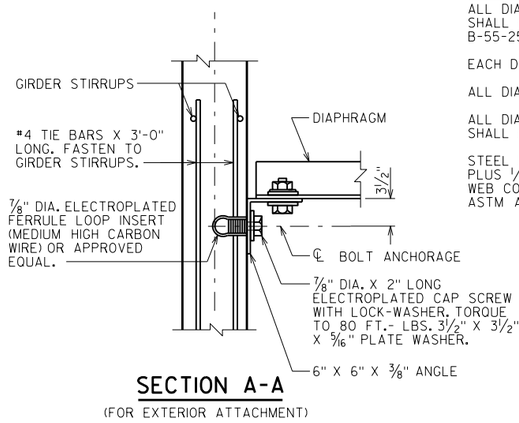
8

STATE PROJECT NUMBER

1020-03-76



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

NOTES

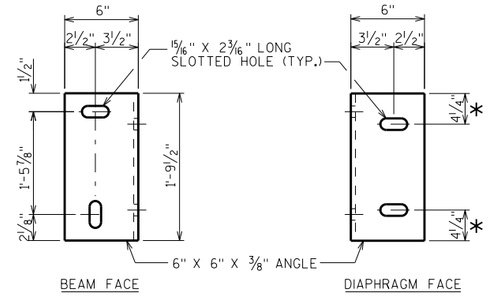
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-254", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

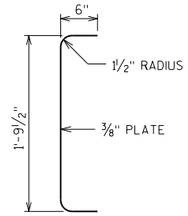
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



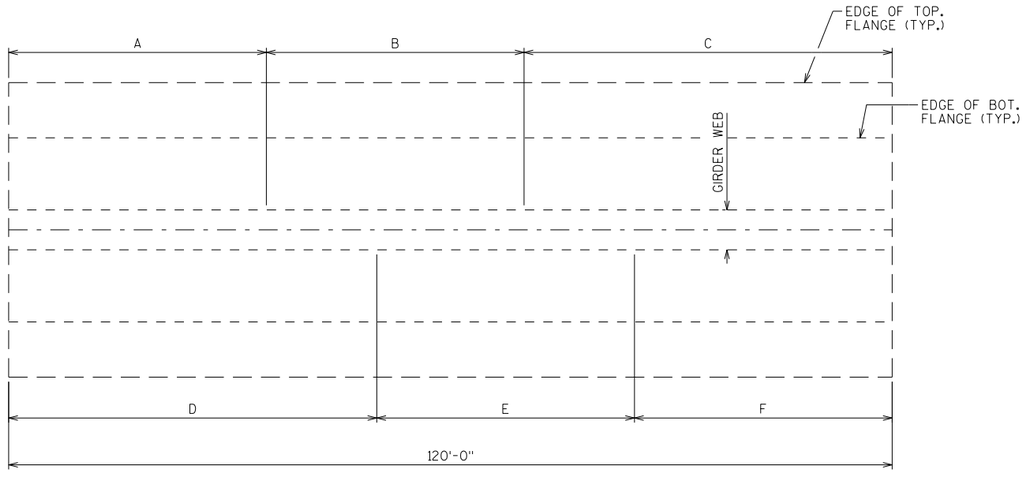
DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

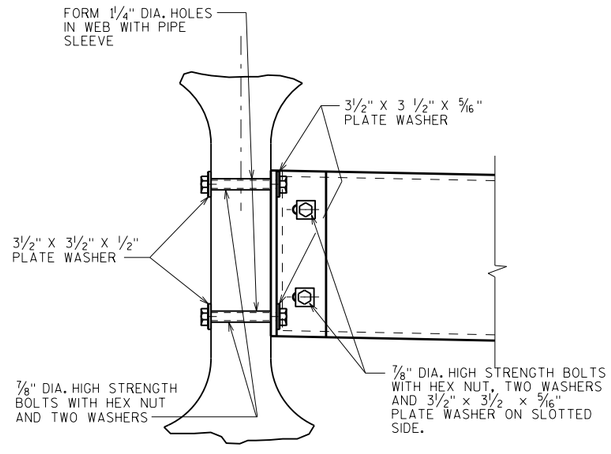


SECTION THRU ALTERNATE DIAPHRAGM

	A	B	C	D	E	F
GIR. 1	N/A	N/A	N/A	42'-2½"	39'-8"	38'-1½"
GIR. 2-8	38'-1½"	39'-8"	42'-2½"	42'-2½"	39'-8"	38'-1½"
GIR. 9	38'-1½"	39'-8"	42'-2½"	N/A	N/A	N/A



DIAPHRAGM CONNECTION SPACING



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

STEEL DIAPHRAGMS

SHEET 10

276

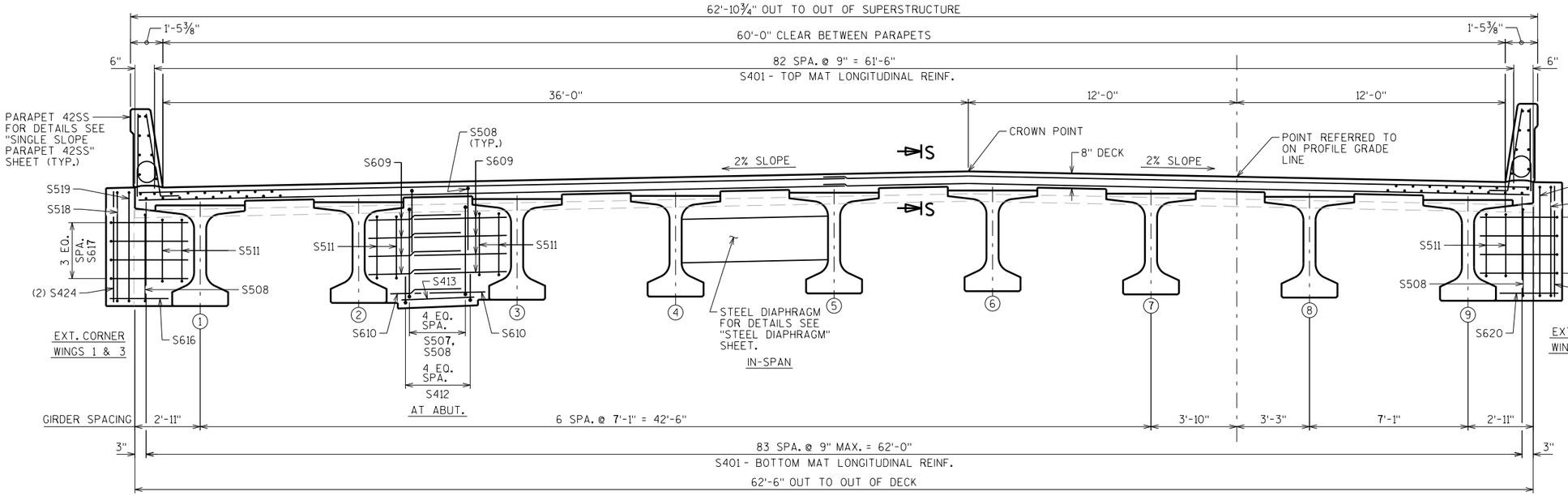
SCALE = 1.00

8

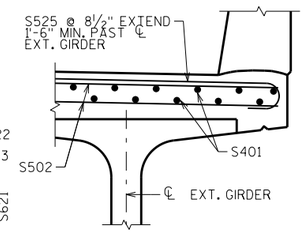
8

STATE PROJECT NUMBER

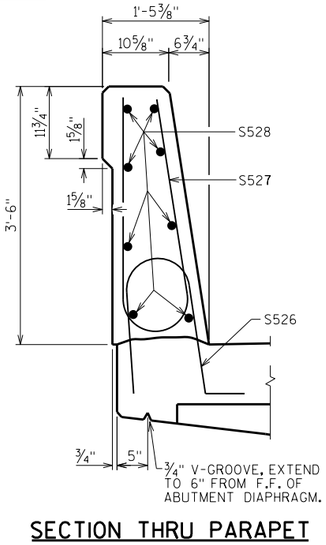
1020-03-76



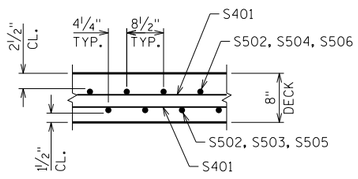
CROSS SECTION THRU ROADWAY



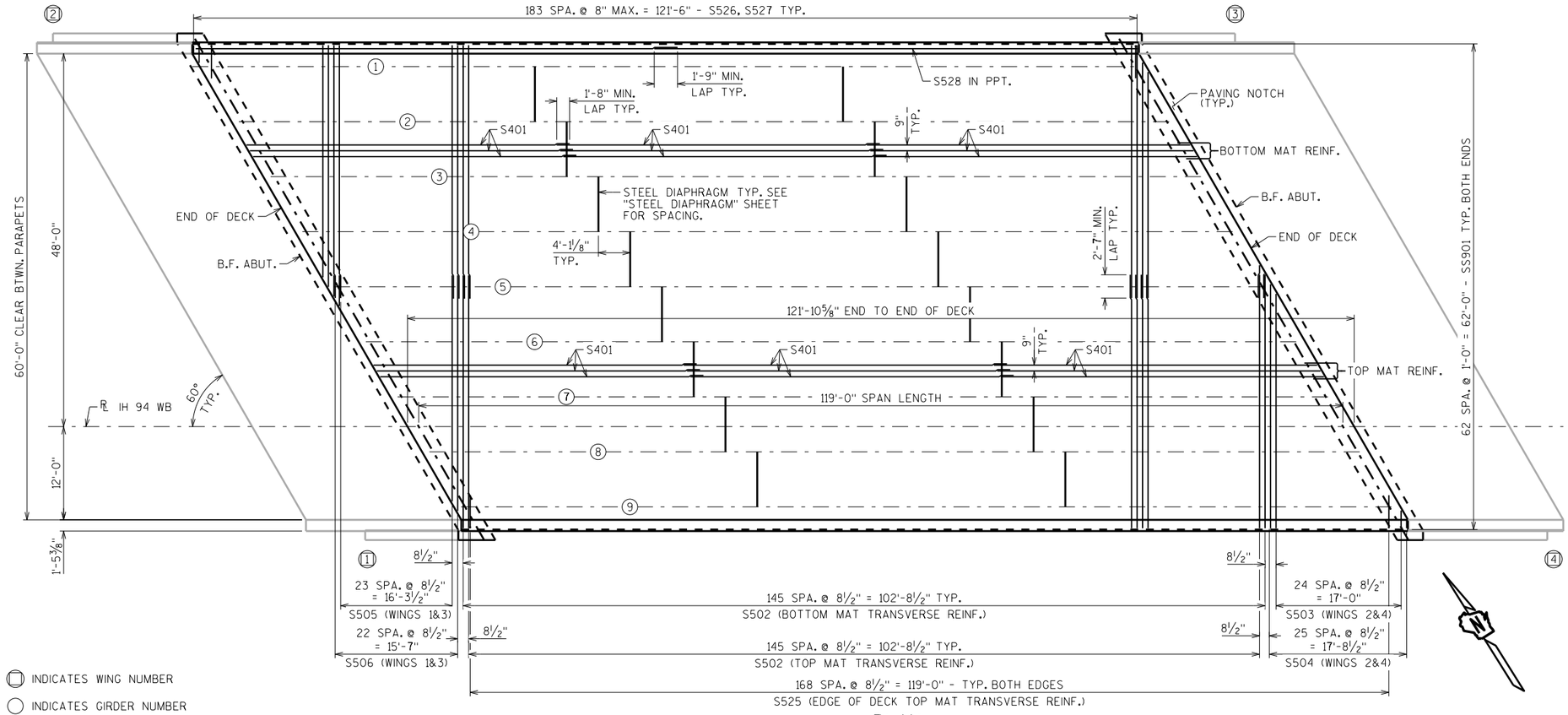
EDGE OF DECK DETAIL



SECTION THRU PARAPET



SECTION S-S



PLAN

INDICATES WING NUMBER

INDICATES GIRDER NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS/MWB | PLANS CK'D. MJL

SUPERSTRUCTURE

SHEET 11

277

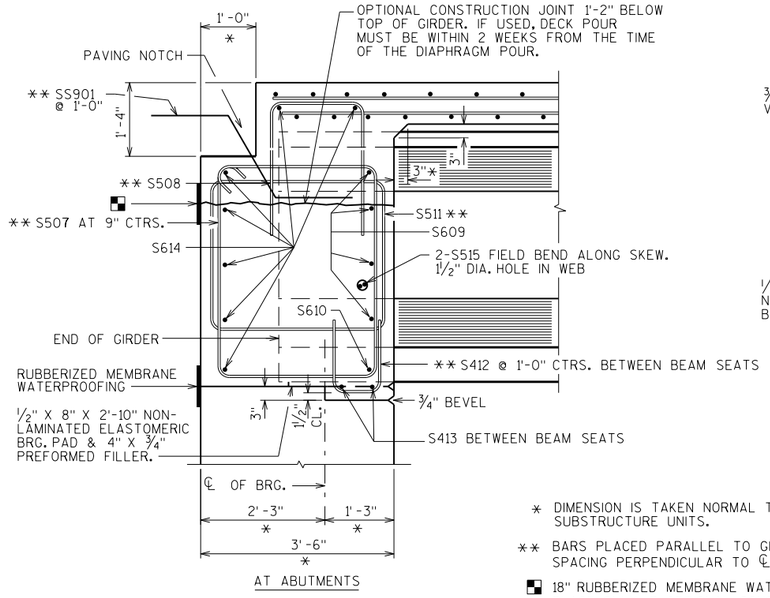
SCALE = 8.00

8

8

STATE PROJECT NUMBER

1020-03-76

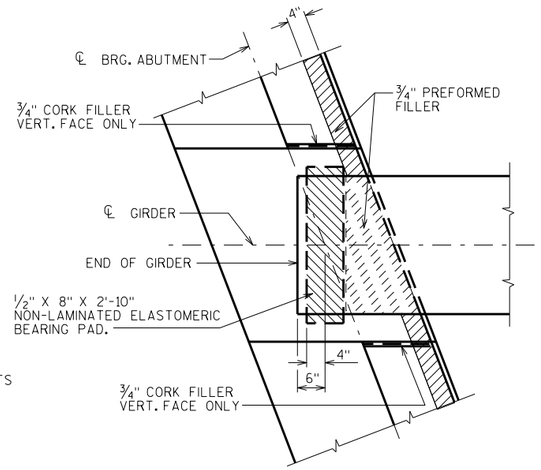


PART LONGIT. SECTION

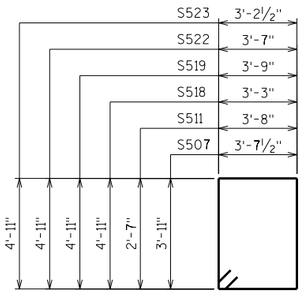
* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

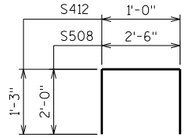
■ 18" RUBBERIZED MEMBRANE WATERPROOFING. PLACE ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCLUDED WITH BID ITEM "CONCRETE MASONRY BRIDGES".



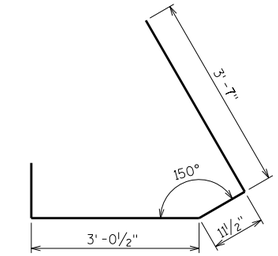
BEARING PAD DETAIL



S507, S511, S518, S519, S522, S523



S508, S412



S617

BILL OF BARS

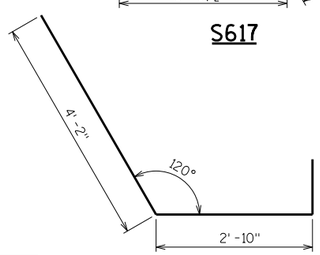
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	501	41'-8"			DECK - LONGITUDINAL
S502	X	584	32'-5"			DECK - TRANSVERSE
S503	X	50	16'-8"		⚠	DECK - TRANS. - CORNER - BOT. WINGS 2 & 4
S504	X	52	16'-8"		⚠	DECK - TRANS. - CORNER - TOP WINGS 2 & 4
S505	X	48	17'-0"		⚠	DECK - TRANS. - CORNER - BOT. WINGS 1 & 3
S506	X	46	17'-0"		⚠	DECK - TRANS. - CORNER - TOP WINGS 1 & 3
S507	X	84	15'-9"	X		ABUT. DIAPH. - STIRRUP
S508	X	84	6'-3"	X		ABUT. DIAPH. - VERT.
S609	X	128	4'-10"			ABUT. DIAPH. - HORIZ.
S610	X	32	3'-8"			ABUT. DIAPH. - HORIZ.
S511	X	72	13'-1"	X		ABUT. DIAPH. - STIRRUPS @ GIRDERS
S412	X	80	3'-5"	X		ABUT. DIAPH. - VERT.
S413	X	32	3'-9"			ABUT. DIAPH. - HORIZ.
S614	X	28	38'-11"			ABUT. DIAPH. - HORIZ. - B.F.
S515	X	32	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S616	X	2	2'-6"			ABUT. DIAPH. - HORIZ. - F.F. - ENDS
S617	X	8	8'-3"	X		ABUT. DIAPH. - HORIZ. - ENDS
S518	X	2	17'-0"	X		ABUT. DIAPH. - STIRRUP - ENDS
S519	X	2	18'-0"	X		ABUT. DIAPH. - STIRRUP - ENDS
S620	X	2	3'-0"			ABUT. DIAPH. - HORIZ. - ENDS
S621	X	8	7'-8"	X		ABUT. DIAPH. - HORIZ. - ENDS
S522	X	2	17'-8"	X		ABUT. DIAPH. - STIRRUP - ENDS
S523	X	2	16'-11"	X		ABUT. DIAPH. - STIRRUP - ENDS
S424	X	8	4'-11"			ABUT. DIAPH. - VERT. - ENDS
S525	X	338	4'-10"	X		DECK - OVERHANG
S526	X	368	4'-5"	X		DECK & PPT. - VERT.
S527	X	368	6'-8"	X		PPT. - VERT.
S528	X	48	41'-9"			PPT. - HORIZ.
SS901		126	5'-0"	X		PAVING NOTCH - STAINLESS STEEL

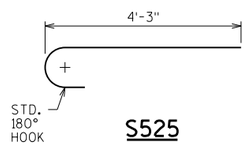
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

TOP OF DECK ELEVATIONS

	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
NORTH EOD	1029.25	1029.16	1029.06	1028.97	1028.87	1028.77	1028.68	1028.58	1028.49	1028.39	1028.29
GIRDER 1	1029.28	1029.18	1029.09	1028.99	1028.90	1028.80	1028.70	1028.61	1028.51	1028.42	1028.32
GIRDER 2	1029.39	1029.29	1029.20	1029.10	1029.00	1028.91	1028.81	1028.72	1028.62	1028.52	1028.43
GIRDER 3	1029.50	1029.40	1029.30	1029.21	1029.11	1029.02	1028.92	1028.82	1028.73	1028.63	1028.54
GIRDER 4	1029.61	1029.51	1029.41	1029.32	1029.22	1029.13	1029.03	1028.93	1028.84	1028.74	1028.65
GIRDER 5	1029.71	1029.62	1029.52	1029.43	1029.33	1029.23	1029.14	1029.04	1028.95	1028.85	1028.75
CROWN PT.	1029.81	1029.71	1029.61	1029.52	1029.42	1029.33	1029.23	1029.13	1029.04	1028.94	1028.85
GIRDER 6	1029.78	1029.68	1029.59	1029.49	1029.40	1029.30	1029.20	1029.11	1029.01	1028.92	1028.82
GIRDER 7	1029.60	1029.51	1029.41	1029.32	1029.22	1029.12	1029.03	1028.93	1028.84	1028.74	1028.64
PGL	1029.51	1029.41	1029.32	1029.22	1029.13	1029.03	1028.93	1028.84	1028.74	1028.65	1028.55
GIRDER 8	1029.43	1029.33	1029.24	1029.14	1029.05	1028.95	1028.85	1028.76	1028.66	1028.57	1028.47
GIRDER 9	1029.26	1029.16	1029.06	1028.97	1028.87	1028.78	1028.68	1028.58	1028.49	1028.39	1028.30
SOUTH EOD	1029.21	1029.12	1029.02	1028.93	1028.83	1028.73	1028.64	1028.54	1028.45	1028.35	1028.25



S621

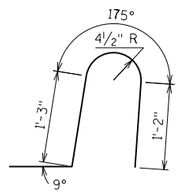


S525

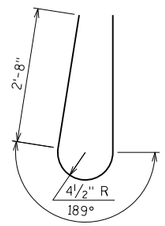
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S503	2 SERIES OF 25	1'-11" TO 31'-4"
S504	2 SERIES OF 26	1'-4" TO 32'-0"
S505	2 SERIES OF 24	2'-11" TO 31'-1"
S506	2 SERIES OF 23	3'-6" TO 30'-6"

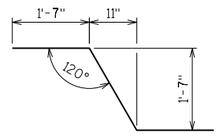
BUNDLE AND TAG EACH SERIES SEPARATELY.



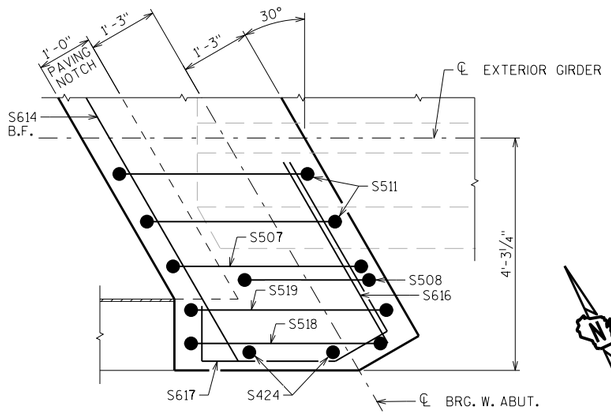
S526



S527

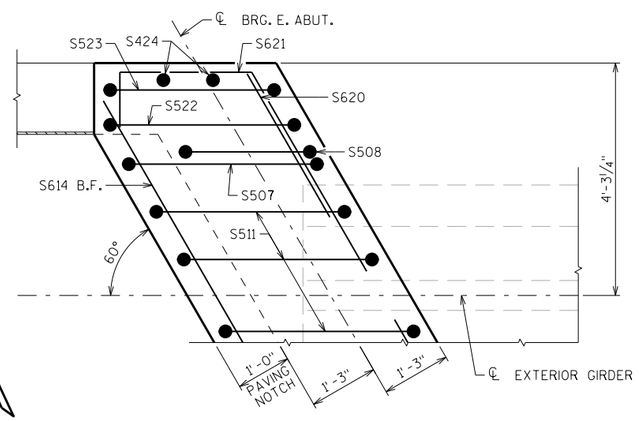


SS901



PLAN - ABUTMENT DIAPHRAGM

WING 1 SHOWN, WING 3 SIMILAR



PLAN - ABUTMENT DIAPHRAGM

WING 2 SHOWN, WING 4 SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

SUPERSTRUCTURE DETAILS

SHEET 12

278

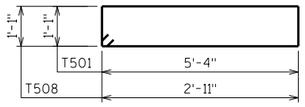
SCALE = 1.33

8

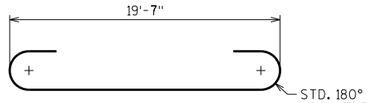
8

STATE PROJECT NUMBER

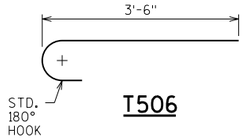
1020-03-76



T501, T508



T803

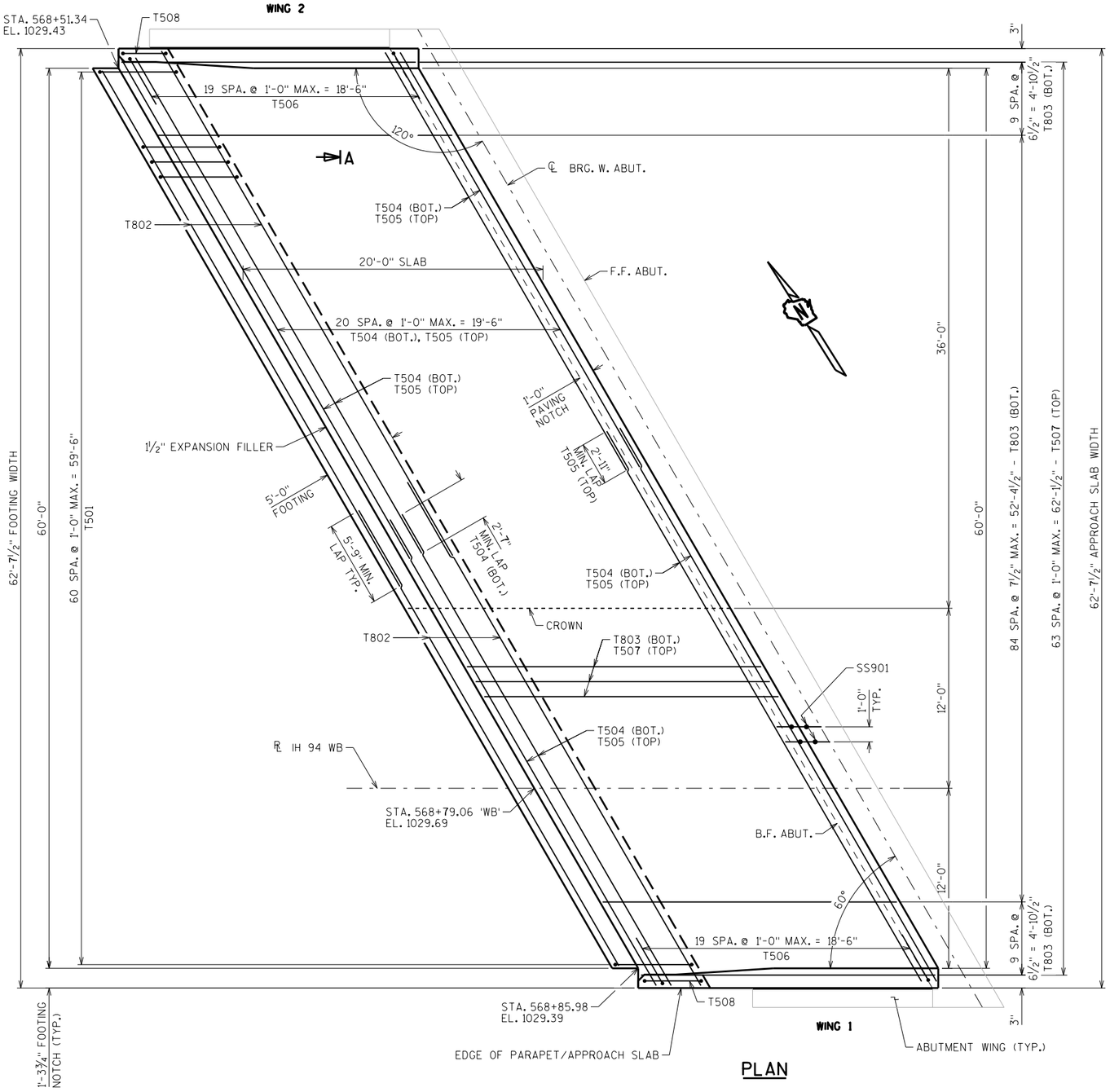


T506

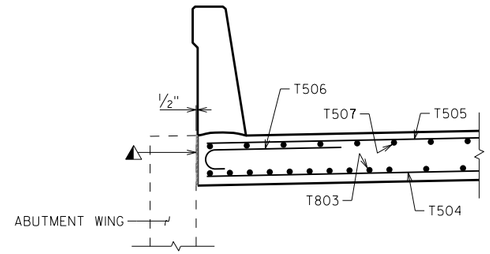
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	61	13'-6"	X		FOOTING - STIRRUPS
T802	X	24	38'-10"			FOOTING - HORIZ.
T803	X	103	21'-5"	X		APP. SLAB - LONGIT. - BOT.
T504	X	42	37'-6"			APP. SLAB - TRANSVERSE - BOT.
T505	X	42	37'-8"			APP. SLAB - TRANSVERSE - TOP
T506	X	40	4'-1"	X		APP. SLAB - TRANSVERSE - EDGES
T507	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
T508	X	2	8'-8"	X		FOOTING - STIRRUPS - NOTCH

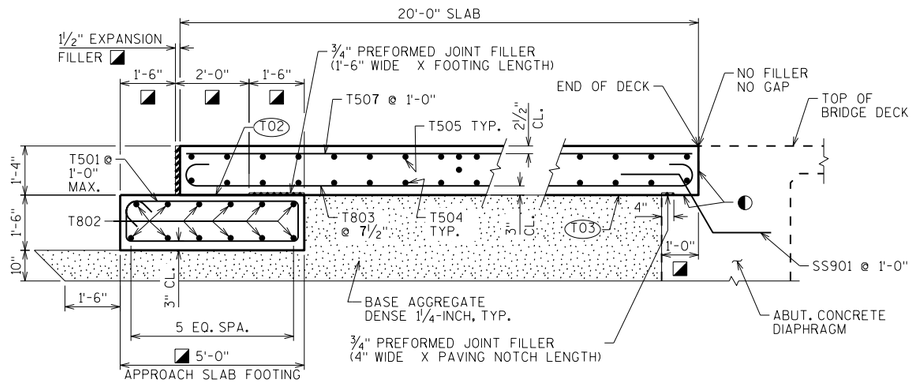


PLAN



SECTION A-A

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY MWB | PLANS CK'D. MJL

WEST STRUCTURAL APPROACH SLAB

SHEET 13

279

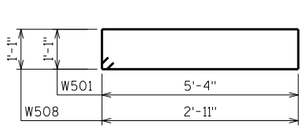
8

8

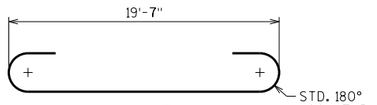
SCALE = 4.00

STATE PROJECT NUMBER

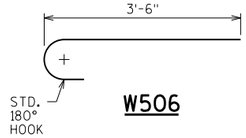
1020-03-76



W501, W508



W803

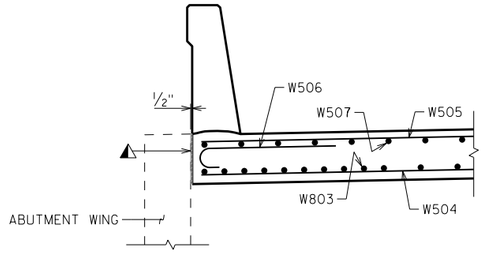


W506

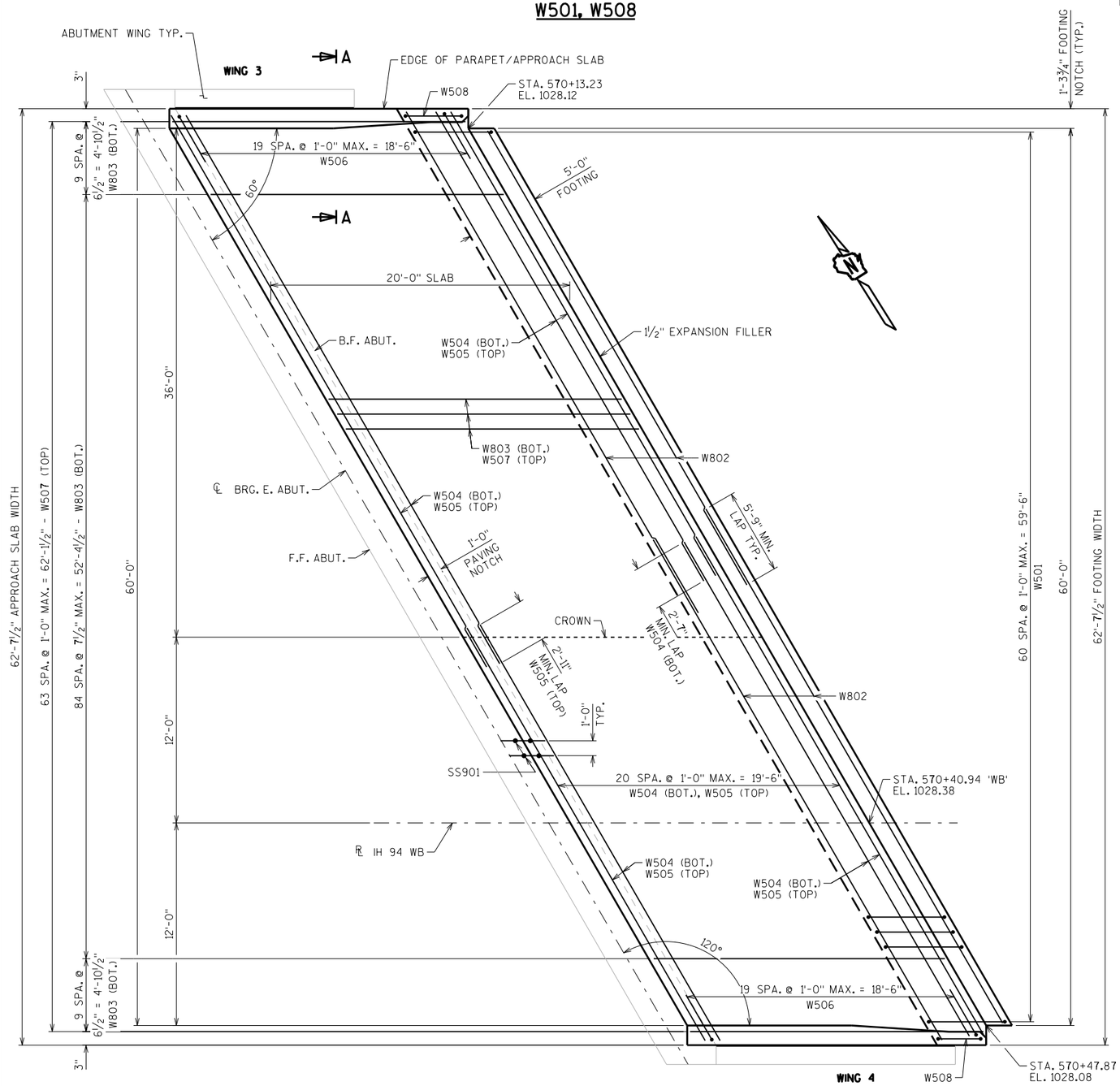
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

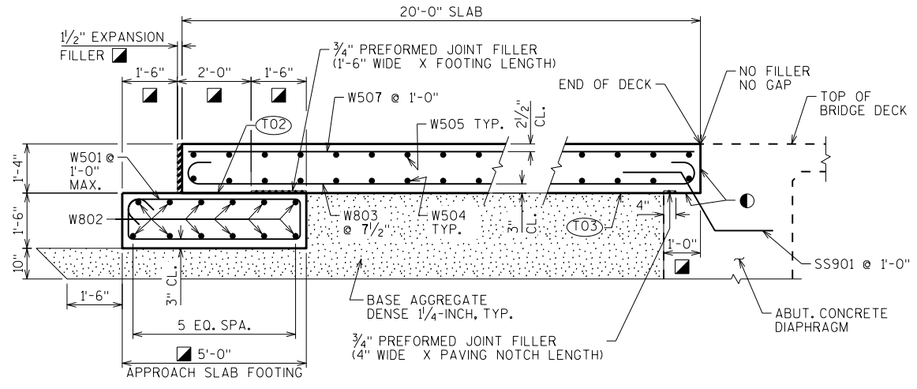
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	61	13'-6"	X		FOOTING - STIRRUPS
W802	X	24	38'-10"			FOOTING - HORIZ.
W803	X	103	21'-5"	X		APP. SLAB - LONGIT. - BOT.
W504	X	42	37'-6"			APP. SLAB - TRANSVERSE - BOT.
W505	X	42	37'-8"			APP. SLAB - TRANSVERSE - TOP
W506	X	40	4'-1"	X		APP. SLAB - TRANSVERSE - EDGES
W507	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
W508	X	2	8'-8"	X		FOOTING - STIRRUPS - NOTCH



SECTION A-A



PLAN



SECTION THRU APPROACH SLAB

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY MWB | PLANS CK'D. MJL

EAST STRUCTURAL APPROACH SLAB

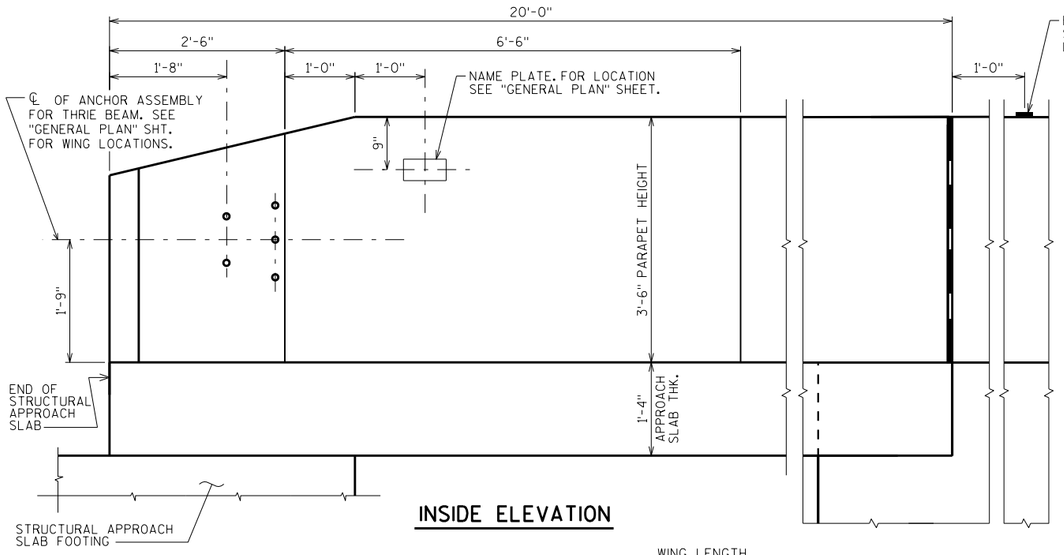
SHEET 14

280

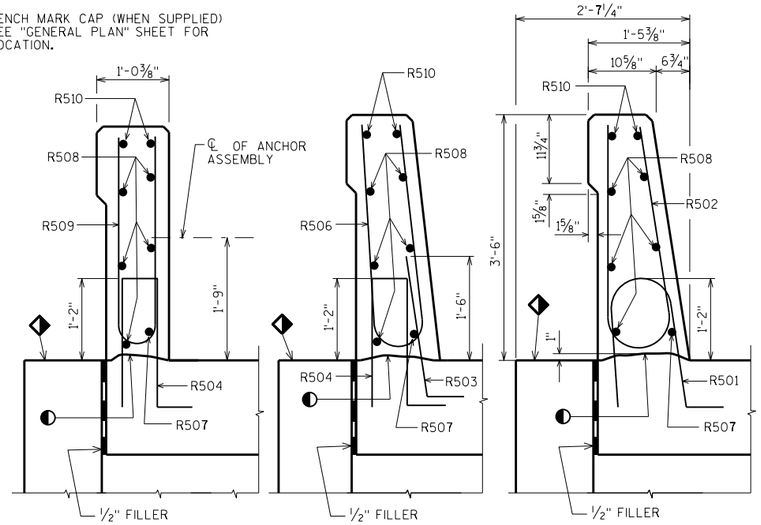
8

8

SCALE = 4.00



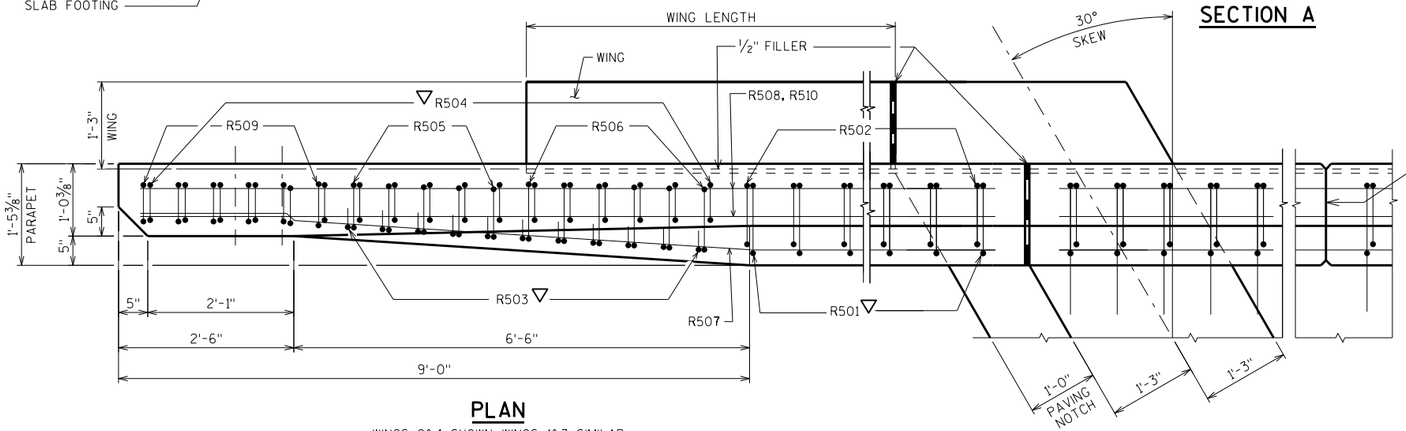
INSIDE ELEVATION



SECTION A

SECTION B

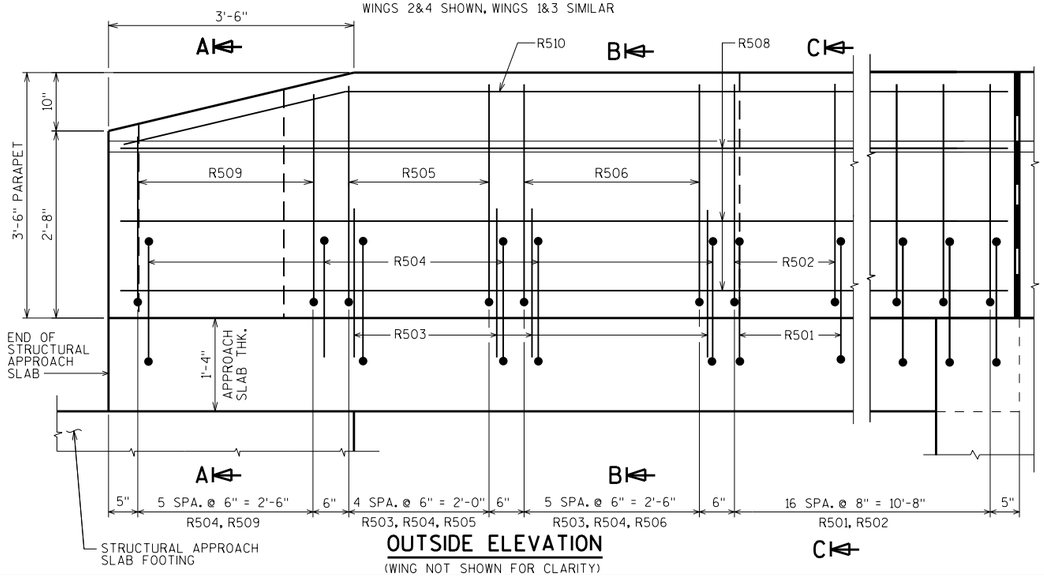
SECTION C



PLAN

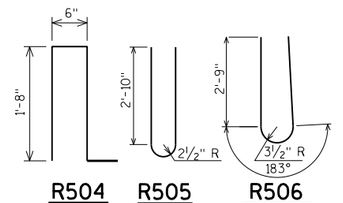
WINGS 2&4 SHOWN, WINGS 1&3 SIMILAR

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

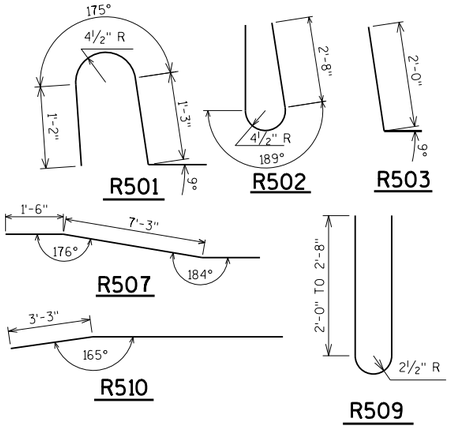


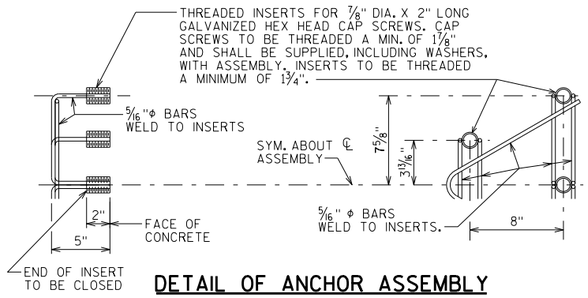
OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)



R504 R505 R506





DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

STATE PROJECT NUMBER

1020-03-76

BILL OF BARS

FOR STRUCTURAL APPROACH SLAB PARAPETS

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-7"	X		PARAPET HORIZ.
R508	X	10	10	19'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	▲	PARAPET VERT.
R510	X	4	4	19'-7"	X		PARAPET HORIZ

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY: DDS | PLANS CK'D.: MJL

SINGLE SLOPE PARAPET 42SS

SHEET 15

281

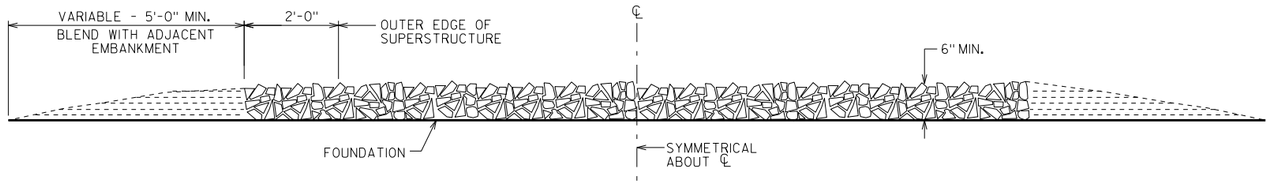
SCALE = 1.05

8

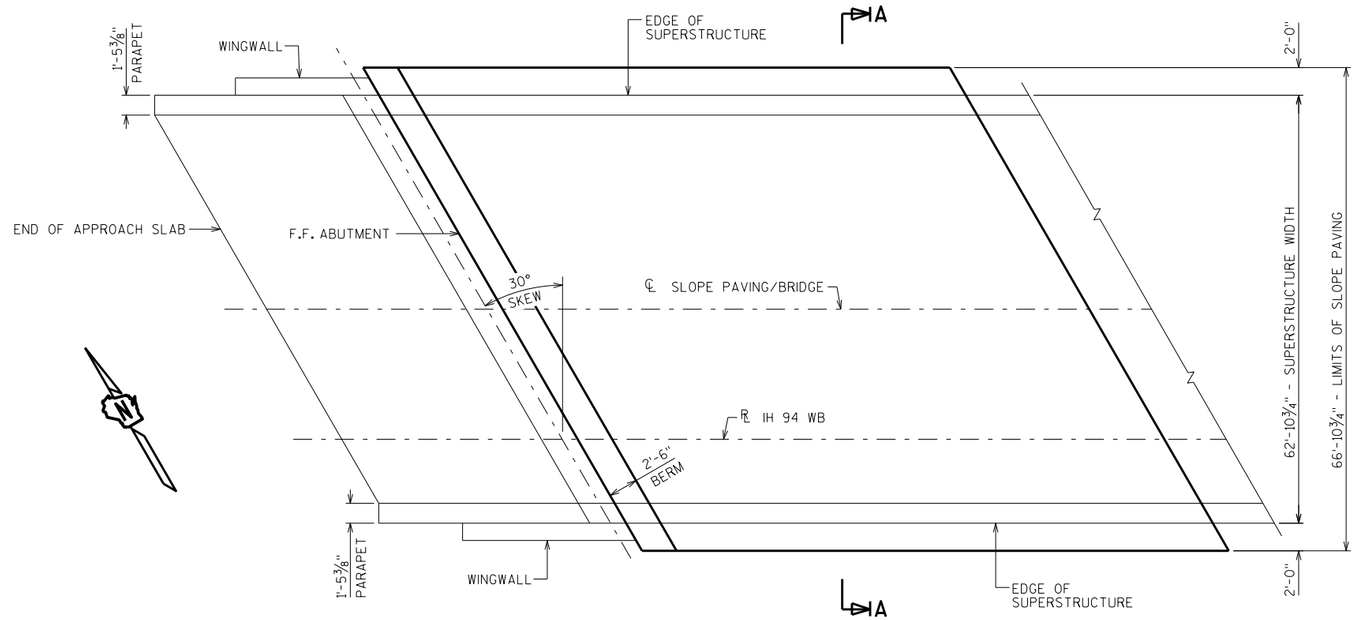
8

STATE PROJECT NUMBER

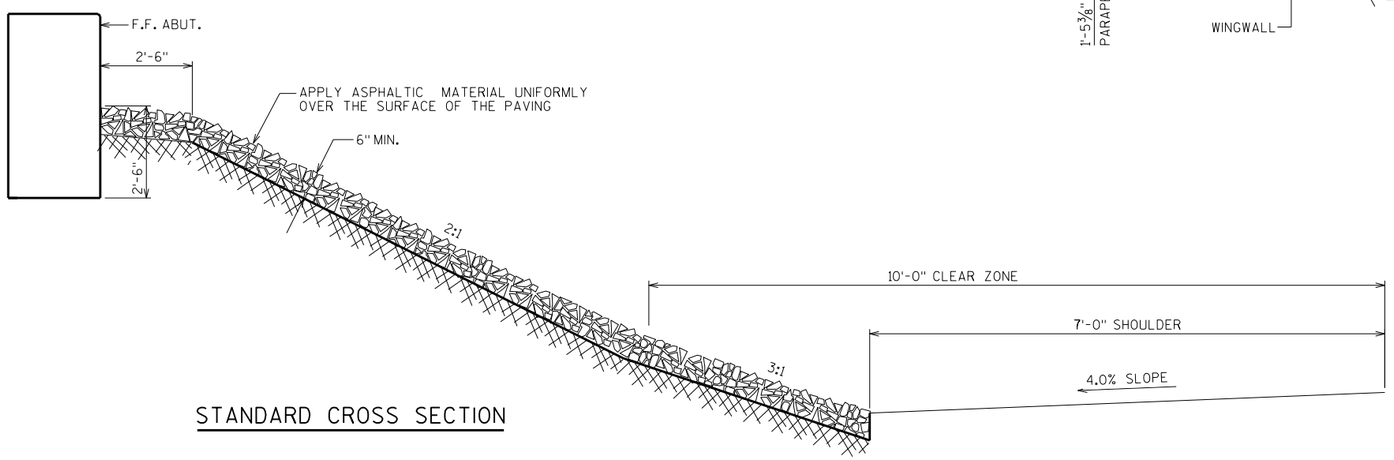
1020-03-76



SECTION A-A



PLAN



STANDARD CROSS SECTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY DDS | PLANS CK'D. MJL

SLOPE PAVING (CRUSHED AGGREGATE)

SHEET 16

282

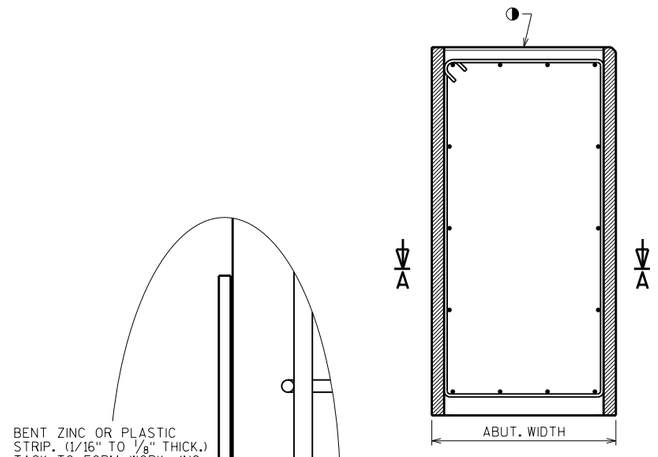
8

8

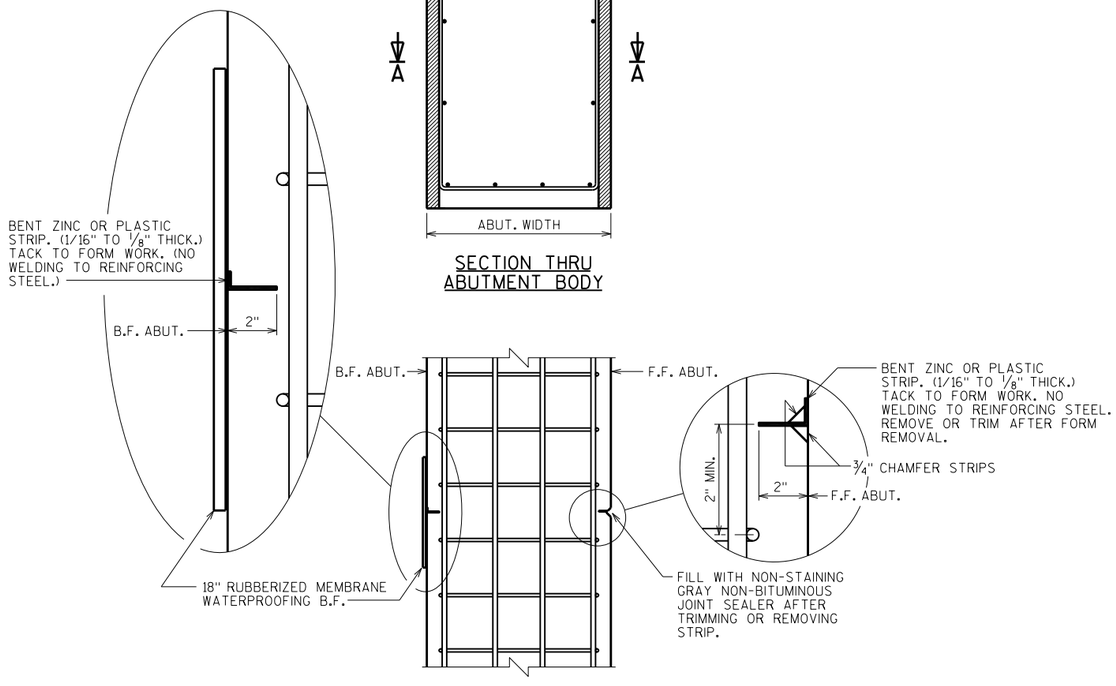
SCALE = 1.00

STATE PROJECT NUMBER

1020-03-76



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-254

DRAWN BY MWB | PLANS CK'D. MJL

ALTERNATE CONSTRUCTION JOINT

SHEET 17

283

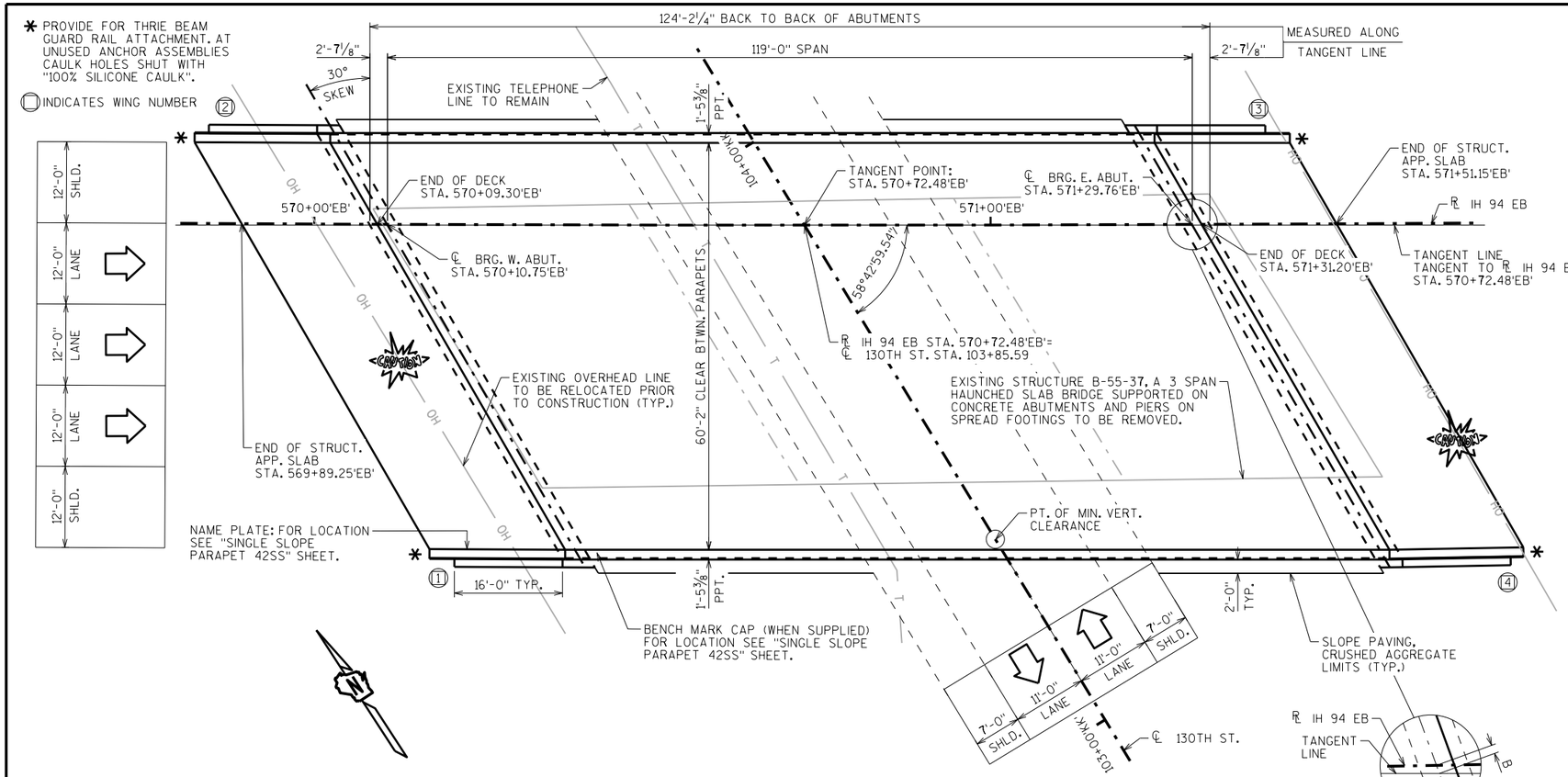
SCALE = 1.00

8

8

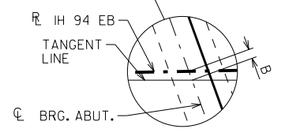
STATE PROJECT NUMBER

1020-03-77



PLAN

SINGLE SPAN 54W" PRESTRESSED GIRDERS



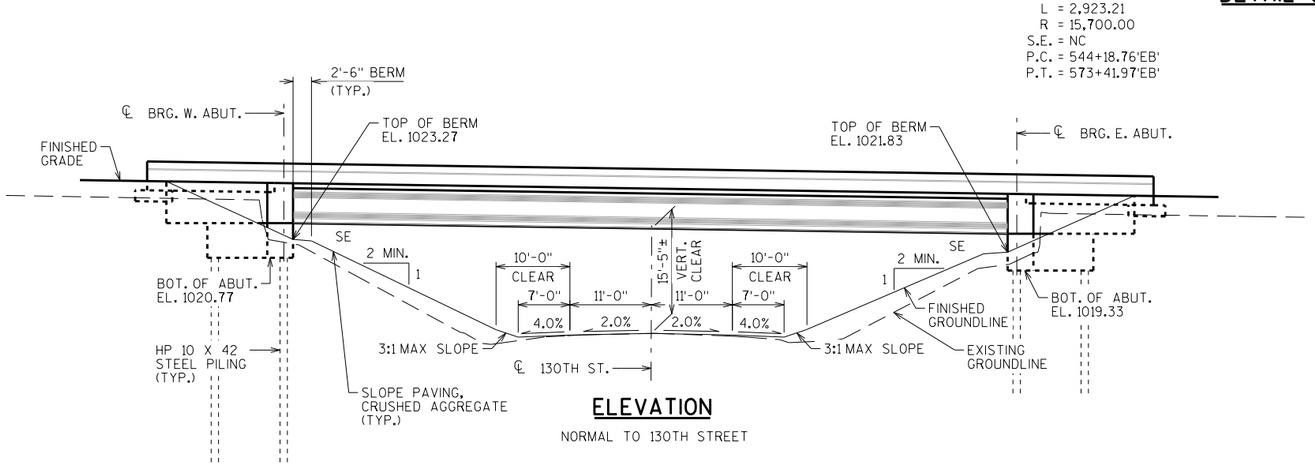
LOCATION	DIM. B
WEST ABUT.	0'-1 5/8"
EAST ABUT.	0'-1 1/2"

TANGENT OFFSET DETAIL & TABLE

CURVE DATA

FEATURE ON

P.I. = 558+84.60'EB'
△ = 10°40'05"
D = 0°21'54"
T = 1,465.84
L = 2,923.21
R = 15,700.00
S.E. = NC
P.C. = 544+18.76'EB'
P.T. = 573+41.97'EB'



ELEVATION

NORMAL TO 130TH STREET

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.08
OPERATING RATING FACTOR: RF = 1.72
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

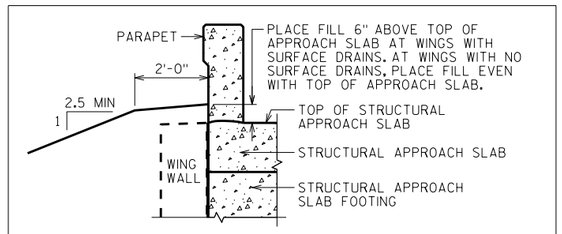
ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 35' LONG AT WEST ABUTMENT.
ESTIMATED 15' LONG AT EAST ABUTMENT.
PILE POINTS ARE REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

IH 94 EB
ADT = 22,700 (2039)
R.D.S. = 75 M.P.H.

130TH ST.
ADT = 390 (2039)
R.D.S. = 55 M.P.H.



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

STRUCTURE DESIGN CONTACTS:

MICHAEL LARSON (608) 267-4539
LAURA SHADEWALD (608) 267-9592

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. 54W" PRESTRESSED GIRDER DETAILS 1
9. 54W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGMS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. WEST STRUCTURAL APPROACH SLAB
14. EAST STRUCTURAL APPROACH SLAB
15. SINGLE SLOPE PARAPET 42SS
16. SLOPE PAVING (CRUSHED AGGREGATE)
17. ALTERNATE CONSTRUCTION JOINT

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 8/13/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-55-255

IH 94 EB OVER 130TH STREET

COUNTY	TOWN
ST. CROIX	KINNICKINNIC

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MJL	MWB	MWB	MJL

GENERAL PLAN

SHEET 1 OF 17

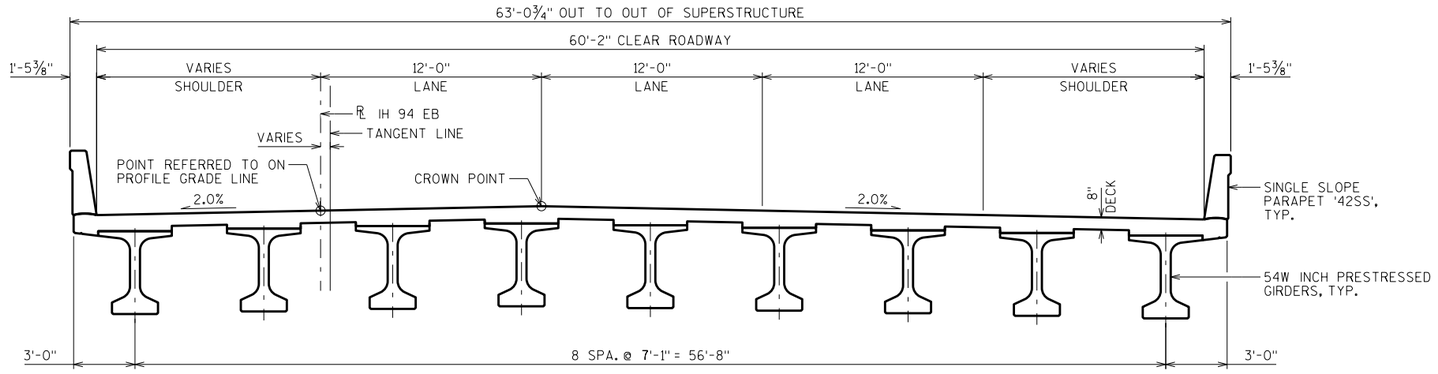
284

I.D. 1020-03-07 DATE: JUNE 2018

SCALE = 10.00

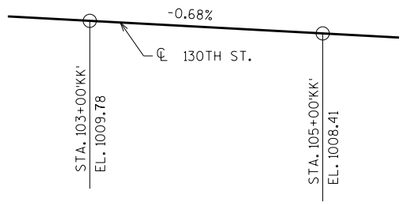
8

8

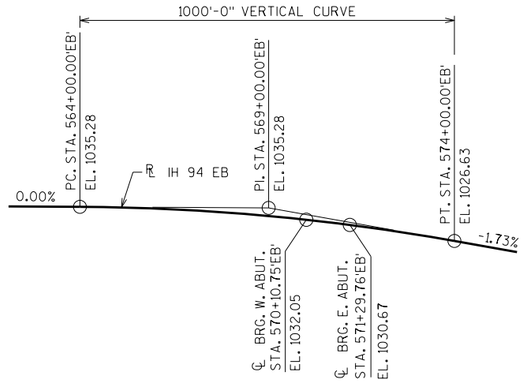


CROSS SECTION THRU ROADWAY

LOOKING EAST



PROFILE GRADE LINE 130TH ST.



PROFILE GRADE LINE - IH 94 EB

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH SLAB	WEST ABUTMENT	EAST ABUTMENT	EAST APPROACH SLAB	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 571+00'EB'	LS	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-255	LS	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	355	360	———	715
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	215	———	———	215	430
501.1000.S	ICE HOT WEATHER CONCRETING	LB	2,655	660	555	565	660	5,095
502.0100	CONCRETE MASONRY BRIDGES	CY	354	88	74	75	88	679
502.3200	PROTECTIVE SURFACE TREATMENT	SY	845	134	———	———	134	1,113
502.3210	PIGMENTED SURFACE SEALER	SY	122	20	———	———	20	162
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	1,080	———	———	———	———	1,080
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	5,160	5,100	———	10,260
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	51,820	15,270	1,970	1,960	15,270	86,290
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,150	———	———	———	———	2,150
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	18	———	———	———	———	18
506.4000	STEEL DIAPHRAGMS B-55-255	EACH	16	———	———	———	———	16
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	26	———	6	6	———	38
550.0500	PILE POINTS	EACH	———	———	18	18	———	36
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	———	630	270	———	900
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	———	———	325	280	———	605
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	125	125	———	250
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	———	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	66	66	———	132
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½", ¾", 1½"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN ON THIS SHEET.

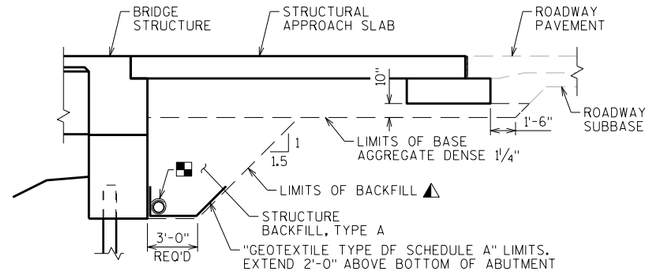
PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON THE "SLOPE PAVING (CRUSHED AGGREGATE)" SHEET.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET.

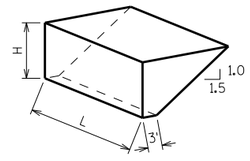
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)

STATE PROJECT NUMBER

1020-03-77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

CROSS SECTION & QUANTITIES

SHEET 2

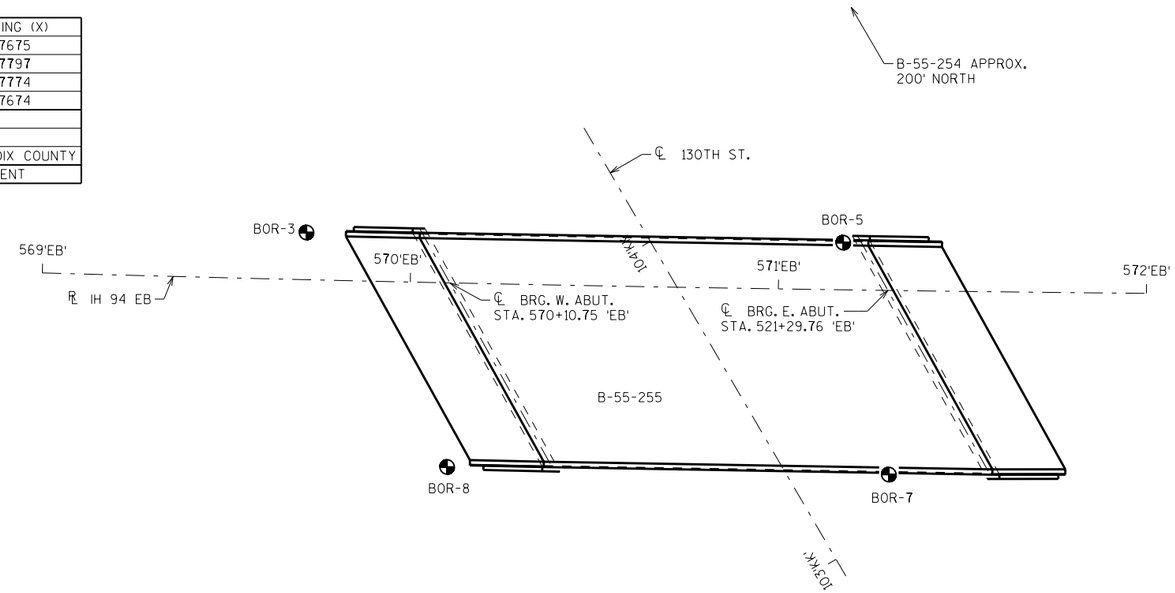
285

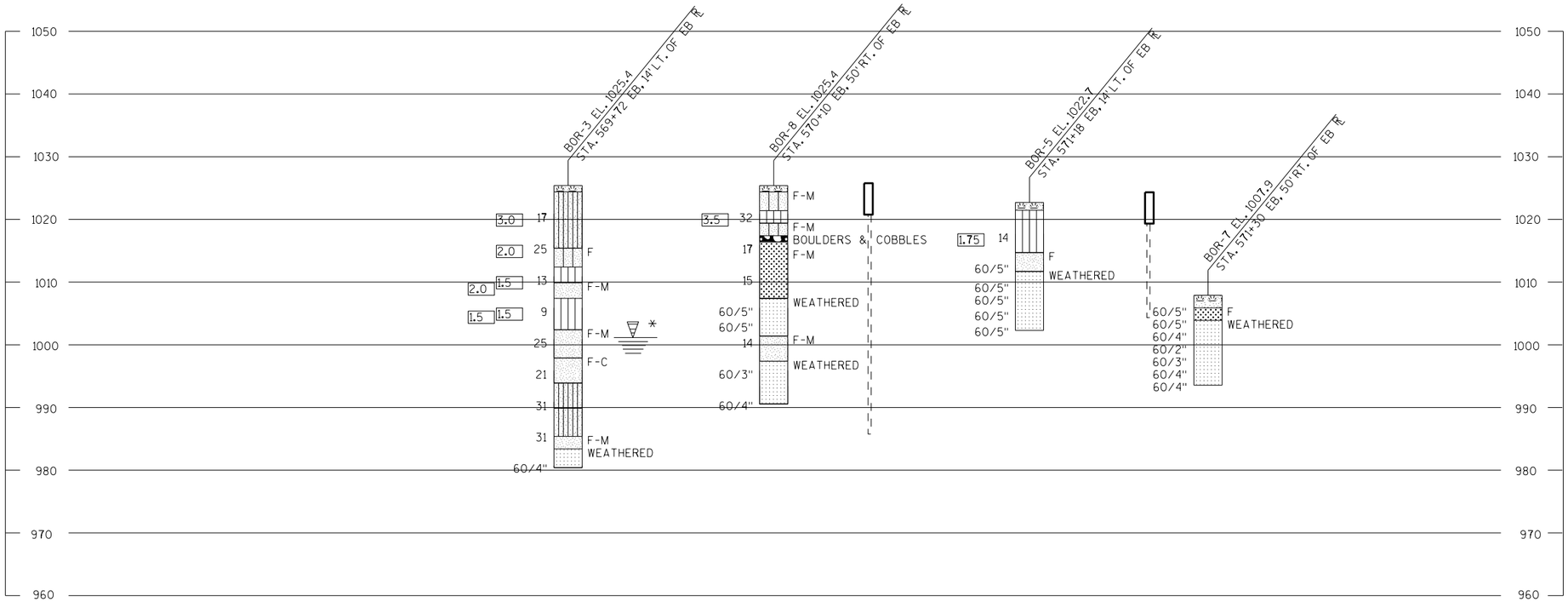
SCALE = 4.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
3	9/20/2017	332212	567675
5	9/20/2017	332132	567797
7	9/26/2017	332072	567774
8	9/26/2017	332137	567674
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

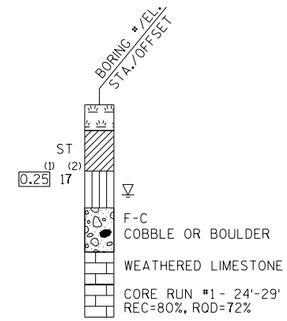
STATE PROJECT NUMBER

1020-03-77

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▼ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY TLP/MWB | PLANS CK'D. MJL

SUBSURFACE EXPLORATION

SHEET 3

286

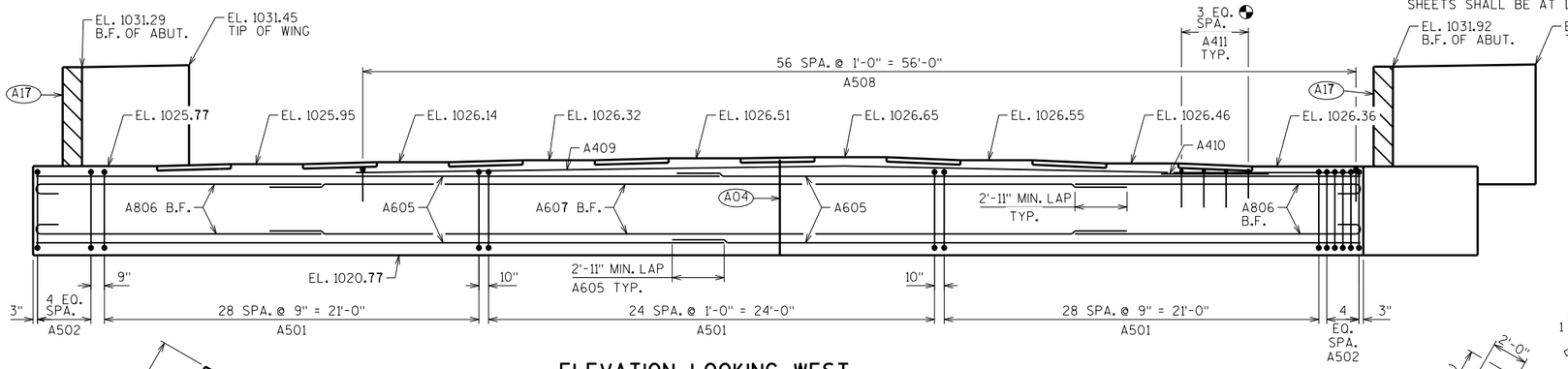
SCALE = 20.00

8

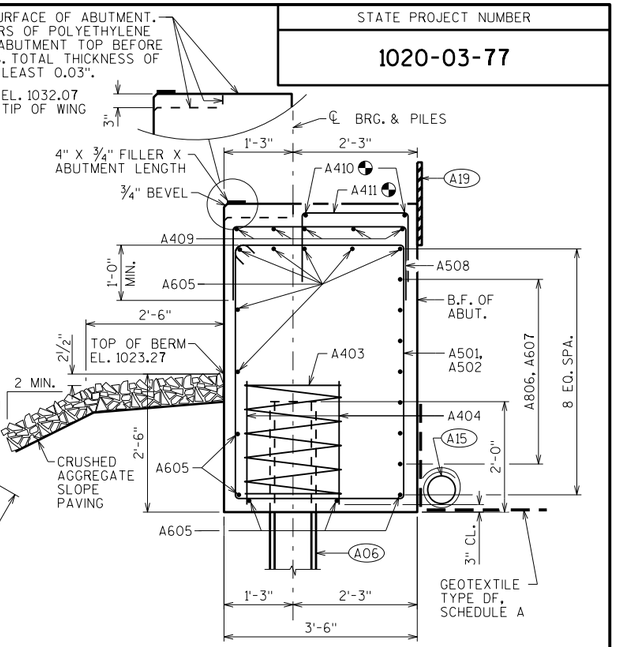
8

STATE PROJECT NUMBER

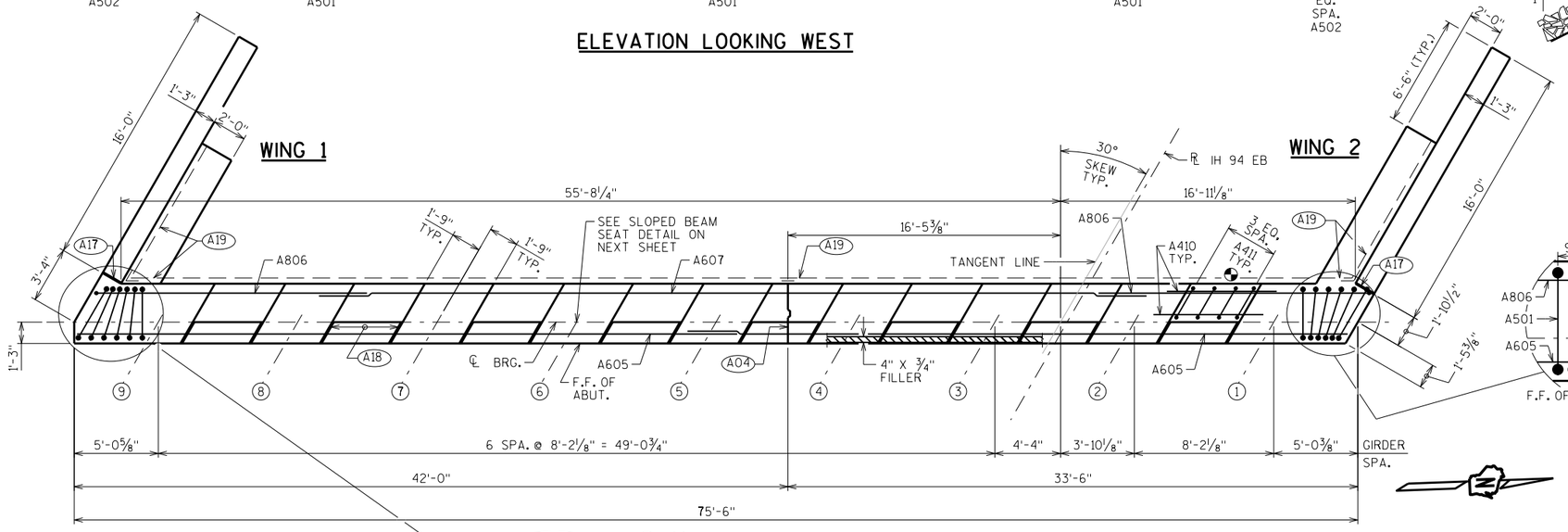
1020-03-77



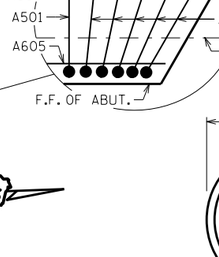
ELEVATION LOOKING WEST

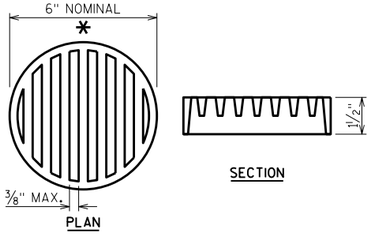


SECTION THRU BODY

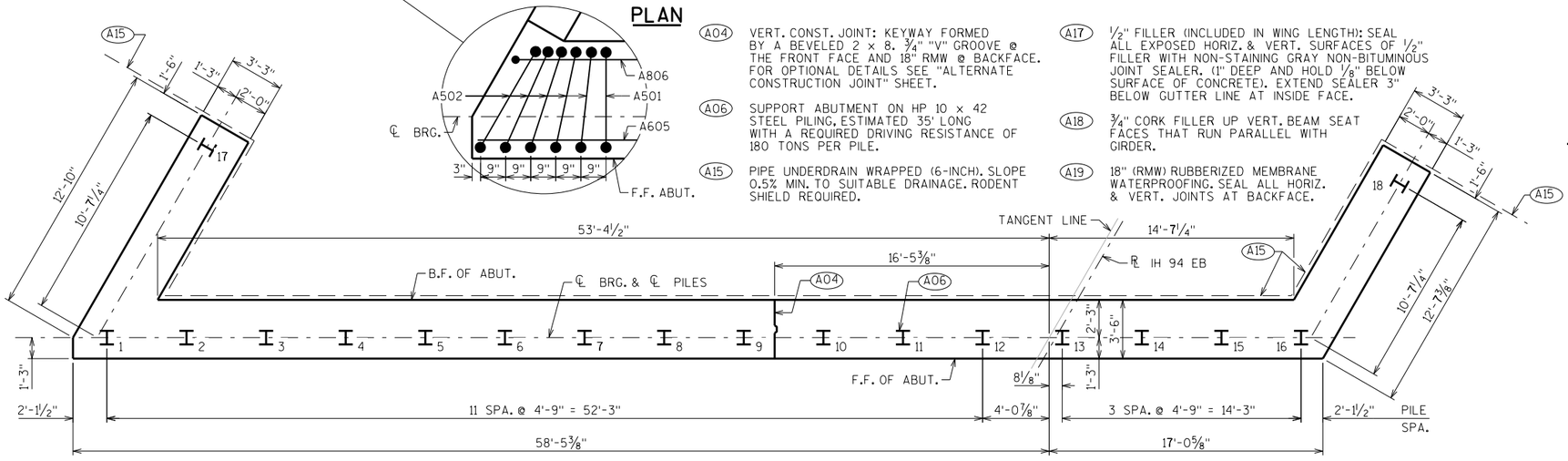


PLAN





RODENT SHIELD DETAIL



PILE PLAN

A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A18 ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

WEST ABUTMENT

SHEET 4

287

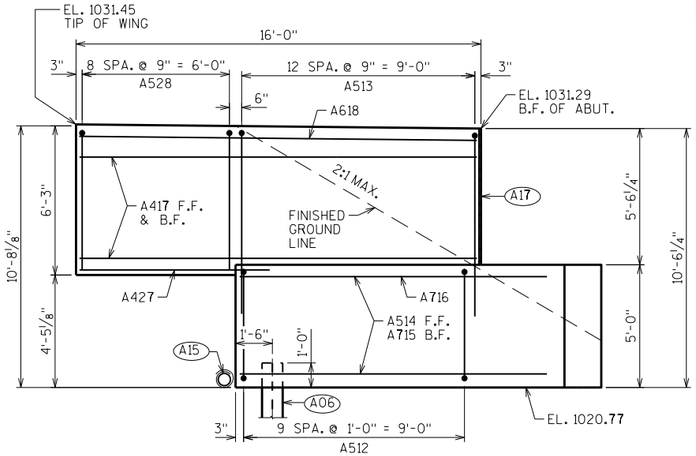
SCALE = 4.00

8

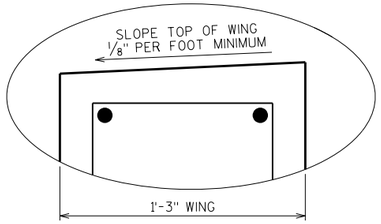
8

STATE PROJECT NUMBER

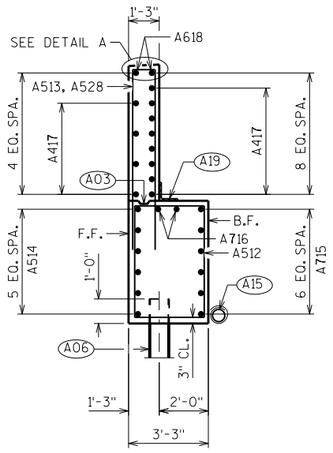
1020-03-77



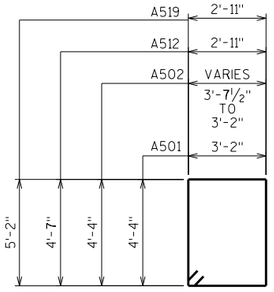
ELEVATION - WING 1



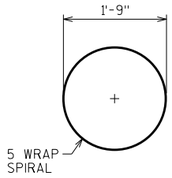
DETAIL A



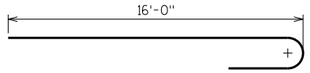
SECTION THRU WING 1



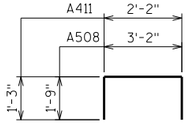
A501, A502, A512, A519



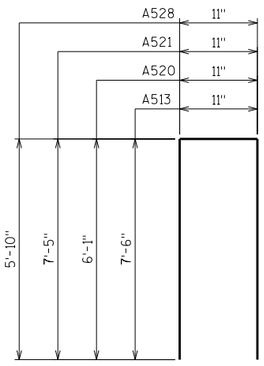
A403



A806



A508, A411



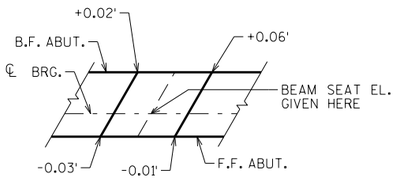
A513, 520, A521, A528

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		83	15'-8"	X		BODY - STIRRUP
A502		10	16'-2"	X	◭	BODY - STIRRUP - ENDS
A403		16	28'-0"	X		PILE - VERT. - 1 PER BODY PILE
A404		32	2'-3"			PILE - VERT. - 2 PER BODY PILE
A605		24	39'-0"			BODY - HORIZ.
A806		14	16'-11"	X		BODY - HORIZ. - B.F.
A607		7	48'-10"			BODY - HORIZ. - B.F.
A508		57	6'-5"	X		BODY - VERT. - TOP
A409		5	56'-0"			BODY - HORIZ. - TOP
A410		16	6'-6"			BODY - HORIZ. - TOP
A411		32	4'-6"	X		BODY - VERT. - TOP
A512	X	10	15'-8"	X		WING 1 - STIRRUP
A513	X	13	15'-8"	X		WING 1 - VERT.
A514	X	6	12'-9"			WING 1 - HORIZ. - BASE F.F.
A715	X	7	11'-5"			WING 1 - HORIZ. - BASE B.F.
A716	X	2	12'-3"			WING 1 - HORIZ. - BASE TOP
A417	X	12	15'-7"			WING 1 - HORIZ. - F.F. & B.F.
A618	X	2	15'-7"			WING 1 - HORIZ. - TOP
A519	X	10	16'-10"	X		WING 2 - STIRRUP
A520	X	9	12'-10"	X		WING 2 - VERT. - TOP
A521	X	13	15'-6"	X		WING 2 - VERT. - TOP
A522	X	6	12'-7"			WING 2 - HORIZ. - BASE F.F.
A723	X	7	12'-4"			WING 2 - HORIZ. - BASE B.F.
A724	X	2	13'-3"			WING 2 - HORIZ. - BASE TOP
A425	X	12	15'-7"			WING 2 - HORIZ. - F.F. & B.F.
A626	X	2	15'-7"			WING 2 - HORIZ. - TOP
A427	X	4	7'-9"			WING 1 & 2 - HORIZ.
A528	X	9	12'-4"	X		WING 1 - VERT. - TOP

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



SLOPED BEAM SEAT DETAIL

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A502	2 SERIES OF 5	15'-8" TO 16'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.

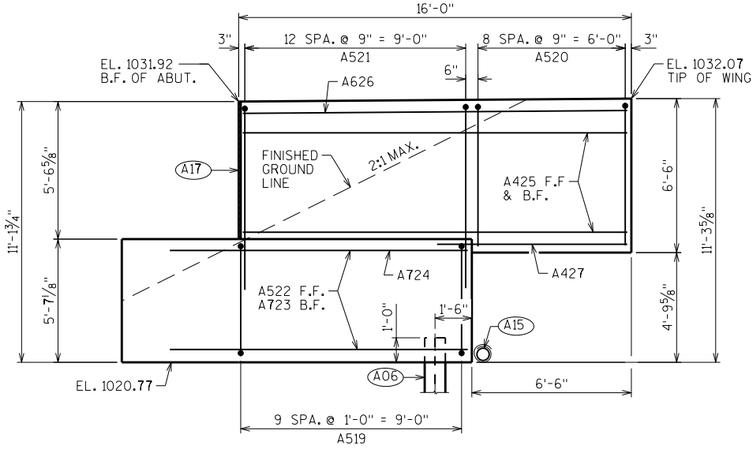
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

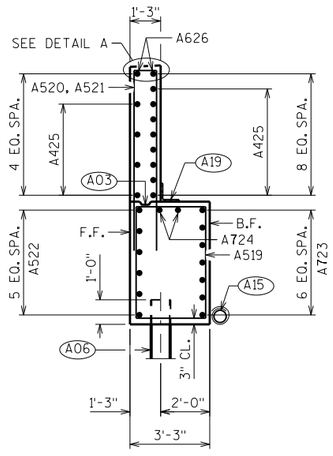
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

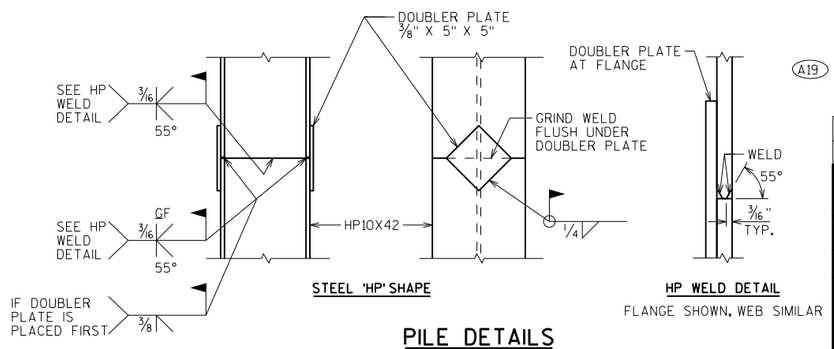
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



ELEVATION - WING 2



SECTION THRU WING 2



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

WEST ABUTMENT DETAILS

SHEET 5

288

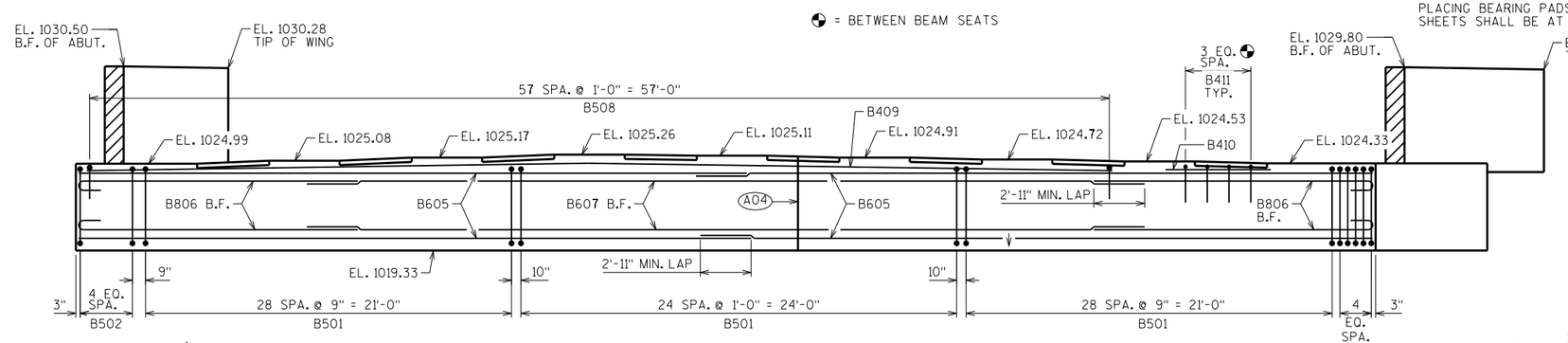
SCALE = 3.00

8

8

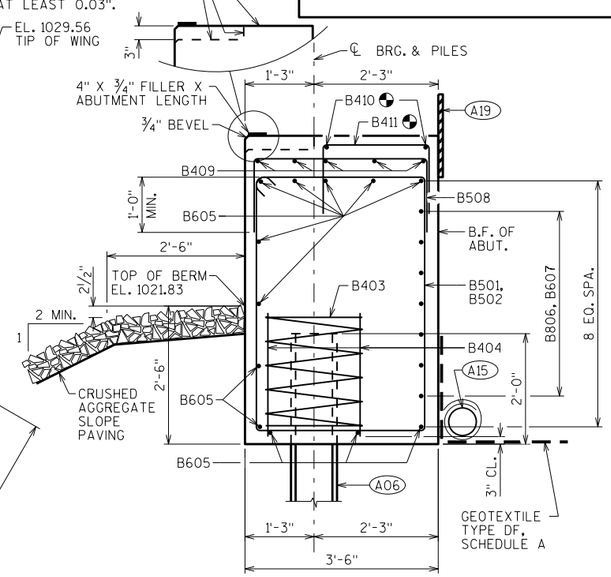
STATE PROJECT NUMBER

1020-03-77

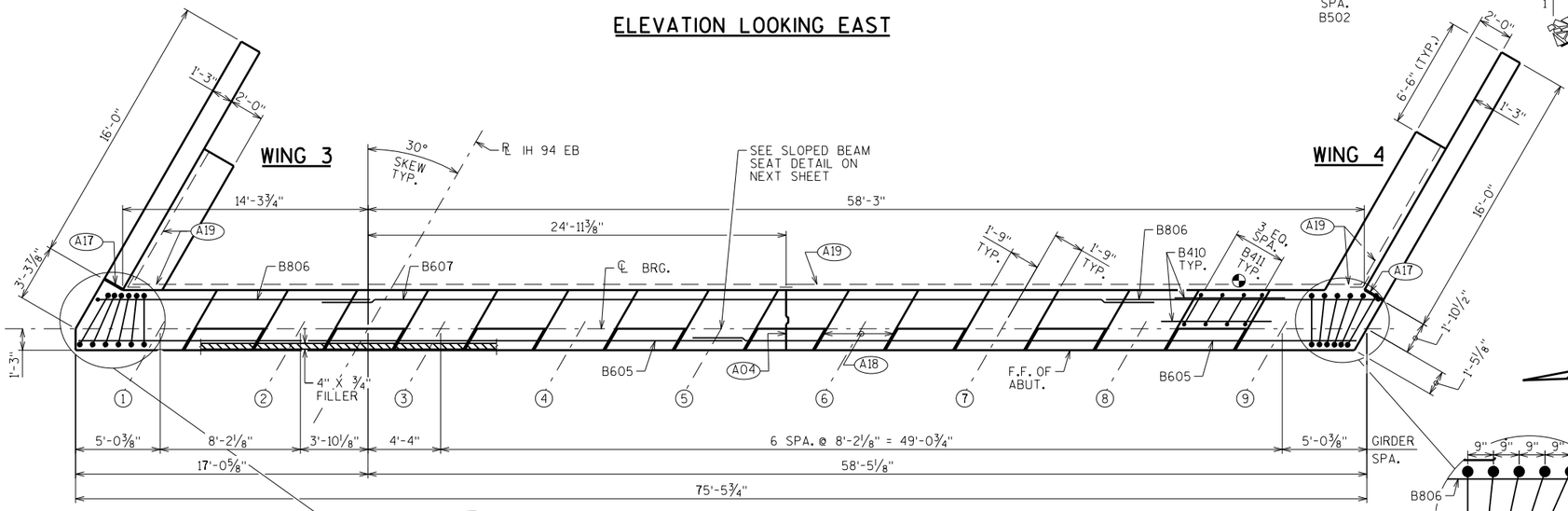


ELEVATION LOOKING EAST

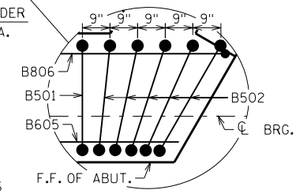
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

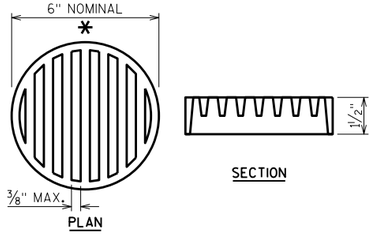


SECTION THRU BODY

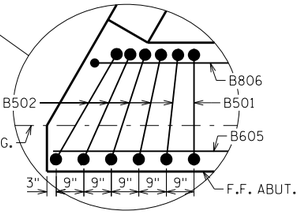


PLAN





RODENT SHIELD DETAIL



A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

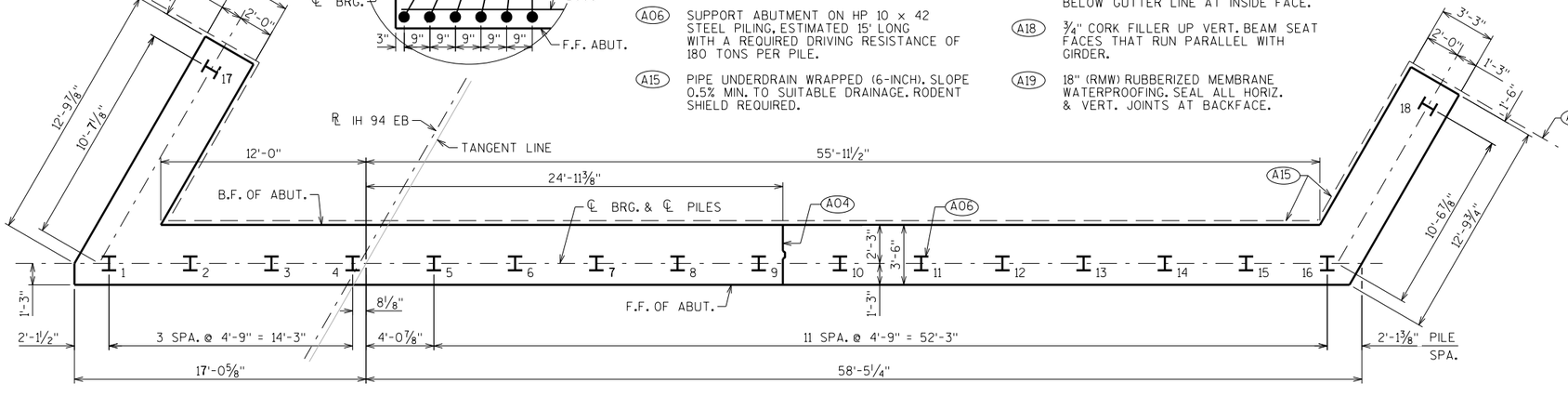
A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 15' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A18 ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



PILE PLAN

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY	MWB	PLANS CK'D.	MJL

EAST ABUTMENT

SHEET 6

289

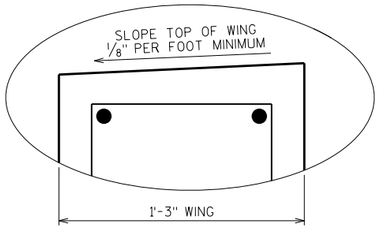
SCALE = 4.00

8

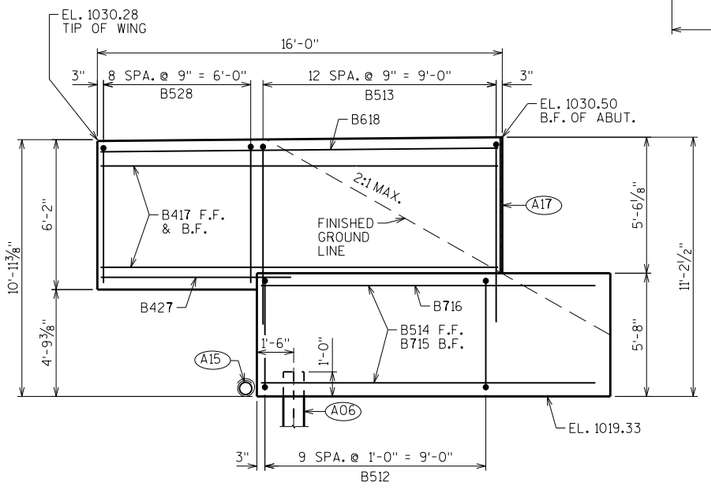
8

STATE PROJECT NUMBER

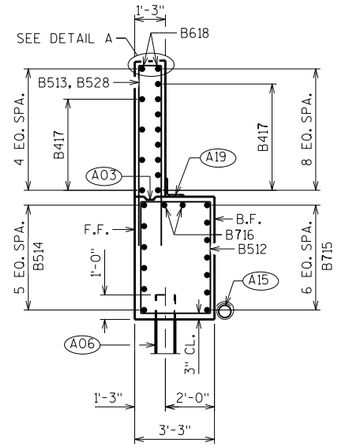
1020-03-77



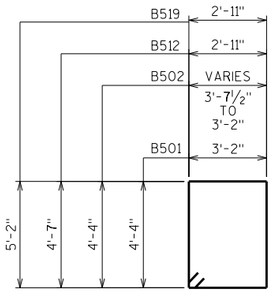
DETAIL A



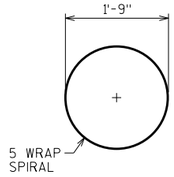
ELEVATION - WING 3



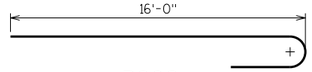
SECTION THRU WING 3



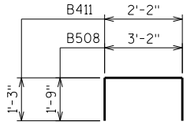
B501, B502, B512, B519



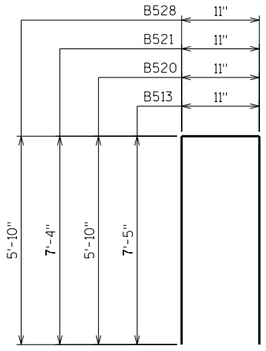
B403



B806



B508, B411



B513, B520, B521, B528

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		83	15'-8"	X		BODY - STIRRUP
B502		10	16'-2"	X	◭	BODY - STIRRUP - ENDS
B403		16	28'-0"	X		PILE - VERT. - 1 PER BODY PILE
B404		32	2'-3"			PILE - VERT. - 2 PER BODY PILE
B605		24	37'-0"			BODY - HORIZ.
B806		14	16'-11"	X		BODY - HORIZ. - B.F.
B607		7	48'-10"			BODY - HORIZ. - B.F.
B508		58	6'-5"	X		BODY - VERT. - TOP
B409		5	57'-0"			BODY - HORIZ. - TOP
B410		16	6'-6"			BODY - HORIZ. - TOP
B411		32	4'-6"	X		BODY - VERT. - TOP
B512	X	10	15'-8"	X		WING 3 - STIRRUP
B513	X	13	15'-6"	X		WING 3 - VERT.
B514	X	6	12'-9"			WING 3 - HORIZ. - BASE F.F.
B715	X	7	11'-5"			WING 3 - HORIZ. - BASE B.F.
B716	X	2	12'-3"			WING 3 - HORIZ. - BASE TOP
B417	X	12	15'-7"			WING 3 - HORIZ. - F.F. & B.F.
B618	X	2	15'-7"			WING 3 - HORIZ. - TOP
B519	X	10	16'-10"	X		WING 4 - STIRRUP
B520	X	9	12'-4"	X		WING 4 - VERT. - TOP
B521	X	13	15'-4"	X		WING 4 - VERT. - TOP
B522	X	6	12'-7"			WING 4 - HORIZ. - BASE F.F.
B723	X	7	12'-4"			WING 4 - HORIZ. - BASE B.F.
B724	X	2	13'-3"			WING 4 - HORIZ. - BASE TOP
B425	X	12	15'-7"			WING 4 - HORIZ. - F.F. & B.F.
B626	X	2	15'-7"			WING 4 - HORIZ. - TOP
B427	X	4	7'-9"			WING 3 & 4 - HORIZ. - OVERHANG
B528	X	9	12'-4"	X		WING 3 - VERT. - TOP

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B502	2 SERIES OF 5	15'-8" TO 16'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.

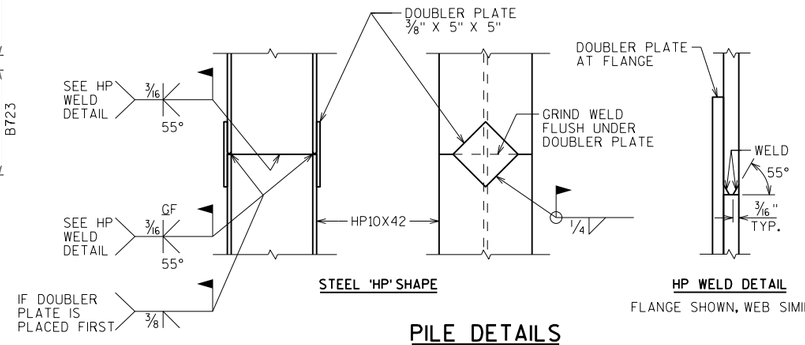
(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 15' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

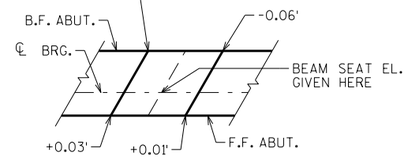


STEEL 'HP' SHAPE

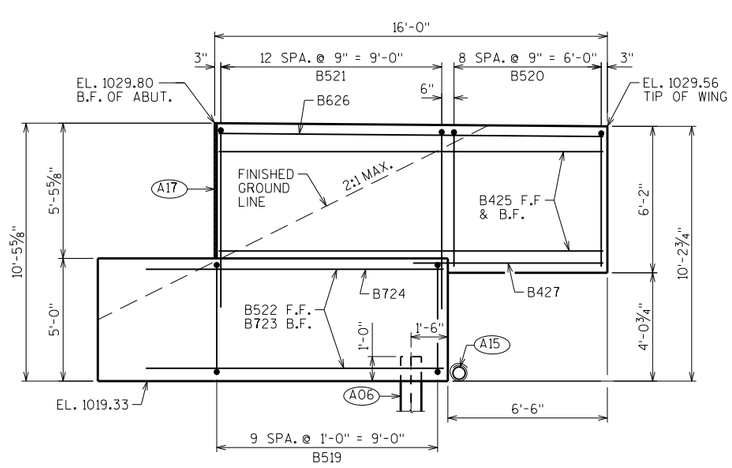
HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

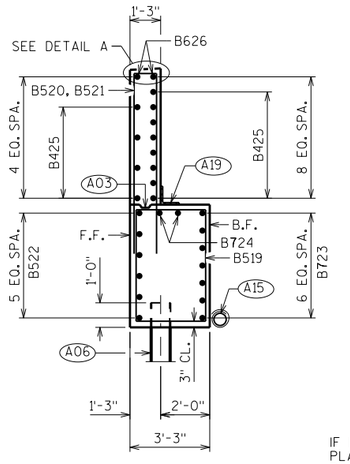
PILE DETAILS



SLOPED BEAM SEAT DETAIL



ELEVATION - WING 4



SECTION THRU WING 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

EAST ABUTMENT DETAILS

SHEET 7

290

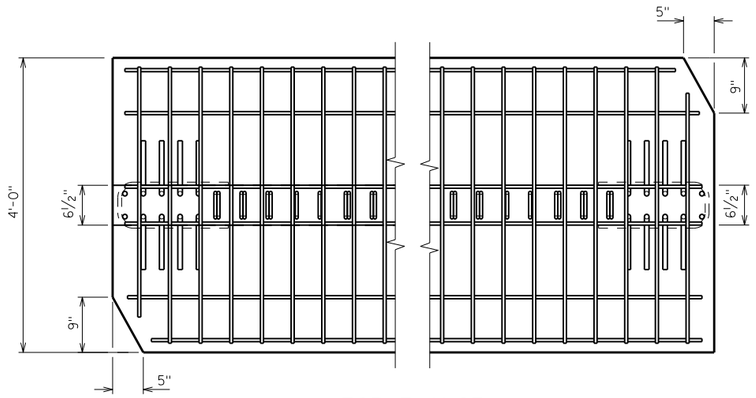
SCALE = 3.00

8

8

STATE PROJECT NUMBER

1020-03-77



TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

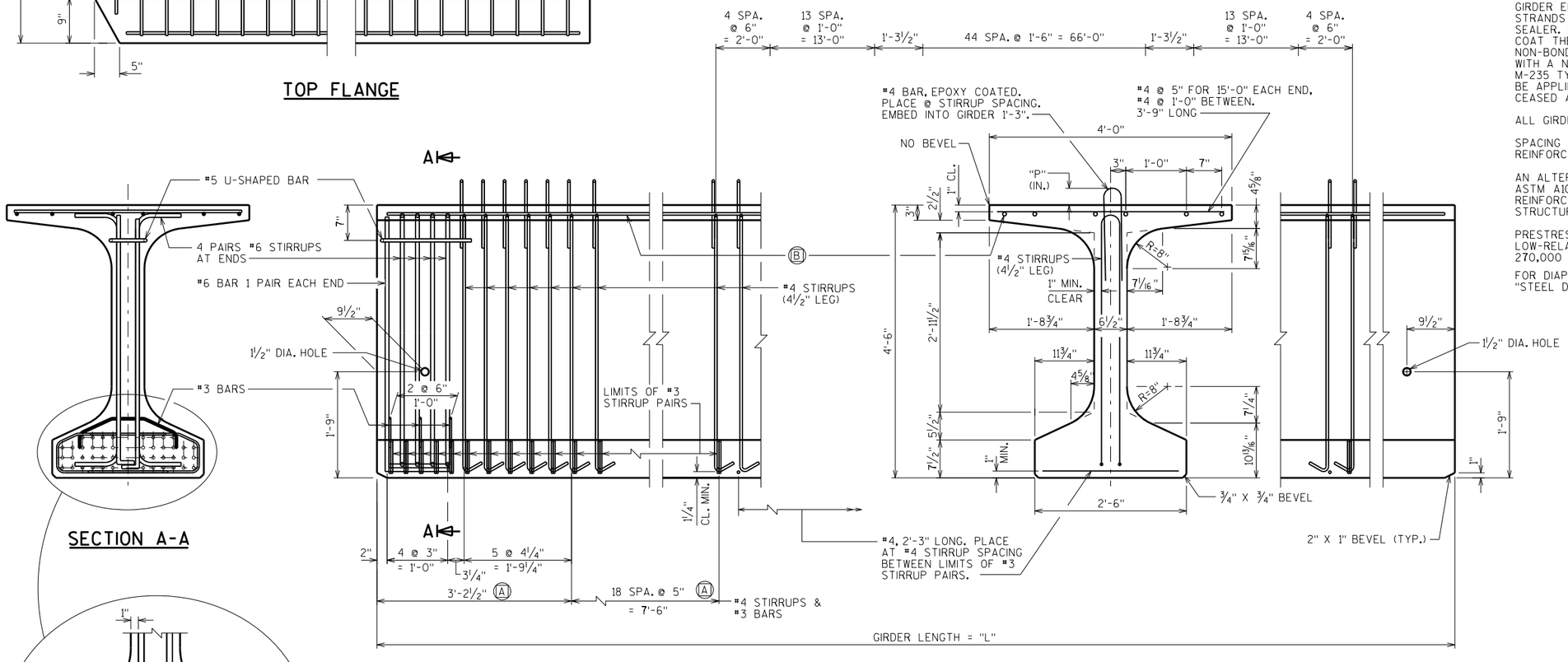
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGMS" SHEET.

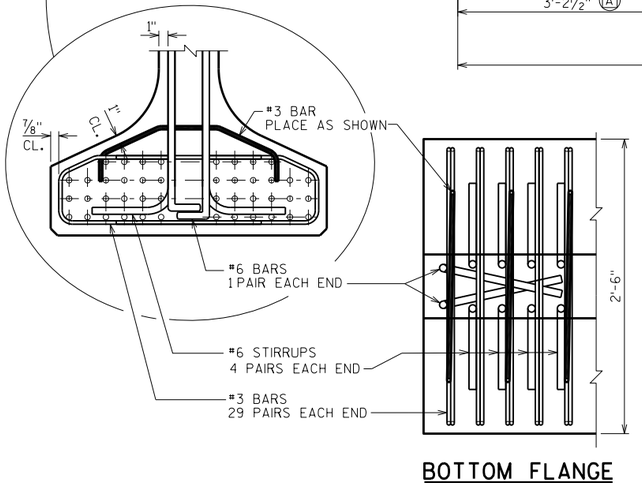


SECTION A-A

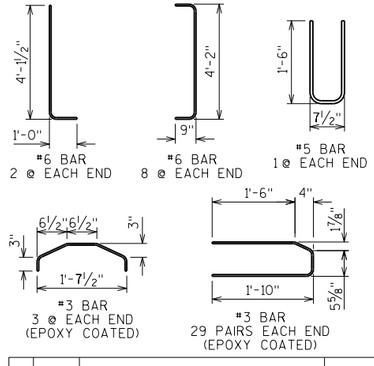
SIDE VIEW & TYP. SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDERS	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	("A"	"B" MIN.	"B" MAX.	"C")	TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1&9	120'	0.7	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.7	8,000	7.5"	7"	7.5"	0.6	38	6,400	49	16	19	5		
1	2-8	120'	0.6	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.6	8,000	7.5"	7"	7.5"	0.6	38	6,400	49	16	19	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

291

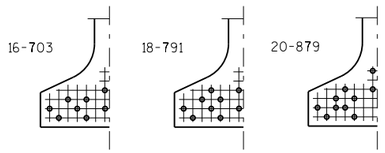
SCALE = 1.00

8

8

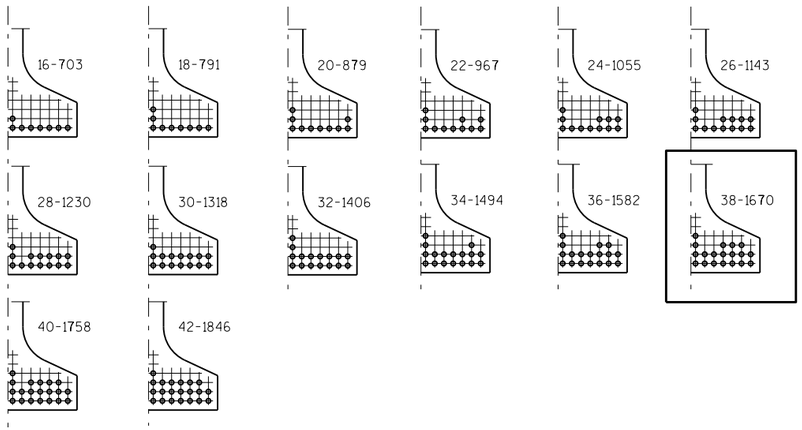
STATE PROJECT NUMBER

1020-03-77



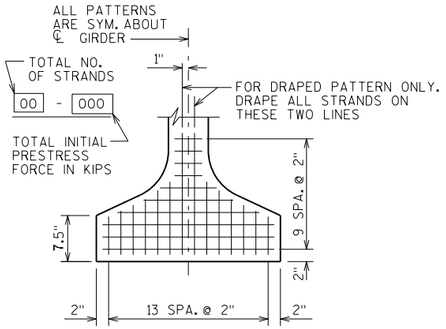
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

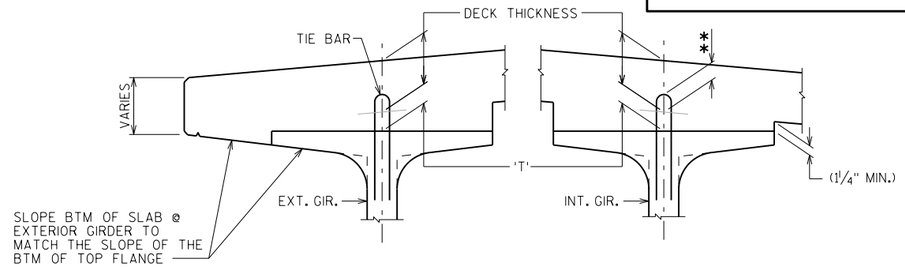


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

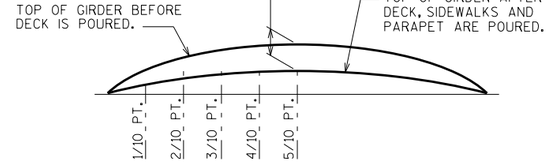
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

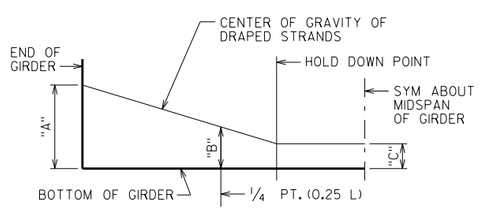
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3⅛" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.98

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

292

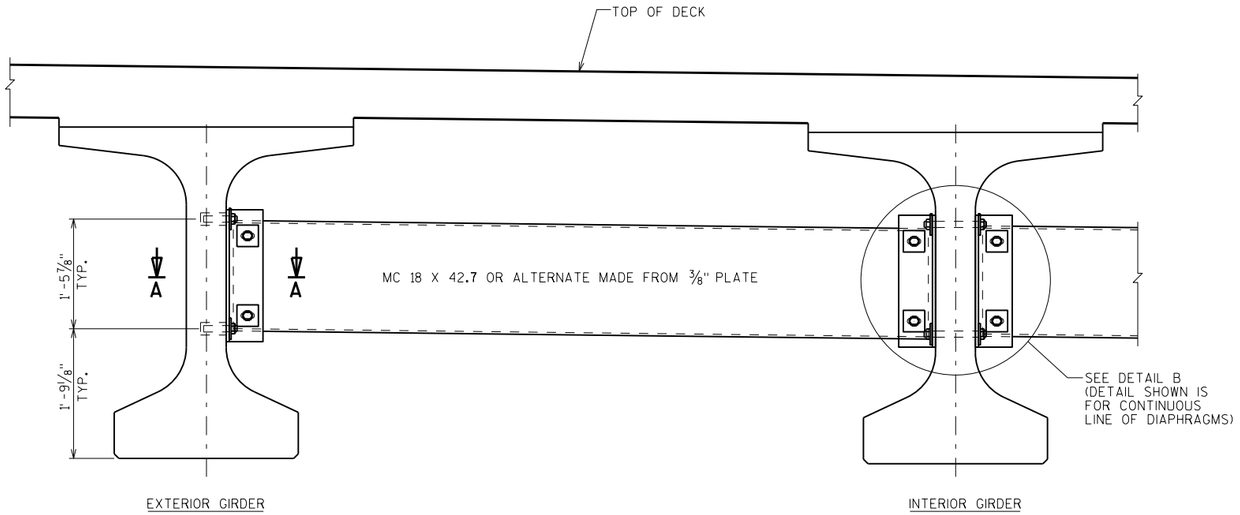
8

8

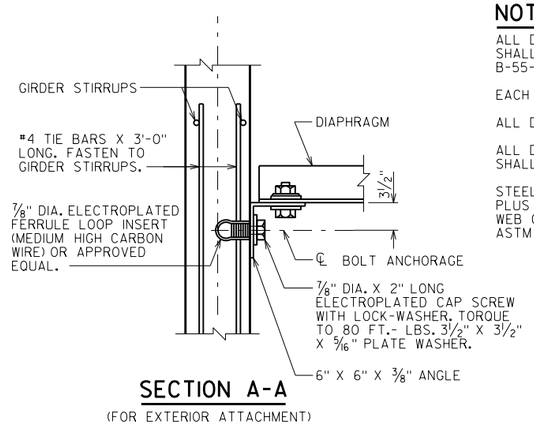
SCALE = 1.00

STATE PROJECT NUMBER

1020-03-77



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

NOTES

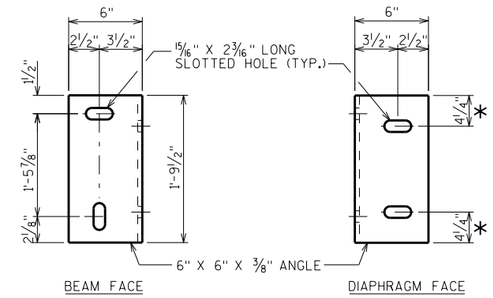
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-255", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

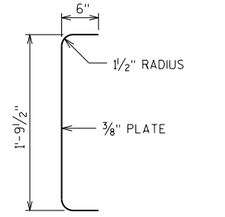
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



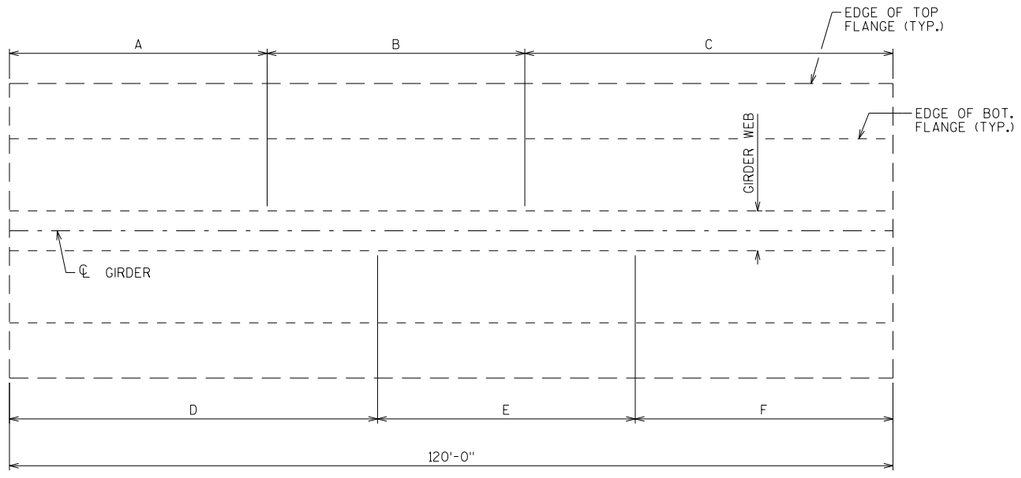
DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

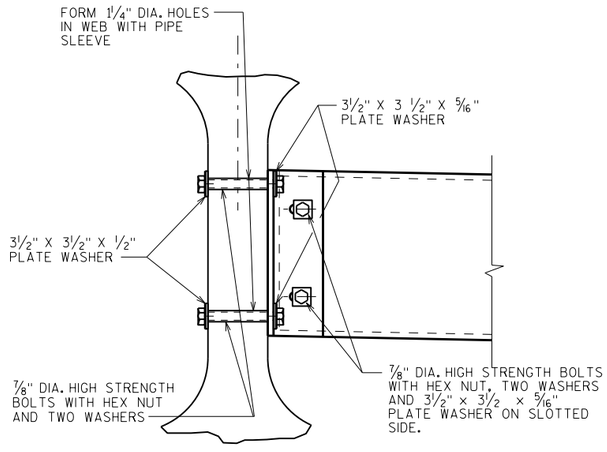


SECTION THRU ALTERNATE DIAPHRAGM

	A	B	C	D	E	F
GIR. 1	N/A	N/A	N/A	42'-2½"	39'-8"	38'-1½"
GIR. 2-8	38'-1½"	39'-8"	42'-2½"	42'-2½"	39'-8"	38'-1½"
GIR. 9	38'-1½"	39'-8"	42'-2½"	N/A	N/A	N/A



DIAPHRAGM CONNECTION SPACING



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

STEEL DIAPHRAGMS

SHEET 10

293

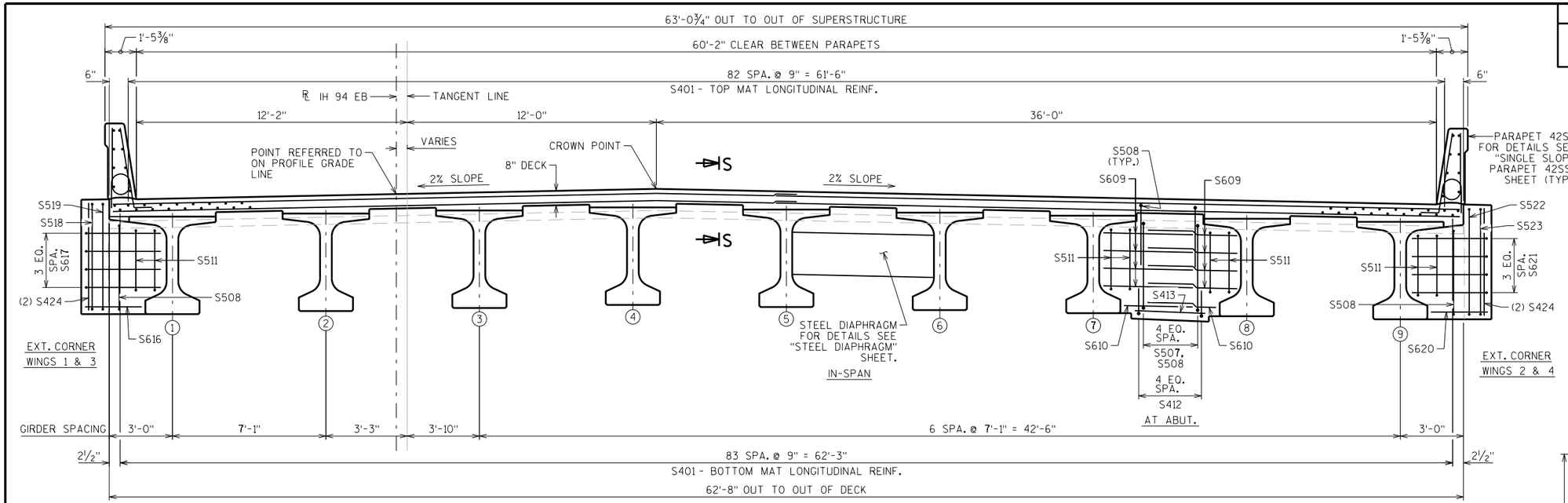
SCALE = 1.00

8

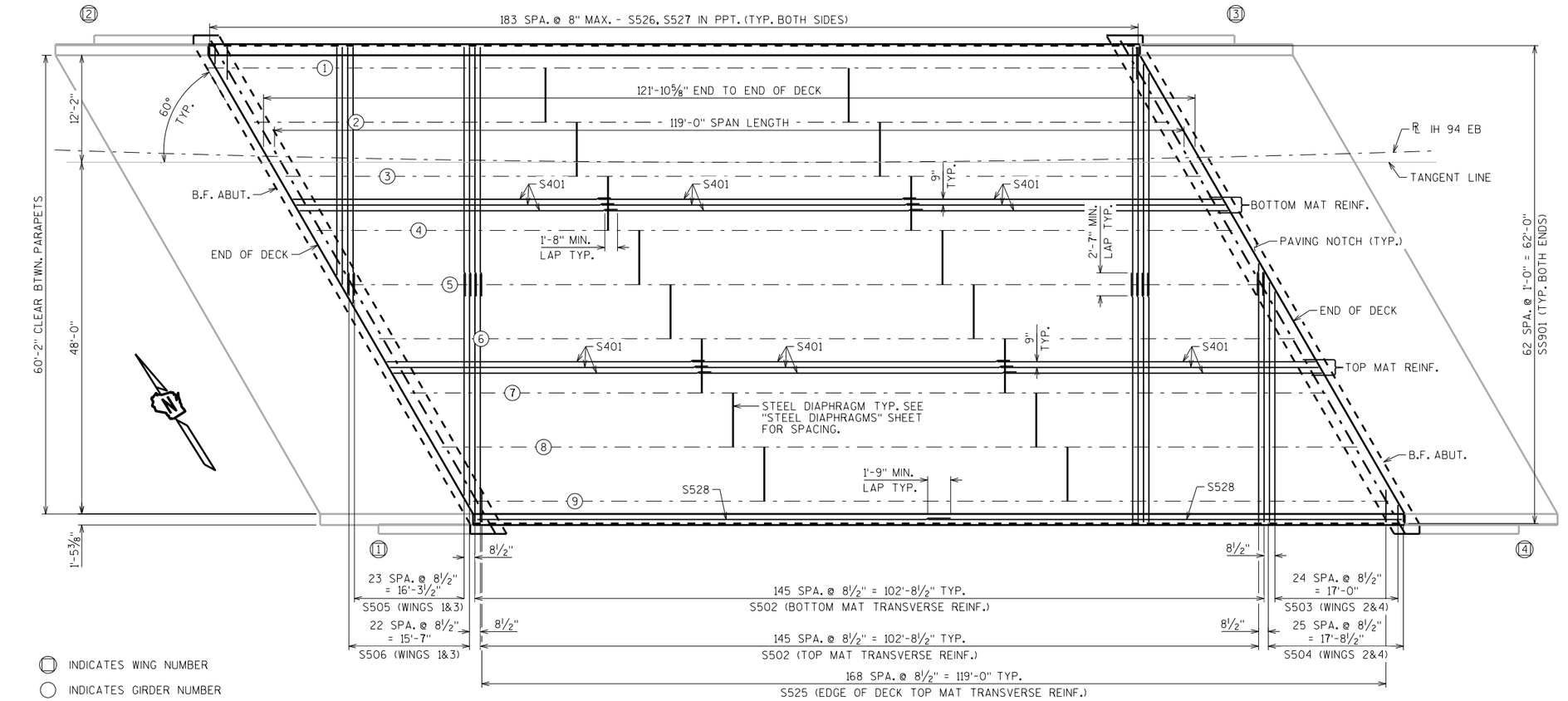
8

STATE PROJECT NUMBER

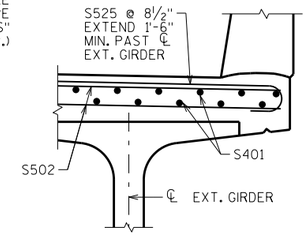
1020-03-77



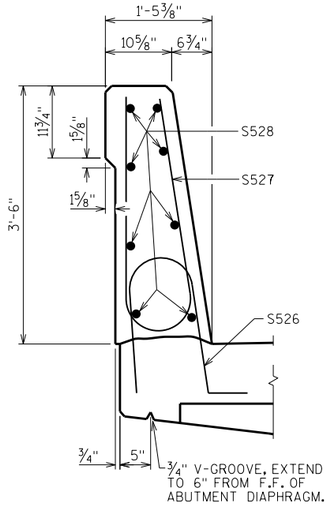
CROSS SECTION THRU ROADWAY



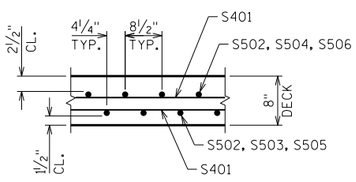
PLAN



EDGE OF DECK DETAIL



SECTION THRU PARAPET



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

SUPERSTRUCTURE

SHEET 11

294

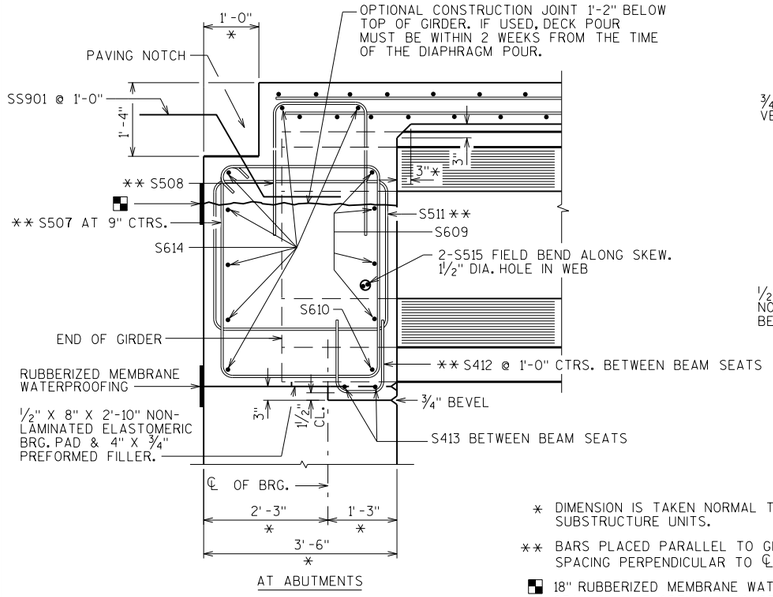
SCALE = 8.00

8

8

STATE PROJECT NUMBER

1020-03-77

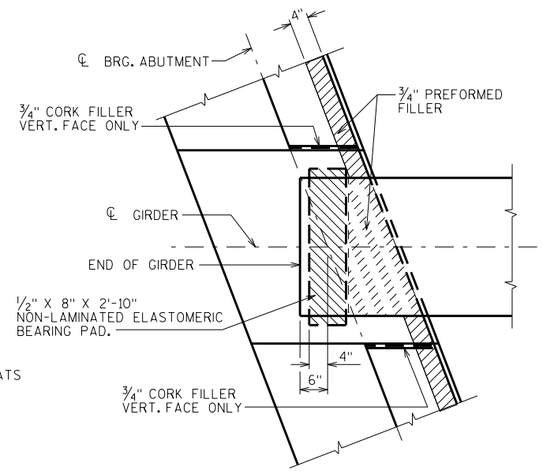


PART LONGIT. SECTION

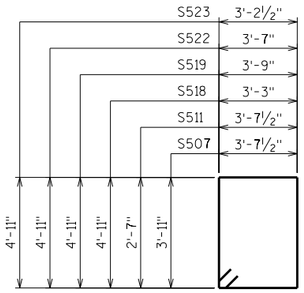
* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

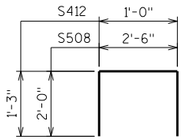
▪ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCLUDED WITH BID ITEM "CONCRETE MASONRY BRIDGES".



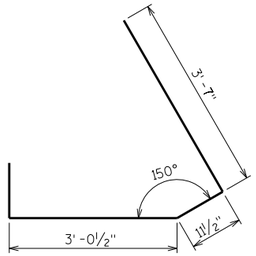
BEARING PAD DETAIL



S507, S511, S518, S519, S522, S523



S508, S412



S617

BILL OF BARS

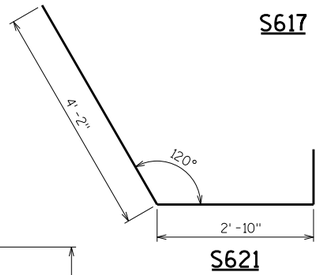
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	501	41'-8"			DECK - LONGITUDINAL
S502	X	584	32'-7"			DECK - TRANSVERSE
S503	X	50	16'-8"		⚠	DECK - TRANS. - CORNER - BOT. WINGS 2 & 4
S504	X	52	16'-9"		⚠	DECK - TRANS. - CORNER - TOP WINGS 2 & 4
S505	X	48	17'-0"		⚠	DECK - TRANS. - CORNER - BOT. WINGS 1 & 3
S506	X	46	17'-1"		⚠	DECK - TRANS. - CORNER - TOP WINGS 1 & 3
S507	X	84	15'-9"	X		ABUT. DIAPH. - STIRRUP
S508	X	84	6'-3"	X		ABUT. DIAPH. - VERT.
S609	X	128	4'-10"			ABUT. DIAPH. - HORIZ.
S610	X	32	3'-8"			ABUT. DIAPH. - HORIZ.
S511	X	72	13'-1"	X		ABUT. DIAPH. - STIRRUPS @ GIRDERS
S412	X	80	3'-5"	X		ABUT. DIAPH. - VERT.
S413	X	32	3'-9"			ABUT. DIAPH. - HORIZ.
S614	X	28	38'-11"			ABUT. DIAPH. - HORIZ. - B.F.
S515	X	32	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDERS
S616	X	2	2'-6"			ABUT. DIAPH. - HORIZ. - F.F. - ENDS
S617	X	8	8'-3"	X		ABUT. DIAPH. - HORIZ. - ENDS
S518	X	2	17'-0"	X		ABUT. DIAPH. - STIRRUP - ENDS
S519	X	2	18'-0"	X		ABUT. DIAPH. - STIRRUP - ENDS
S620	X	2	3'-0"			ABUT. DIAPH. - HORIZ. - ENDS
S621	X	8	7'-8"	X		ABUT. DIAPH. - HORIZ. - ENDS
S522	X	2	17'-8"	X		ABUT. DIAPH. - STIRRUP - ENDS
S523	X	2	16'-11"	X		ABUT. DIAPH. - STIRRUP - ENDS
S424	X	8	4'-11"			ABUT. DIAPH. - VERT. - ENDS
S525	X	338	4'-11"	X		DECK - OVERHANG
S526	X	368	4'-5"	X		DECK & PPT. - VERT.
S527	X	368	6'-8"	X		PPT. - VERT.
S528	X	48	41'-9"			PPT. - HORIZ.
SS901		126	5'-0"	X		PAVING NOTCH - STAINLESS STEEL

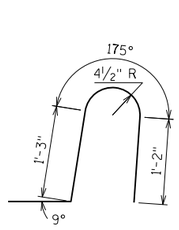
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

TOP OF DECK ELEVATIONS

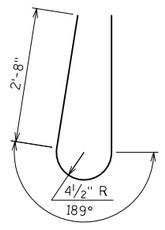
	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
NORTH EOD	1031.89	1031.77	1031.64	1031.51	1031.37	1031.24	1031.10	1030.96	1030.82	1030.67	1030.53
GIRDER 1	1031.91	1031.78	1031.66	1031.52	1031.39	1031.25	1031.12	1030.98	1030.83	1030.69	1030.54
GIRDER 2	1032.01	1031.88	1031.75	1031.62	1031.49	1031.35	1031.21	1031.07	1030.93	1030.78	1030.63
PGL	1032.05	1031.93	1031.80	1031.66	1031.53	1031.39	1031.25	1031.11	1030.97	1030.82	1030.67
GIRDER 3	1032.11	1031.98	1031.85	1031.72	1031.58	1031.44	1031.30	1031.16	1031.02	1030.87	1030.72
GIRDER 4	1032.20	1032.08	1031.94	1031.81	1031.68	1031.54	1031.40	1031.25	1031.11	1030.96	1030.81
CROWN PT.	1032.22	1032.09	1031.96	1031.83	1031.69	1031.55	1031.41	1031.27	1031.12	1030.98	1030.83
GIRDER 5	1032.06	1031.93	1031.80	1031.67	1031.53	1031.39	1031.25	1031.11	1030.96	1030.81	1030.66
GIRDER 6	1031.88	1031.75	1031.62	1031.48	1031.34	1031.20	1031.06	1030.92	1030.77	1030.62	1030.47
GIRDER 7	1031.69	1031.56	1031.43	1031.29	1031.15	1031.01	1030.87	1030.73	1030.58	1030.43	1030.27
GIRDER 8	1031.50	1031.37	1031.24	1031.10	1030.96	1030.82	1030.68	1030.53	1030.38	1030.23	1030.08
GIRDER 9	1031.32	1031.19	1031.05	1030.91	1030.78	1030.63	1030.49	1030.34	1030.19	1030.04	1029.88
SOUTH EOD	1031.26	1031.13	1031.00	1030.86	1030.72	1030.58	1030.43	1030.28	1030.13	1029.98	1029.83



S621



S526

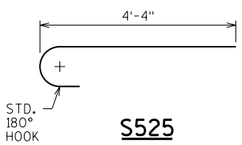


S527

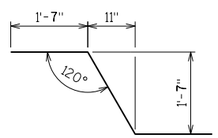
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S503	2 SERIES OF 25	1'-11" TO 31'-5"
S504	2 SERIES OF 26	1'-4" TO 32'-1"
S505	2 SERIES OF 24	2'-11" TO 31'-1"
S506	2 SERIES OF 23	3'-6" TO 30'-7"

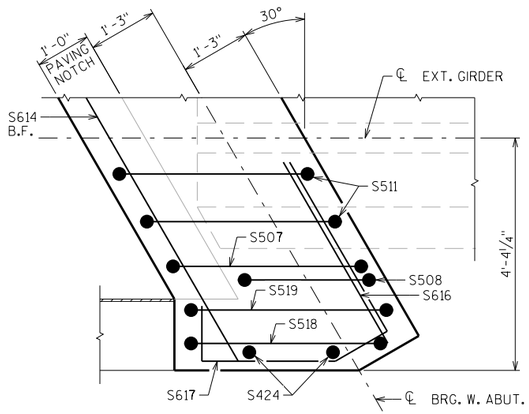
BUNDLE AND TAG EACH SERIES SEPARATELY.



S525

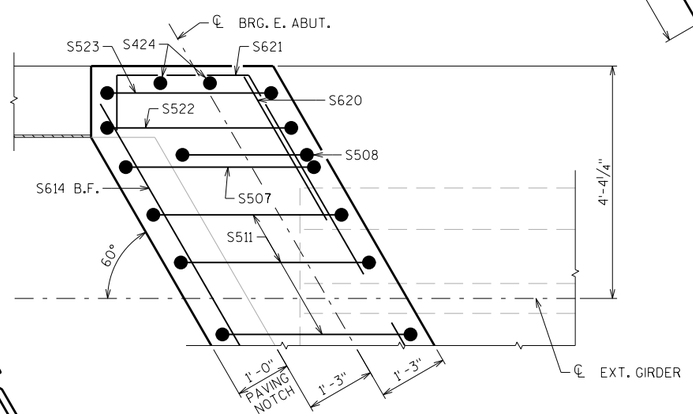


SS901



PLAN - ABUTMENT DIAPHRAGM

WING 1 SHOWN, WING 3 SIMILAR



PLAN - ABUTMENT DIAPHRAGM

WING 2 SHOWN, WING 4 SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

SUPERSTRUCTURE DETAILS

SHEET 12

295

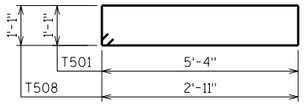
SCALE = 1.33

8

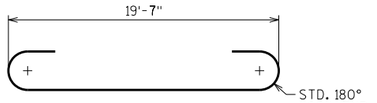
8

STATE PROJECT NUMBER

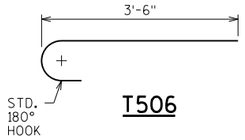
1020-03-77



T501, T508



T803

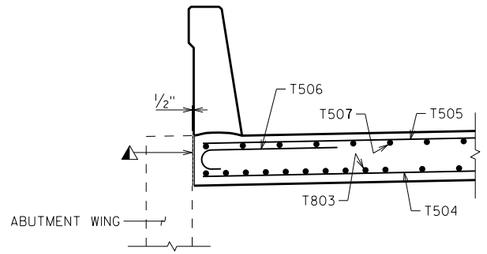


T506

BILL OF BARS

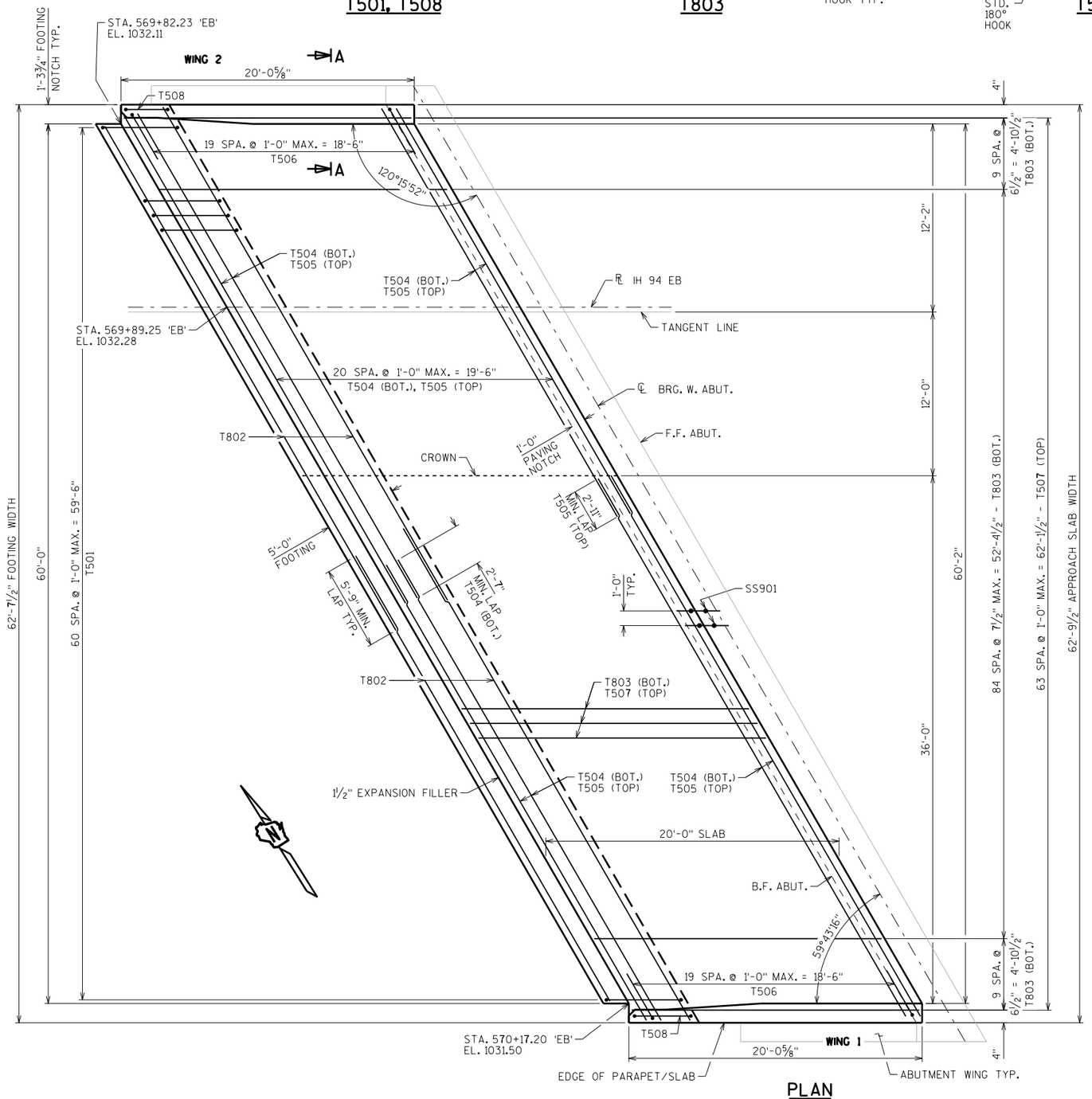
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	61	13'-6"	X		FOOTING - STIRRUPS
T802	X	24	40'-0"			FOOTING - HORIZ.
T803	X	103	21'-5"	X		APP. SLAB - LONGIT. - BOT.
T504	X	42	37'-8"			APP. SLAB - TRANSVERSE - BOT.
T505	X	42	37'-10"			APP. SLAB - TRANSVERSE - TOP
T506	X	40	4'-1"	X		APP. SLAB - TRANSVERSE - EDGES
T507	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
T508	X	2	8'-8"	X		FOOTING - STIRRUPS - NOTCH

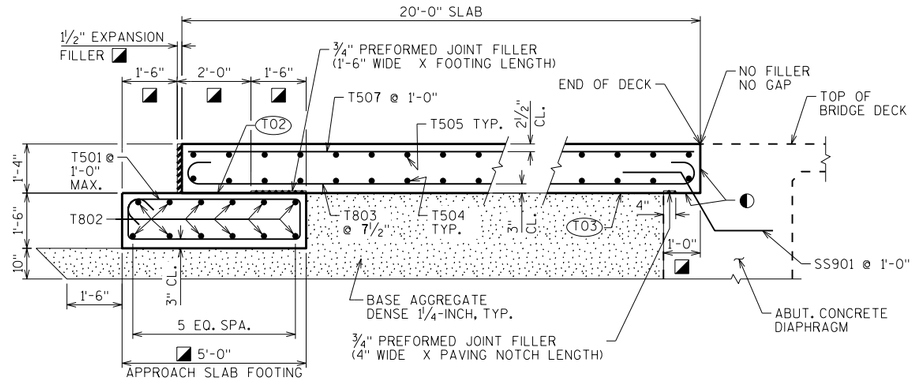


SECTION A-A

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).



PLAN



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

WEST STRUCTURAL APPROACH SLAB

SHEET 13

296

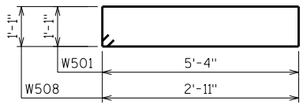
SCALE = 4.00

8

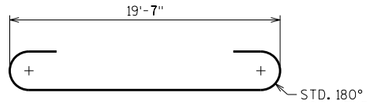
8

STATE PROJECT NUMBER

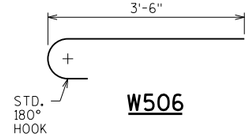
1020-03-77



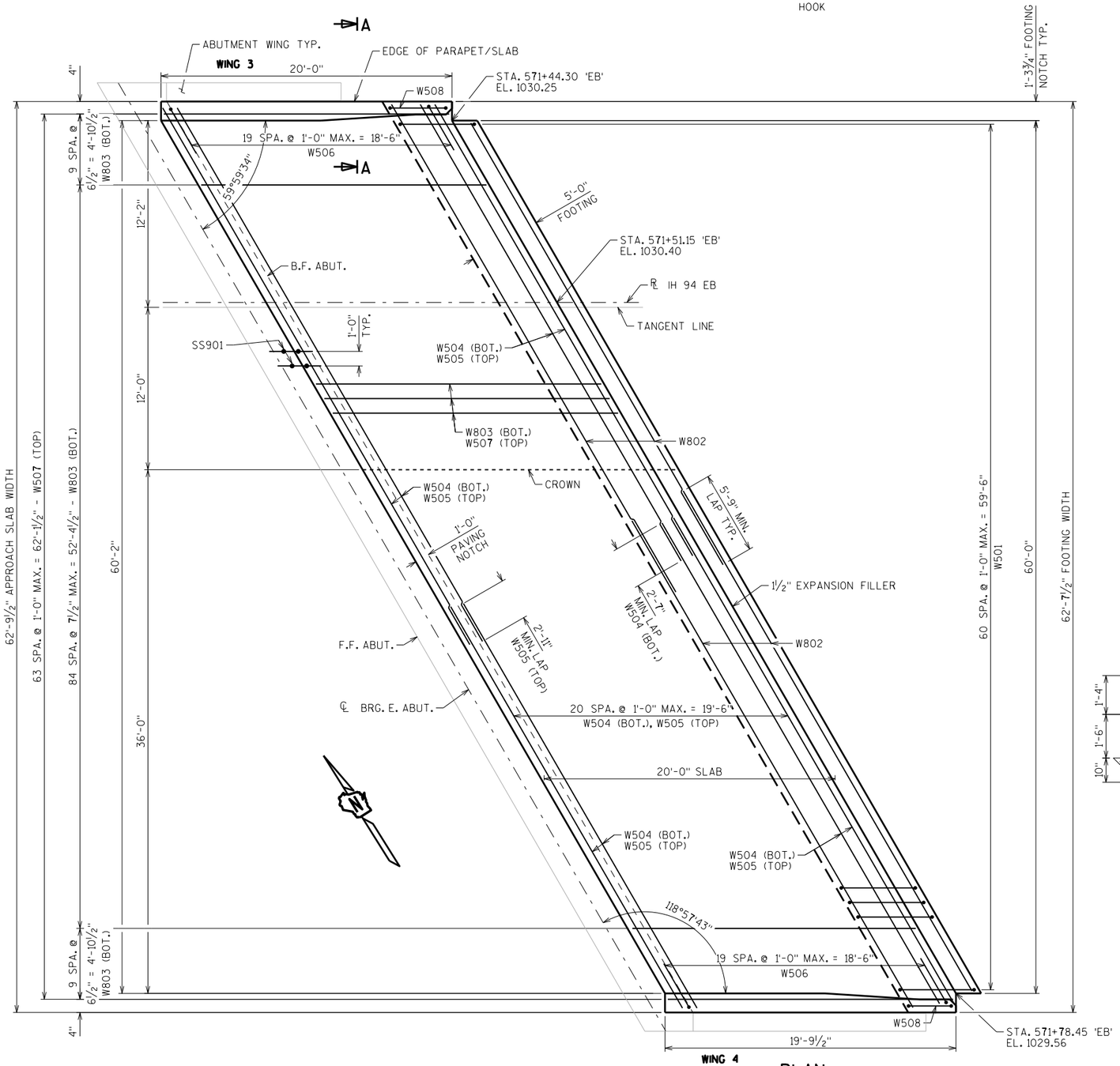
W501, W508



W803



W506

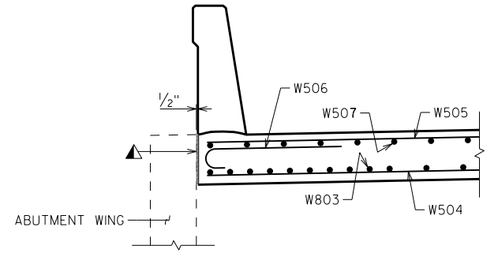


PLAN

BILL OF BARS

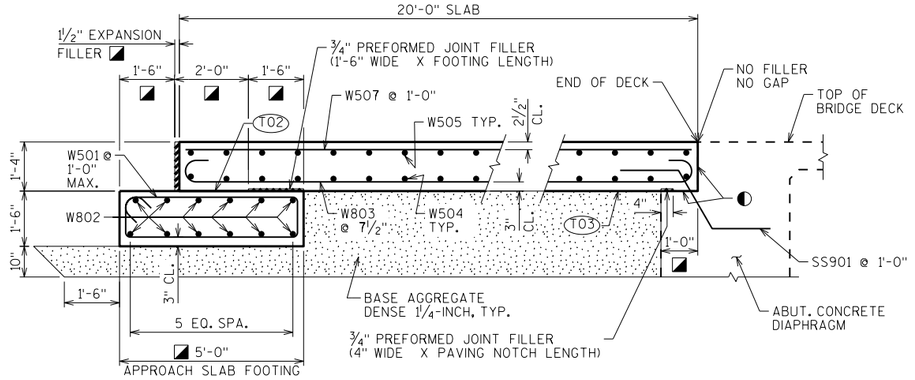
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	61	13'-6"	X		FOOTING - STIRRUPS
W802	X	24	40'-0"			FOOTING - HORIZ.
W803	X	103	21'-5"	X		APP. SLAB - LONGIT. - BOT.
W504	X	42	37'-8"			APP. SLAB - TRANSVERSE - BOT.
W505	X	42	37'-10"			APP. SLAB - TRANSVERSE - TOP
W506	X	40	4'-1"	X		APP. SLAB - TRANSVERSE - EDGES
W507	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
W508	X	2	8'-8"	X		FOOTING - STIRRUPS - NOTCH



SECTION A-A

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

EAST STRUCTURAL APPROACH SLAB

SHEET 14

297

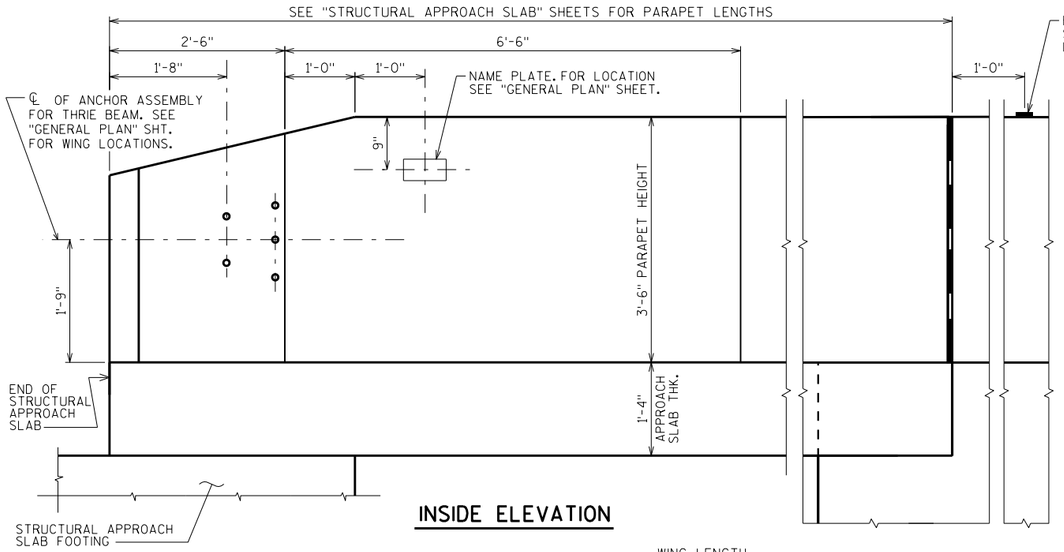
SCALE = 4.00

8

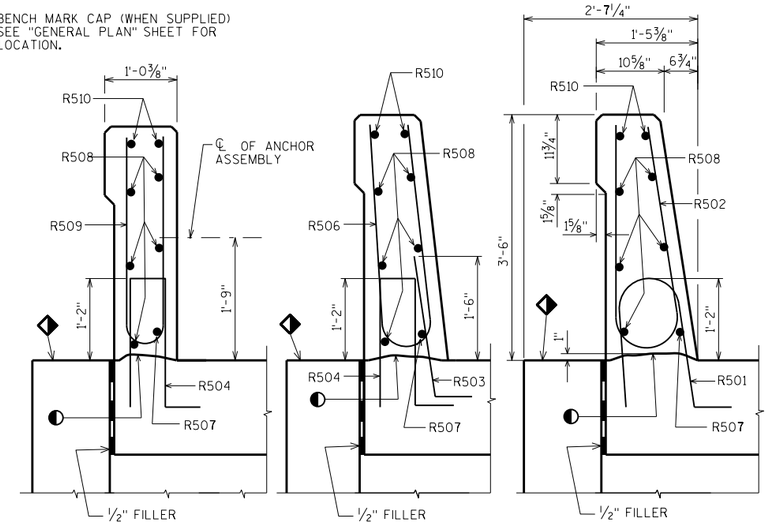
8

STATE PROJECT NUMBER

1020-03-77



INSIDE ELEVATION



SECTION A

SECTION B

SECTION C

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

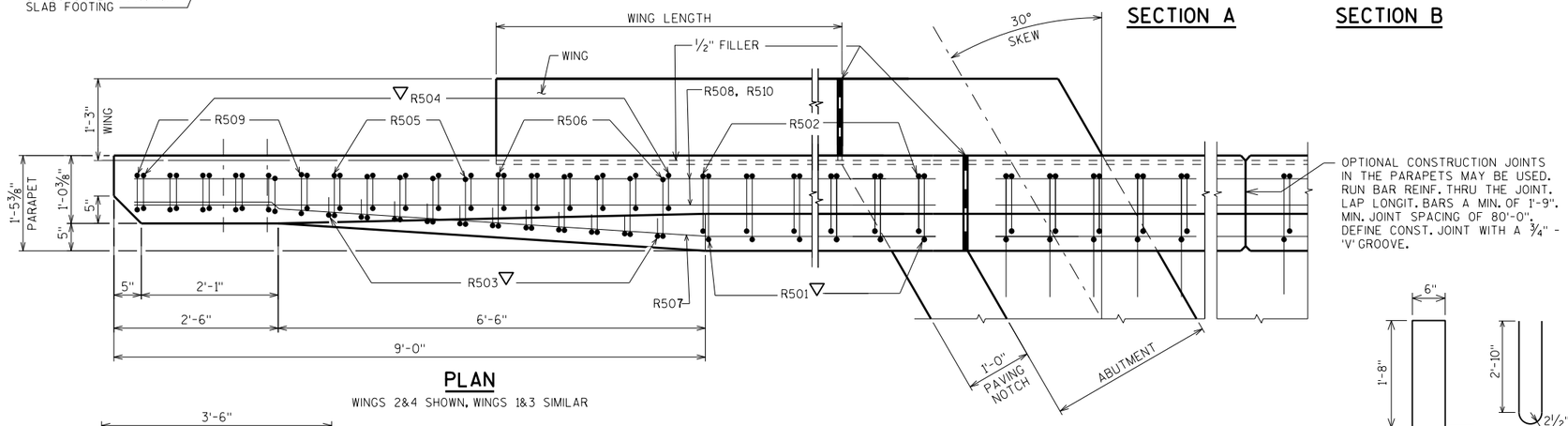
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-7"	X		PARAPET HORIZ
R508	X	10	10	19'-7"			PARAPET HORIZ
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	19'-7"	X		PARAPET HORIZ

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

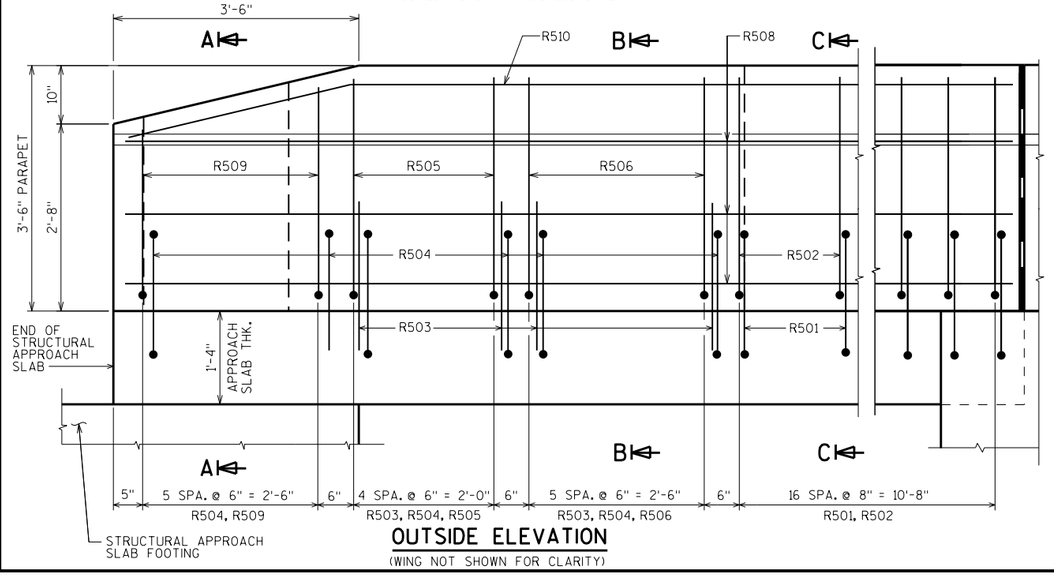
BUNDLE AND TAG EACH SERIES SEPARATELY.



OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

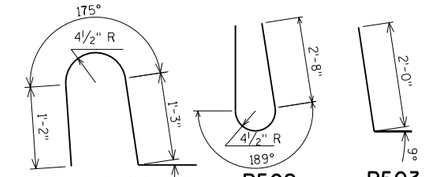
PLAN

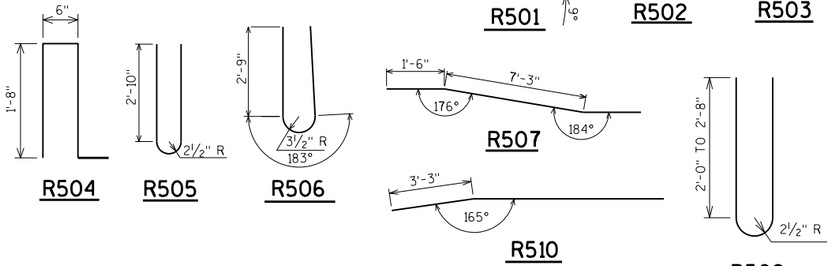
WINGS 2&4 SHOWN, WINGS 1&3 SIMILAR

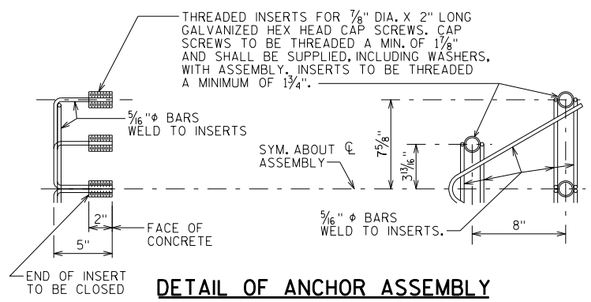


OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)







DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

SINGLE SLOPE PARAPET 42SS

SHEET 15

298

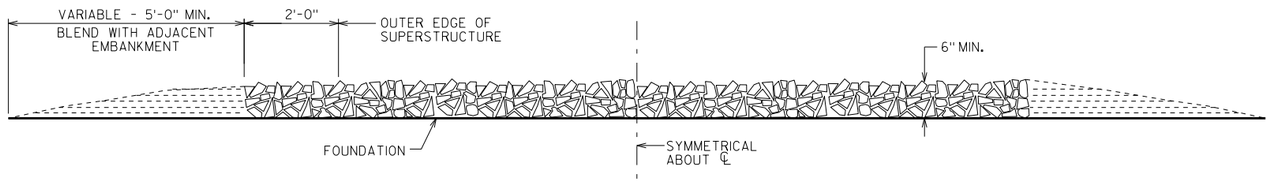
SCALE = 1.05

8

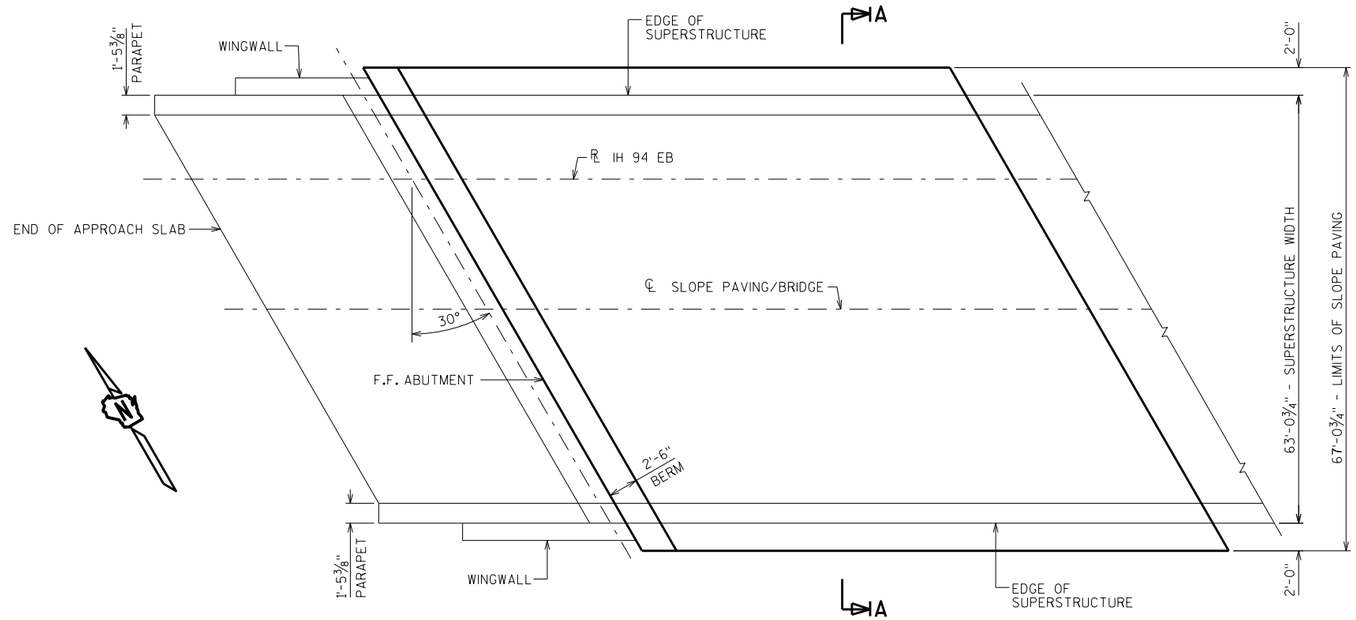
8

STATE PROJECT NUMBER

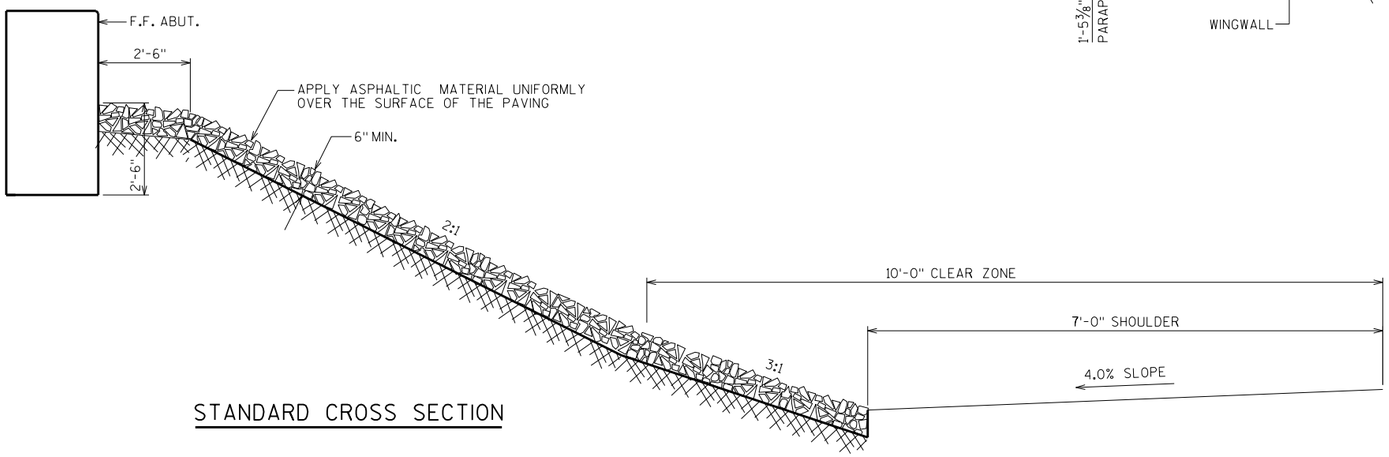
1020-03-77



SECTION A-A



PLAN



STANDARD CROSS SECTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

SLOPE PAVING (CRUSHED AGGREGATE)

SHEET 16

299

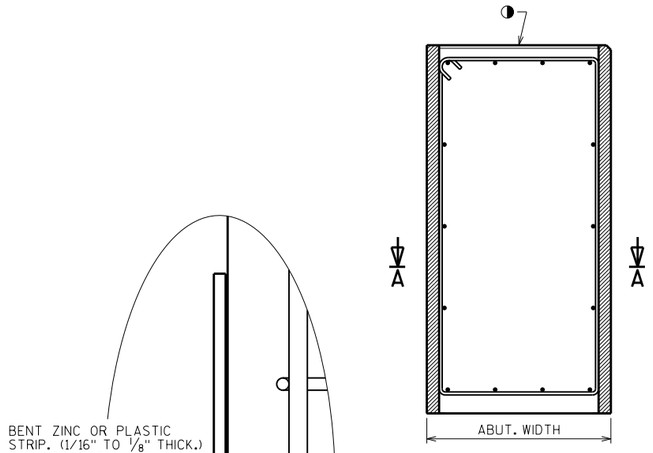
SCALE = 1.00

8

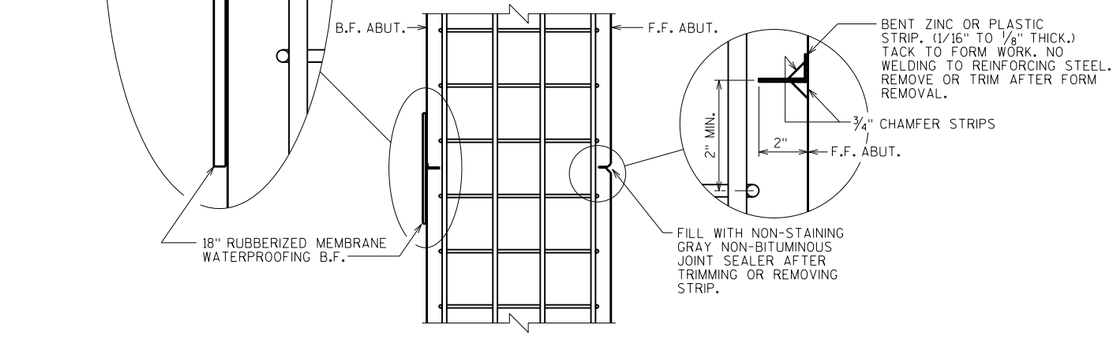
8

STATE PROJECT NUMBER

1020-03-77



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-255

DRAWN BY MWB | PLANS CK'D. MJL

ALTERNATE CONSTRUCTION JOINT

SHEET 17

300

SCALE = 1.00

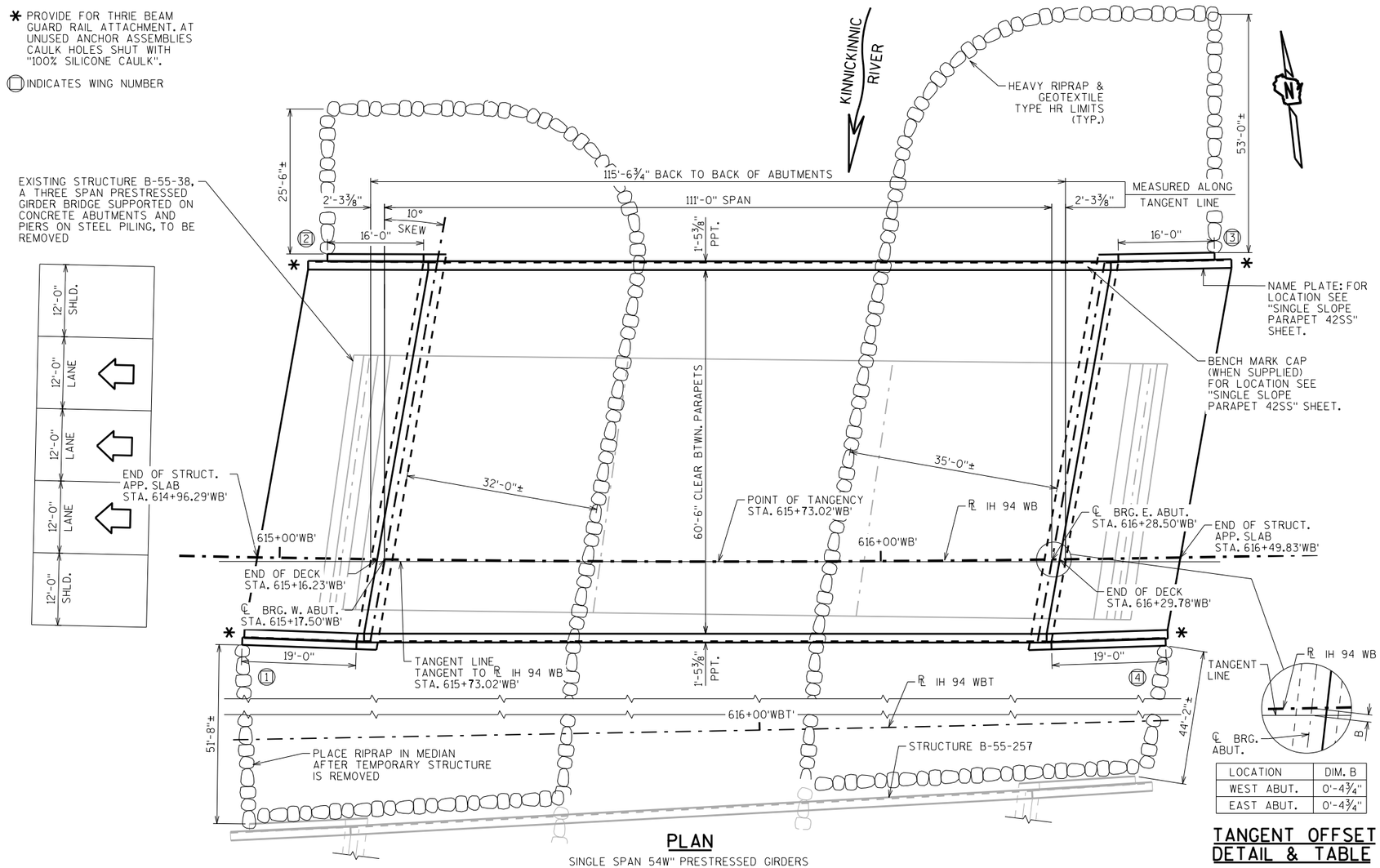
8

8

STATE PROJECT NUMBER
1020-03-78

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(2) INDICATES WING NUMBER

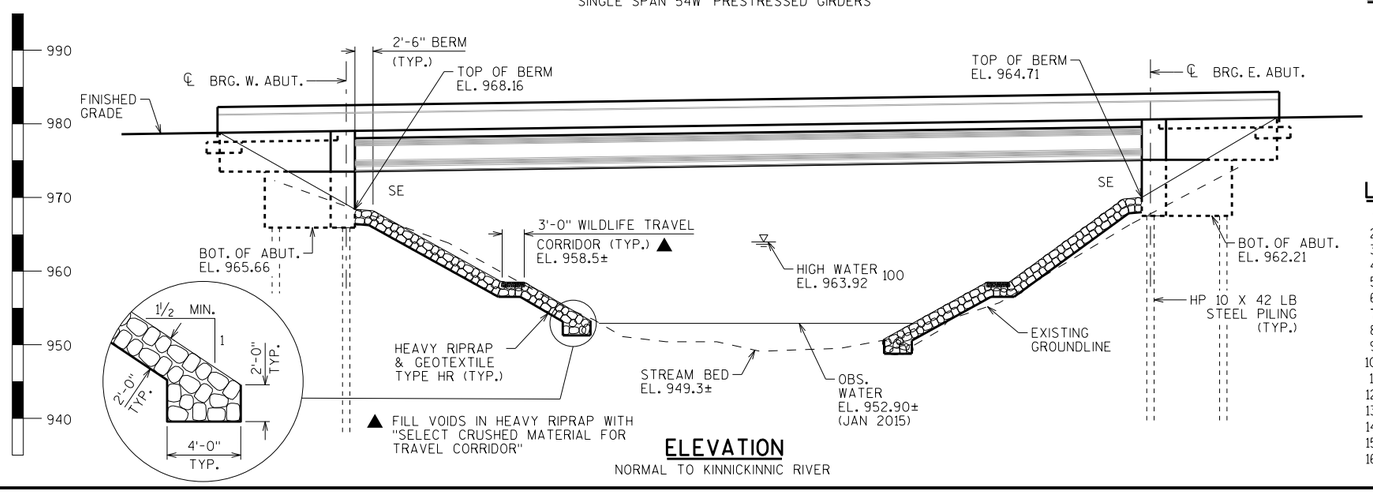


PLAN

SINGLE SPAN 54W" PRESTRESSED GIRDERS

LOCATION	DIM. B
WEST ABUT.	0'-4¾"
EAST ABUT.	0'-4¾"

TANGENT OFFSET DETAIL & TABLE



ELEVATION

NORMAL TO KINNICKINNIC RIVER

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.05
OPERATING RATING FACTOR: RF = 1.68
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT. RATING INCLUDES A 5 PSF POLYMER OVERLAY.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ✱✱ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30' LONG AT W. ABUT., 60' LONG AT E. ABUT. PILE POINTS ARE REQUIRED.

✱✱ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 5,800 C.F.S.
VEL. = 8.0 F.P.S.
$HW._{100}$ = EL. 963.92
WATERWAY AREA = 726 SQ. FT.
DRAINAGE AREA = 60 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

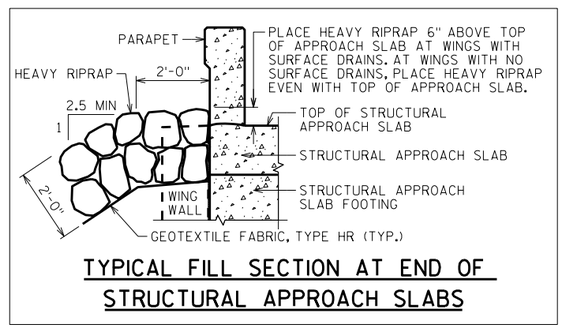
TRAFFIC VOLUME

IH 94 WB

ADT = 22,700 (2039)
R.D.S. = 75 M.P.H.

2 YEAR FREQUENCY

Q_2 = 1,750 C.F.S.
$HW._2$ = EL. 958.54



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

CURVE DATA

IH 94 WB

P.I. = 608+51.72'WB'
△ = 31°15'24"
D = 1°20'31"
T = 1,194.48
L = 2,329.42
R = 4,270.00
S.E. = 4.7 %
P.C. = 596+57.24'WB'
P.T. = 619+86.66'WB'

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. 54W" PRESTRESSED GIRDER DETAILS 1
9. 54W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGMS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. WEST STRUCTURAL APPROACH SLAB
14. EAST STRUCTURAL APPROACH SLAB
15. SINGLE SLOPE PARAPET 42SS
16. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

MICHAEL LARSON (608) 267-4539
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 8/13/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-55-256

IH 94 WB OVER KINNICKINNIC RIVER

COUNTY	TOWN
ST. CROIX	KINNICKINNIC

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MJL	MWB	MWB	MJL

GENERAL PLAN

SHEET 1 OF 16

301

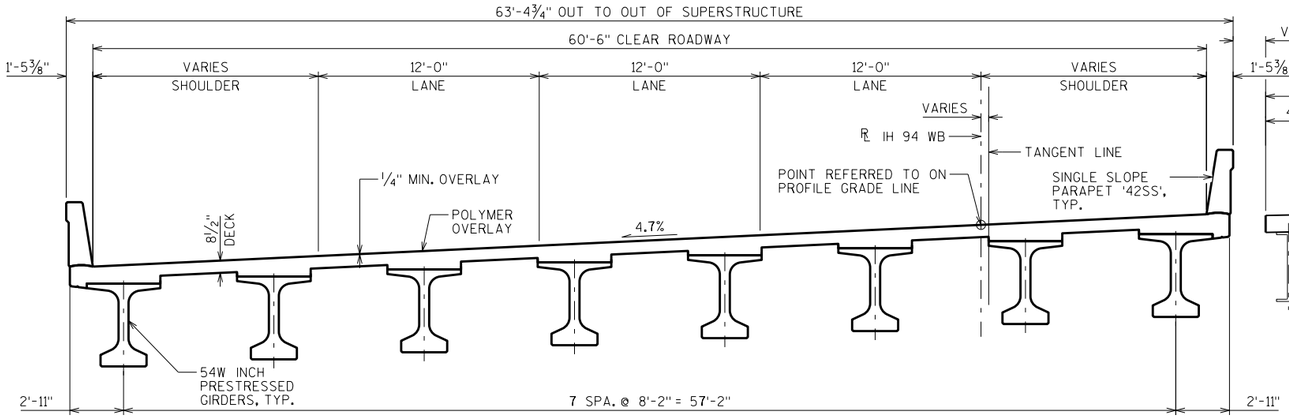
I.D. 1020-03-08 DATE: JUNE 2018

SCALE = 10.00

8 8

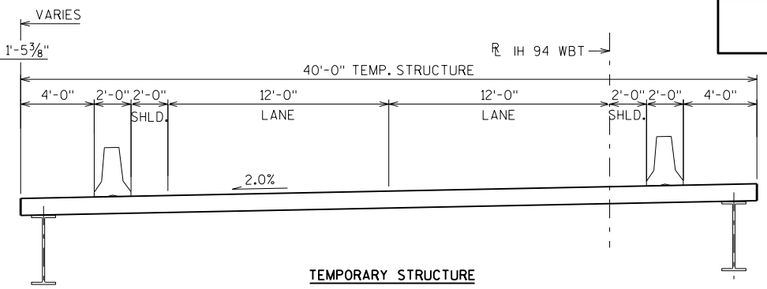
STATE PROJECT NUMBER

1020-03-78



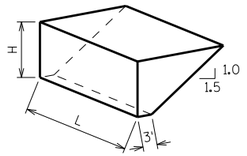
CROSS SECTION THRU ROADWAY

LOOKING EAST



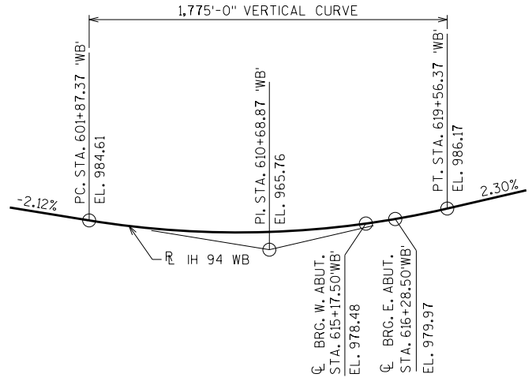
TEMPORARY STRUCTURE

NOTE:
TEMPORARY STRUCTURE TO BE BUILT PRIOR TO B-55-257 CONSTRUCTION. TO BE REMOVED AFTER B-55-256 CONSTRUCTION.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE - IH 94 WB

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAILS SHOWN ON THIS SHEET.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

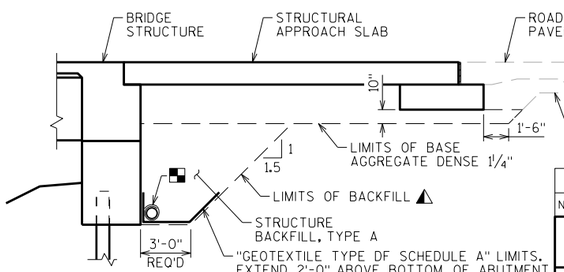
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

DECK SURFACE PREPARATION IS INCLUDED WITH THE BID ITEM "POLYMER OVERLAY".

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH SLAB	WEST ABUTMENT	EAST ABUTMENT	EAST APPROACH SLAB	TOTALS
203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA. 616+00'WB'	LS	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-256	LS	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	380	380	———	760
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	190	———	———	190	380
501.1000.S	ICE HOT WEATHER CONCRETING	LB	2,610	645	615	615	645	5,130
502.0100	CONCRETE MASONRY BRIDGES	CY	348	86	82	82	86	684
502.3200	PROTECTIVE SURFACE TREATMENT	SY	795	135	———	———	135	1,065
502.3210	PIGMENTED SURFACE SEALER	SY	112	20	———	———	20	152
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	896	———	———	———	———	896
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	5,230	5,230	———	10,460
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	50,460	13,050	2,520	2,540	13,050	81,620
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,150	———	———	———	———	2,150
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	16	———	———	———	———	16
506.4000	STEEL DIAPHRAGMS B-55-256	EACH	14	———	———	———	———	14
509.5100.S	POLYMER OVERLAY	SY	763	———	———	———	———	763
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	22	———	7	7	———	36
550.0500	PILE POINTS	EACH	———	———	17	17	———	34
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	———	510	1,020	———	1,530
606.0300	RIPRAP HEAVY	CY	———	———	530	650	———	1,180
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	115	115	———	230
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	———	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	60	60	———	120
645.0120	GEOTEXTILE TYPE HR	SY	———	———	830	1,015	———	1,845
SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	———	———	16	19	———	35
	NON-BID ITEMS							
	FILLER	SIZE						½", ¾", 1½"



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

CROSS SECTION & QUANTITIES

SHEET 2

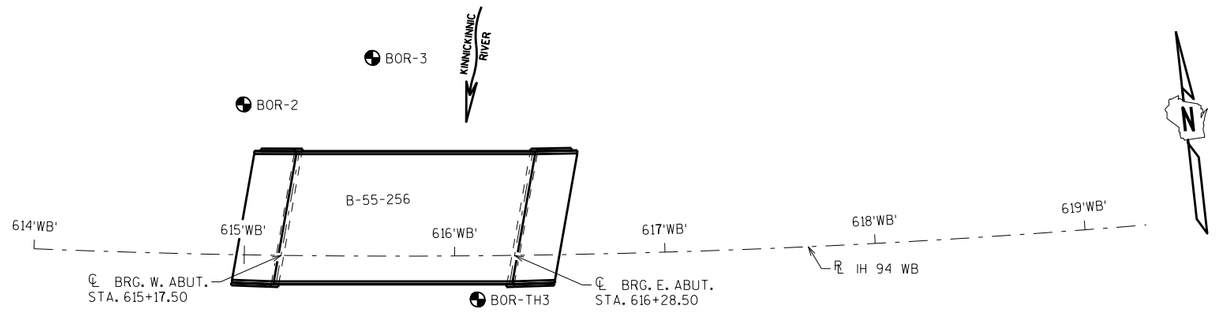
302

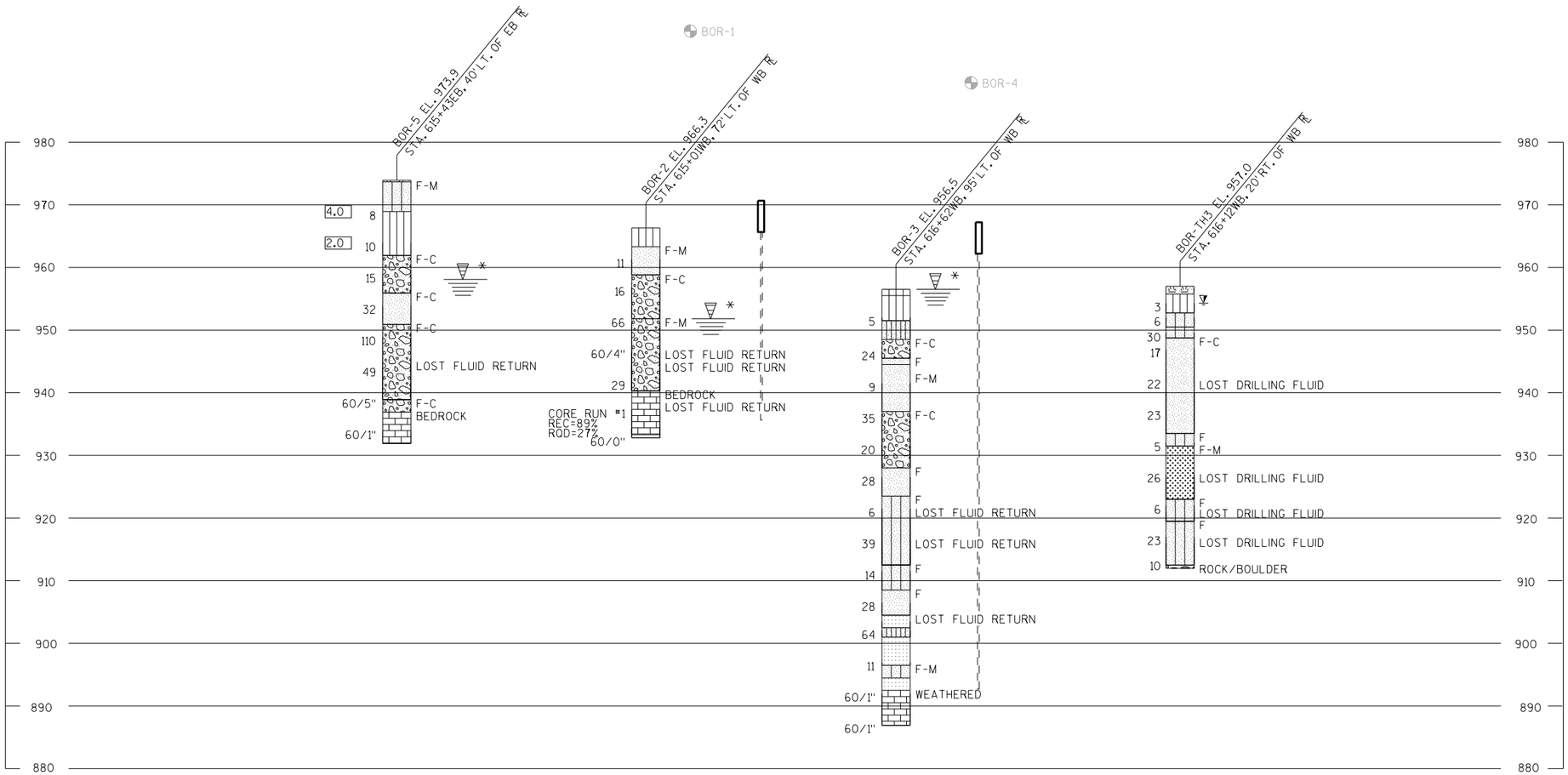
SCALE = 4.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/27/2017	330184	571724
2	10/17/2017	330412	571773
3	10/04/2017	330427	571836
4	10/11/2017	330138	571876
5	10/18/2017	330301	571750
TH3	10/25/1957	330308	571873
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

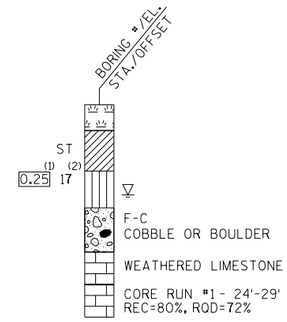
STATE PROJECT NUMBER

1020-03-78

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY TLP/MWB | PLANS CK'D. MJL

SUBSURFACE EXPLORATION

SHEET 3

303

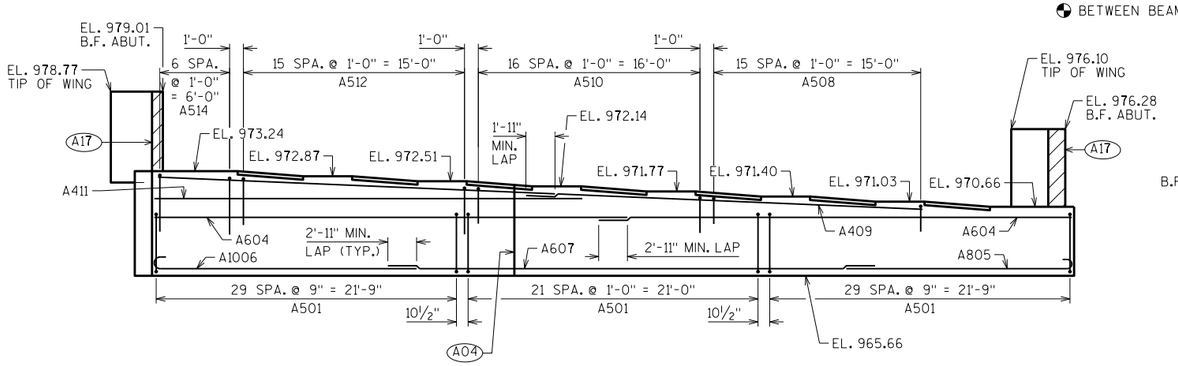
SCALE = 35.00

8

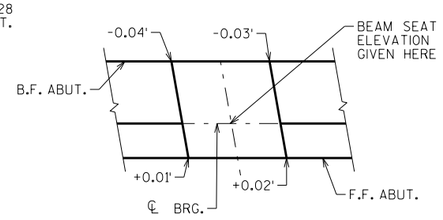
8

STATE PROJECT NUMBER

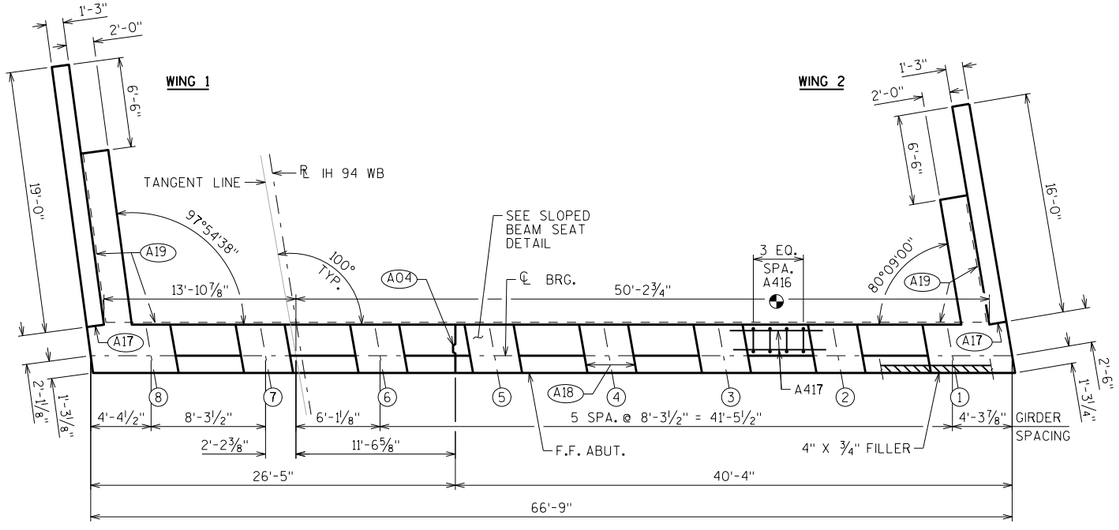
1020-03-78



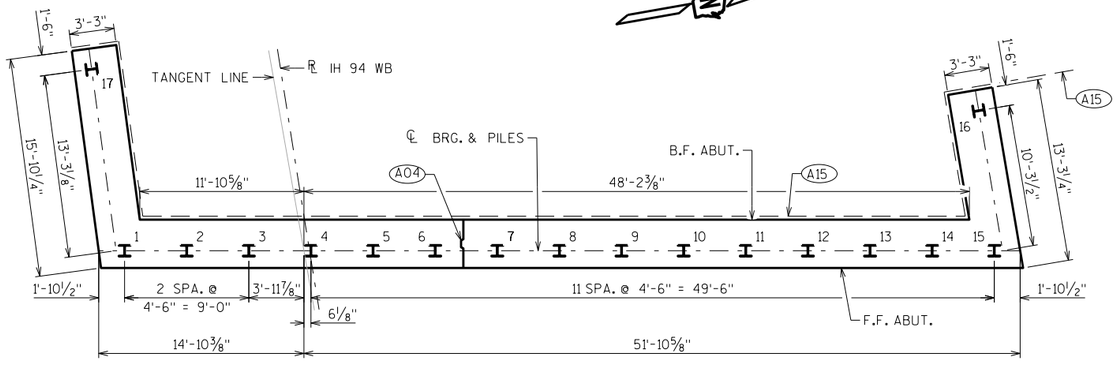
ELEVATION LOOKING WEST



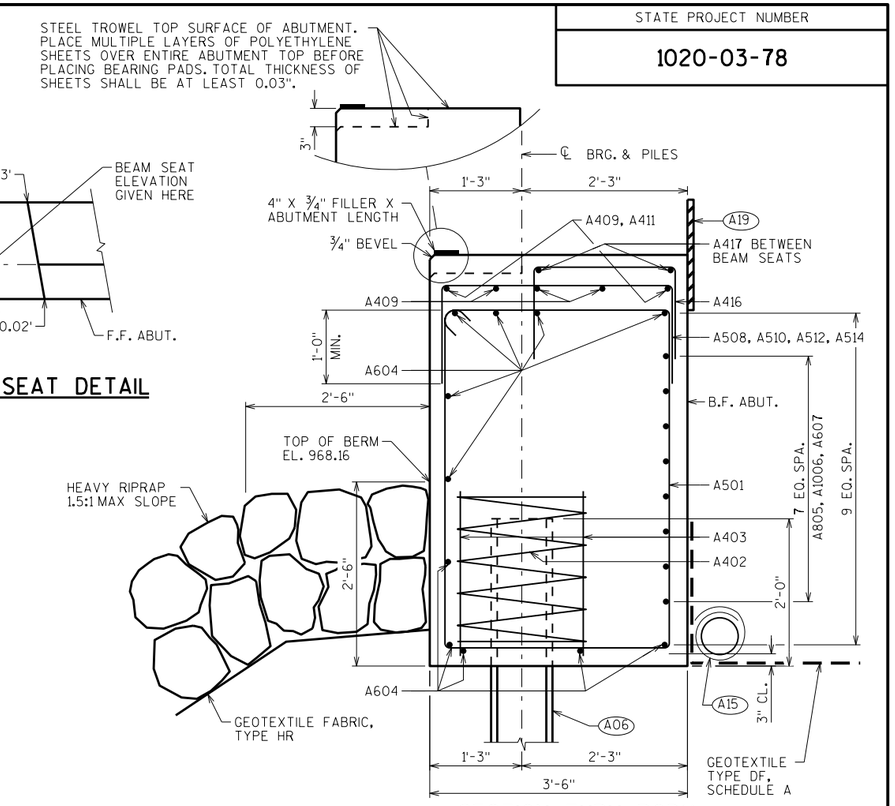
SLOPED BEAM SEAT DETAIL



PLAN



PILE PLAN



SECTION THRU BODY

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

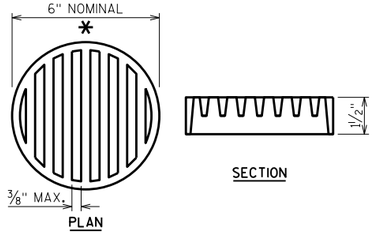
(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 30' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

WEST ABUTMENT

SHEET 4

304

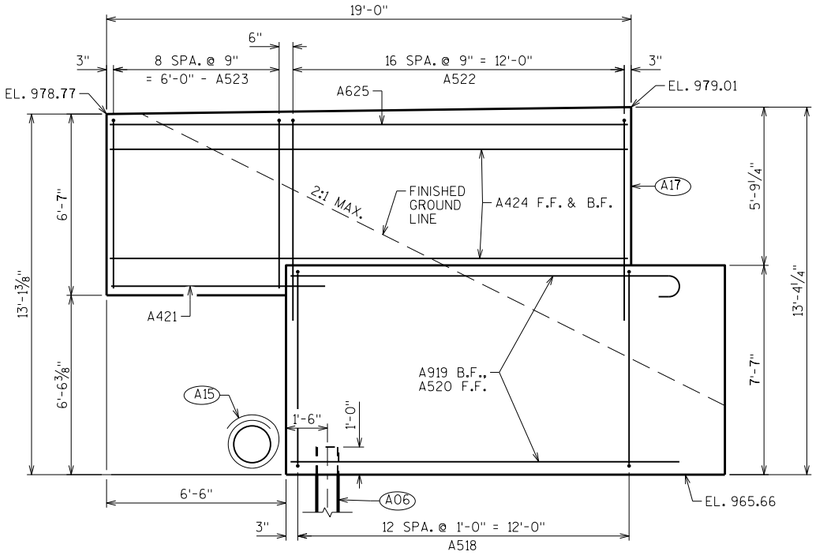
SCALE = 5.33

8

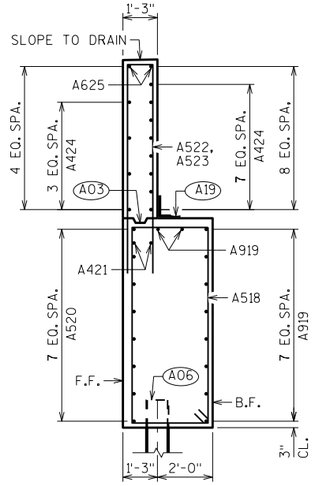
8

STATE PROJECT NUMBER

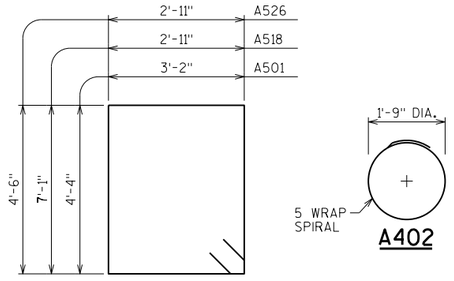
1020-03-78



WING 1 ELEVATION

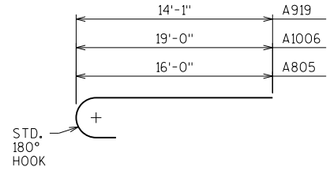


SECTION THRU WING 1

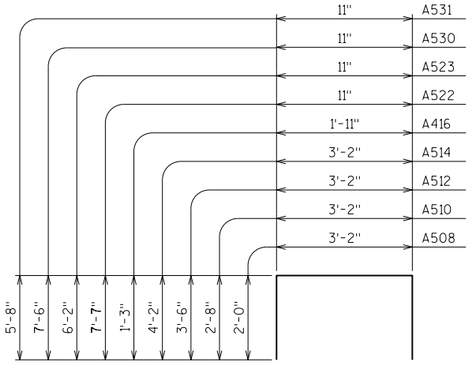


A501, A518, A526

A402



A805, A1006, A919

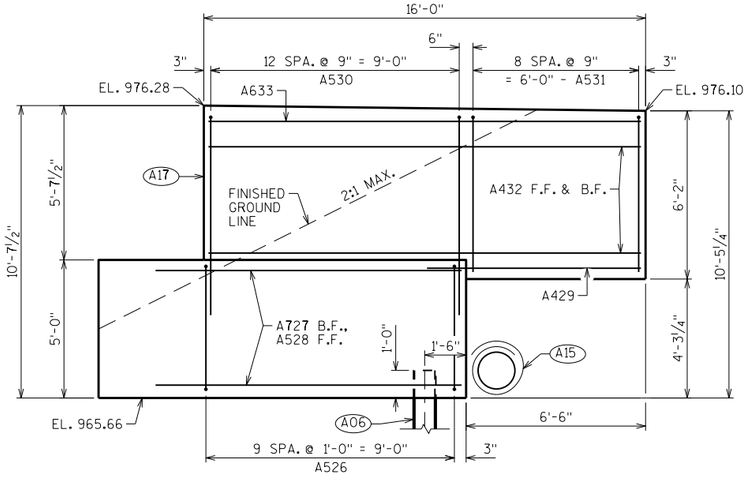


A508, A510, A512, A514, A416
A522, A523, A530, A531

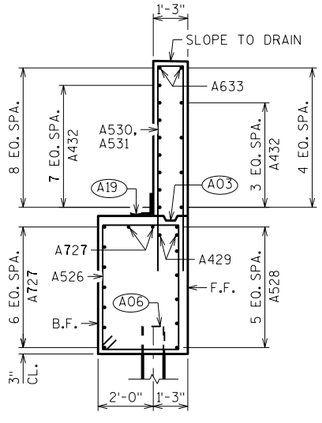
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

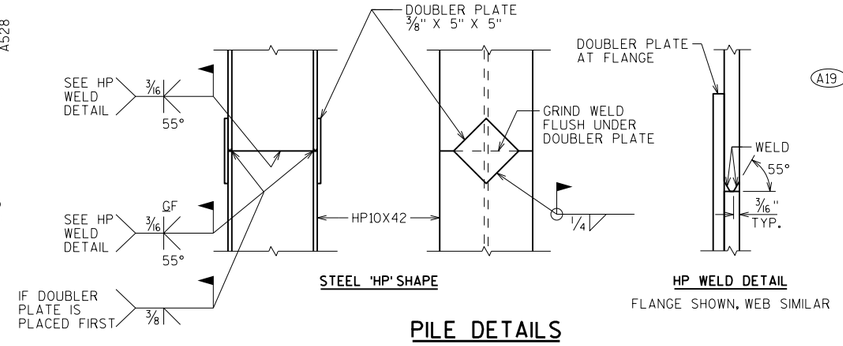
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		82	15'-8"	X		ABUT. - STIRRUPS
A402		15	28'-0"	X		ABUT. PILES - 1 PER PILE
A403		30	2'-3"			ABUT. PILES - 2 PER PILE
A604		22	34'-8"			ABUT. - HORIZ. - F.F. & TOP
A805		8	16'-11"	X		ABUT. - HORIZ. - B.F.
A1006		8	20'-5"	X		ABUT. - HORIZ. - B.F.
A607		8	37'-3"			ABUT. - HORIZ. - B.F.
A508		16	6'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 2-4
A409		10	29'-0"			ABUT. - HORIZ. SUPPL.
A510		17	8'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 4-6
A411		2	31'-0"			ABUT. - HORIZ. SUPPL.
A512		16	9'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 6-8
A413		NOT	USED			
A514		7	11'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEAT 8
A415		NOT	USED			
A416		28	4'-3"	X		ABUT. - VERT. - BTWN. BEAM SEATS
A417		14	6'-9"			ABUT. - HORIZ. - BTWN. BEAM SEATS
A518	X	13	20'-8"	X		WING 1 - LOWER - STIRRUPS
A919	X	10	15'-4"	X		WING 1 - HORIZ. - B.F.
A520	X	8	15'-6"			WING 1 - HORIZ. - F.F.
A421	X	2	7'-9"			WING 1 - HORIZ.
A522	X	17	15'-10"	X		WING 1 - VERT.
A523	X	9	13'-0"	X		WING 1 - VERT. - UPPER
A424	X	12	18'-8"			WING 1 - HORIZ. - UPPER
A625	X	2	18'-8"			WING 1 - HORIZ. - TOP
A526	X	10	15'-6"	X		WING 2 - LOWER - STIRRUPS
A727	X	9	11'-10"			WING 2 - HORIZ. - B.F.
A528	X	6	12'-10"			WING 2 - HORIZ. - F.F.
A429	X	2	7'-9"			WING 2 - HORIZ.
A530	X	13	15'-8"	X		WING 2 - VERT.
A531	X	9	12'-0"	X		WING 2 - VERT. - UPPER
A432	X	12	15'-8"			WING 2 - HORIZ. - UPPER
A633	X	2	15'-8"			WING 2 - HORIZ. - TOP



WING 2 ELEVATION



SECTION THRU WING 2



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 30' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

WEST ABUTMENT DETAILS

SHEET 5

305

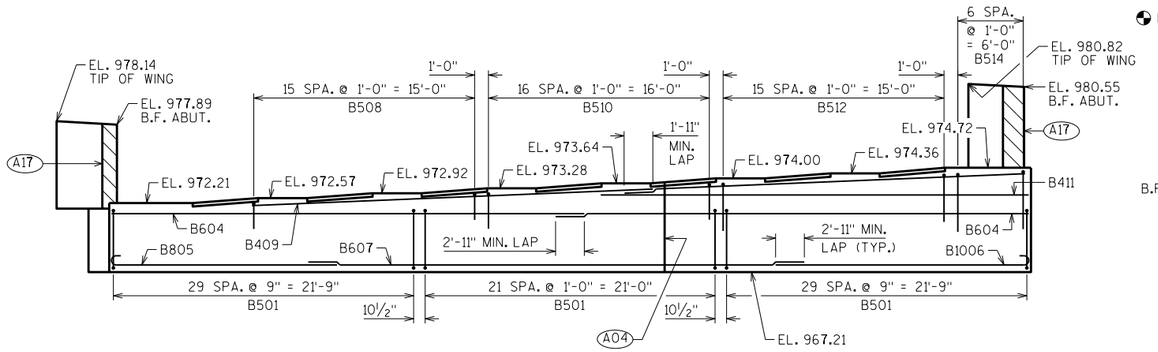
8

8

SCALE = 2.67

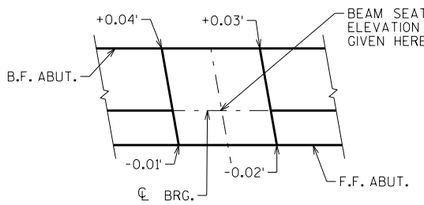
STATE PROJECT NUMBER

1020-03-78

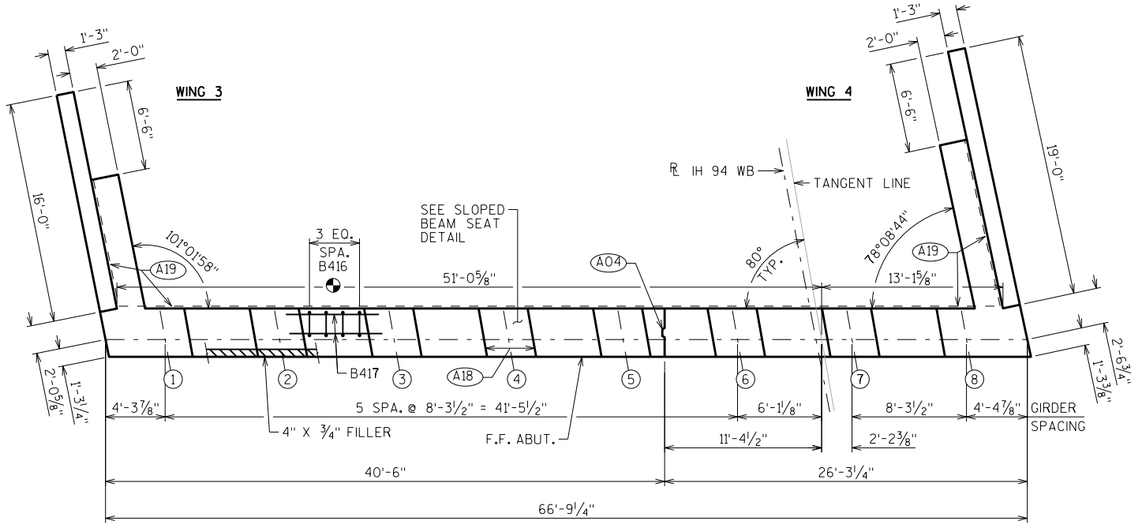


ELEVATION LOOKING EAST

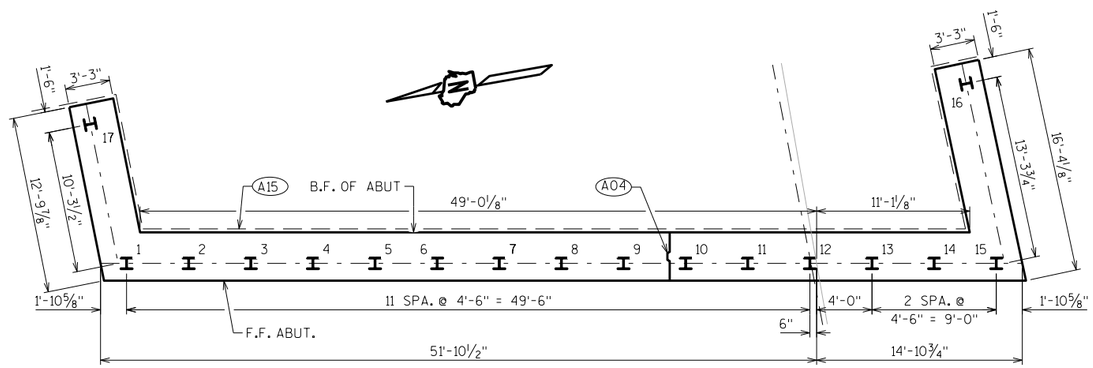
BETWEEN BEAM SEATS



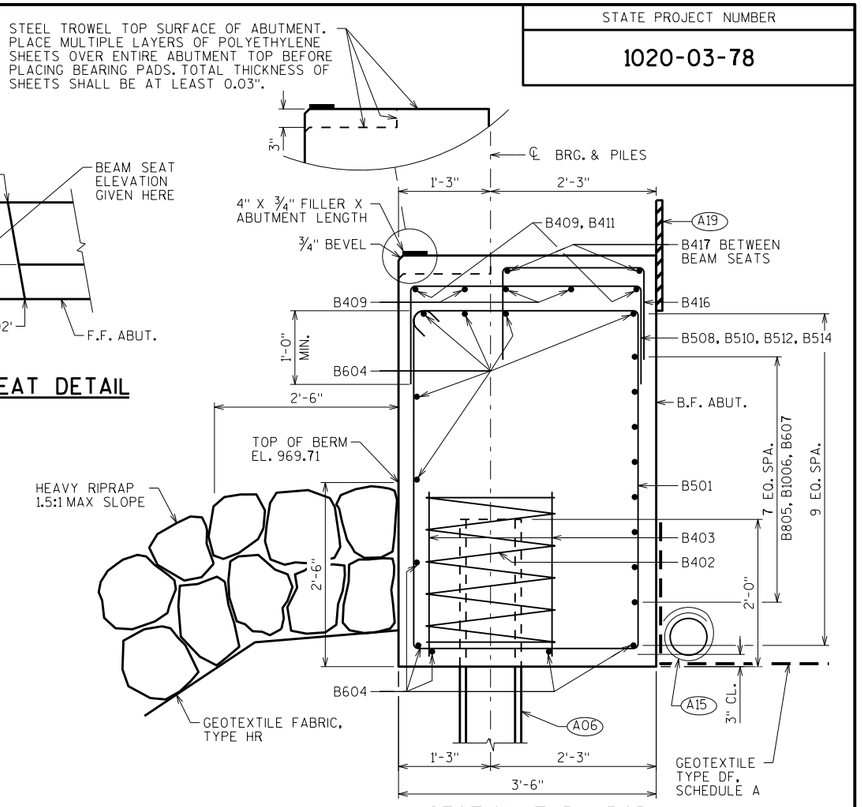
SLOPED BEAM SEAT DETAIL



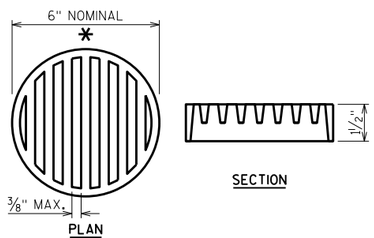
PLAN



PILE PLAN



SECTION THRU BODY



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 60' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

EAST ABUTMENT

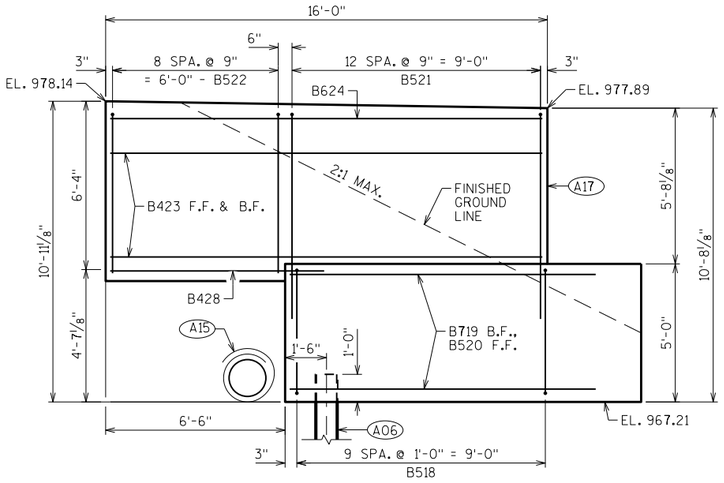
SHEET 6

306

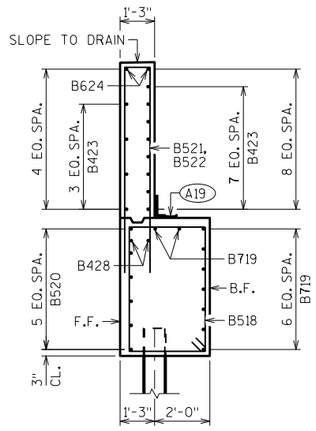
8

8

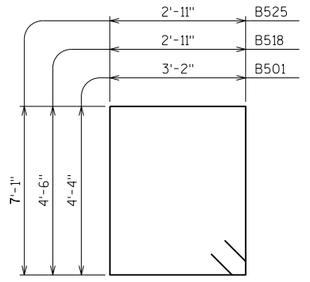
SCALE = 5.33



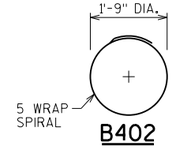
WING 3 ELEVATION



SECTION THRU WING 3



B501, B518, B525



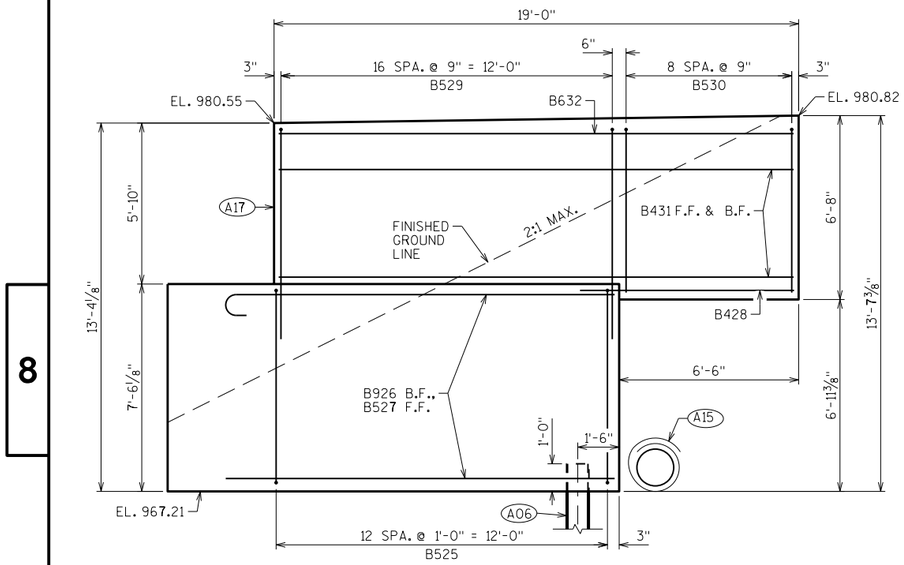
B402

B805, B1006, B926

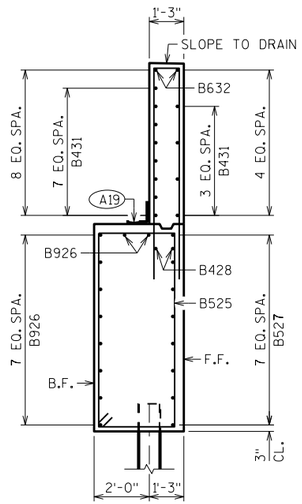
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

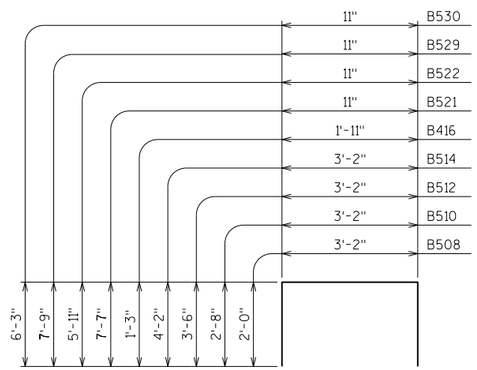
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		82	15'-8"	X		ABUT. - STIRRUPS
B402		15	28'-0"	X		ABUT. PILES - 1 PER PILE
B403		30	2'-3"			ABUT. PILES - 2 PER PILE
B604		22	34'-8"			ABUT. - HORIZ. - F.F. & TOP
B805		8	16'-11"	X		ABUT. - HORIZ. - B.F.
B1006		8	20'-5"	X		ABUT. - HORIZ. - B.F.
B607		8	37'-3"			ABUT. - HORIZ. - B.F.
B508		16	6'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 2-4
B409		10	29'-0"			ABUT. - HORIZ. SUPPL.
B510		17	8'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 4-6
B411		2	31'-0"			ABUT. - HORIZ. SUPPL.
B512		16	9'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 6-8
B413		NOT	USED			
B514		7	11'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEAT 8
B415		NOT	USED			
B416		28	4'-3"	X		ABUT. - VERT. - BTWN. BEAM SEATS
B417		14	6'-9"			ABUT. - HORIZ. - BTWN. BEAM SEATS
B518	X	10	15'-6"	X		WING 3 - LOWER - STIRRUPS
B719	X	9	11'-10"			WING 3 - HORIZ. - B.F.
B520	X	6	12'-6"			WING 3 - HORIZ. - F.F.
B521	X	13	15'-10"	X		WING 3 - VERT.
B522	X	9	12'-6"	X		WING 3 - VERT. - UPPER
B423	X	12	15'-8"			WING 3 - HORIZ. - UPPER
B624	X	2	15'-8"			WING 3 - HORIZ. - TOP
B525	X	13	20'-8"	X		WING 4 - LOWER - STIRRUPS
B926	X	10	15'-4"	X		WING 4 - HORIZ. - B.F.
B527	X	8	15'-11"			WING 4 - HORIZ. - F.F.
B428	X	4	7'-9"			WING 3 & 4 - HORIZ.
B529	X	17	16'-2"	X		WING 4 - VERT.
B530	X	9	13'-2"	X		WING 4 - VERT. - UPPER
B431	X	12	18'-8"			WING 4 - HORIZ. - UPPER
B632	X	2	18'-8"			WING 4 - HORIZ. - TOP



WING 4 ELEVATION



SECTION THRU WING 4



B508, B510, B512, B514, B416
B521, B522, B529, B530

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 60' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

EAST ABUTMENT DETAILS

SHEET 7

307

STATE PROJECT NUMBER

1010-03-78

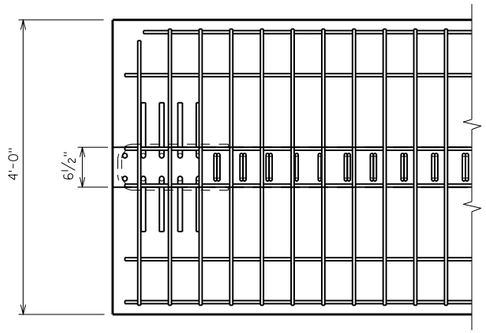
8

8

SCALE = 2.67

STATE PROJECT NUMBER

1020-03-78



TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

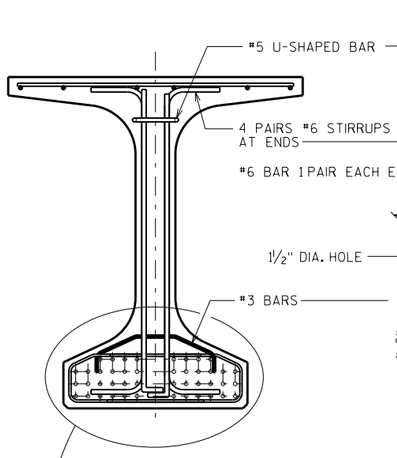
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

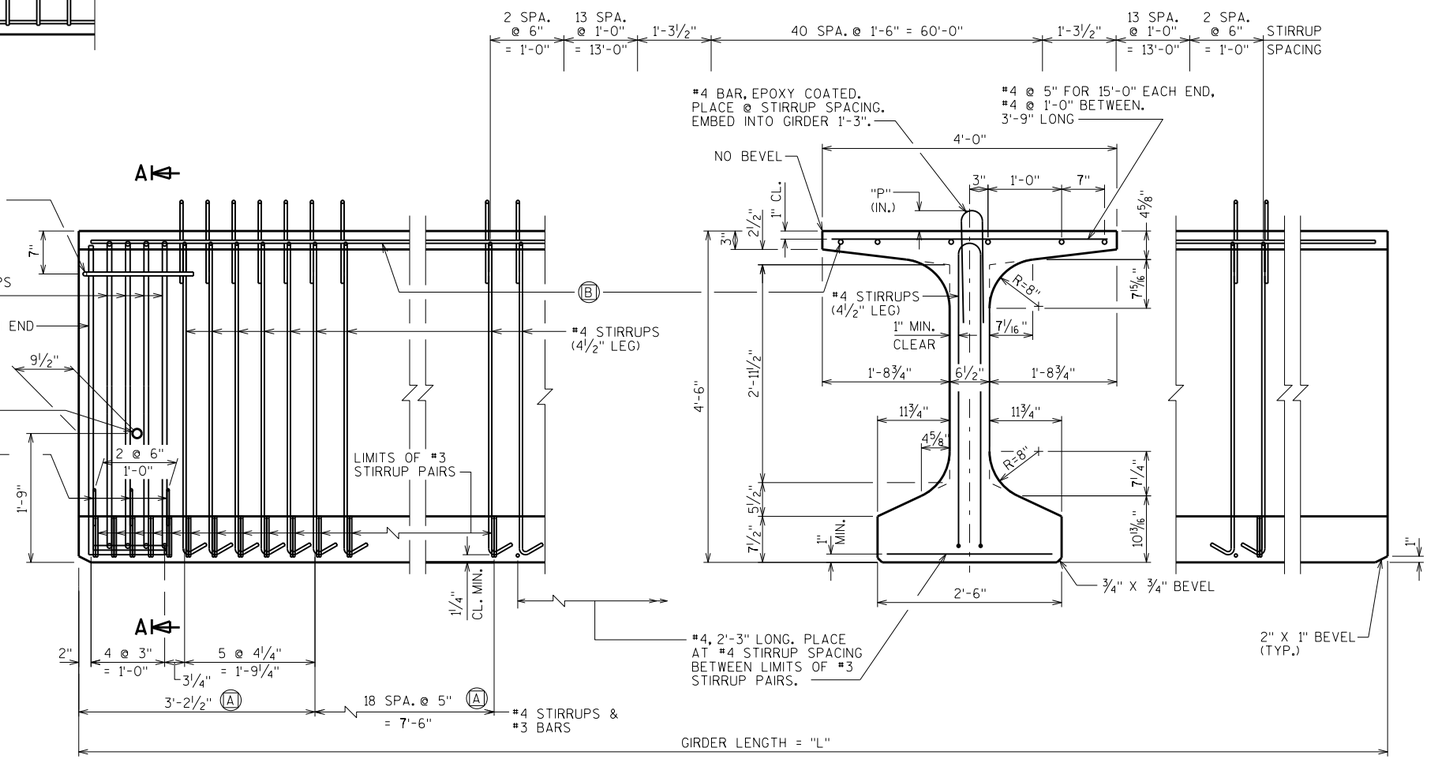
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGMS" SHEET.



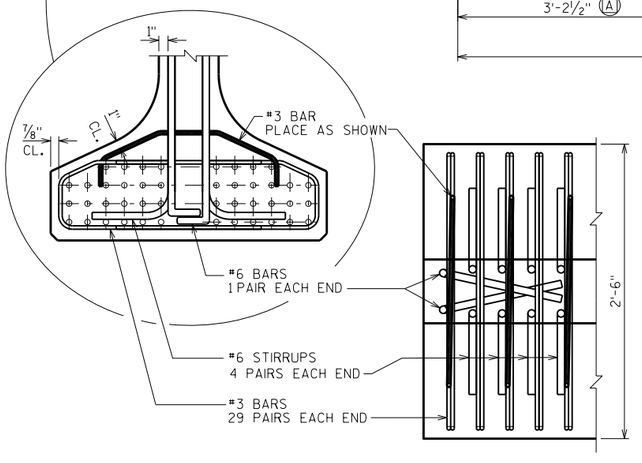
SECTION A-A



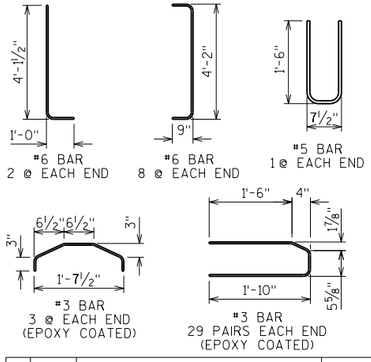
SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" IST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1	112	0.6	1.1	1.5	1.7	1.8	1.7	1.5	1.1	0.6	8,000	9	7	9	0.6	36	6,400	49	16	19	5		
1	2-7	112	0.6	1.1	1.6	1.8	1.9	1.8	1.6	1.1	0.6	8,000	9	7	9	0.6	36	6,400	49	16	19	5		
1	8	112	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	8,000	9	7	9	0.6	36	6,400	49	16	19	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

308

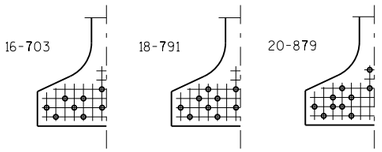
SCALE = 1.00

8

8

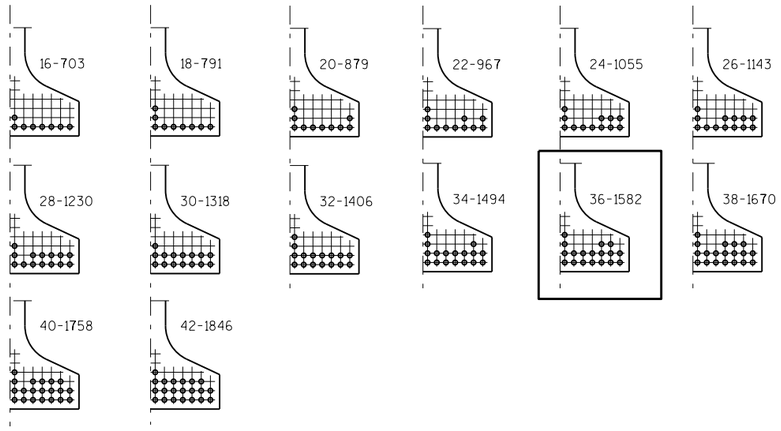
STATE PROJECT NUMBER

1020-03-78



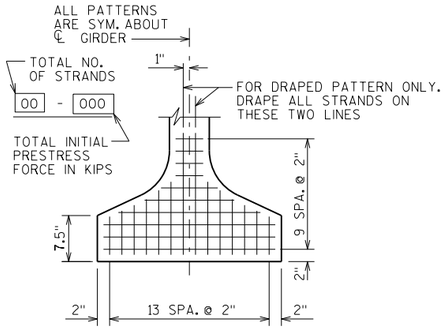
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

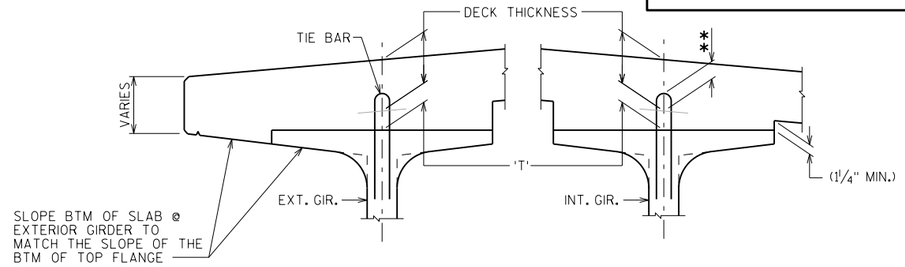


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

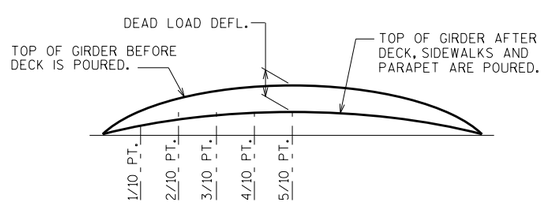
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

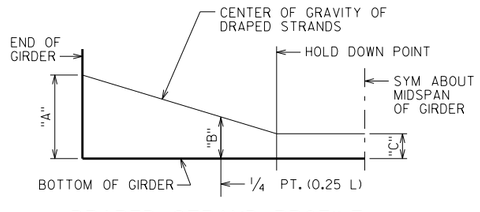
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4⅛" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.53

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

309

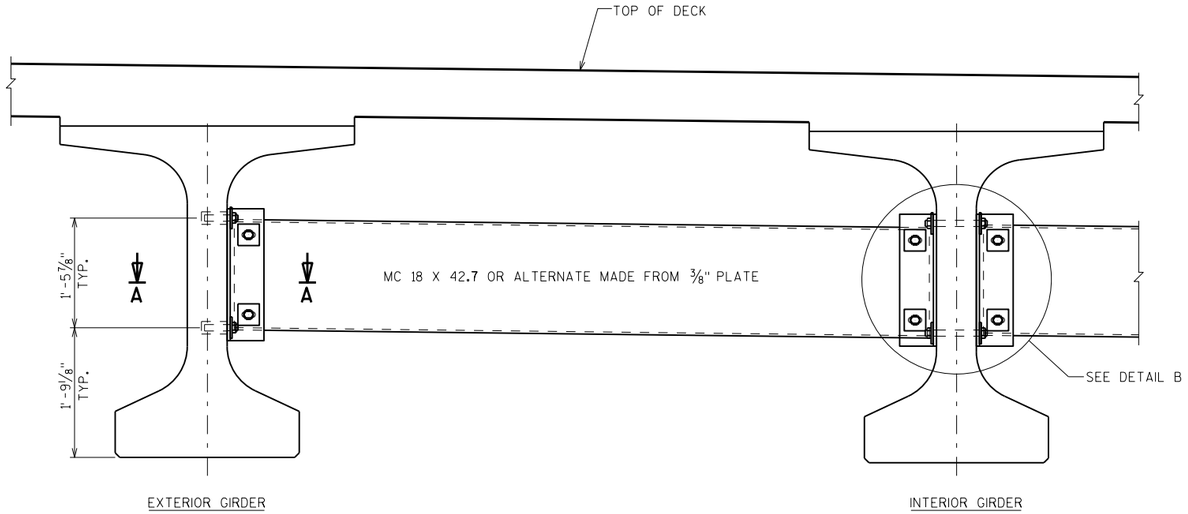
8

8

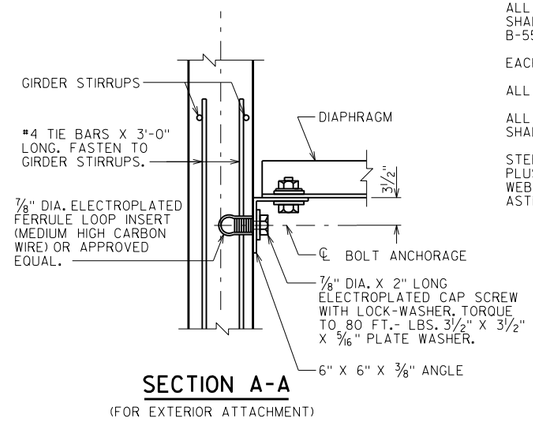
SCALE = 1.00

STATE PROJECT NUMBER

1020-03-78



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

NOTES

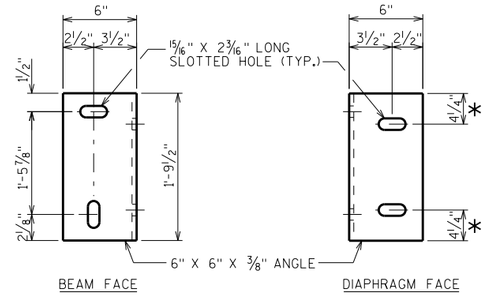
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-256", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

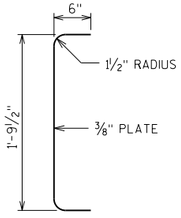
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



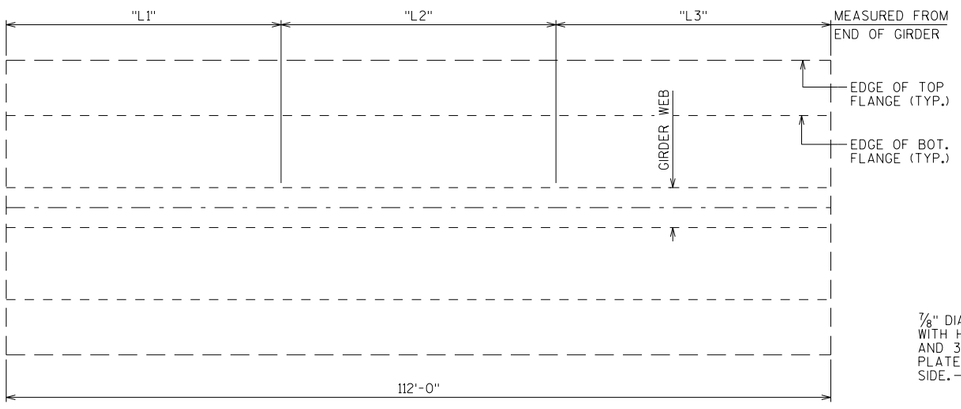
DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

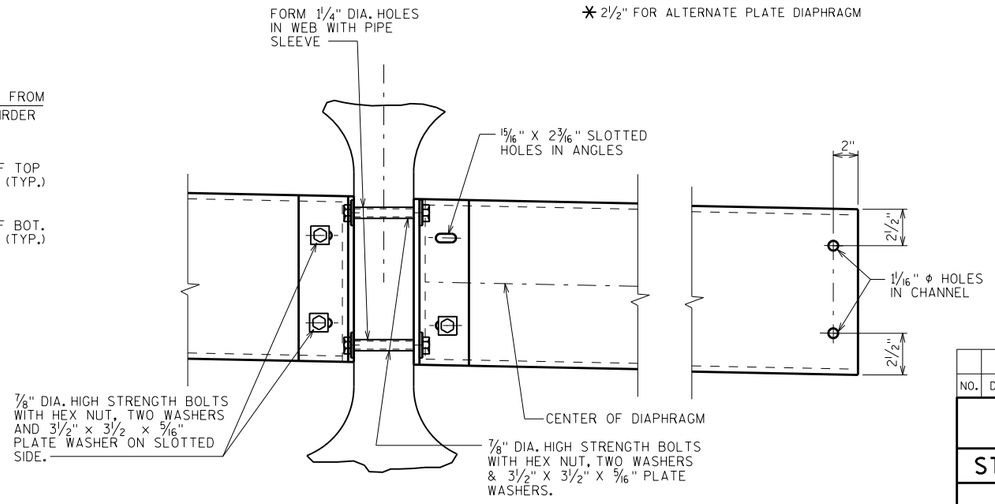


SECTION THRU ALTERNATE DIAPHRAGM

	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8
"L1"	32'-5½"	33'-10¾"	35'-4⅛"	36'-9⅜"	38'-2⅝"	39'-7⅞"	41'-1¼"	42'-6½"
"L2"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"
"L3"	42'-6½"	41'-1¼"	39'-7⅞"	38'-2⅝"	36'-9⅜"	35'-4⅛"	33'-10¾"	32'-5½"



DIAPHRAGM CONNECTION SPACING



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

STEEL DIAPHRAGMS

SHEET 10

310

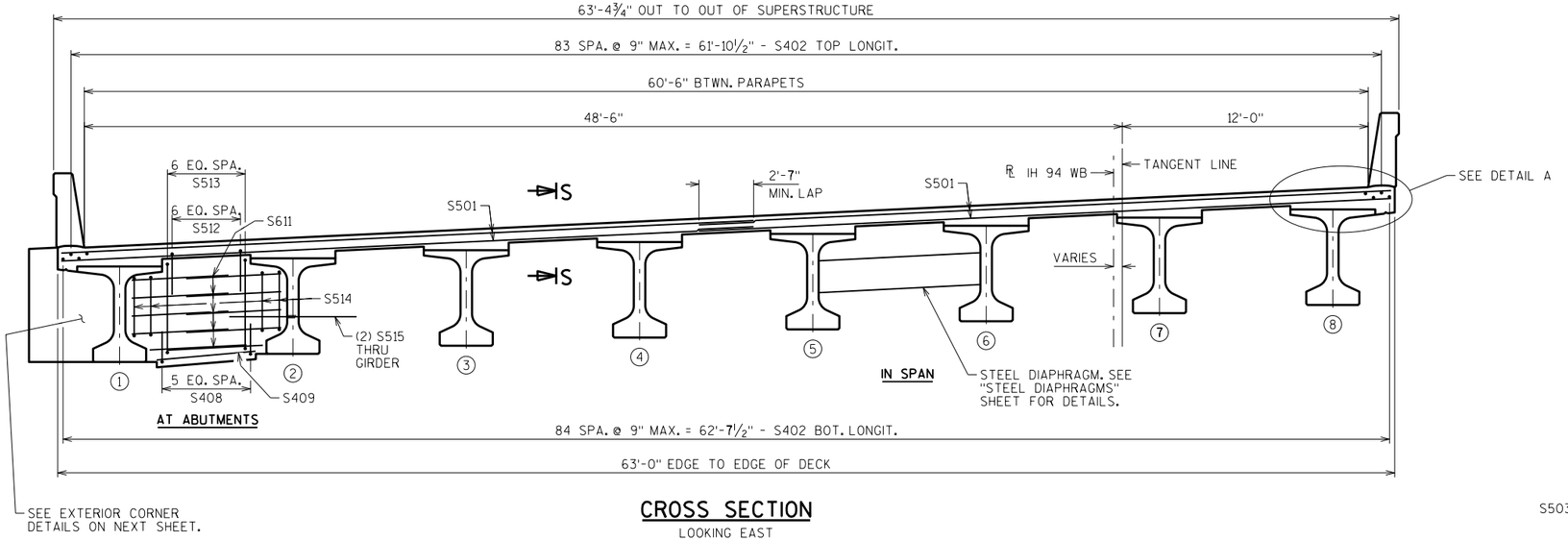
SCALE = 1.00

8

8

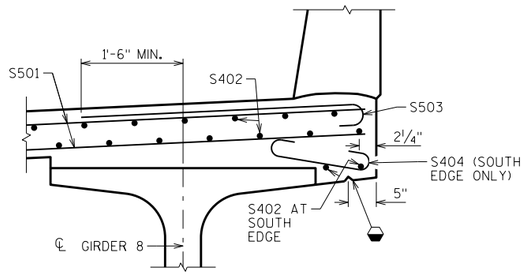
STATE PROJECT NUMBER

1020-03-78



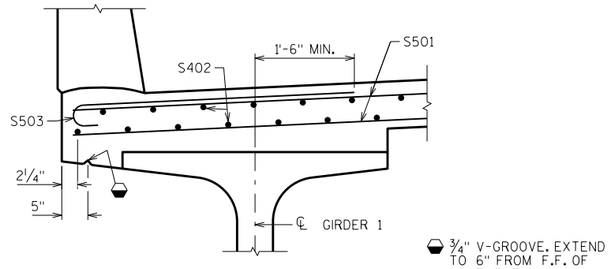
CROSS SECTION

LOOKING EAST



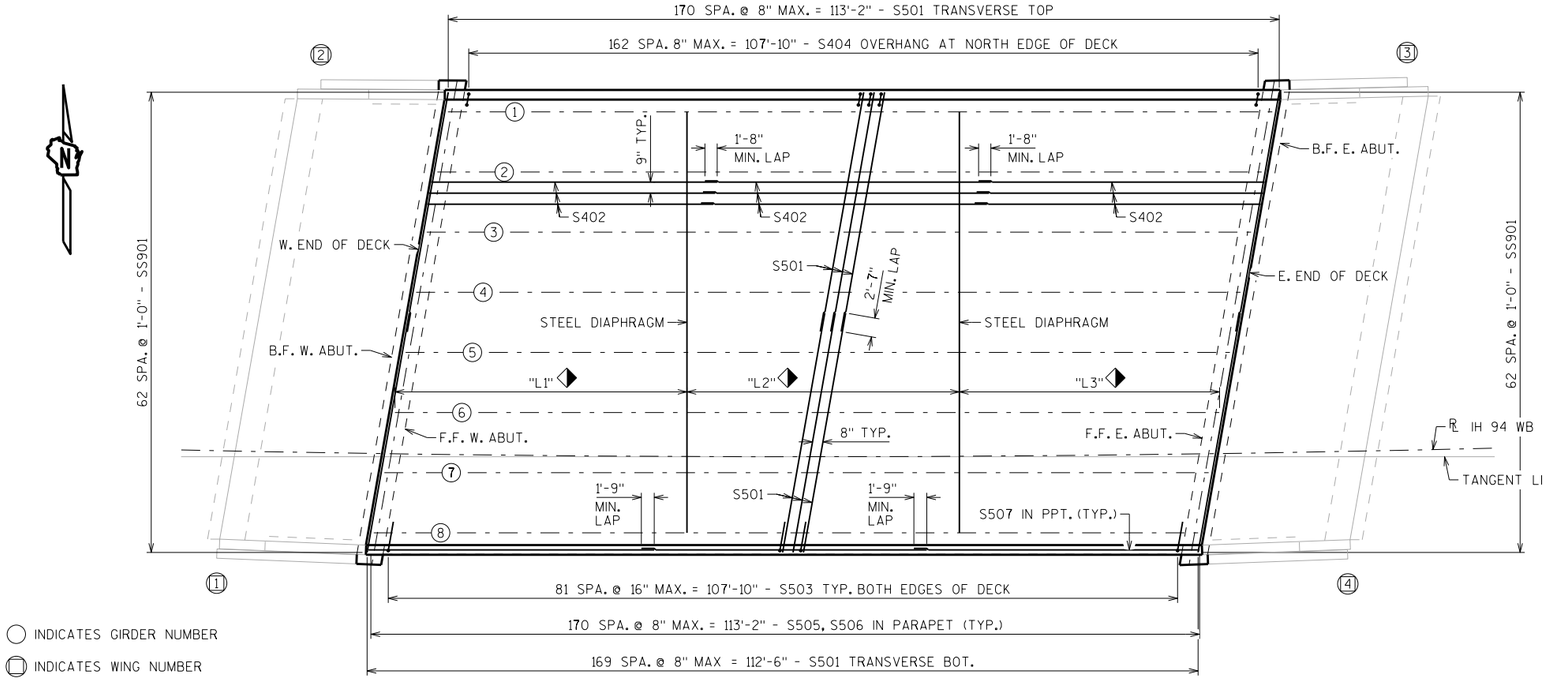
DETAIL A

AT SOUTH EDGE OF DECK

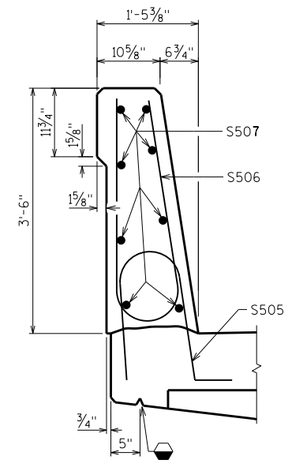


DETAIL A

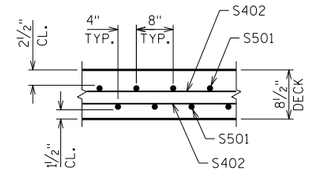
AT NORTH EDGE OF DECK



PLAN



SECTION THRU PARAPET



SECTION S-S

○ INDICATES GIRDER NUMBER

▢ INDICATES WING NUMBER

◆ STEEL DIAPHRAGM SPACING. SEE "STEEL DIAPHRAGMS" SHEET FOR L1, L2, L3 DIMENSIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

SUPERSTRUCTURE

SHEET 11

311

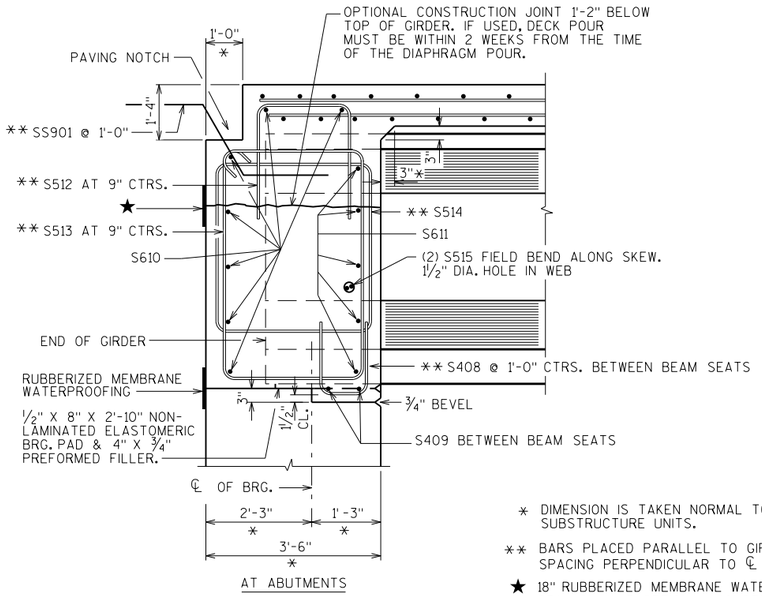
SCALE = 10.00

8

8

STATE PROJECT NUMBER

1020-03-78

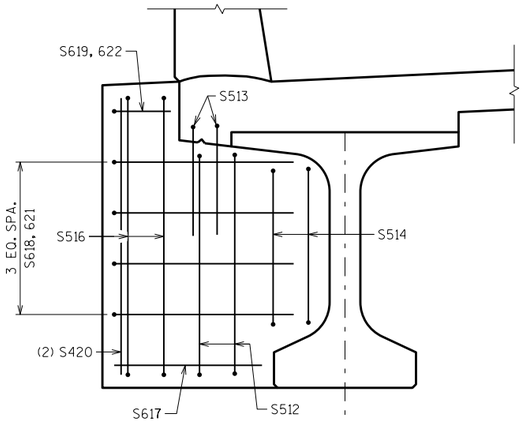


PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

★ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCLUDED WITH BID ITEM "CONCRETE MASONRY BRIDGES".



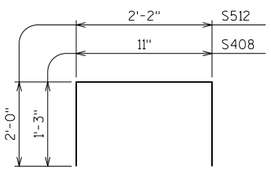
EXTERIOR CORNER DETAILS

WING 1 SHOWN, OTHER WINGS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY

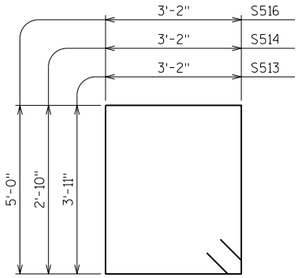
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

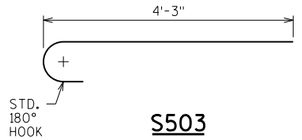
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	682	33'-2"			DECK - TRANS. - TOP & BOT.
S402	X	513	39'-0"			DECK - LONGIT. - TOP & BOT.
S503	X	164	4'-10"	X		DECK - OVERHANG - SOUTH EDGE
S404	X	163	2'-6"	X		DECK - OVERHANG - NORTH EDGE
S505	X	342	4'-5"	X		DECK & PPT. - VERT.
S506	X	342	6'-8"	X		PPT. - VERT.
S507	X	48	39'-0"			PPT. - HORIZ.
S408	X	84	3'-3"	X		ABUT. DIAPH. - VERT. - BTWN. BEAM SEATS
S409	X	28	4'-8"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS
S610	X	28	35'-0"			ABUT. DIAPH. & DECK - HORIZ.
S611	X	140	4'-9"			ABUT. DIAPH. - HORIZ. - BTWN. GIRS.
S512	X	106	5'-11"	X		ABUT. DIAPH. & DECK - VERT.
S513	X	106	14'-10"	X		ABUT. DIAPH. - VERT. - STIRRUPS
S514	X	64	12'-8"	X		ABUT. DIAPH. - VERT. - UNDER FLANGES
S515	X	32	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIR. WEBS
S516	X	8	17'-0"	X		ABUT. DIAPH. - STIRRUPS - EXT. CORNERS
S617	X	4	2'-9"			ABUT. DIAPH. - HORIZ. - EXT. CORNERS
S618	X	8	8'-3"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS 1 & 3
S619	X	2	4'-9"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS 1 & 3
S420	X	8	5'-0"			ABUT. DIAPH. - VERT. - EXT. CORNERS
S621	X	8	8'-5"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS 2 & 4
S622	X	2	4'-10"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS 2 & 4
SS901		126	5'-0"	X		PAVING NOTCH - STAINLESS STEEL



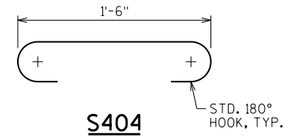
S408, S512



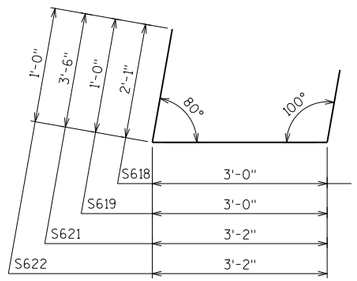
S513, S514, S516



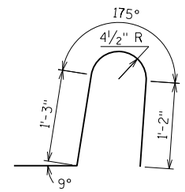
S503



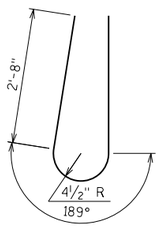
S404



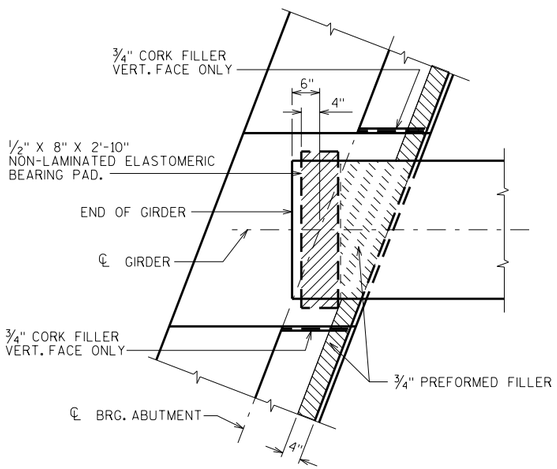
S618, S619, S621, S622



S505



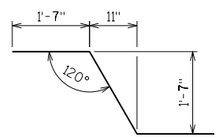
S506



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	℄ BRG. W. ABUT	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT
N EOD	976.31	976.44	976.58	976.73	976.87	977.03	977.18	977.34	977.51	977.68	977.86
GIR. 1	976.38	976.52	976.66	976.80	976.95	977.10	977.25	977.42	977.58	977.75	977.93
GIR. 2	976.75	976.88	977.02	977.16	977.31	977.46	977.62	977.78	977.94	978.11	978.28
GIR. 3	977.12	977.25	977.39	977.53	977.67	977.82	977.98	978.14	978.30	978.47	978.64
GIR. 4	977.49	977.62	977.75	977.90	978.04	978.19	978.34	978.50	978.66	978.83	979.00
GIR. 5	977.86	977.99	978.12	978.26	978.40	978.55	978.71	978.86	979.03	979.19	979.36
GIR. 6	978.22	978.35	978.49	978.63	978.77	978.92	979.07	979.23	979.39	979.55	979.72
℄ IH 94	978.48	978.61	978.75	978.89	979.04	979.19	979.34	979.49	979.65	979.81	979.97
GIR. 7	978.59	978.72	978.85	978.99	979.14	979.28	979.43	979.59	979.75	979.91	980.08
GIR. 8	978.96	979.09	979.22	979.36	979.50	979.65	979.80	979.95	980.11	980.27	980.44
S EOD	979.03	979.16	979.29	979.43	979.57	979.72	979.87	980.02	980.18	980.34	980.51



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

SUPERSTRUCTURE DETAILS

SHEET 12

312

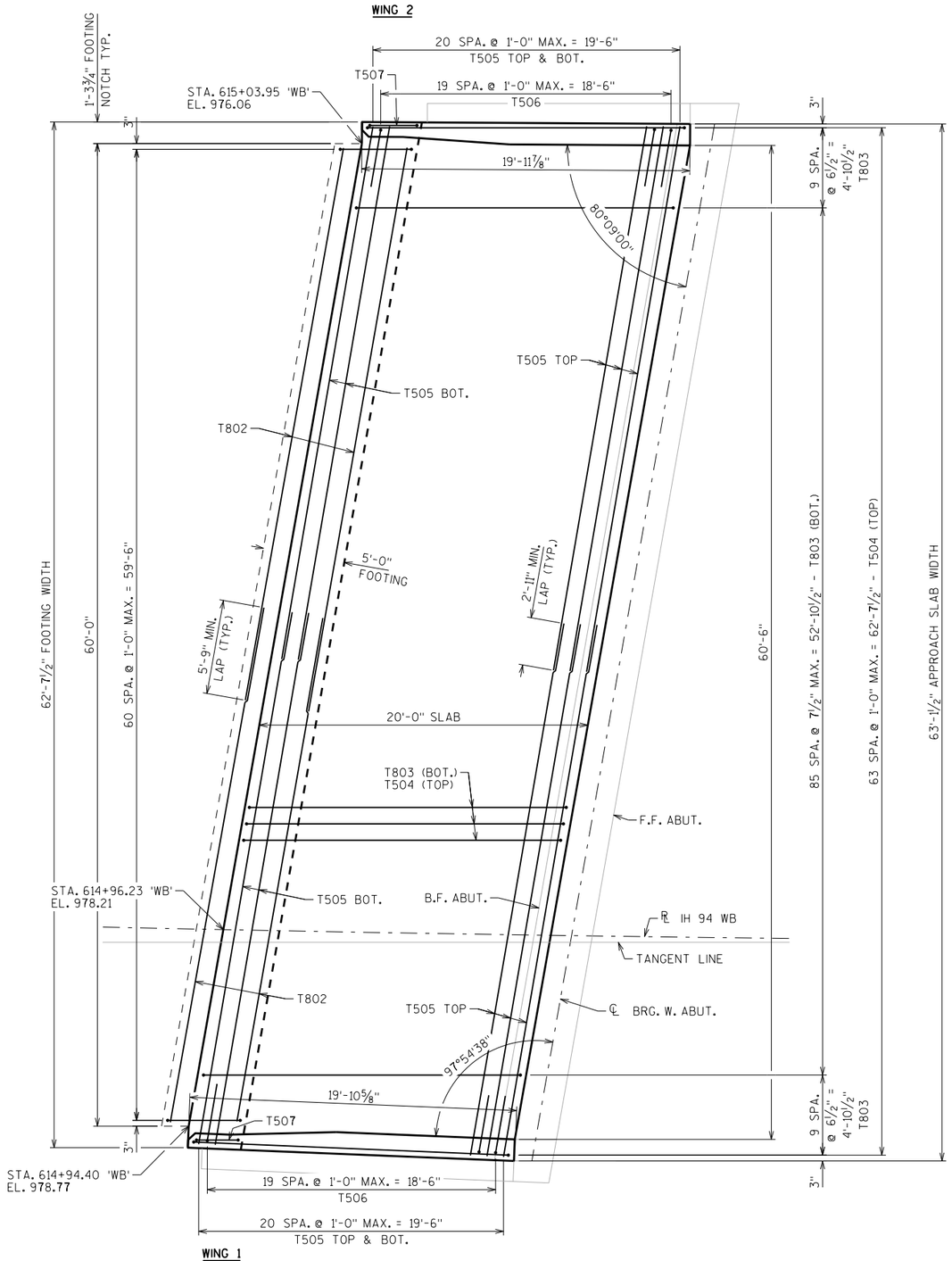
8

8

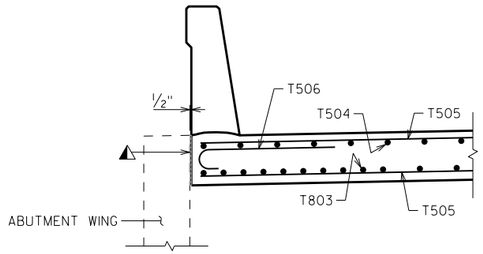
SCALE = 1.33

STATE PROJECT NUMBER

1020-03-78



PLAN



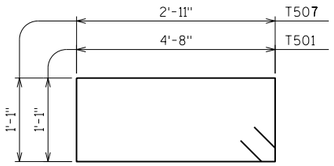
SECTION A-A

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

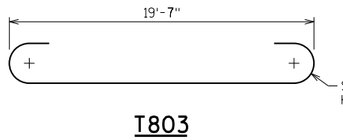
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

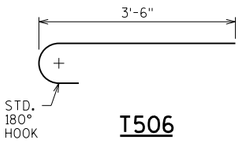
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	61	12'-2"	X		APP. SLAB FOOTING - STIRRUPS
T802	X	24	34'-8"			APP. SLAB FOOTING - HORIZ.
T803	X	104	21'-5"	X		APP. SLAB - LONGIT. - BOT.
T504	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
T505	X	42	33'-3"			APP. SLAB - TRANS. - TOP & BOT.
T506	X	40	4'-1"	X		APP. SLAB - TRANS. - AT EDGES
T507	X	2	8'-8"	X		APP. SLAB - FOOTING - STIRRUPS AT NOTCH



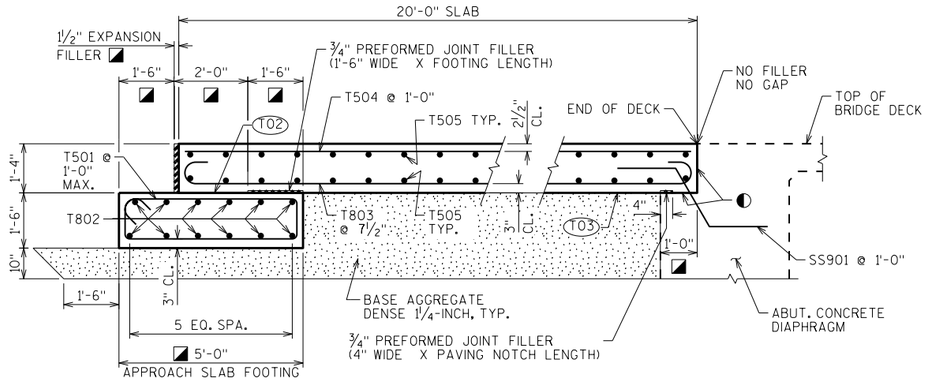
T501, T507



T803



T506



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

WEST STRUCTURAL APPROACH SLAB

SHEET 13

313

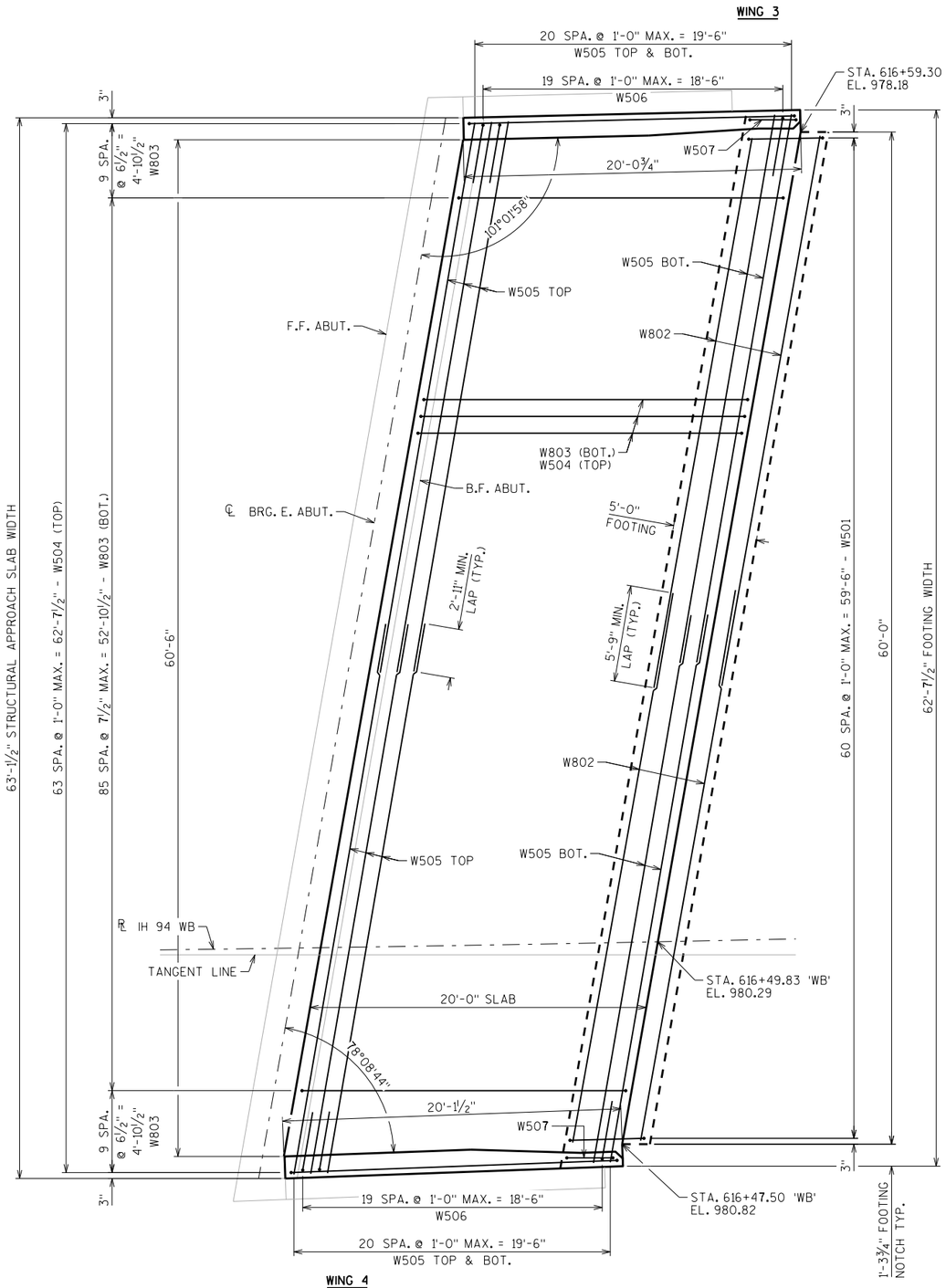
SCALE = 4.00

8

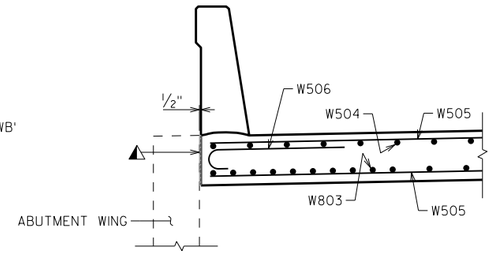
8

STATE PROJECT NUMBER

1020-03-78



PLAN



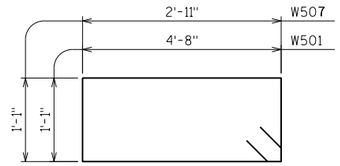
SECTION A-A

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

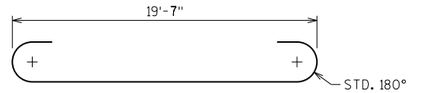
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

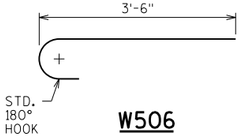
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	61	12'-2"	X		APP. SLAB FOOTING - STIRRUPS
W802	X	24	34'-8"			APP. SLAB FOOTING - HORIZ.
W803	X	104	21'-5"	X		APP. SLAB - LONGIT. - BOT.
W504	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
W505	X	42	33'-3"			APP. SLAB - TRANS. - TOP & BOT.
W506	X	40	4'-1"	X		APP. SLAB - TRANS. - AT EDGES
W507	X	2	8'-8"	X		APP. SLAB - FOOTING - STIRRUP AT NOTCH



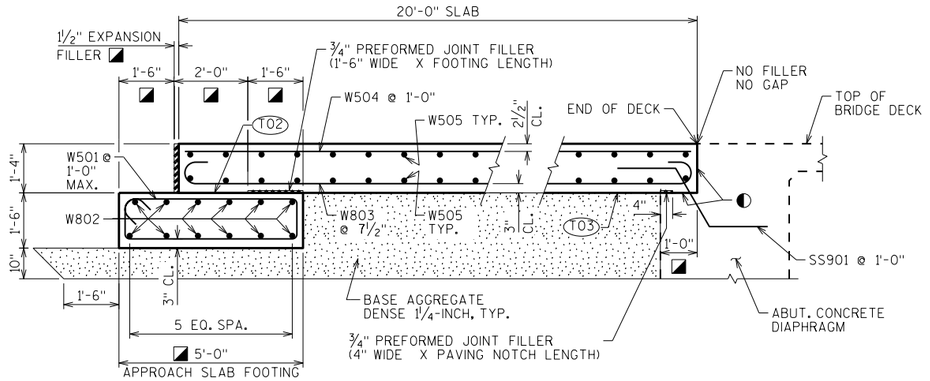
W501, W507



W803



W506



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

EAST STRUCTURAL APPROACH SLAB

SHEET 14

314

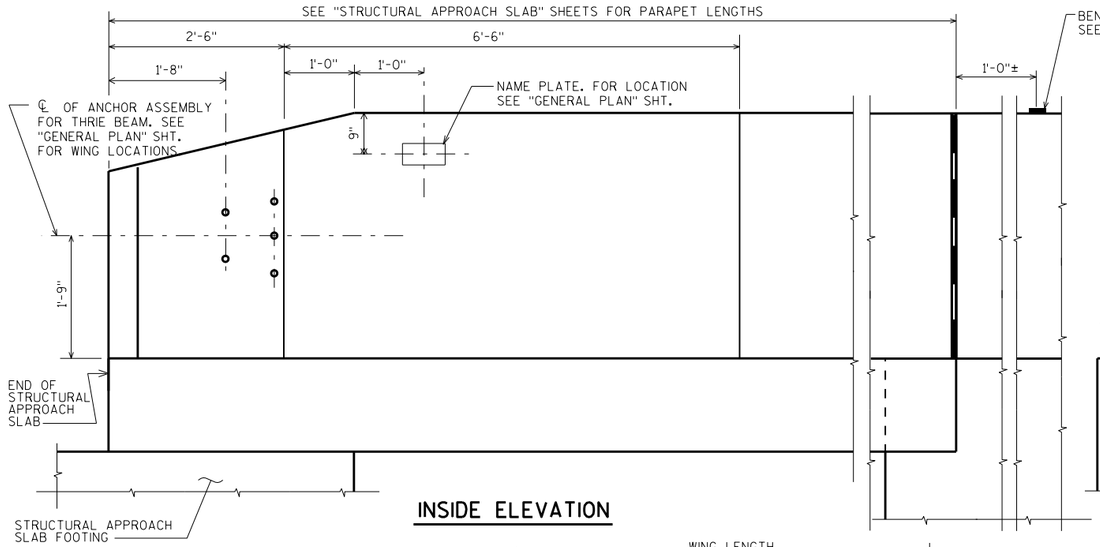
SCALE = 4.00

8

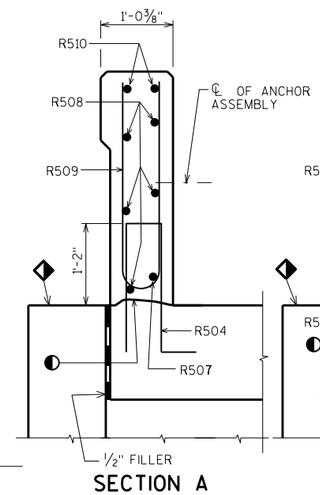
8

STATE PROJECT NUMBER

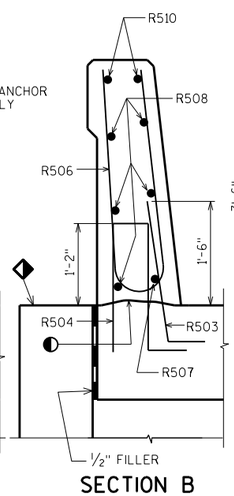
1020-03-78



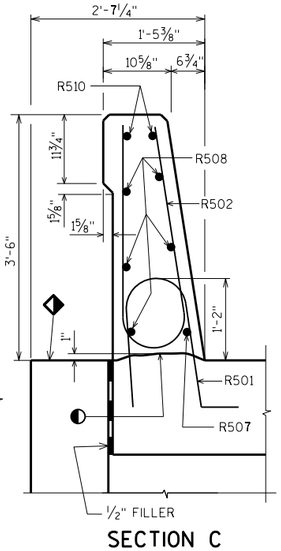
INSIDE ELEVATION



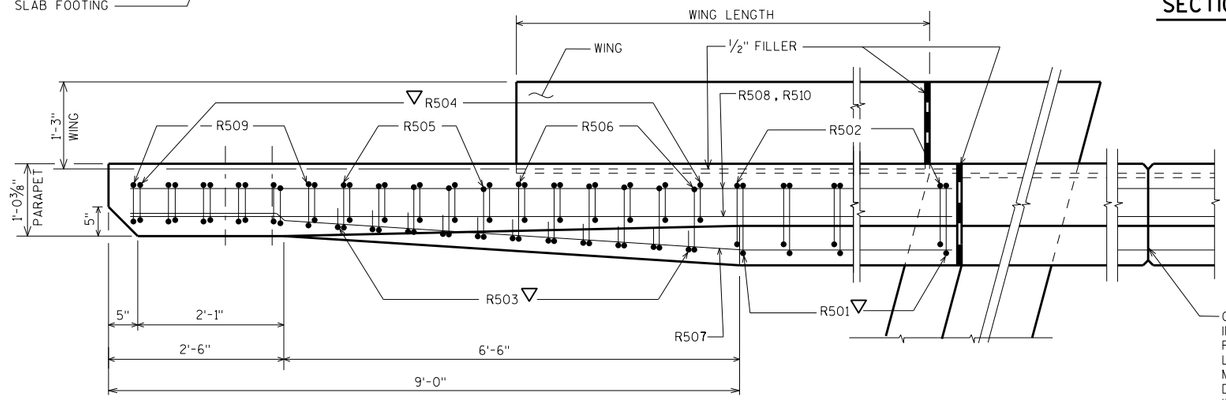
SECTION A



SECTION B

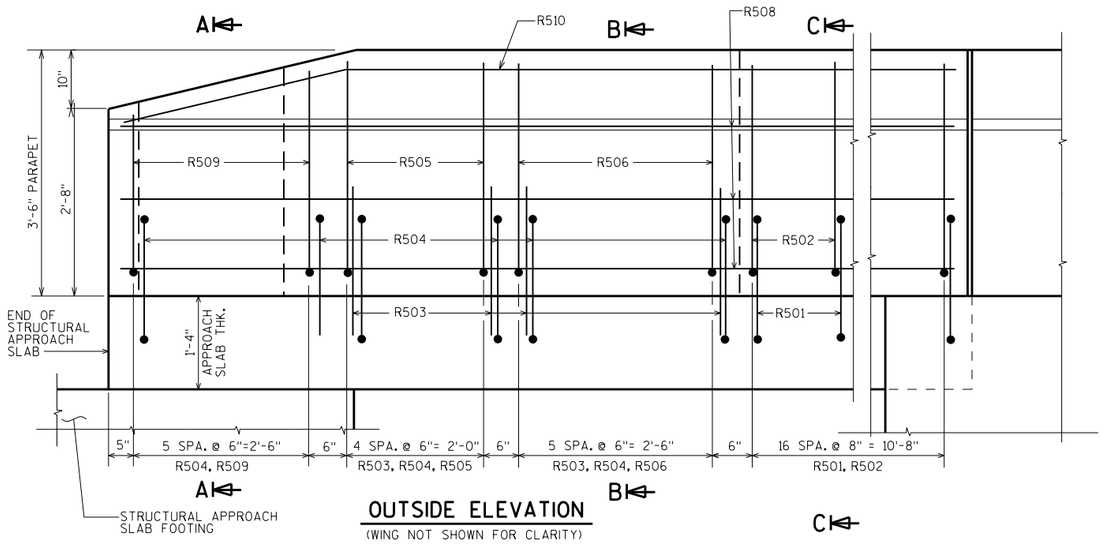


SECTION C



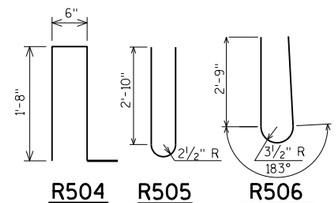
PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

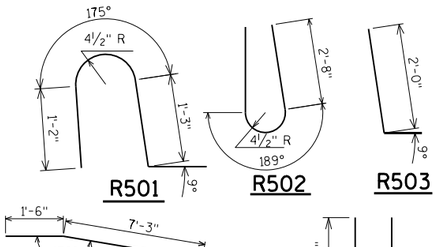


OUTSIDE ELEVATION

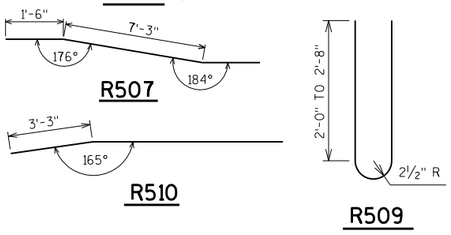
(WING NOT SHOWN FOR CLARITY)



R504 R505 R506



R501 R502 R503



R507 R510 R509

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK INDICATES THE BAR SIZE.

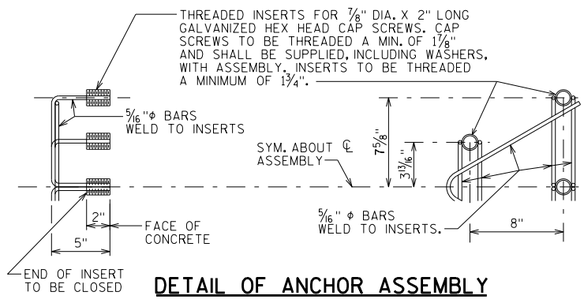
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-6"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	◭	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET HORIZ

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

SINGLE SLOPE PARAPET 42SS

SHEET 15

315

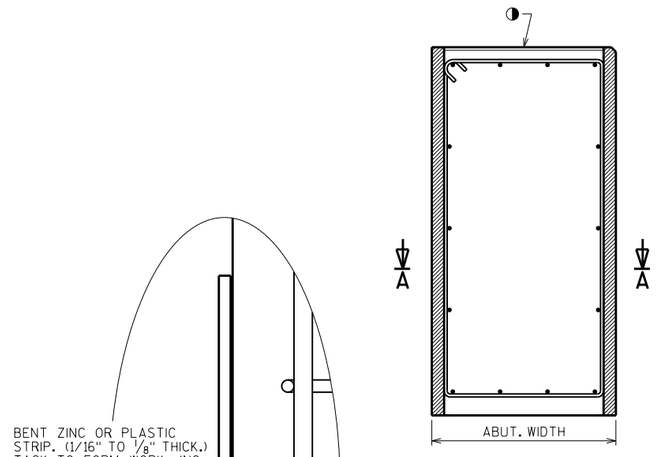
SCALE = 1.05

8

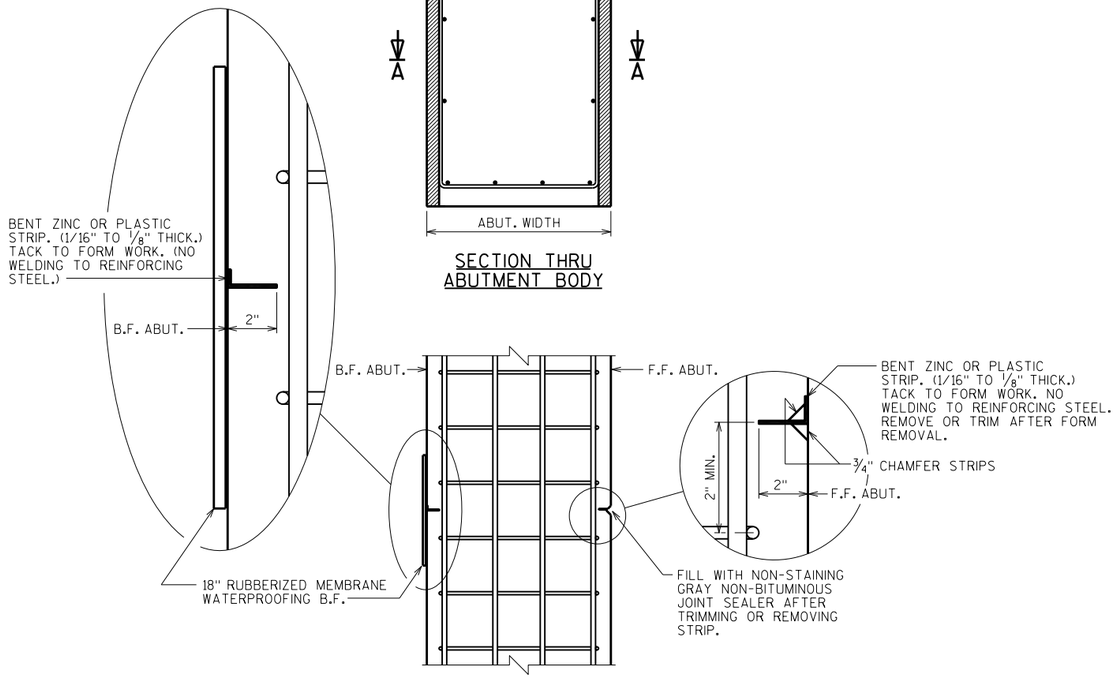
8

STATE PROJECT NUMBER

1020-03-78



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-256

DRAWN BY MWB | PLANS CK'D. MJL

ALTERNATE CONSTRUCTION JOINT

SHEET 16

316

SCALE = 1.00

8

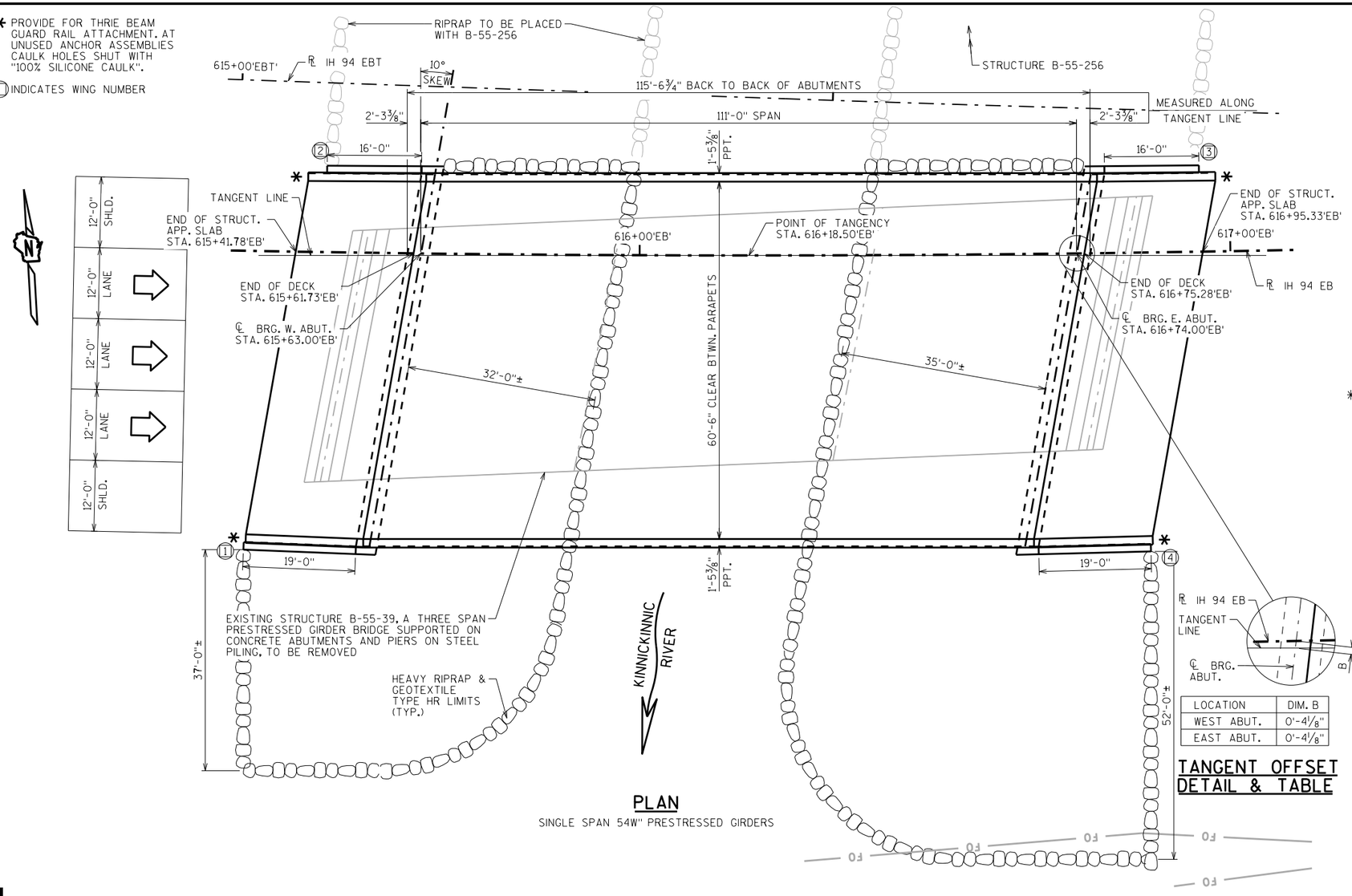
8

STATE PROJECT NUMBER

1020-03-79

* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

(2) INDICATES WING NUMBER

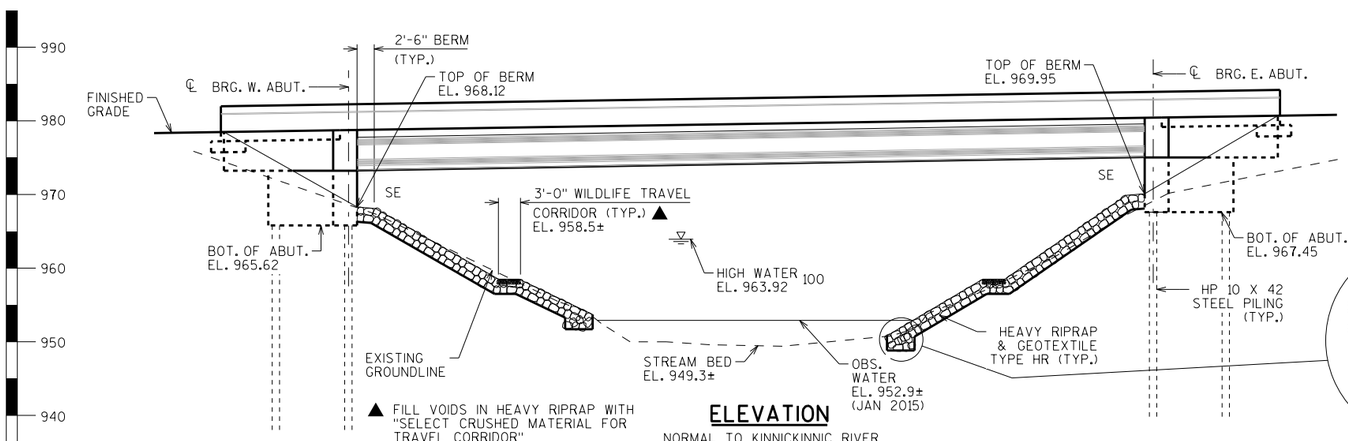


LOCATION	DIM. B
WEST ABUT.	0'-4⅛"
EAST ABUT.	0'-4⅛"

TANGENT OFFSET DETAIL & TABLE

PLAN

SINGLE SPAN 54W" PRESTRESSED GIRDERS



▲ FILL VOIDS IN HEAVY RIPRAP WITH "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR"

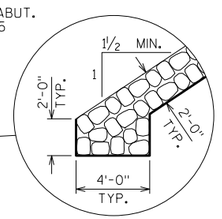
ELEVATION

NORMAL TO KINNICKINNIC RIVER

CURVE DATA

IH 94 EB

P.I. = 606+06.09'EB'
△ = 31°15'07"
D = 1°15'33"
T = 1,272.61
L = 2,481.79
R = 4,550
S.E. = 4.5 %
P.C. = 593+33.49'EB'
P.T. = 618+15.28'EB'



DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.06
OPERATING RATING FACTOR: RF = 1.68
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARINGSURFACE OF 20 POUNDS PER SQUARE FOOT. RATING INCLUDES A 5 PSF POLYMER OVERLAY.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 LB PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. EST. 40' LONG AT W. ABUT., EST. 60' LONG AT E. ABUT. PILE POINTS ARE REQUIRED.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 5,800 C.F.S.
VEL. = 9.3 F.P.S.
$HW._{100}$ = EL. 963.92
WATERWAY AREA = 626 SQ. FT.
DRAINAGE AREA = 60 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 1,750 C.F.S.
$HW._2$ = EL. 958.54

TRAFFIC VOLUME

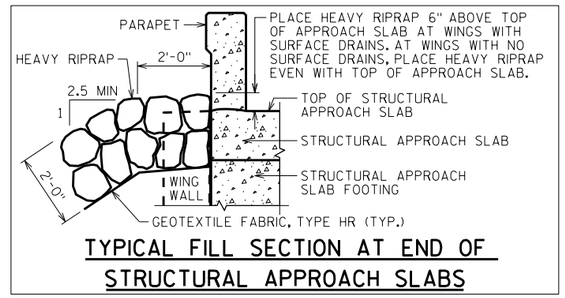
IH 94 EB

ADT = 22,700 (2039)
R.D.S. = 75 M.P.H.

HYDRAULIC DATA

TEMPORARY STRUCTURE

Q_5 = 2,790 C.F.S.
$HW._5$ = EL. 960.14
MINIMUM HYDRAULIC AREA = 260 SQ. FT.
LOW CHORD = EL. 960.3



TYPICAL FILL SECTION AT END OF STRUCTURAL APPROACH SLABS

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. 54W" PRESTRESSED GIRDER DETAILS 1
9. 54W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGMS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. WEST STRUCTURAL APPROACH SLAB
14. EAST STRUCTURAL APPROACH SLAB
15. SINGLE SLOPE PARAPET 42SS
16. ALTERNATE CONSTRUCTION JOINT

STRUCTURE DESIGN CONTACTS:

MICHAEL LARSON (608) 267-4539
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED William C. Dreher LLS 8/13/18
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-55-257

IH 94 EB OVER KINNICKINNIC RIVER

COUNTY	TOWN
ST. CROIX	KINNICKINNIC

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MJL	MWB	MWB	MJL

GENERAL PLAN

SHEET 1 OF 16

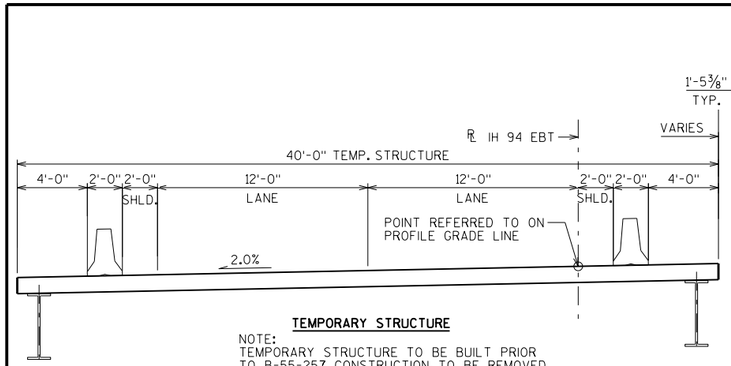
317

I.D. 1020-03-09 DATE: JUNE 2018

SCALE = 10.00

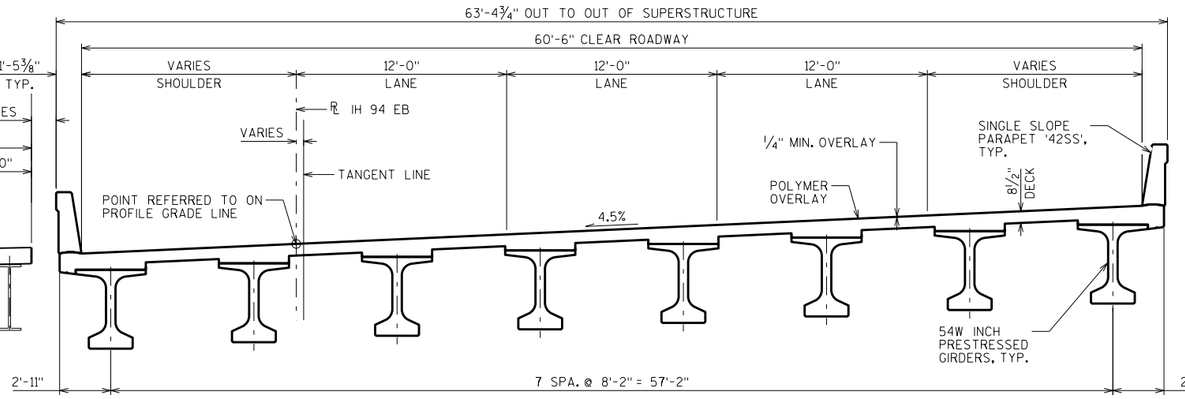
STATE PROJECT NUMBER

1020-03-79



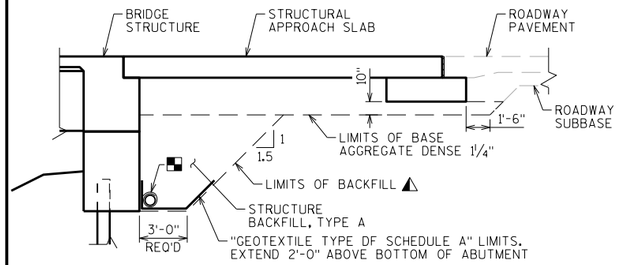
TEMPORARY STRUCTURE

NOTE:
TEMPORARY STRUCTURE TO BE BUILT PRIOR TO B-55-257 CONSTRUCTION. TO BE REMOVED AFTER B-55-256 CONSTRUCTION.



CROSS SECTION THRU ROADWAY

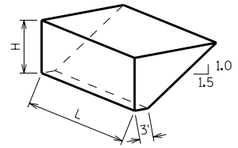
LOOKING EAST



TYPICAL SECTION THRU ABUTMENT

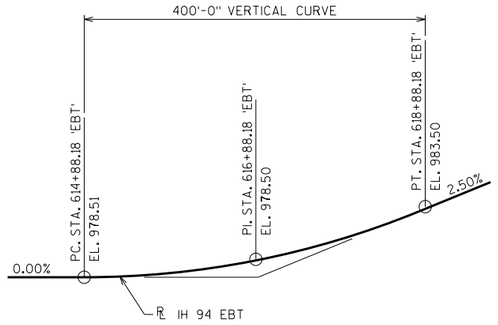
⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



PROFILE GRADE LINE - IH 94 EBT

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾"UNLESS OTHERWISE NOTED.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1¼-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAILS SHOWN ON THIS SHEET.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

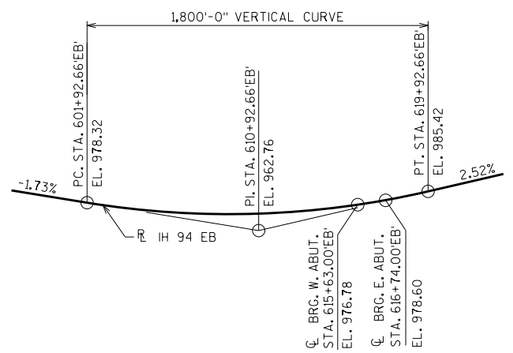
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "54W PRESTRESSED GIRDER DETAILS 2" SHEET.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

DECK SURFACE PREPARATION IS INCLUDED WITH THE BID ITEM "POLYMER OVERLAY".

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST APPROACH SLAB	WEST ABUTMENT	EAST ABUTMENT	EAST APPROACH SLAB	TOTALS
203.0700.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH DEBRIS CAPTURE SYSTEM STA. 616+00'EB'	LS	———	———	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-55-257	LS	———	———	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	———	———	375	375	———	750
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	———	190	———	———	190	380
501.1000.S	ICE HOT WEATHER CONCRETING	LB	2,595	645	610	610	645	5,105
502.0100	CONCRETE MASONRY BRIDGES	CY	346	86	81	81	86	680
502.3200	PROTECTIVE SURFACE TREATMENT	SY	795	135	———	———	135	1,065
502.3210	PIGMENTED SURFACE SEALER	SY	112	20	———	———	20	152
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	896	———	———	———	———	896
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	———	———	5,230	5,230	———	10,460
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	50,460	13,050	2,520	2,540	13,050	81,620
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	2,150	———	———	———	———	2,150
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	16	———	———	———	———	16
506.4000	STEEL DIAPHRAGMS B-55-257	EACH	14	———	———	———	———	14
509.5100.S	POLYMER OVERLAY	SY	763	———	———	———	———	763
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	22	———	7	7	———	36
526.0100	TEMPORARY STRUCTURE STA. 615+92'EBT'	LS	———	———	———	———	———	1
550.0500	PILE POINTS	EACH	———	———	17	17	———	34
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	———	680	1,020	———	1,700
606.0300	RIPRAP HEAVY	CY	———	———	360	465	———	825
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	———	115	115	———	230
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	———	2	———	———	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	———	———	60	60	———	120
645.0120	GEOTEXTILE TYPE HR	SY	———	———	565	740	———	1,305
SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	———	———	12	14	———	26
	NON-BID ITEMS							
	FILLER	SIZE	———	———	———	———	———	½", ¾", 1½"



PROFILE GRADE LINE - IH 94 EB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

CROSS SECTION & QUANTITIES

SHEET 2

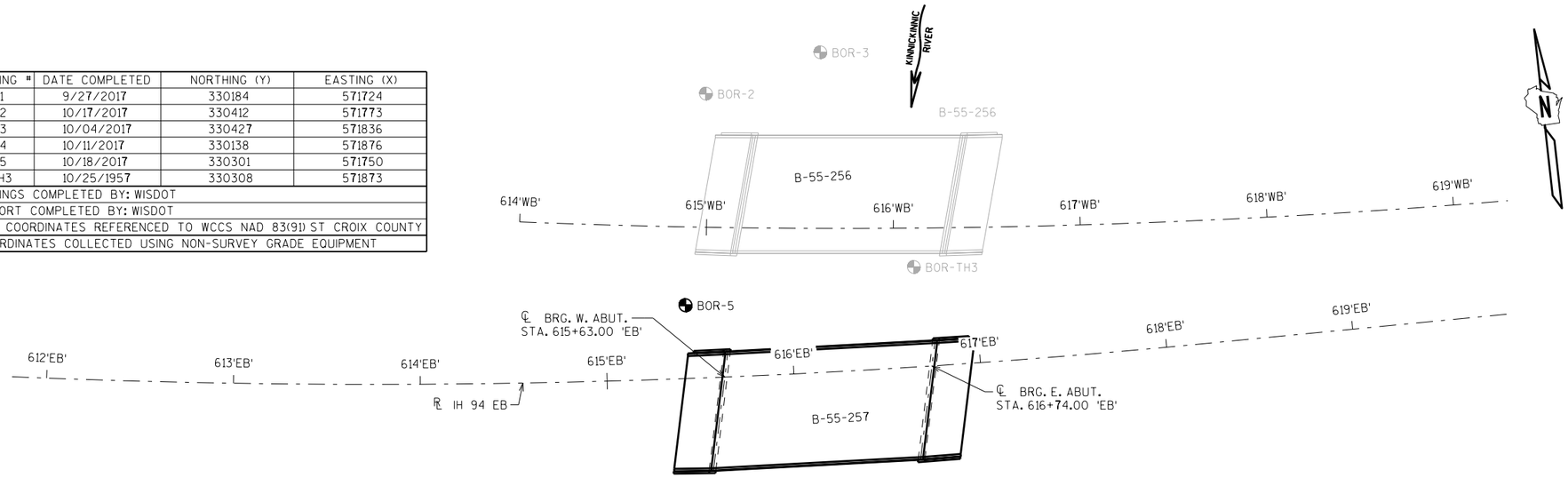
318

8

8

SCALE = 4.20

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/27/2017	330184	571724
2	10/17/2017	330412	571773
3	10/04/2017	330427	571836
4	10/11/2017	330138	571876
5	10/18/2017	330301	571750
TH3	10/25/1957	330308	571873
BORINGS COMPLETED BY: WISDOT			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) ST CROIX COUNTY			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

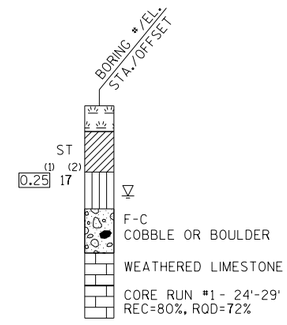
STATE PROJECT NUMBER

1020-03-79

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY TLP/MWB | PLANS CK'D. MJL

SUBSURFACE EXPLORATION

SHEET 3

319

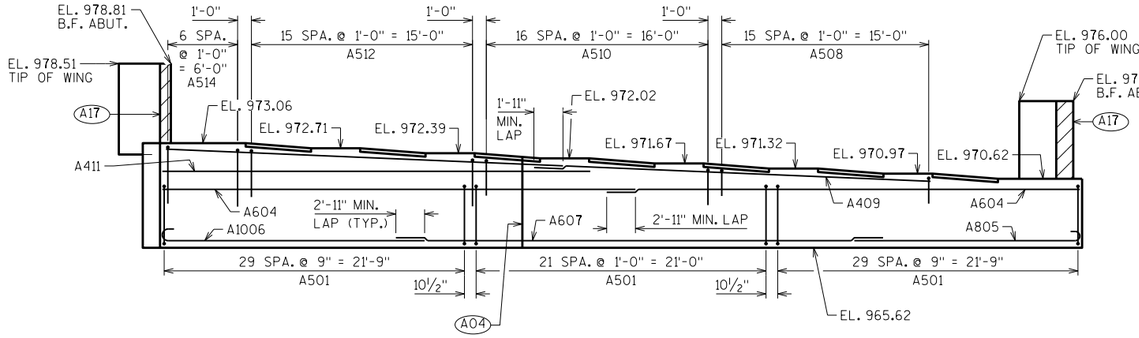
SCALE = 35.00

8

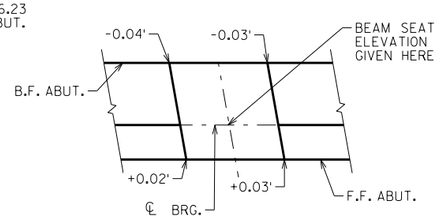
8

STATE PROJECT NUMBER

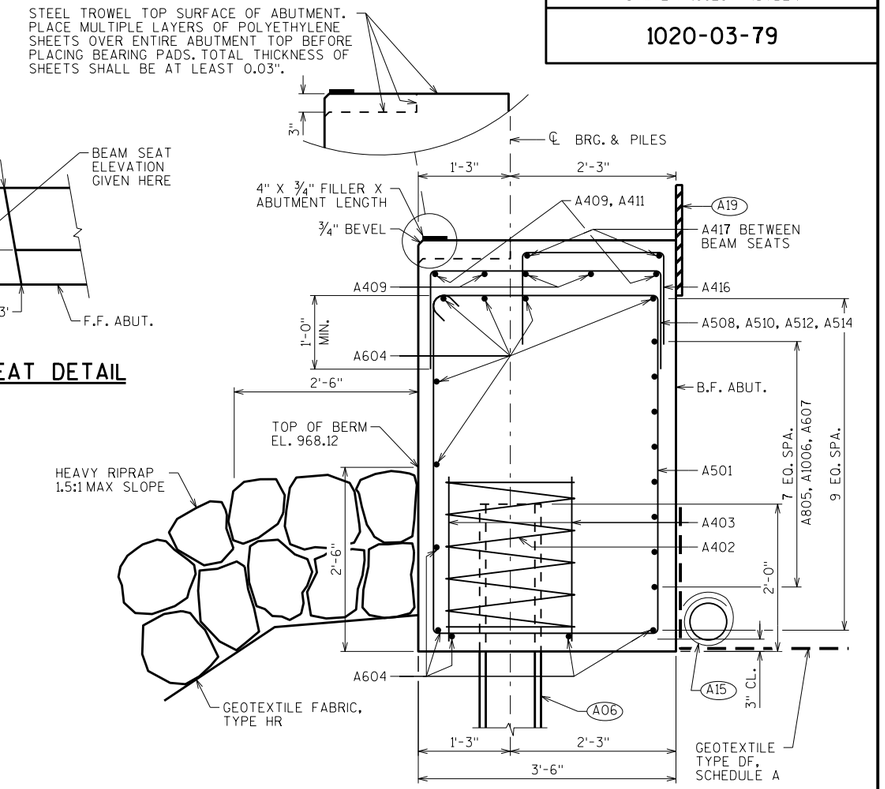
1020-03-79



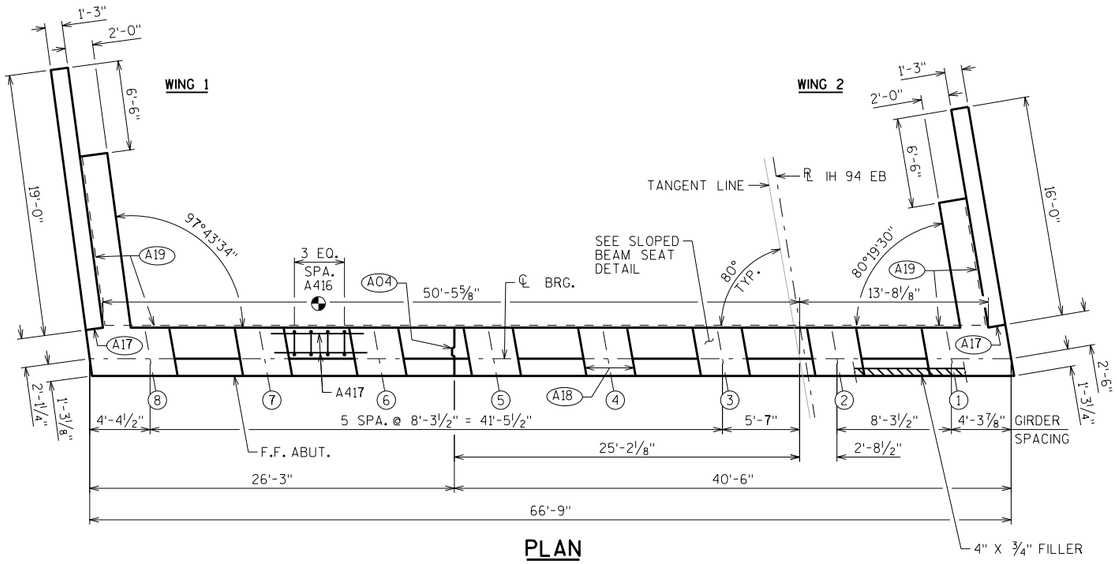
ELEVATION LOOKING WEST



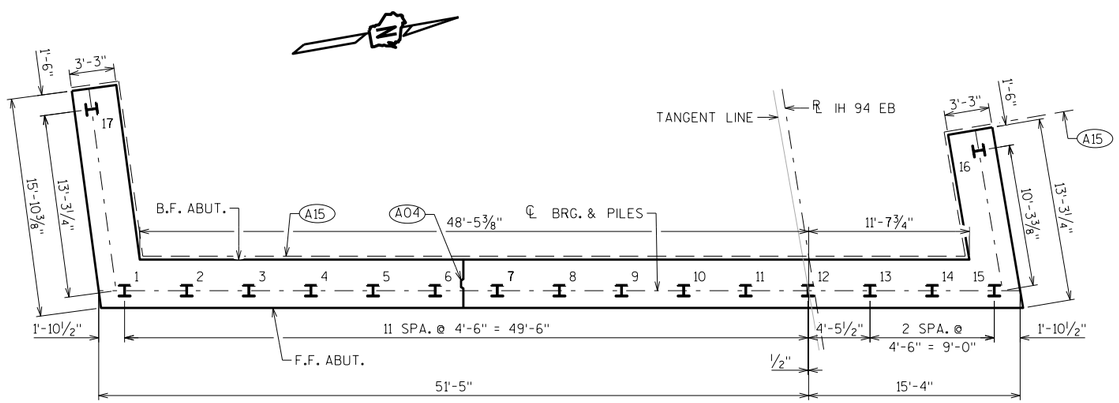
SLOPED BEAM SEAT DETAIL



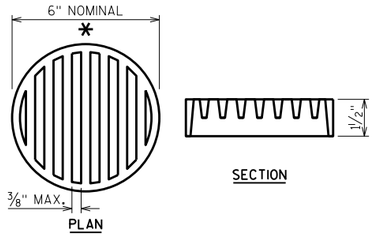
SECTION THRU BODY



PLAN



PILE PLAN



RODENT SHIELD DETAIL

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

WEST ABUTMENT

SHEET 4

320

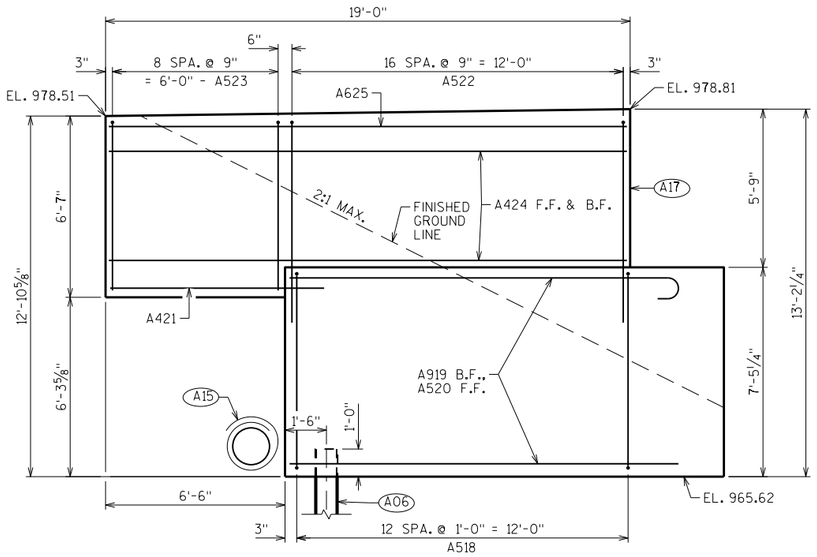
SCALE = 5.33

8

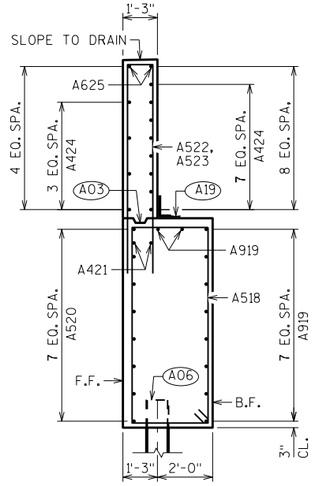
8

STATE PROJECT NUMBER

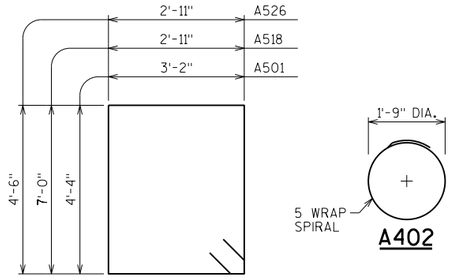
1020-03-79



WING 1 ELEVATION

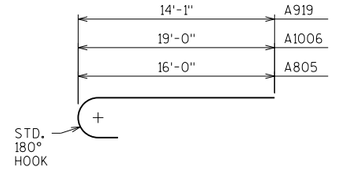


SECTION THRU WING 1

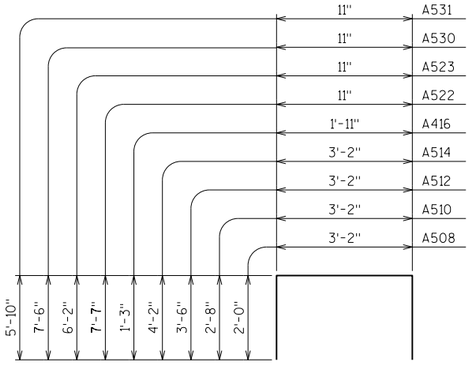


A501, A518, A526

A402



A805, A1006, A919

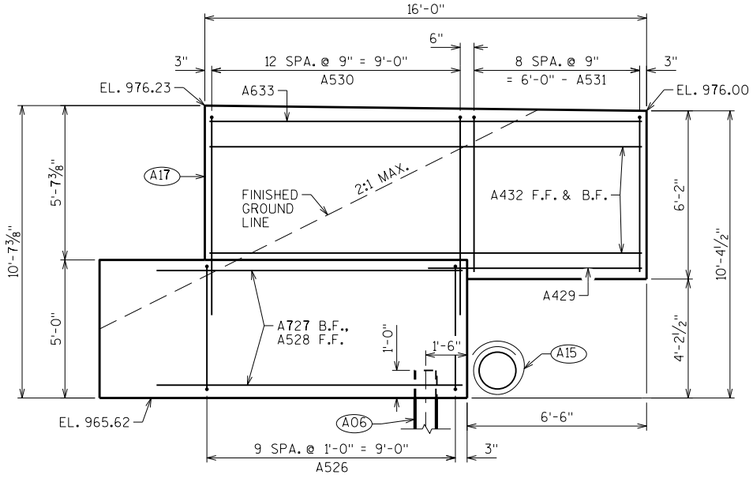


A508, A510, A512, A514, A416
A522, A523, A530, A531

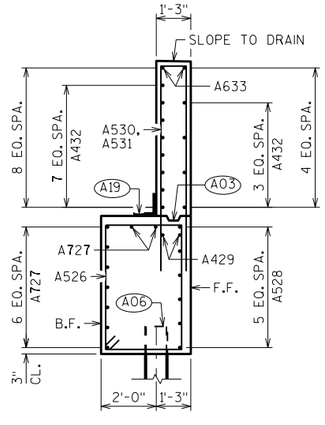
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

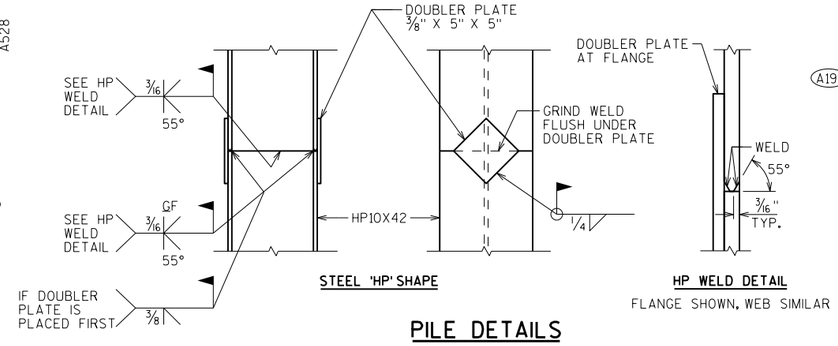
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		82	15'-8"	X		ABUT. - STIRRUPS
A402		15	28'-0"	X		ABUT. PILES - 1 PER PILE
A403		30	2'-3"			ABUT. PILES - 2 PER PILE
A604		22	34'-8"			ABUT. - HORIZ. - F.F. & TOP
A805		8	16'-11"	X		ABUT. - HORIZ. - B.F.
A1006		8	20'-5"	X		ABUT. - HORIZ. - B.F.
A607		8	37'-3"			ABUT. - HORIZ. - B.F.
A508		16	6'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 2-4
A409		10	29'-0"			ABUT. - HORIZ. SUPPL.
A510		17	8'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 4-6
A411		2	31'-0"			ABUT. - HORIZ. SUPPL.
A512		16	9'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 6-8
A413		NOT	USED			
A514		7	11'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEAT 8
A415		NOT	USED			
A416		28	4'-3"	X		ABUT. - VERT. - BTWN. BEAM SEATS
A417		14	6'-9"			ABUT. - HORIZ. - BTWN. BEAM SEATS
A518	X	13	20'-6"	X		WING 1 - LOWER - STIRRUPS
A919	X	10	15'-4"	X		WING 1 - HORIZ. - B.F.
A520	X	8	15'-6"			WING 1 - HORIZ. - F.F.
A421	X	2	7'-9"			WING 1 - HORIZ.
A522	X	17	15'-10"	X		WING 1 - VERT.
A523	X	9	13'-0"	X		WING 1 - VERT. - UPPER
A424	X	12	18'-8"			WING 1 - HORIZ. - UPPER
A625	X	2	18'-8"			WING 1 - HORIZ. - TOP
A526	X	10	15'-6"	X		WING 2 - LOWER - STIRRUPS
A727	X	9	11'-10"			WING 2 - HORIZ. - B.F.
A528	X	6	12'-10"			WING 2 - HORIZ. - F.F.
A429	X	2	7'-9"			WING 2 - HORIZ.
A530	X	13	15'-8"	X		WING 2 - VERT.
A531	X	9	12'-4"	X		WING 2 - VERT. - UPPER
A432	X	12	15'-8"			WING 2 - HORIZ. - UPPER
A633	X	2	15'-8"			WING 2 - HORIZ. - TOP



WING 2 ELEVATION



SECTION THRU WING 2



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

WEST ABUTMENT DETAILS

SHEET 5

321

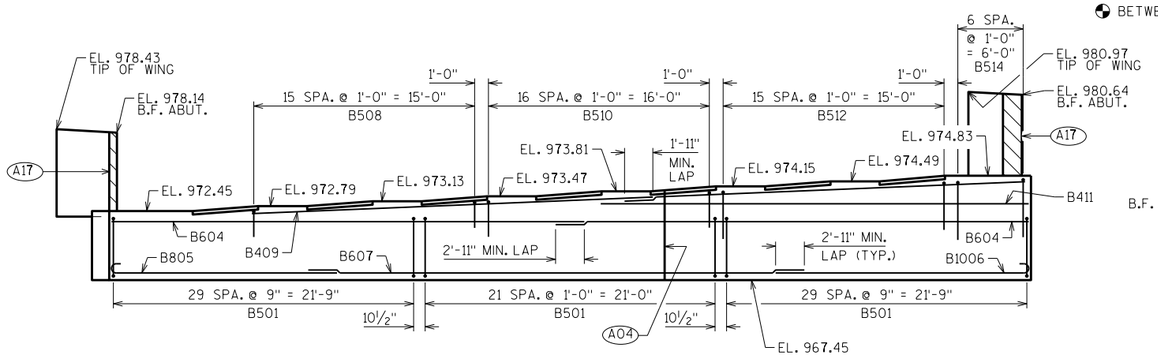
SCALE = 2.67

8

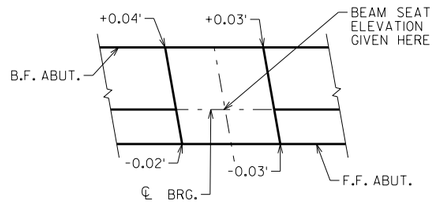
8

STATE PROJECT NUMBER

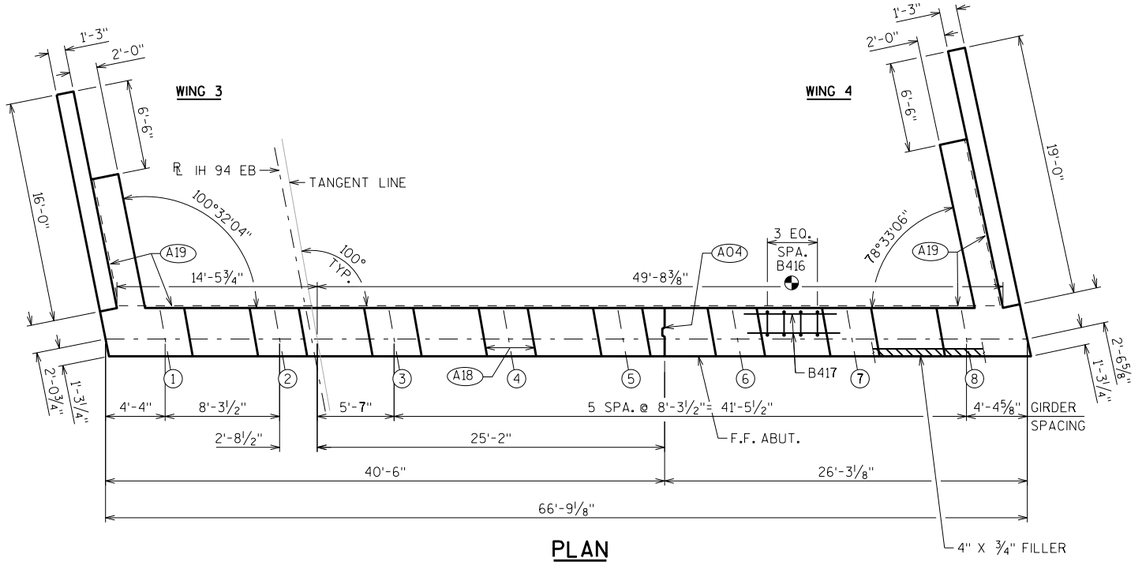
1020-03-79



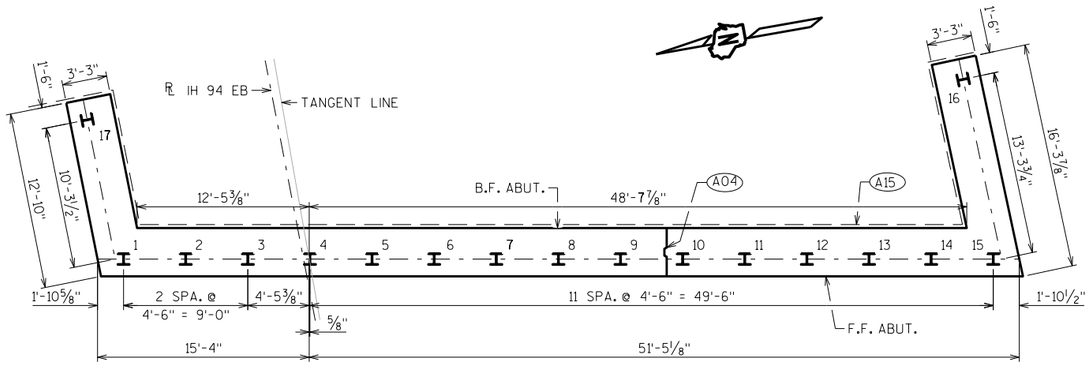
ELEVATION LOOKING EAST



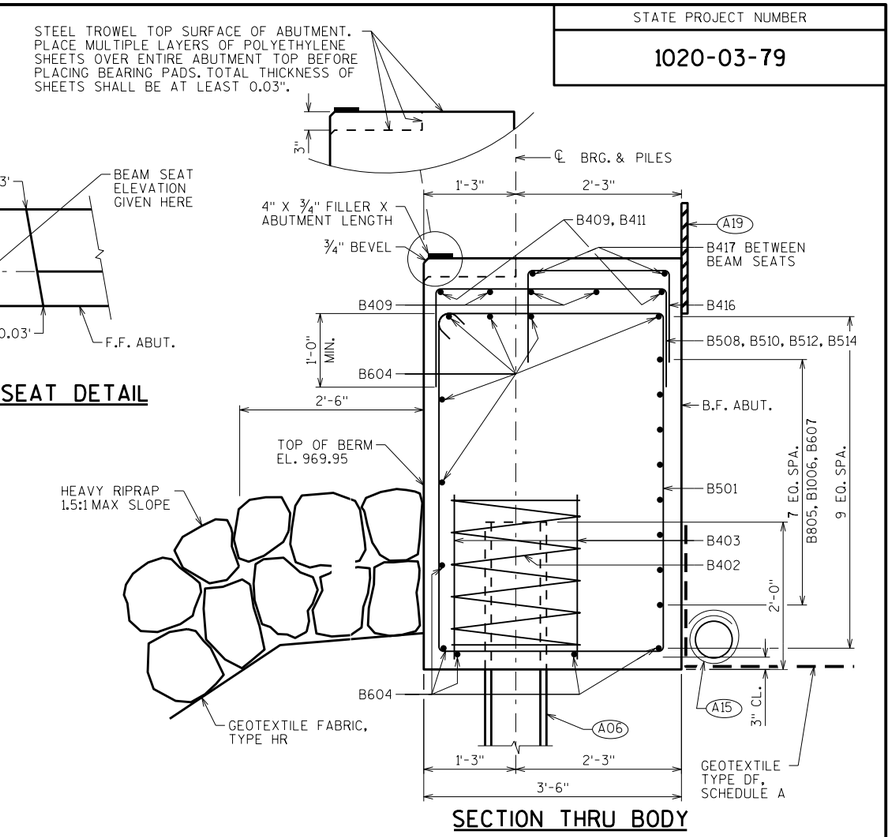
SLOPED BEAM SEAT DETAIL



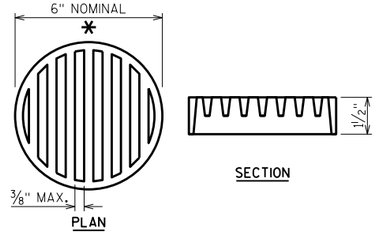
PLAN



PILE PLAN



SECTION THRU BODY



RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 60' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

EAST ABUTMENT

SHEET 6

322

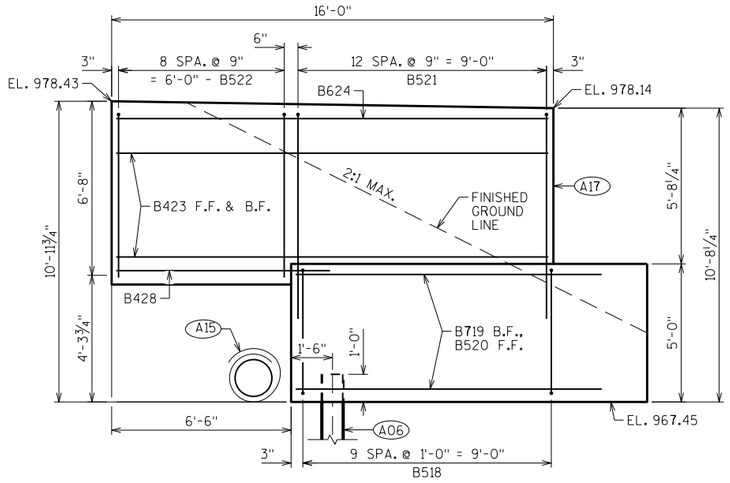
SCALE = 5.33

8

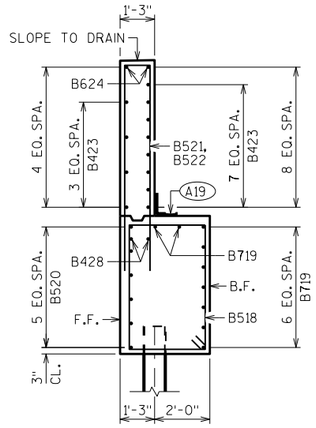
8

STATE PROJECT NUMBER

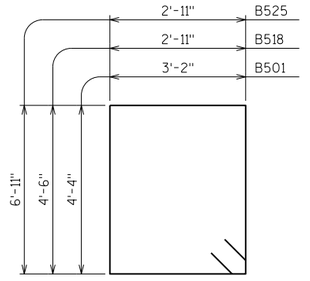
1020-03-79



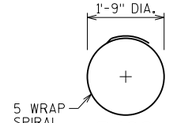
WING 3 ELEVATION



SECTION THRU WING 3



B501, B518, B525



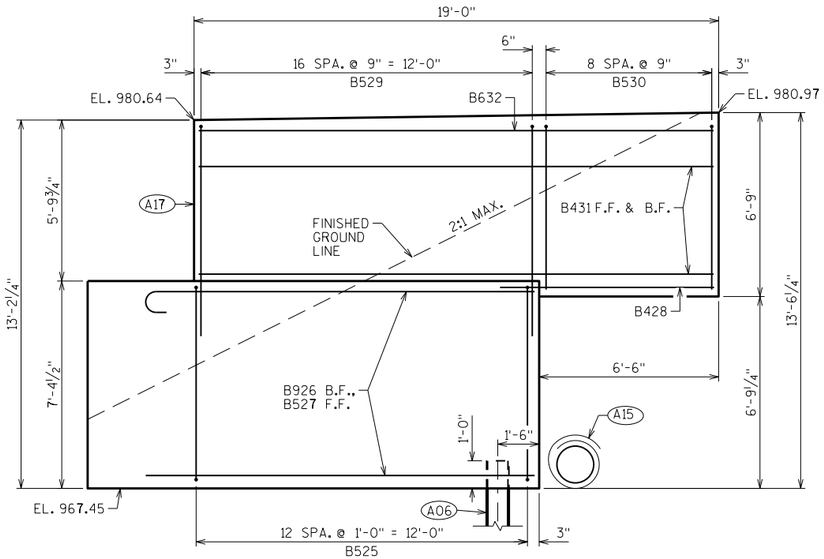
B402

B805, B1006, B926

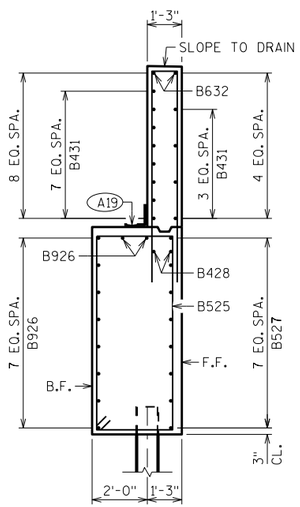
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

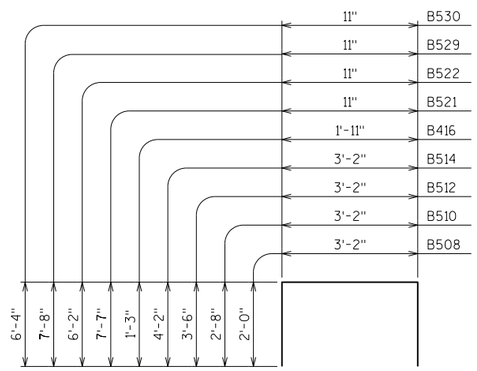
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		82	15'-8"	X		ABUT. - STIRRUPS
B402		15	28'-0"	X		ABUT. PILES - 1 PER PILE
B403		30	2'-3"			ABUT. PILES - 2 PER PILE
B604		22	34'-8"			ABUT. - HORIZ. - F.F. & TOP
B805		8	16'-11"	X		ABUT. - HORIZ. - B.F.
B1006		8	20'-5"	X		ABUT. - HORIZ. - B.F.
B607		8	37'-3"			ABUT. - HORIZ. - B.F.
B508		16	6'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 2-4
B409		10	29'-0"			ABUT. - HORIZ. SUPPL.
B510		17	8'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 4-6
B411		2	31'-0"			ABUT. - HORIZ. SUPPL.
B512		16	9'-11"	X		ABUT. - VERT. SUPPL. - BEAM SEATS 6-8
B413		NOT	USED			
B514		7	11'-3"	X		ABUT. - VERT. SUPPL. - BEAM SEAT 8
B415		NOT	USED			
B416		28	4'-3"	X		ABUT. - VERT. - BTWN. BEAM SEATS
B417		14	6'-9"			ABUT. - HORIZ. - BTWN. BEAM SEATS
B518	X	10	15'-6"	X		WING 3 - LOWER - STIRRUPS
B719	X	9	11'-10"			WING 3 - HORIZ. - B.F.
B520	X	6	12'-6"			WING 3 - HORIZ. - F.F.
B521	X	13	15'-10"	X		WING 3 - VERT.
B522	X	9	13'-0"	X		WING 3 - VERT. - UPPER
B423	X	12	15'-8"			WING 3 - HORIZ. - UPPER
B624	X	2	15'-8"			WING 3 - HORIZ. - TOP
B525	X	13	20'-4"	X		WING 4 - LOWER - STIRRUPS
B926	X	10	15'-4"	X		WING 4 - HORIZ. - B.F.
B527	X	8	15'-11"			WING 4 - HORIZ. - F.F.
B428	X	4	7'-9"			WING 3 & 4 - HORIZ.
B529	X	17	16'-0"	X		WING 4 - VERT.
B530	X	9	13'-4"	X		WING 4 - VERT. - UPPER
B431	X	12	18'-8"			WING 4 - HORIZ. - UPPER
B632	X	2	18'-8"			WING 4 - HORIZ. - TOP



WING 4 ELEVATION



SECTION THRU WING 4



B508, B510, B512, B514, B416
B521, B522, B529, B530

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 60' LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

EAST ABUTMENT DETAILS

SHEET 7

323

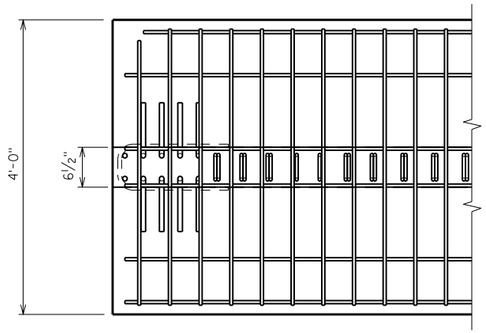
8

8

SCALE = 2.67

STATE PROJECT NUMBER

1020-03-79



TOP FLANGE

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

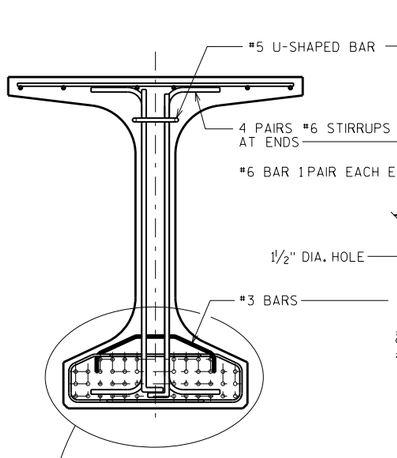
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

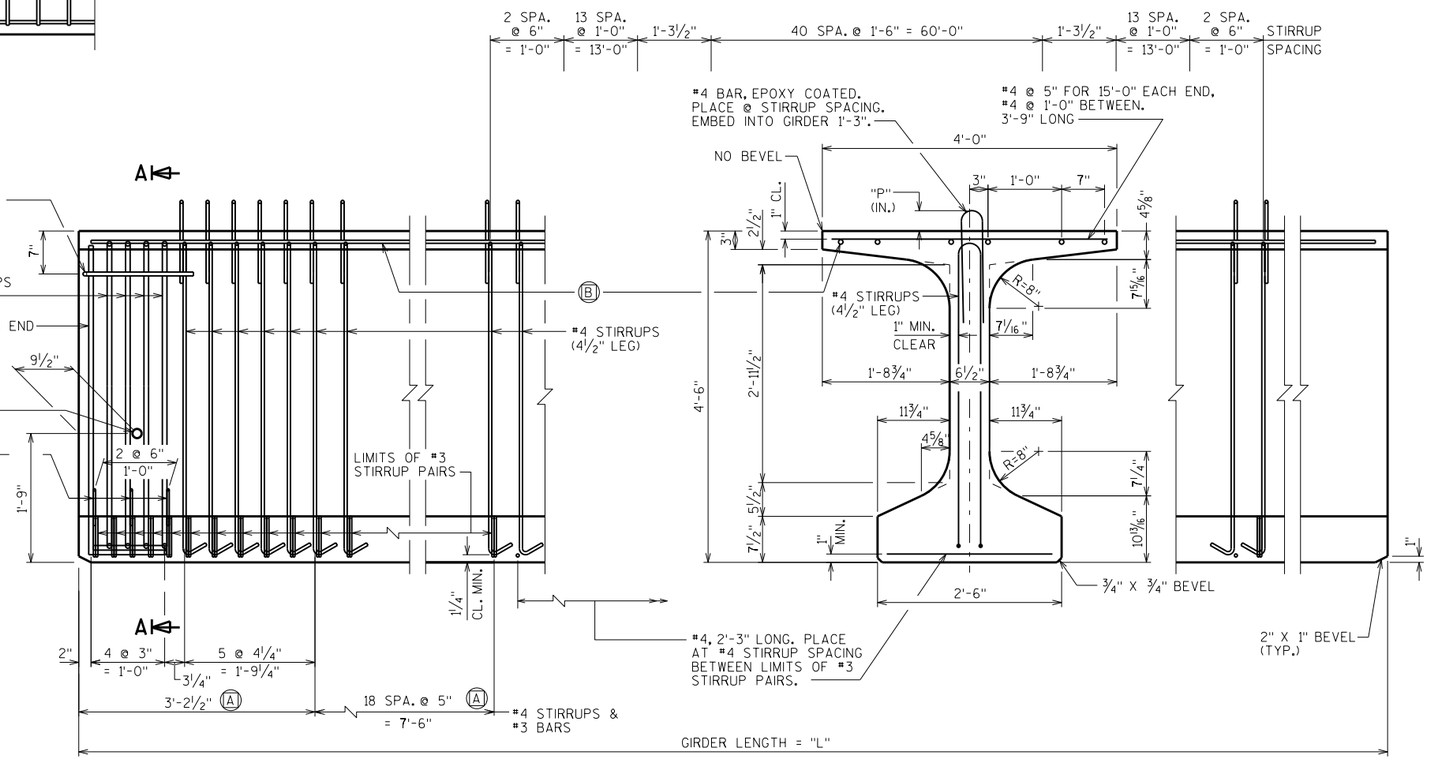
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGMS" SHEET.



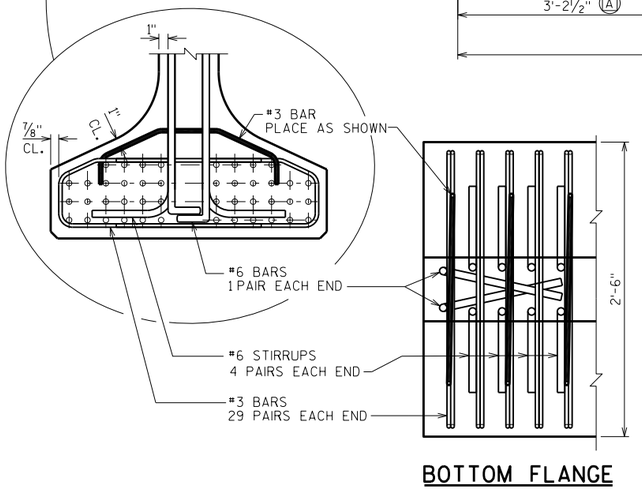
SECTION A-A



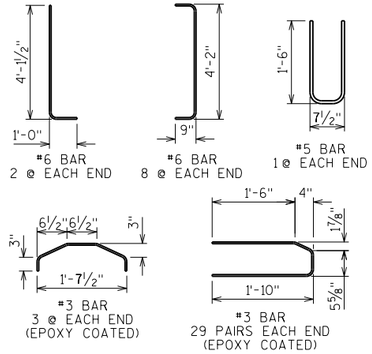
SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"



BOTTOM FLANGE



✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'c (p.s.i.)	"P" IST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10						TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'ci (P.S.I.) ✳
1	1	112	0.6	1.1	1.5	1.7	1.8	1.7	1.5	1.1	0.6	8,000	8.5	7.5	8.5	0.6	36	6,400	49	16	19	5		
1	2-7	112	0.6	1.1	1.5	1.8	1.9	1.8	1.5	1.1	0.6	8,000	8.5	7.5	8.5	0.6	36	6,400	49	16	19	5		
1	8	112	0.6	1.1	1.5	1.8	1.8	1.8	1.5	1.1	0.6	8,000	8.5	7.5	8.5	0.6	36	6,400	49	16	19	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 1

SHEET 8

324

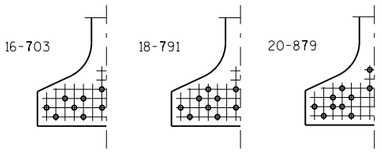
SCALE = 1.00

8

8

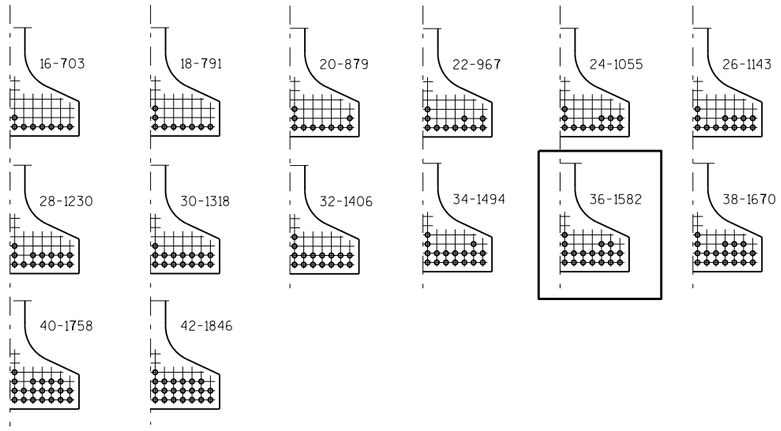
STATE PROJECT NUMBER

1020-03-79



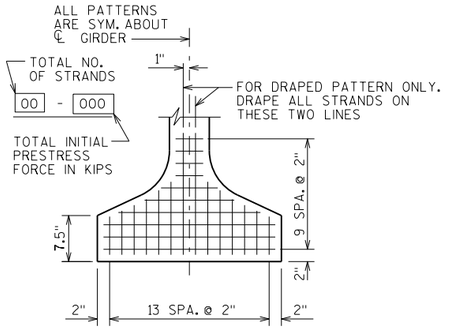
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS

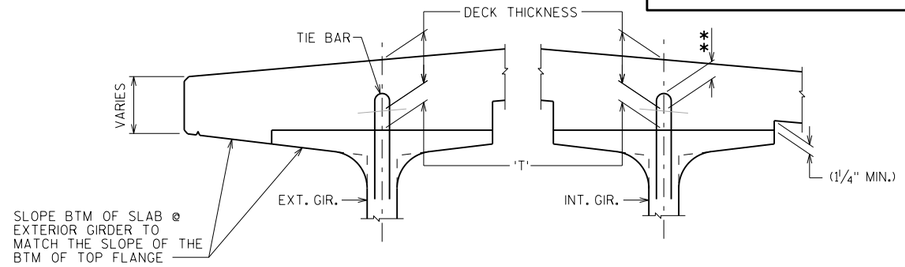


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

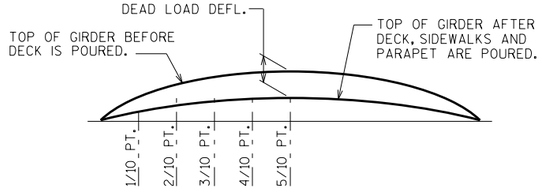
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

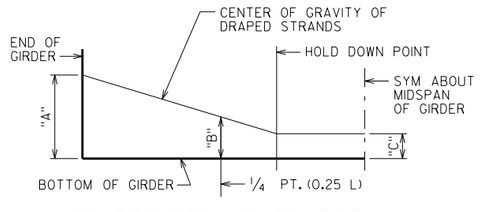
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.53

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

54W" PRESTRESSED GIRDER DETAILS 2

SHEET 9

325

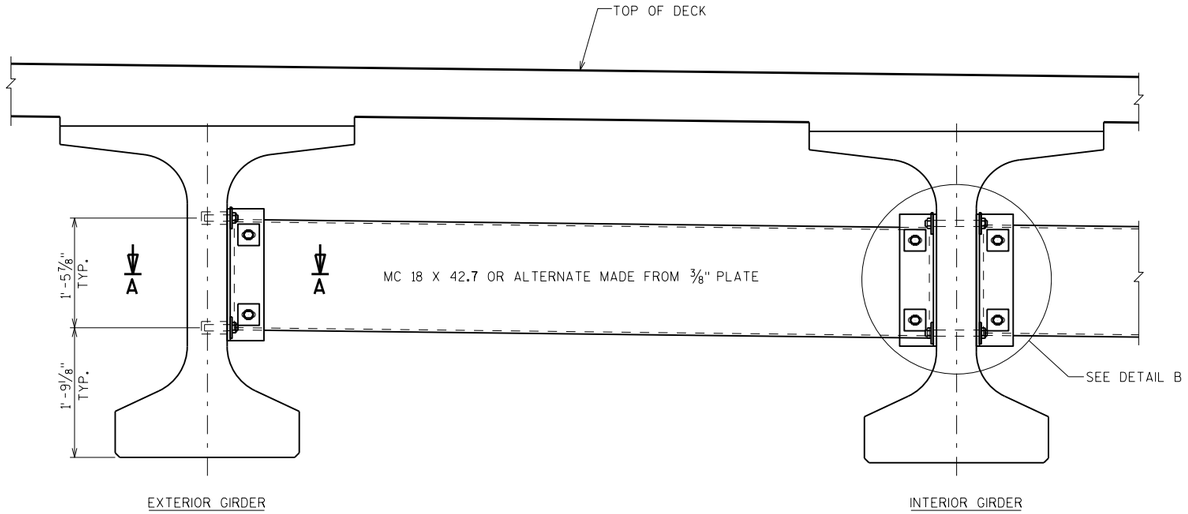
8

8

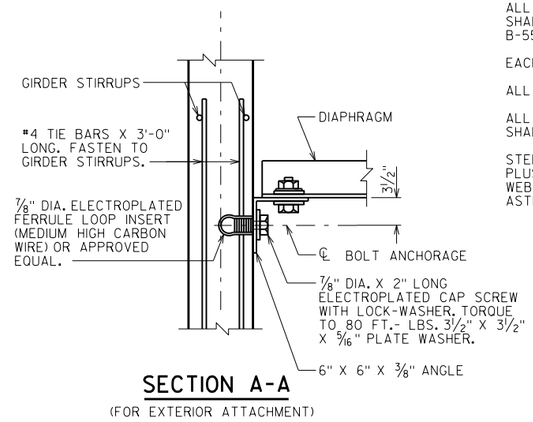
SCALE = 1.00

STATE PROJECT NUMBER

1020-03-79



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)

NOTES

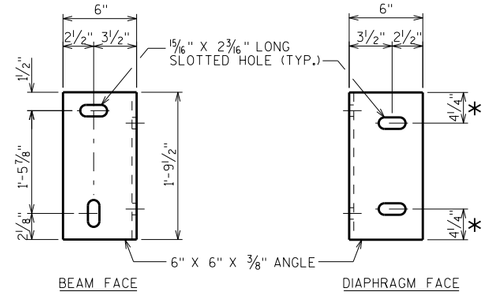
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-55-257", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

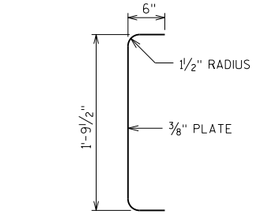
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



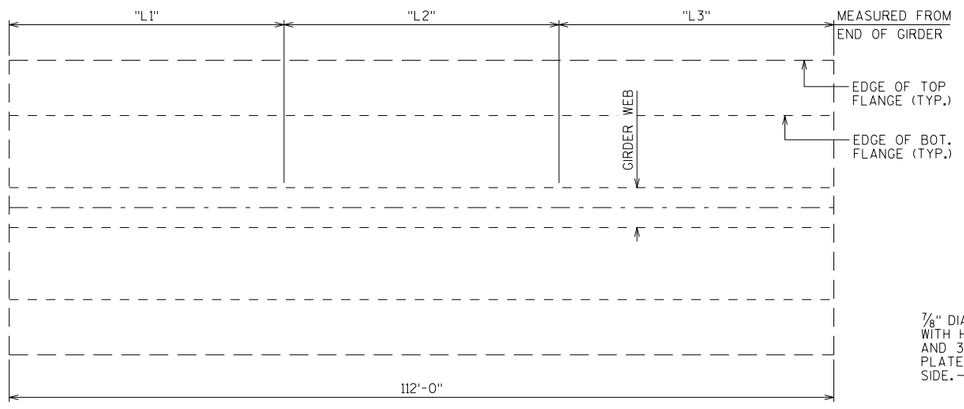
DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

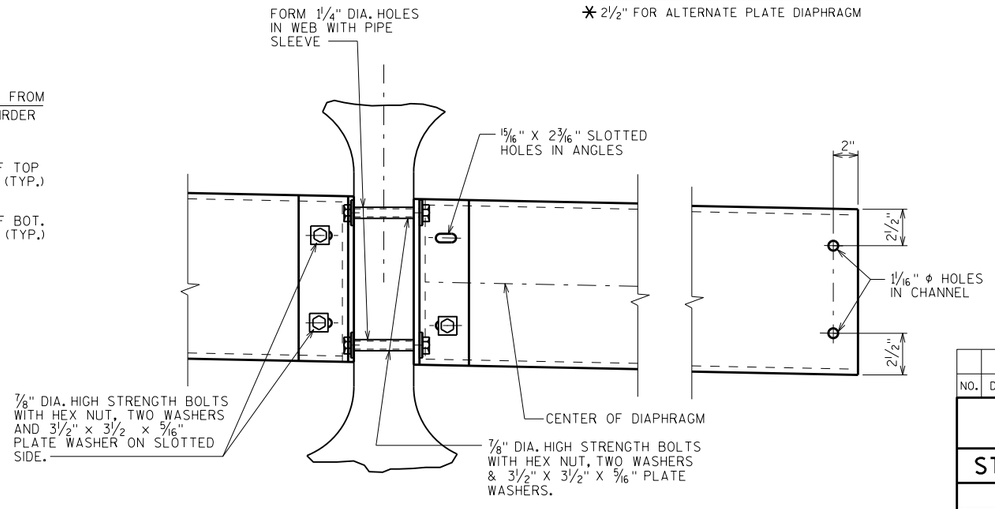


SECTION THRU ALTERNATE DIAPHRAGM

	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8
"L1"	32'-5½"	33'-10¾"	35'-4⅛"	36'-9⅜"	38'-2⅝"	39'-7⅞"	41'-1¼"	42'-6½"
"L2"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"	37'-0"
"L3"	42'-6½"	41'-1¼"	39'-7⅞"	38'-2⅝"	36'-9⅜"	35'-4⅛"	33'-10¾"	32'-5½"



DIAPHRAGM CONNECTION SPACING



DETAIL B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

STEEL DIAPHRAGMS

SHEET 10

326

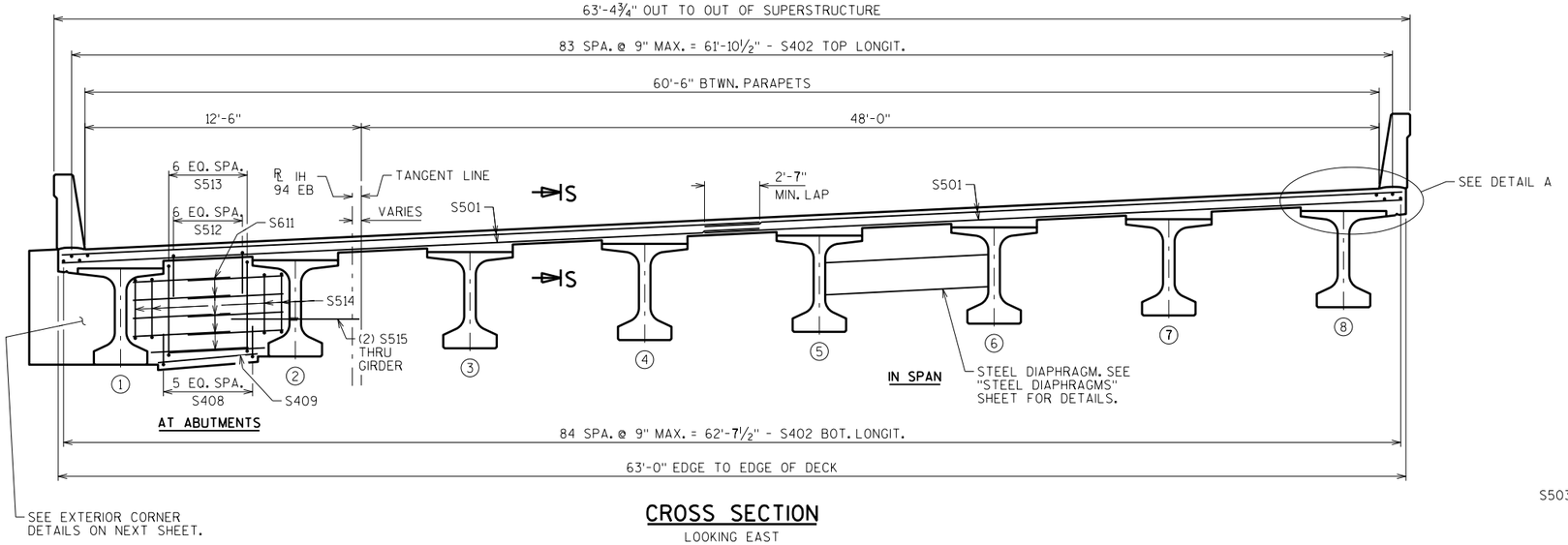
SCALE = 1.00

8

8

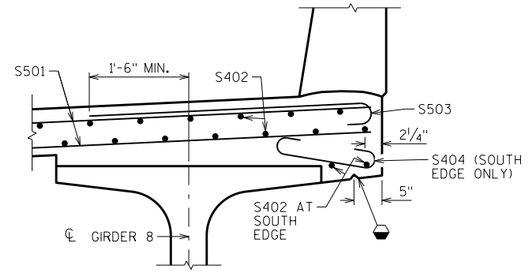
STATE PROJECT NUMBER

1020-03-79



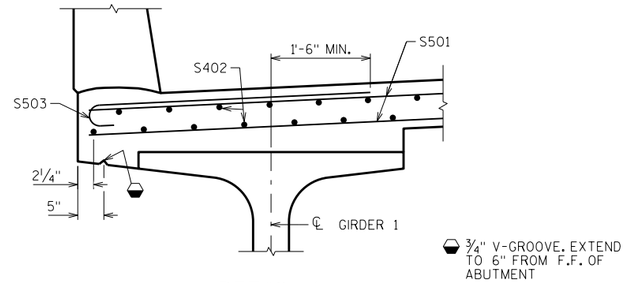
CROSS SECTION

LOOKING EAST



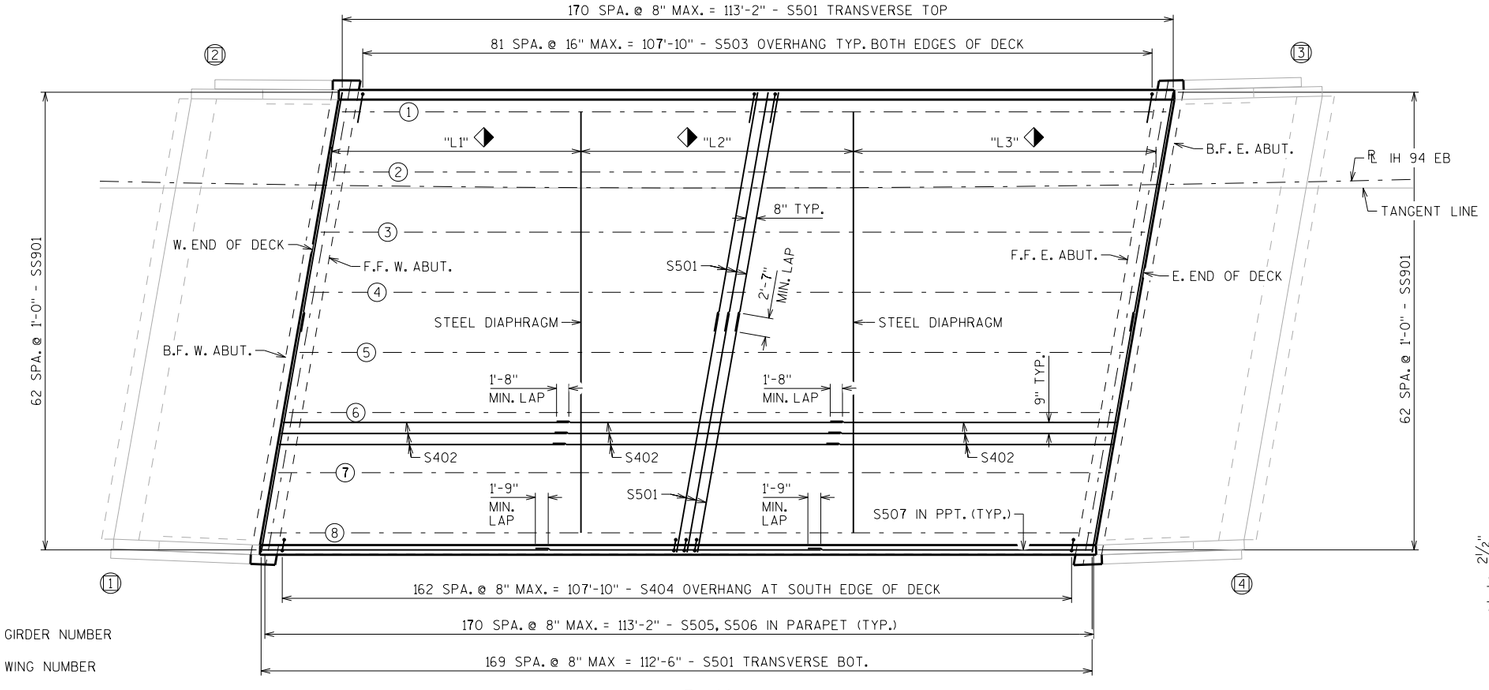
DETAIL A

AT SOUTH EDGE OF DECK



DETAIL A

AT NORTH EDGE OF DECK

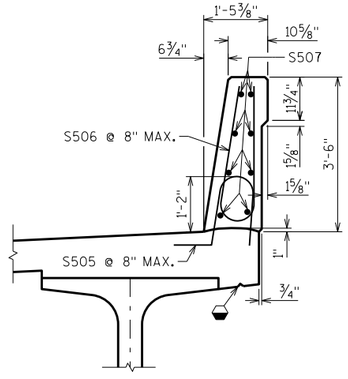


PLAN

○ INDICATES GIRDER NUMBER

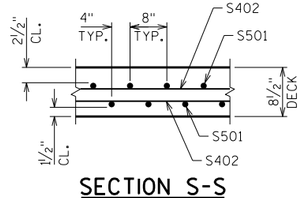
▭ INDICATES WING NUMBER

◆ STEEL DIAPHRAGM SPACING. SEE "STEEL DIAPHRAGMS" SHEET FOR L1, L2, L3 DIMENSIONS.



SECTION THRU PARAPET ON DECK

DECK REINFORCEMENT NOT SHOWN FOR CLARITY



SECTION S-S

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

SUPERSTRUCTURE

SHEET 11

327

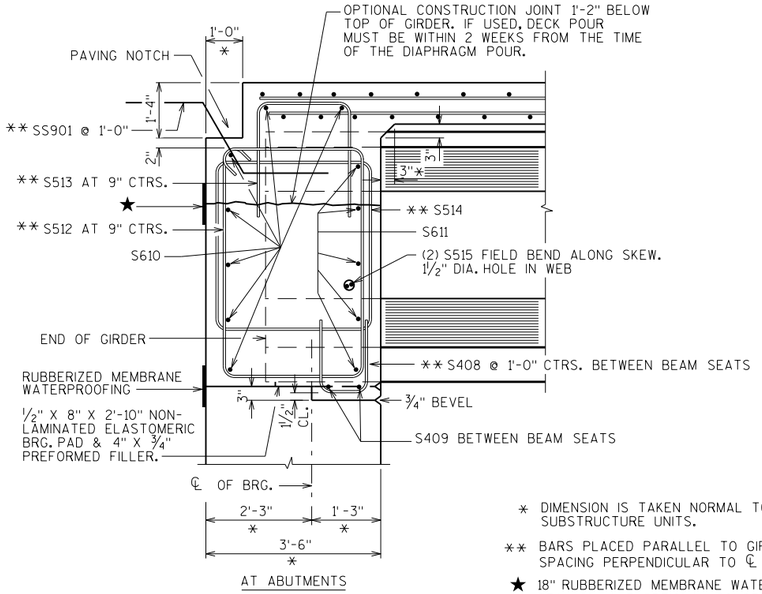
8

8

SCALE = 10.00

STATE PROJECT NUMBER

1020-03-79



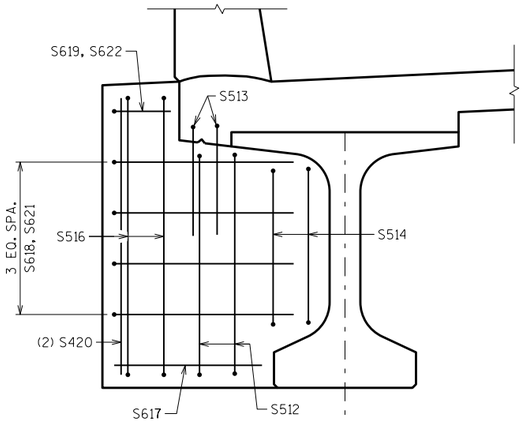
AT ABUTMENTS

PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS

★ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCLUDED WITH BID ITEM "CONCRETE MASONRY BRIDGES".



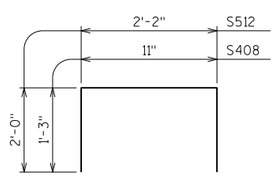
EXTERIOR CORNER DETAILS

WING 1 SHOWN, OTHER WINGS SIMILAR
DECK REINFORCEMENT NOT SHOWN FOR CLARITY

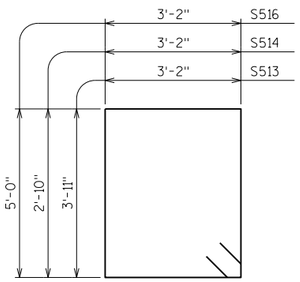
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

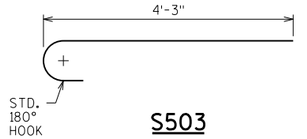
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	682	33'-2"			DECK - TRANS. - TOP & BOT.
S402	X	513	39'-0"			DECK - LONGIT. - TOP & BOT.
S503	X	164	4'-10"	X		DECK - OVERHANG
S404	X	163	2'-6"	X		DECK - OVERHANG - NORTH EDGE
S505	X	342	4'-5"	X		DECK & PPT. - VERT.
S506	X	342	6'-8"	X		PPT. - VERT.
S507	X	48	39'-0"			PPT. - HORIZ.
S408	X	84	3'-3"	X		ABUT. DIAPH. - VERT. - BTWN. BEAM SEATS
S409	X	28	4'-8"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS
S610	X	28	35'-0"			ABUT. DIAPH. & DECK - HORIZ.
S611	X	140	4'-9"			ABUT. DIAPH. - HORIZ. - BTWN. GIRS.
S512	X	106	5'-11"	X		ABUT. DIAPH. & DECK - VERT.
S513	X	106	14'-10"	X		ABUT. DIAPH. - VERT. - STIRRUPS
S514	X	64	12'-8"	X		ABUT. DIAPH. - VERT. - UNDER FLANGES
S515	X	32	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIR. WEBS
S516	X	8	17'-0"	X		ABUT. DIAPH. - STIRRUPS - EXT. CORNERS
S617	X	4	2'-9"			ABUT. DIAPH. - HORIZ. - EXT. CORNERS
S618	X	8	8'-3"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS
S619	X	2	4'-9"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS
S420	X	8	5'-0"			ABUT. DIAPH. - VERT. - EXT. CORNERS
S621	X	8	8'-5"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS
S622	X	2	4'-10"	X		ABUT. DIAPH. - HORIZ. - EXT. CORNERS
SS901		126	5'-0"	X		PAVING NOTCH - STAINLESS STEEL



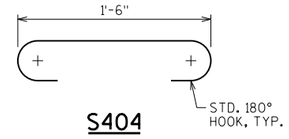
S408, S512



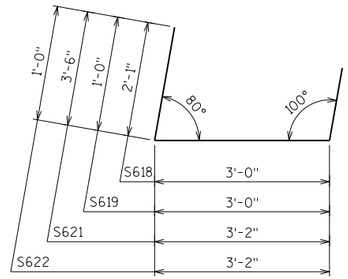
S513, S514, S516



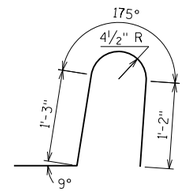
S503



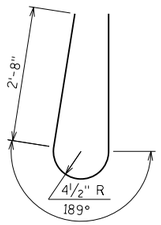
S404



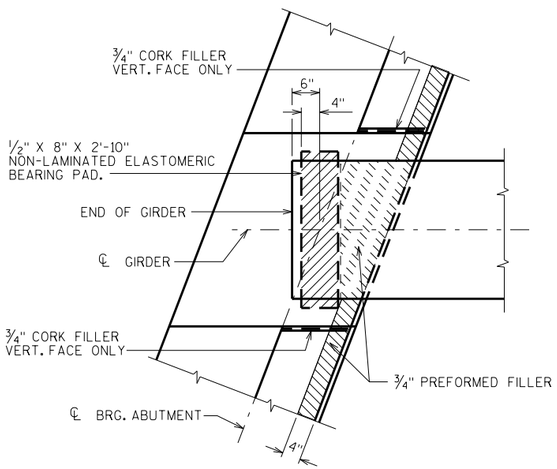
S618, S619, S621, S622



S505



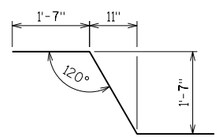
S506



BEARING PAD DETAIL

TOP OF DECK ELEVATIONS

	℄ BRG. W. ABUT	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT
N EOD	976.26	976.43	976.60	976.77	976.95	977.13	977.31	977.50	977.70	977.89	978.09
GIR. 1	976.33	976.50	976.67	976.84	977.01	977.19	977.38	977.57	977.76	977.96	978.16
GIR. 2	976.68	976.84	977.01	977.18	977.36	977.54	977.72	977.91	978.10	978.30	978.50
℞ IH 94	976.78	976.95	977.12	977.29	977.47	977.65	977.83	978.02	978.21	978.40	978.60
GIR. 3	977.03	977.19	977.36	977.53	977.70	977.88	978.06	978.25	978.44	978.64	978.84
GIR. 4	977.38	977.54	977.70	977.87	978.05	978.18	978.41	978.59	978.78	978.98	979.18
GIR. 5	977.73	977.89	978.05	978.22	978.39	978.57	978.75	978.94	979.13	979.32	979.52
GIR. 6	978.09	978.23	978.40	978.57	978.74	978.91	979.09	979.28	979.47	979.66	979.86
GIR. 7	978.42	978.58	978.75	978.91	979.08	979.26	979.44	979.62	979.81	980.00	980.20
GIR. 8	978.77	978.93	979.09	979.26	979.43	979.60	979.78	979.97	980.15	980.34	980.54
S EOD	978.84	979.00	979.16	979.33	979.50	979.67	979.85	980.03	980.22	980.41	980.60



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

SUPERSTRUCTURE DETAILS

SHEET 12

328

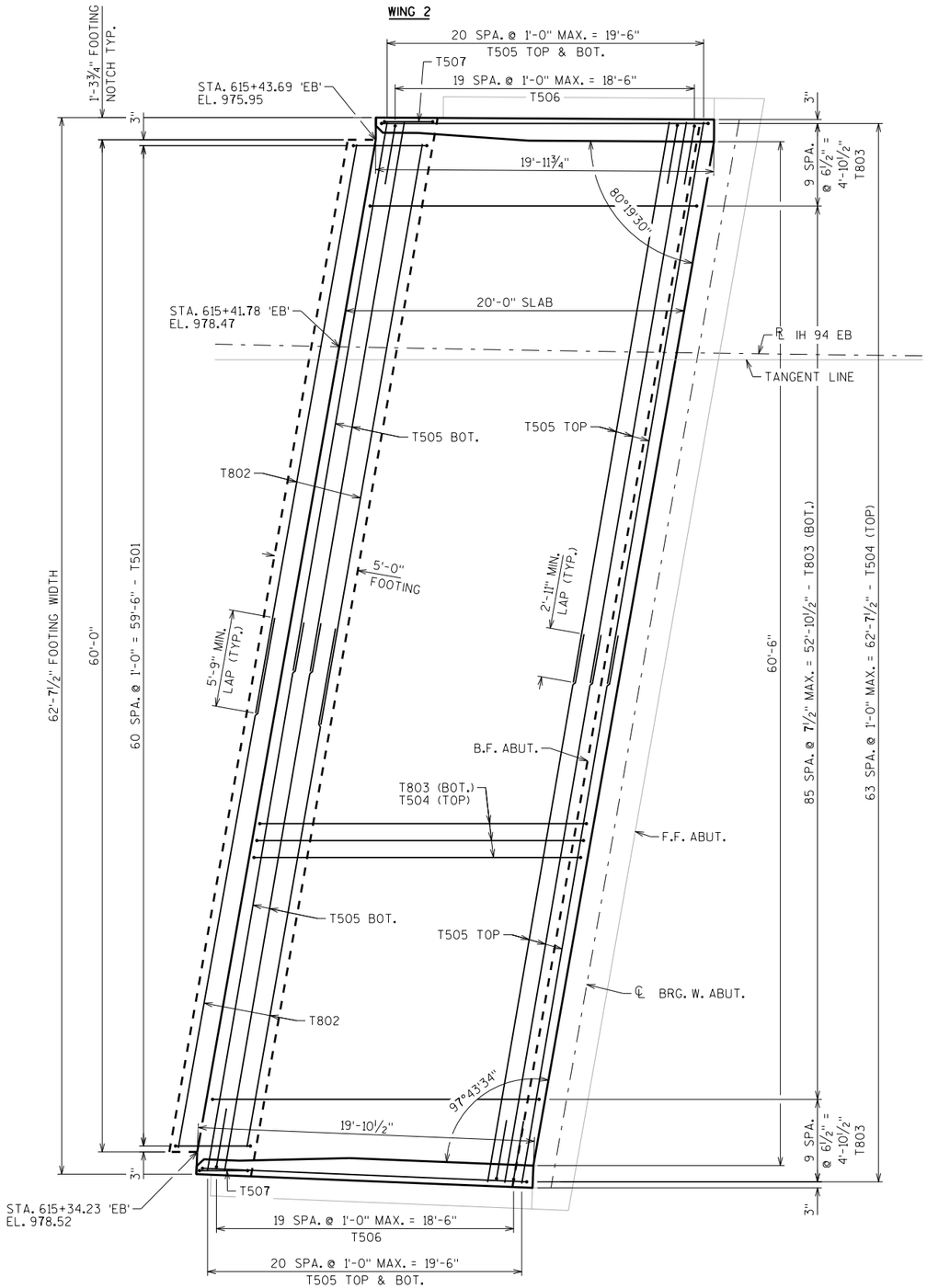
SCALE = 1.33

8

8

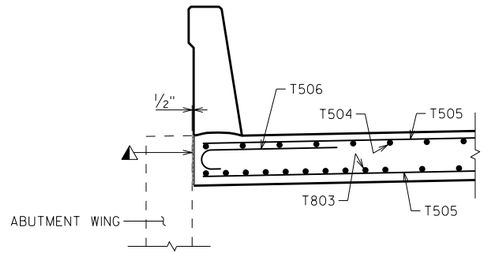
STATE PROJECT NUMBER

1020-03-79



WING 1

PLAN



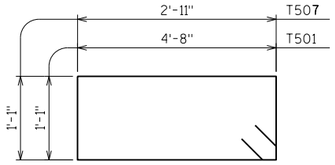
SECTION A-A

⚠ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

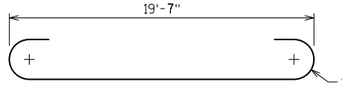
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

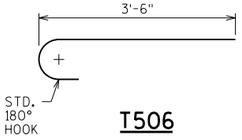
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	61	12'-2"	X		APP. SLAB FOOTING - STIRRUPS
T802	X	24	34'-8"			APP. SLAB FOOTING - HORIZ.
T803	X	104	21'-5"	X		APP. SLAB - LONGIT. - BOT.
T504	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
T505	X	42	33'-3"			APP. SLAB - TRANS. - TOP & BOT.
T506	X	40	4'-1"	X		APP. SLAB - TRANS. - AT EDGES
T507	X	2	8'-8"	X		APP. SLAB - FOOTING - STIRRUPS AT NOTCH



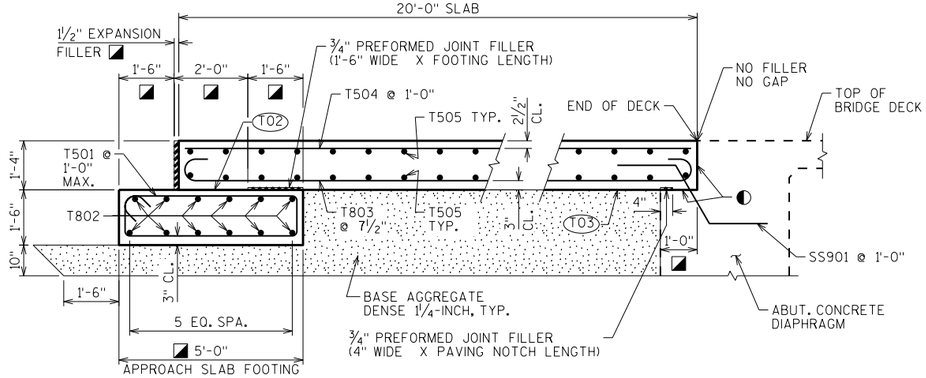
T501, T507



T803



T506



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

WEST STRUCTURAL APPROACH SLAB

SHEET 13

329

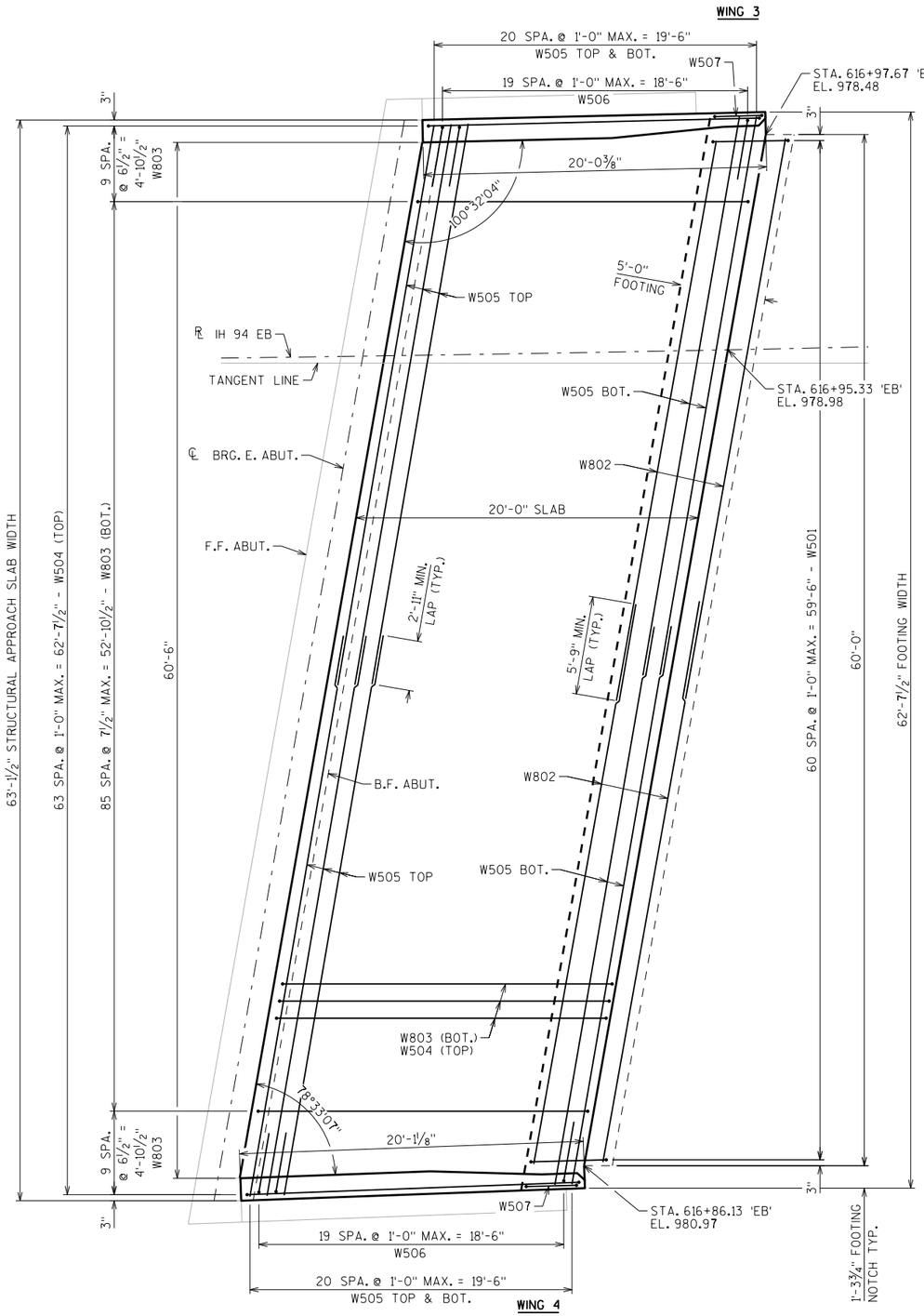
SCALE = 4.00

8

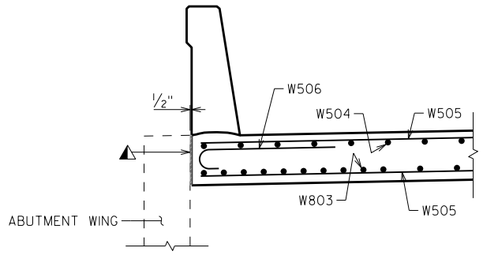
8

STATE PROJECT NUMBER

1020-03-79



PLAN



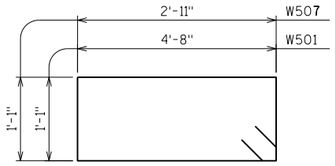
SECTION A-A

▲ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).

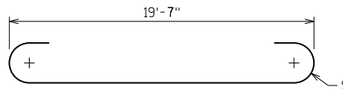
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

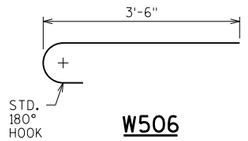
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	61	12'-2"	X		APP. SLAB FOOTING - STIRRUPS
W802	X	24	34'-8"			APP. SLAB FOOTING - HORIZ.
W803	X	104	21'-5"	X		APP. SLAB - LONGIT. - BOT.
W504	X	64	19'-7"			APP. SLAB - LONGIT. - TOP
W505	X	42	33'-3"			APP. SLAB - TRANS. - TOP & BOT.
W506	X	40	4'-1"	X		APP. SLAB - TRANS. - AT EDGES
W507	X	2	8'-8"	X		APP. SLAB - FOOTING - STIRRUPS AT NOTCH



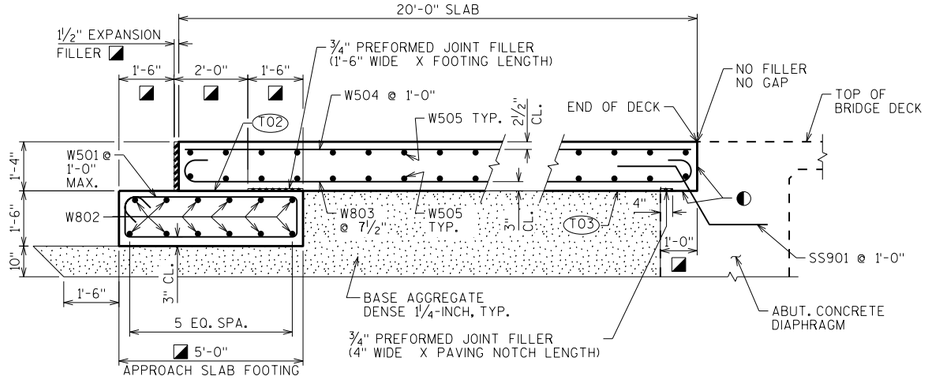
W501, W507



W803



W506



SECTION THRU APPROACH SLAB

◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.

◪ MEASURED NORMAL TO ABUTMENT

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

EAST STRUCTURAL APPROACH SLAB

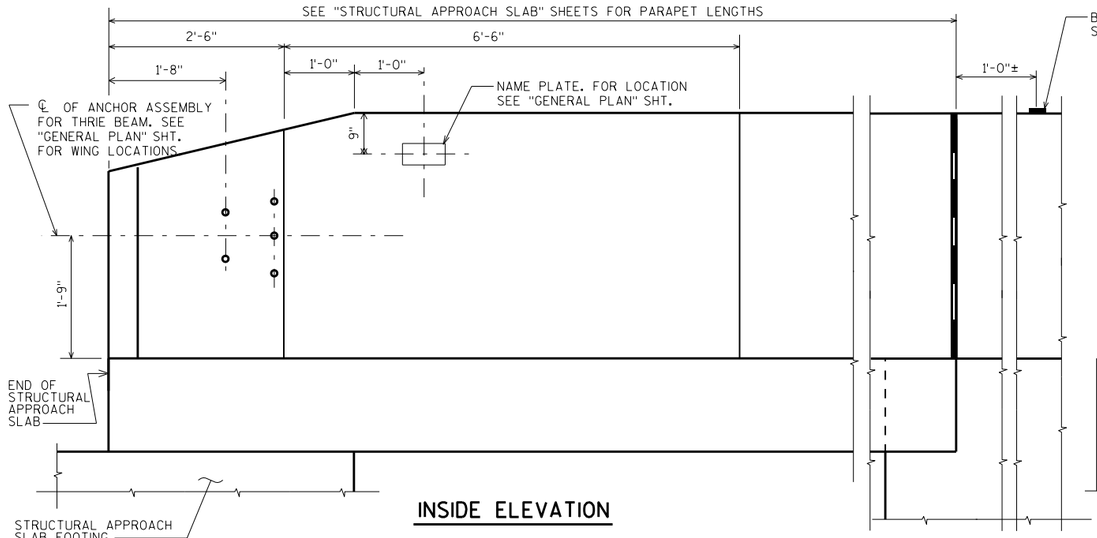
SHEET 14

330

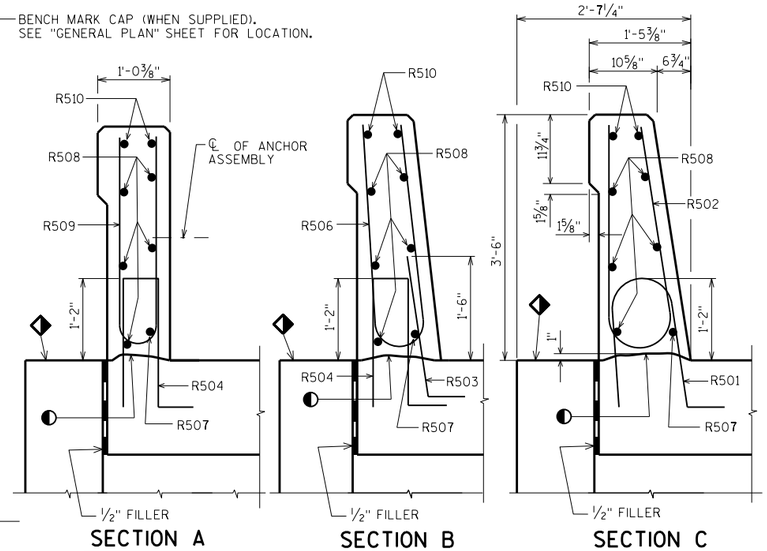
SCALE = 4.00

8

8



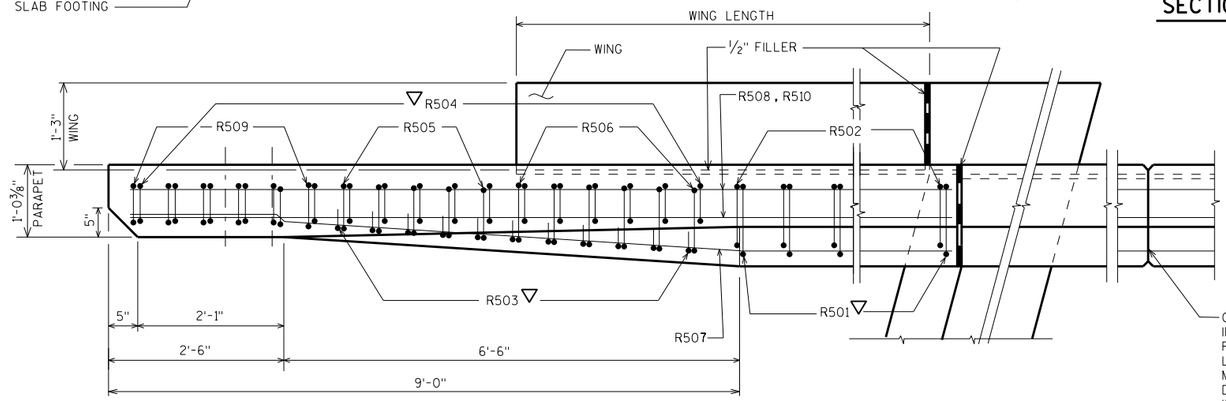
INSIDE ELEVATION



SECTION A

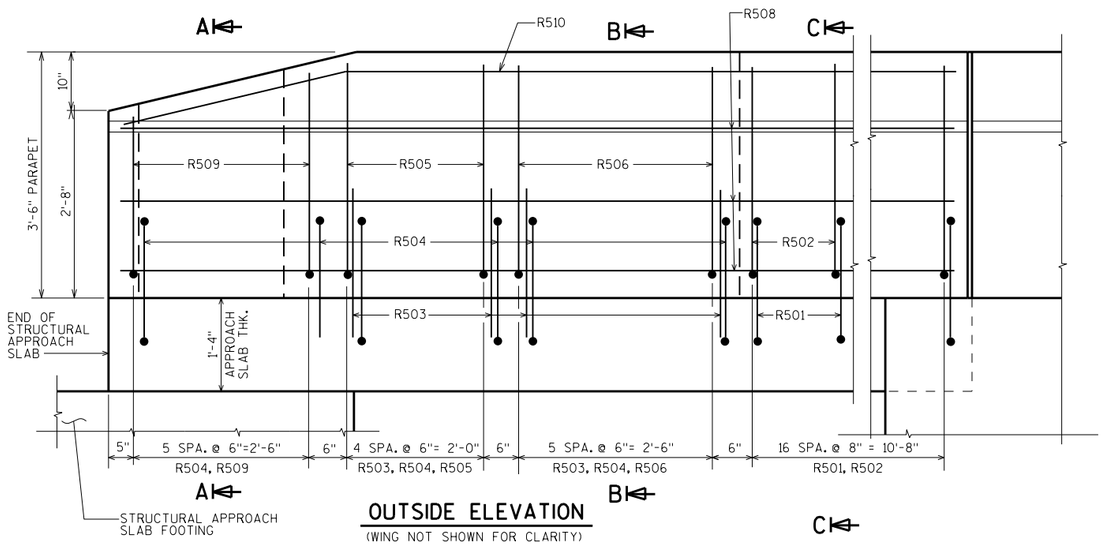
SECTION B

SECTION C



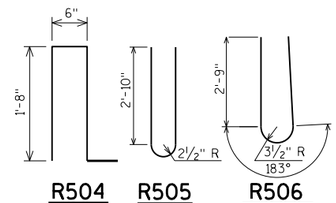
PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

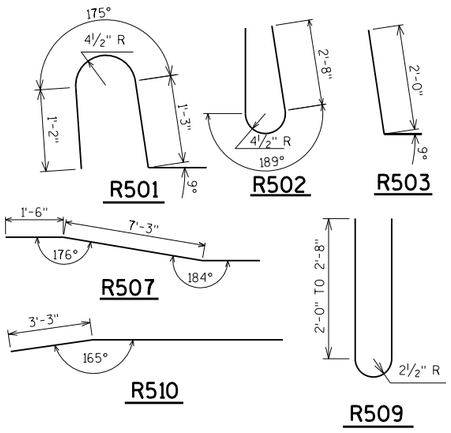


OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)



R504 R505 R506

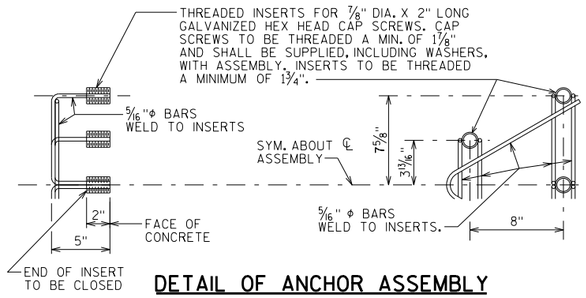


R501 R502 R503

R507

R510

R509



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

STATE PROJECT NUMBER

1020-03-79

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK INDICATES THE BAR SIZE.

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	4'-5"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	2'-9"	X		PARAPET VERT.
R504	X	34	34	4'-4"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	19'-6"	X		PARAPET HORIZ.
R508	X	10	10	19'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	◭	PARAPET VERT.
R510	X	4	4	19'-6"	X		PARAPET HORIZ

◭ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◆ SLOPE FOR DRAINAGE

▽ R501, R503 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY MWB | PLANS CK'D. MJL

SINGLE SLOPE PARAPET 42SS

SHEET 15

331

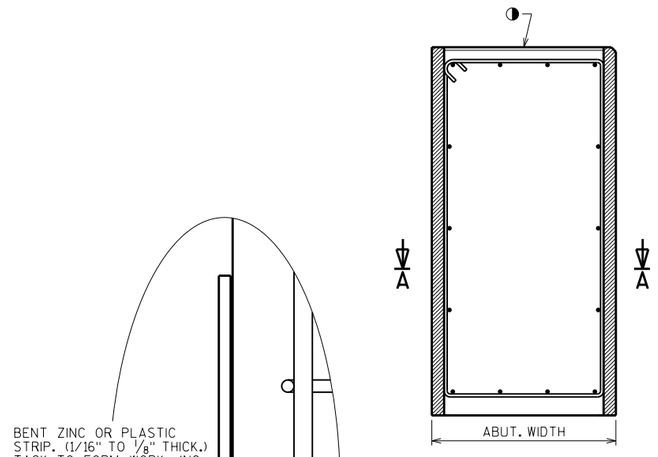
SCALE = 1.05

8

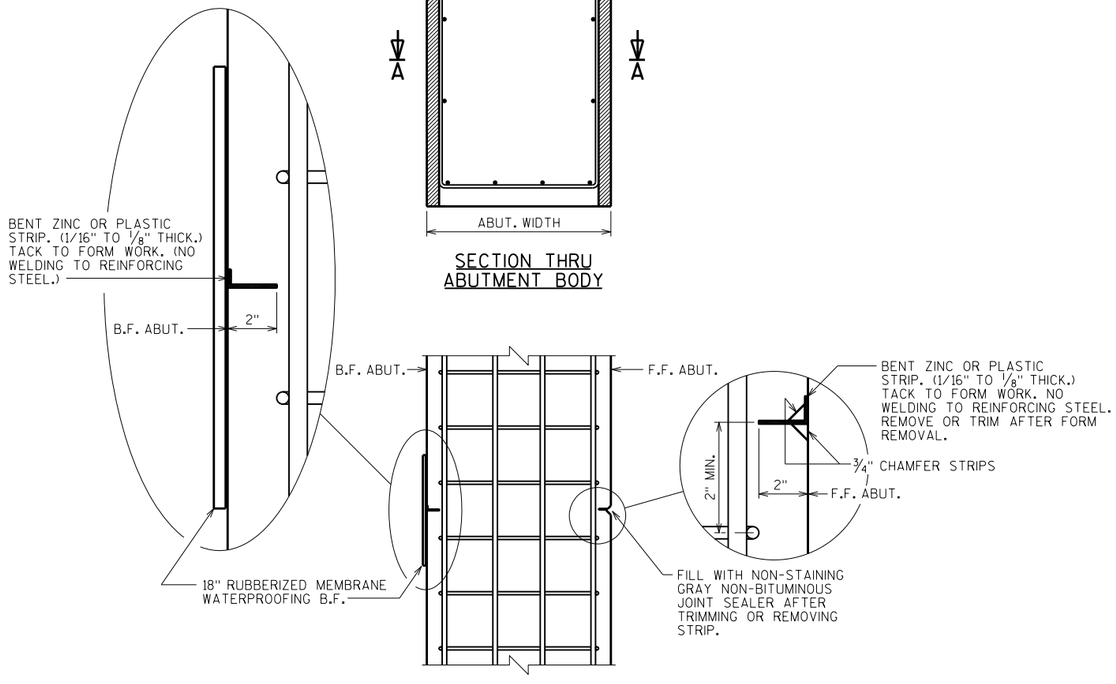
8

STATE PROJECT NUMBER

1020-03-79



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-55-257

DRAWN BY	MWB	PLANS CK'D.	MJL

ALTERNATE CONSTRUCTION JOINT

SHEET 16

332

SCALE = 1.00

8

8

Division 1 - IH 94 WB (STAGE 1)

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	EBS Note 3	Mass Ordinate Note 4
514+20	51420.00	0.00	15.79	2.00	0.00	0.00	0	0	0	0	0	0	0	0
514+50	51450.00	30.00	16.26	2.00	0.00	0.00	18	2	0	0	18	0	0	16
515+00	51500.00	50.00	17.64	2.00	0.00	0.00	31	4	0	0	49	0	0	43
515+50	51550.00	50.00	18.26	4.00	0.00	0.00	33	6	0	0	82	0	0	71
515+56	51556.00	6.00	36.18	4.00	0.00	0.00	6	1	0	0	88	0	0	76
516+00	51600.00	44.00	36.36	4.00	0.02	0.00	59	7	0	0	148	0	0	129
516+50	51650.00	50.00	40.84	4.00	1.31	0.00	71	7	1	0	219	2	0	191
517+00	51700.00	50.00	42.71	4.00	2.68	0.00	77	7	4	0	296	6	0	257
517+50	51750.00	50.00	40.12	4.00	2.98	0.00	77	7	5	0	373	13	0	319
518+00	51800.00	50.00	43.17	4.00	0.15	24.00	77	7	3	22	450	16	22	385
518+50	51850.00	50.00	43.52	4.00	3.69	24.00	80	7	4	44	531	21	67	454
519+00	51900.00	50.00	36.89	4.00	10.00	24.00	74	7	13	44	605	37	111	505
519+50	51950.00	50.00	36.98	4.00	13.64	24.00	68	7	22	44	673	64	156	539
520+00	52000.00	50.00	32.70	4.00	22.65	24.00	65	7	34	44	738	106	200	554
520+50	52050.00	50.00	18.62	2.00	34.92	24.00	48	6	53	44	785	173	244	529
521+00	52100.00	50.00	16.21	2.00	44.00	24.00	32	4	73	44	818	264	289	466
521+50	52150.00	50.00	17.06	2.00	40.47	24.00	31	4	78	44	848	362	333	396
522+00	52200.00	50.00	19.25	2.00	38.64	24.00	34	4	73	44	882	453	378	334
522+50	52250.00	50.00	25.63	2.00	32.21	24.00	42	4	66	44	924	535	422	290
523+00	52300.00	50.00	22.78	2.00	36.78	24.00	45	4	64	44	968	615	467	251
523+50	52350.00	50.00	19.33	2.00	42.52	24.00	39	4	73	44	1,007	707	511	195
524+00	52400.00	50.00	17.93	2.00	46.39	24.00	35	4	82	44	1,042	810	556	122
524+50	52450.00	50.00	18.70	2.00	53.11	24.00	34	4	92	44	1,076	925	600	37
525+00	52500.00	50.00	19.68	2.00	59.71	24.00	36	4	104	44	1,111	1,056	644	-61
525+50	52550.00	50.00	19.14	2.00	70.47	24.00	36	4	121	44	1,147	1,206	689	-180
526+00	52600.00	50.00	20.08	2.00	62.31	24.00	36	4	123	44	1,184	1,360	733	-301
526+50	52650.00	50.00	16.86	2.00	69.22	24.00	34	4	122	44	1,218	1,512	778	-422
527+00	52700.00	50.00	14.38	2.00	87.11	24.00	29	4	145	44	1,247	1,693	822	-578
527+50	52750.00	50.00	16.05	2.00	92.48	24.00	28	4	166	44	1,275	1,901	867	-762
528+00	52800.00	50.00	19.56	2.00	80.56	24.00	33	4	160	44	1,308	2,101	911	-933
528+50	52850.00	50.00	18.74	2.00	80.95	24.00	35	4	150	44	1,343	2,288	956	-1,088
529+00	52900.00	50.00	18.97	2.00	74.03	24.00	35	4	144	44	1,378	2,468	1,000	-1,236
529+50	52950.00	50.00	21.29	2.00	68.49	24.00	37	4	132	44	1,416	2,633	1,044	-1,367
530+00	53000.00	50.00	19.95	2.00	74.50	24.00	38	4	132	44	1,454	2,798	1,089	-1,498
530+50	53050.00	50.00	18.12	2.00	69.20	24.00	35	4	133	44	1,489	2,964	1,133	-1,633
531+00	53100.00	50.00	20.49	2.00	57.43	24.00	36	4	117	44	1,525	3,111	1,178	-1,748
531+50	53150.00	50.00	21.62	2.00	50.14	24.00	39	4	100	44	1,564	3,235	1,222	-1,837
532+00	53200.00	50.00	23.87	2.00	47.55	24.00	42	4	90	44	1,606	3,348	1,267	-1,911
532+50	53250.00	50.00	21.94	2.00	46.62	24.00	42	4	87	44	1,648	3,457	1,311	-1,982
533+00	53300.00	50.00	29.13	2.00	41.25	24.00	47	4	81	44	1,696	3,559	1,356	-2,040
533+50	53350.00	50.00	26.68	2.00	37.94	24.00	52	4	73	44	1,747	3,651	1,400	-2,084
534+00	53400.00	50.00	34.82	2.00	10.42	24.00	57	4	45	44	1,804	3,707	1,444	-2,086
534+50	53450.00	50.00	50.14	2.00	0.00	24.00	79	4	10	44	1,883	3,719	1,489	-2,023
535+00	53500.00	50.00	26.83	2.00	28.27	24.00	71	4	26	44	1,954	3,752	1,533	-1,988
535+50	53550.00	50.00	22.10	2.00	58.72	24.00	45	4	81	44	1,999	3,852	1,578	-2,048
536+00	53600.00	50.00	21.08	2.00	90.63	24.00	40	4	138	44	2,039	4,025	1,622	-2,184
536+50	53650.00	50.00	21.17	2.00	139.80	24.00	39	4	213	44	2,079	4,292	1,667	-2,415
537+00	53700.00	50.00	18.69	2.00	155.39	24.00	37	4	273	44	2,115	4,633	1,711	-2,724
537+50	53750.00	50.00	13.78	2.00	147.25	24.00	30	4	280	44	2,146	4,984	1,756	-3,048
538+00	53800.00	50.00	14.42	2.00	169.88	24.00	26	4	294	44	2,172	5,351	1,800	-3,392
538+50	53850.00	50.00	10.77	2.00	178.30	24.00	23	4	322	44	2,195	5,754	1,844	-3,776
539+00	53900.00	50.00	7.34	2.00	174.87	24.00	17	4	327	44	2,212	6,163	1,889	-4,172
539+50	53950.00	50.00	10.42	2.00	148.20	24.00	16	4	299	44	2,228	6,536	1,933	-4,533
540+00	54000.00	50.00	11.38	2.00	133.20	24.00	20	4	261	44	2,248	6,862	1,978	-4,842
540+50	54050.00	50.00	13.39	2.00	121.75	24.00	23	4	236	44	2,271	7,157	2,022	-5,118
541+00	54100.00	50.00	11.72	2.00	105.33	24.00	23	4	210	44	2,295	7,420	2,067	-5,361
541+50	54150.00	50.00	11.47	2.00	84.60	24.00	21	4	176	44	2,316	7,640	2,111	-5,563
542+00	54200.00	50.00	13.38	2.00	71.30	24.00	23	4	144	44	2,339	7,820	2,156	-5,724
542+50	54250.00	50.00	12.92	2.00	64.23	24.00	24	4	125	44	2,363	7,977	2,200	-5,860
543+00	54300.00	50.00	12.77	2.00	65.47	24.00	24	4	120	44	2,387	8,127	2,244	-5,991
543+50	54350.00	50.00	22.04	2.00	59.19	24.00	32	4	115	44	2,419	8,272	2,289	-6,106
544+00	54400.00	50.00	30.74	2.00	58.83	24.00	49	4	109	44	2,468	8,408	2,333	-6,198
544+50	54450.00	50.00	37.33	2.00	60.72	24.00	63	4	111	44	2,531	8,547	2,378	-6,277
545+00	54500.00	50.00	66.62	2.00	58.82	24.00	96	4	111	44	2,628	8,685	2,422	-6,323
545+50	54550.00	50.00	83.19	2.00	52.88	24.00	139	4	103	44	2,766	8,814	2,467	-6,317
546+00	54600.00	50.00	100.49	2.00	49.91	24.00	170	4	95	44	2,936	8,933	2,511	-6,269
546+50	54650.00	50.00	104.53	2.00	47.70	24.00	190	4	90	44	3,126	9,046	2,556	-6,196
547+00	54700.00	50.00	145.46	2.00	43.08	24.00	231	4	84	44	3,358	9,151	2,600	-6,074
547+50	54750.00	50.00	184.30	2.00	38.41	24.00	305	4	75	44	3,663	9,246	2,644	-5,866
548+00	54800.00	50.00	238.33	2.00	34.81	24.00	391	4	68	44	4,054	9,330	2,689	-5,563
548+50	54850.00	50.00	326.00	2.00	23.75	24.00	523	4	54	44	4,577	9,398	2,733	-5,112
549+00	54900.00	50.00	423.83	2.00	22.16	24.00	694	4	43	44	5,271	9,451	2,778	-4,475
549+50	54950.00	50.00	491.43	2.00	24.65	24.00	847	4	43	44	6,119	9,505	2,822	-3,685
550+00	55000.00	50.00	539.02	2.00	24.64	24.00	954	4	46	44	7,073	9,562	2,867	-2,792
550+50	55050.00	50.00	221.76	0.00	28.17	24.00	704	2	49	44	7,777	9,624	2,911	-2,151

Division 1 - IH 94 WB (STAGE 1)

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	EBS Note 3	Mass Ordinate Note 4
551+00	55100.00	50.00	160.05	0.00	29.06	24.00	354	0	53	44	8,131	9,690	2,956	-1,863
551+50	55150.00	50.00	176.95	0.00	33.40	24.00	312	0	58	44	8,443	9,762	3,000	-1,623
552+00	55200.00	50.00	242.46	0.00	31.75	24.00	388	0	60	44	8,831	9,837	3,044	-1,311
552+50	55250.00	50.00	326.65	0.00	35.46	24.00	527	0	62	44	9,358	9,915	3,089	-861
553+00	55300.00	50.00	390.15	0.00	29.78	24.00	664	0	60	44	10,022	9,991	3,133	-273
553+50	55350.00	50.00	439.19	0.00	36.02	24.00	768	0	61	44	10,790	10,067	3,178	419
554+00	55400.00	50.00	458.67	0.00	38.21	24.00	831	0	69	44	11,621	10,153	3,222	1,164
554+50	55450.00	50.00	463.80	0.00	52.41	24.00	854	0	84	44	12,475	10,258	3,267	1,913
555+00	55500.00	50.00	211.29	0.00	67.02	24.00	625	0	111	44	13,100	10,396	3,311	2,400
555+50	55550.00	50.00	90.68	0.00	91.83	24.00	280	0	147	44	13,380	10,580	3,356	2,496
556+00	55600.00	50.00	37.23	0.00	114.52	24.00	118	0	191	44	13,498	10,819	3,400	2,375
556+50	55650.00	50.00	10.64	0.00	146.94	24.00	44	0	242	44	13,543	11,121	3,444	2,117
557+00	55700.00	50.00	6.00	0.00	204.94	24.00	15	0	326	44	13,558	11,529	3,489	1,725
557+50	55750.00	50.00	4.88	0.00	248.35	24.00	10	0	420	44	13,568	12,053	3,533	1,211
558+00	55800.00	50.00	4.56	0.00	338.43	24.00	9	0	543	44	13,577	12,732	3,578	540
558+50	55850.00	50.00	6.36	0.00	392.02	24.00	10	0	676	44	13,587	13,578	3,622	-295
559+00	55900.00	50.00	6.69	0.00	424.94	24.00	12	0	756	44	13,599	14,523	3,667	-1,228
559+50	55950.00	50.00	5.62	0.00	486.98	24.00	11	0	844	44	13,610	15,579	3,711	-2,272
560+00	56000.00	50.00	5.63	0.00	558.93	24.00	10	0	968	44	13,621	16,789	3,756	-3,473
560+50	56050.00	50.00	2.21	0.00	628.49	24.00	7	0	1,099	44	13,628	18,164	3,800	-4,840
561+00	56100.00	50.00	1.89	0.00	641.95	24.00	4	0	1,176	44	13,632	19,634	3,844	-6,306
561+50	56150.00	50.00	3.40	0.00	677.64	24.00	5	0	1,222	44	13,637	21,161	3,889	-7,829
562+00	56200.00	50.00	1.73	0.00	732.94	24.00	5	0	1,306	44	13,641	22,794	3,933	-9,457
562+50	56250.00	50.00	2.87	0.00	792.63	24.00	4	0	1,413	44	13,646	24,560	3,978	-11,218
563+00	56300.00	50.00	3.21	0.00	848.79	24.00	6	0	1,520	44	13,651	26,460	4,022	-13,112
563+50	56350.00	50.00	6.22	0.00	876.22	24.00	9	0	1,597	44	13,660	28,456	4,067	-15,100
564+00	56400.00	50.00	11.64	0.00	896.51	24.00	17	0	1,641	44	13,677	30,508	4,111	-17,135
564+50	56450.00	50.00	15.23	0.00	880.17	24.00	25	0	1,645	44	13,702	32,564	4,156	-19,167
565+00	56500.00	50.00	4.31	0.00	764.72	24.00	18	0	1,523	44	13,720	34,468	4,200	-21,052
565+50	56550.00	50.00	34.33	0.00	561.54	24.00	36	0	1,228	44	13,755	36,003	4,244	-22,552
566+00	56600.00	50.00	65.24	0.00	332.62	24.00	92	0	828	44	13,848	37,038	4,289	-23,494
566+50	56650.00	50.00	56.30	0.00	276.24	24.00	113	0	564	44	13,960	37,743	4,333	-24,087
567+00	56700.00	50.00	2.51	0.00	524.62	24.00	54	0	742	44	14,015	38,670	4,378	-24,959
567+50	56750.00	50.00	0.00	0.00	976.79	24.00	2	0	1,390	44	14,017	40,407	4,422	-26,694
568+00	56800.00	50.00	0.00	0.00	1069.47	24.00	0	0	1,895	44	14,017	42,776	4,467	-29,063
568+50	56850.00	50.00	0.00	0.00	972.79	24.00	0	0	1,891	44	14,017	45,139	4,511	-31,427
568+85.5	56885.50	35.50	0.00	0.00	436.08	24.00	0	0	926	32	14,017	46,297	4,543	-32,584
569+00	56900.00	14.50	0.00	0.00	0.00	0.00	0	0	117	6	14,017	46,443	4,549	-32,731
569+50	56950.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	14,017	46,443	4,549	-32,731
570+00	57000.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	14,017	46,443	4,549	-32,731
570+13.5	57013.50	13.50	0.00	0.00	408.49	24.00	0	0	102	6	14,017	46,571	4,555	-32,858
570+50	57050.00	36.50	0.00	0.00	601.64	24.00	0	0	683	32	14,017	47,425	4,588	-33,712
571+00	57100.00	50.00	3.34	0.00	570.97	24.00	3	0	1,086	44	14,020	48,782	4,632	-35,066
571+50	57150.00	50.00	6.41	0.00	658.49	24.00	9	0	1,138	44	14,029	50,205	4,676	-36,480
572+00	57200.00	50.00	19.31	0.00	685.26	24.00	24	0	1,244	44	14,053	51,760	4,721	-38,011
572+50	57250.00	50.00	3.46	0.00	664.12	24.00	21	0	1,249	44	14,074	53,322	4,765	-39,552
573+00	57300.00	50.00	0.24	0.00	536.03	24.00	3	0	1,111	44	14,077	54,711	4,810	-40,938
573+50	57350.00	50.00	0.00	0.00	409.16	24.00	0	0	875	44	14,078	55,805	4,854	-42,031
574+00	57400.00	50.00	0.08	0.00	274.42	24.00	0	0	633	44	14,078	56,596	4,899	-42,822
574+50	57450.00	50.00	64.18	0.00	204.53	24.00	60	0	443	44	14,137	57,150	4,943	-43,317
575+00	57500.00	50.00	70.71	0.00	111.67	24.00	125	0	293	44	14,262	57,516	4,988	-43,558
575+50	57550.00	50.00	101.50	0.00	75.21	24.00	159	0	173	44	14,422	57,733	5,032	-43,615
576+00	57600.00	50.00	173.02	0.00	63.45	24.00	254	0	128	44	14,676	57,893	5,076	-43,521
576+50	57650.00	50.00	197.77	0.00	56.40	24.00	343	0	111	44	15,019	58,032	5,121	-43,317
577+00	57700.00	50.00	190.50	0.00	53.48	24.00	360	0	102	44	15,379	58,159	5,165	-43,085
577+50	57750.00	50.00	194.14	0.00	64.71	24.00	356	0	109	44	15,735	58,296	5,210	-42,865
578+00	57800.00	50.00	230.97	0.00	66.01	24.00	394	0	121	44	16,128	58,447	5,254	-42,623
578+50	57850.00	50.00	216.24	0.00	68.97	24.00	414	0	125	44	16,542	58,603	5,299	-42,365
579+00	57900.00	50.00	213.86	0.00	78.37	24.00	398	0	136	44	16,941	58,774	5,343	-42,137
579+50	57950.00	50.00	151.69	0.00	62.65	24.00	338	0	131	44	17,279	58,937	5,388	-41,962
580+00	58000.00	50.00	129.82	0.00	117.76	24.00	261	0	167	44	17,540	59,146	5,432	-41,910
580+50	58050.00	50.00	103.00	0.00	299.61	24.00	216	0	386	44	17,755	59,629	5,476	-42,178
581+00	58100.00	50.00	69.64	0.00	530.37	24.00	160	0	769	44	17,915	60,590	5,521	-42,978
581+50	58150.00	50.00	32.66	0.00	734.06	24.00	95	0	1,171	44	18,010	62,053	5,565	-44,347
582+00	58200.00	50.00	8.27	0.00	720.35	24.00	38	0	1,347	44	18,048	63,736	5,610	-45,993
582+50	58250.00	50.00	6.02	0.00	725.40	24.00	13	0	1,339	44	18,061	65,410	5,654	-47,653
583+00	58300.00	50.00	0.00	0.00	762.88	24.00	6	0	1,378	44	18,067	67,132	5,699	-49,370
583+50	58350.00	50.00	0.00	0.00	737.69	24.00	0	0	1,389	44	18,067	68,869	5,743	-51,106
584+00	58400.00	50.00	0.00	0.00	741.30	24.00	0	0	1,369	44	18,067	70,581	5,788	-52,818
584+50	58450.00	50.00	0.00	0.00	809.60	24.00	0	0	1,436	44	18,067	72,376	5,832	-54,613
585+00	58500.00	50.00	0.00	0.00	878.93	24.00	0	0	1,563	44	18,067	74,330	5,876	-56,568
585+50	58550.00	50.00	0.00	0.00	930.80	24.00	0	0	1,676	44	18,067	76,425	5,921	-58,662
586+00	58600.00	50.00	0.00	0.00	902.40	24.00	0	0	1,697	44	18,067	78,546	5,965	-60,784
586+50	58650.00	50.00	0.00	0.00	942.46	24.00	0	0	1,708	44	18,067	80,682	6,010	-62,919
587+00	58700.00	50.00	0.00	0.00	760.99	24.00	0	0	1,577	44	18,067	82,653	6,054	-64,891

(CONTINUED ON NEXT SHEET)

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

Division 1 - IH 94 WB (STAGE 1)

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	EBS Note 3	Mass Ordinate Note 4
587+50	58750.00	50.00	0.00	0.00	657.90	24.00	0	0	1,314	44	18,067	84,296	6,099	-66,533
588+00	58800.00	50.00	0.00	0.00	577.88	24.00	0	0	1,144	44	18,067	85,726	6,143	-67,963
588+50	58850.00	50.00	0.00	0.00	482.41	24.00	0	0	982	44	18,067	86,953	6,188	-69,190
589+00	58900.00	50.00	0.00	0.00	468.91	24.00	0	0	881	44	18,067	88,054	6,232	-70,292
589+50	58950.00	50.00	0.00	0.00	525.38	24.00	0	0	921	44	18,067	89,205	6,276	-71,442
590+00	59000.00	50.00	0.00	0.00	690.83	24.00	0	0	1,126	44	18,067	90,613	6,321	-72,850
590+50	59050.00	50.00	0.00	0.00	779.66	24.00	0	0	1,362	44	18,067	92,314	6,365	-74,552
591+00	59100.00	50.00	0.00	0.00	888.26	24.00	0	0	1,544	44	18,067	94,245	6,410	-76,482
591+50	59150.00	50.00	0.00	0.00	942.21	24.00	0	0	1,695	44	18,067	96,364	6,454	-78,601
592+00	59200.00	50.00	0.00	0.00	859.27	24.00	0	0	1,668	44	18,067	98,449	6,499	-80,686
592+50	59250.00	50.00	0.00	0.00	831.41	24.00	0	0	1,565	44	18,067	100,405	6,543	-82,643
593+00	59300.00	50.00	0.00	0.00	706.56	24.00	0	0	1,424	44	18,067	102,185	6,588	-84,423
593+50	59350.00	50.00	0.00	0.00	544.98	24.00	0	0	1,159	44	18,067	103,634	6,632	-85,871
594+00	59400.00	50.00	0.00	0.00	388.38	24.00	0	0	864	44	18,067	104,714	6,676	-86,952
594+50	59450.00	50.00	0.00	0.00	292.24	24.00	0	0	630	44	18,067	105,502	6,721	-87,739
595+00	59500.00	50.00	0.00	0.00	176.85	24.00	0	0	434	44	18,067	106,045	6,765	-88,282
595+50	59550.00	50.00	0.00	0.00	132.05	24.00	0	0	286	44	18,067	106,402	6,810	-88,640
596+00	59600.00	50.00	0.00	0.00	167.18	24.00	0	0	277	44	18,067	106,749	6,854	-88,986
596+50	59650.00	50.00	0.00	0.00	218.03	24.00	0	0	357	44	18,067	107,195	6,899	-89,432
597+00	59700.00	50.00	0.00	0.00	327.56	24.00	0	0	505	44	18,067	107,826	6,943	-90,064
597+50	59750.00	50.00	0.00	0.00	389.11	24.00	0	0	664	44	18,067	108,656	6,988	-90,893
598+00	59800.00	50.00	0.95	0.00	348.49	24.00	1	0	683	44	18,068	109,509	7,032	-91,746
598+50	59850.00	50.00	6.47	0.00	344.64	24.00	7	0	642	44	18,074	110,311	7,076	-92,541
599+00	59900.00	50.00	0.00	0.00	356.34	24.00	6	0	649	44	18,080	111,123	7,121	-93,347
599+50	59950.00	50.00	1.74	0.00	305.52	24.00	2	0	613	44	18,082	111,889	7,165	-94,111
600+00	60000.00	50.00	10.03	0.00	263.82	24.00	11	0	527	44	18,093	112,548	7,210	-94,759
600+50	60050.00	50.00	10.24	0.00	235.30	24.00	19	0	462	44	18,112	113,125	7,254	-95,318
601+00	60100.00	50.00	0.00	0.00	197.39	24.00	9	0	401	44	18,121	113,626	7,299	-95,809
601+50	60150.00	50.00	24.24	0.00	116.72	24.00	22	0	291	44	18,144	113,990	7,343	-96,150
602+00	60200.00	50.00	42.70	0.00	96.11	24.00	62	0	197	44	18,206	114,236	7,388	-96,335
602+50	60250.00	50.00	49.93	0.00	84.73	24.00	86	0	167	44	18,291	114,445	7,432	-96,458
603+00	60300.00	50.00	51.76	0.00	78.44	24.00	94	0	151	44	18,385	114,634	7,476	-96,553
603+50	60350.00	50.00	67.91	0.00	67.30	24.00	111	0	135	44	18,496	114,803	7,521	-96,611
604+00	60400.00	50.00	102.68	0.00	22.02	24.00	158	0	83	44	18,654	114,906	7,565	-96,556
604+50	60450.00	50.00	94.27	0.00	8.81	0.00	182	0	29	22	18,837	114,942	7,588	-96,410
605+00	60500.00	50.00	95.51	0.00	4.36	0.00	176	0	12	0	19,012	114,957	7,588	-96,249
605+50	60550.00	50.00	83.58	0.00	1.18	0.00	166	0	5	0	19,178	114,964	7,588	-96,090
606+00	60600.00	50.00	38.09	0.00	7.80	0.00	113	0	8	0	19,291	114,974	7,588	-95,987
606+50	60650.00	50.00	5.55	0.00	25.40	0.00	40	0	31	0	19,331	115,013	7,588	-95,985
607+00	60700.00	50.00	0.13	0.00	58.61	0.00	5	0	78	0	19,336	115,110	7,588	-96,077
607+50	60750.00	50.00	0.00	0.00	105.58	0.00	0	0	152	0	19,337	115,300	7,588	-96,267
608+00	60800.00	50.00	0.00	0.00	141.79	0.00	0	0	229	0	19,337	115,586	7,588	-96,554
608+50	60850.00	50.00	0.29	0.00	180.82	0.00	0	0	299	0	19,337	115,960	7,588	-96,927
609+00	60900.00	50.00	0.00	0.00	234.92	0.00	0	0	385	0	19,337	116,441	7,588	-97,408
609+50	60950.00	50.00	0.00	0.00	279.70	0.00	0	0	477	0	19,337	117,036	7,588	-98,003
610+00	61000.00	50.00	1.41	0.00	245.70	24.00	1	0	486	22	19,338	117,644	7,610	-98,610
610+50	61050.00	50.00	13.75	0.00	310.66	24.00	14	0	515	44	19,353	118,288	7,654	-99,240
611+00	61100.00	50.00	10.80	0.00	439.35	24.00	23	0	694	44	19,375	119,156	7,699	-100,085
611+50	61150.00	50.00	0.00	0.00	615.05	24.00	10	0	976	44	19,385	120,377	7,743	-101,296
612+00	61200.00	50.00	0.00	0.00	644.45	24.00	0	0	1,166	44	19,385	121,835	7,788	-102,753
612+50	61250.00	50.00	0.00	0.00	573.18	24.00	0	0	1,127	44	19,385	123,244	7,832	-104,163
613+00	61300.00	50.00	0.01	0.00	432.57	24.00	0	0	931	44	19,385	124,408	7,876	-105,327
613+50	61350.00	50.00	0.00	0.00	316.50	24.00	0	0	694	44	19,385	125,275	7,921	-106,194
614+00	61400.00	50.00	0.00	0.00	227.73	24.00	0	0	504	44	19,385	125,905	7,965	-106,824
614+50	61450.00	50.00	0.01	0.00	164.56	24.00	0	0	363	44	19,385	126,359	8,010	-107,278
615+00	61500.00	50.00	4.51	0.00	140.31	24.00	4	0	282	44	19,389	126,712	8,054	-107,626
615+02	61502.00	2.00	3.91	0.00	153.66	24.00	0	0	11	2	19,390	126,725	8,056	-107,640
615+50	61550.00	48.00	0.00	0.00	0.00	0.00	3	0	137	21	19,393	126,896	8,077	-107,807
616+00	61600.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	19,393	126,896	8,077	-107,807
616+33	61633.00	33.00	0.14	0.00	201.03	24.00	0	0	123	15	19,393	127,050	8,092	-107,960
616+50	61650.00	17.00	1.09	0.00	134.22	24.00	0	0	106	15	19,394	127,182	8,107	-108,092
617+00	61700.00	50.00	0.68	0.00	154.24	24.00	2	0	267	44	19,395	127,515	8,152	-108,424
617+50	61750.00	50.00	9.18	2.00	91.67	24.00	9	2	228	44	19,404	127,800	8,196	-108,701
618+00	61800.00	50.00	9.79	2.00	60.61	24.00	18	4	141	44	19,422	127,976	8,240	-108,864
618+50	61850.00	50.00	10.23	2.00	44.91	24.00	19	4	98	44	19,441	128,098	8,285	-108,971
619+00	61900.00	50.00	10.16	2.00	39.89	24.00	19	4	79	44	19,459	128,197	8,329	-109,054
619+50	61950.00	50.00	10.54	2.00	34.35	24.00	19	4	69	44	19,479	128,282	8,374	-109,125
620+00	62000.00	50.00	10.64	2.00	31.93	24.00	20	4	61	44	19,498	128,359	8,418	-109,185
620+50	62050.00	50.00	11.27	2.00	26.06	24.00	20	4	54	44	19,519	128,426	8,463	-109,236
621+00	62100.00	50.00	10.85	2.00	28.51	24.00	20	4	51	44	19,539	128,489	8,507	-109,282
621+50	62150.00	50.00	11.09	2.00	32.16	24.00	20	4	56	44	19,559	128,560	8,552	-109,336
622+00	62200.00	50.00	10.60	2.00	36.01	24.00	20	4	63	44	19,579	128,639	8,596	-109,398
622+50	62250.00	50.00	11.17	2.00	36.45	24.00	20	4	67	44	19,600	128,722	8,640	-109,466
623+00	62300.00	50.00	11.02	2.00	36.70	24.00	21	4	68	44	19,620	128,807	8,685	-109,534
623+50	62350.00	50.00	11.03	2.00	34.82	24.00	20	4	66	44	19,641	128,890	8,729	-109,600

Division 1 - IH 94 WB (STAGE 1)

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	EBS Note 3	Mass Ordinate Note 4
624+00	62400.00	50.00	11.45	2.00	32.88	24.00	21	4	63	44	19,661	128,968	8,774	-109,661
624+50	62450.00	50.00	11.80	2.00	30.44	24.00	22	4	59	44	19,683	129,042	8,818	-109,716
625+00	62500.00	50.00	11.37	2.00	30.58	24.00	21	4	57	44	19,704	129,112	8,863	-109,769
625+50	62550.00	50.00	13.26	2.00	22.36	24.00	23	4	49	44	19,727	129,173	8,907	-109,811
626+00	62600.00	50.00	20.36	2.00	0.00	24.00	31	4	21	44	19,758	129,199	8,952	-109,810
626+50	62650.00	50.00	10.31	2.00	3.76	24.00	28	4	3	44	19,787	129,204	8,996	-109,790
627+00	62700.00	50.00	29.42	2.00	0.00	24.00	37	4	3	44	19,823	129,208	9,040	-109,761
627+50	62750.00	50.00	26.51	2.00	0.00	24.00	52	4	0	44	19,875	129,208	9,085	-109,713
628+00	62800.00	50.00	37.67	2.00	0.00	24.00	59	4	0	44	19,935	129,208	9,129	-109,657
628+50	62850.00	50.00	40.15	2.00	0.00	24.00	72	4	0	44	20,007	129,208	9,174	-109,589
629+00	62900.00	50.00	18.12	2.00	12.18	24.00	54	4	11	44	20,061	129,222	9,218	-109,553
629+50	62950.00	50.00	13.19	2.00	19.60	24.00	29	4	29	44	20,090	129,259	9,263	-109,564
630+00	63000.00	50.00	13.63	2.00	22.41	24.00	25	4	39	44	20,114	129,307	9,307	-109,592
630+50	63050.00	50.00	14.66	2.00	18.60	24.00	26	4	38	44	20,141	129,355	9,352	-109,617
631+00	63100.00	50.00	16.92	2.00	17.98	24.00	29	4	34	44	20,170	129,397	9,396	-109,633
631+50	63150.00	50.00	12.49	2.00	22.31	24.00	27	4	37	44	20,197	129,444	9,440	-109,656
632+00	63200.00	50.00	14.18	2.00	21.20	24.00	25	4	40	44	20,222	129,494	9,485	-109,686
632+50	63250.00	50.00	16.83	2.00	20.46	24.00	29	4	39	44	20,251	129,543	9,529	-109,709
633+00	63300.00	50.00	36.77	2.00	19.21	24.00	50	4	37	44	20,300	129,588	9,574	-109,709
633+50	63350.00	50.00	36.90	4.00	24.79	24.00	68	6	41	44	20,368	129,639	9,618	-109,697
634+00	63400.00	50.00	33.40	4.00	24.07	24.00	65	7	45	44	20,433	129,696	9,663	-109,696
634+50	63450.00	50.00	22.42	4.00	26.48	24.00	52	7	47	44	20,485	129,754	9,707	-109,710
635+00	63500.00	50.00	20.48	4.00	29.77	24.00	40	7	52	44	20,525	129,820	9,752	-109,743
635+50	63550.00	50.00	19.29	4.00	24.38	24.00	37	7	50	44	20,562	129,882	9,796	-109,776
636+00	63600.00	50.00	12.23	4.00	20.98	24.00	29	7	42	44	20,591	129,935	9,840	-109,807
636+50	63650.00	50.00	16.06	2.00	13.93	24.00	26	6	32	44	20,617	129,975	9,885	-109,827
637+00	63700.00	50.00	16.26	2.00	11.21	24.00	30	4	23	44	20,647	130,004	9,929	-109,830
637+50	63750.00	50.00	16.25	2.00	11.20	0.00	30	4	21	22	20,677	130,030	9,952	-109,829
638+00	63800.00	50.00	14.60	2.00	10.20	0.00	29	4	20	0	20,706	130,055	9,952	-109,829
638+50	63850.00	50.00	13.30	2.00	9.30	0.00	26	4	18	0	20,732	130,077	9,952	-109,830
639+00	63900.00	50.00	12.00	2.00	8.40	0.00	23	4	16	0	20,755	130,098	9,952	-109,830
639+50	63950.00	50.00	10.70	2.00	7.50	0.00	21	4	15	0	20,776	130,116	9,952	-109,831
640+00	64000.00	50.00	9.40	2.00	6.60	0.00	19	4	13	0	20,795	130,133	9,952	-109,833
640+50	64050.00	50.00	8.00	2.00	5.60	0.00	16	4	11	0	20,811	130,147	9,952	-109,835
640+56	64056.00	6.00	8.00	2.00	5.60	0.00	2	0	1	0	20,812	130,148	9,952	-109,835
							COLUMN TOTALS		20,812	499	104,119	9,952		

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

Division 2 - IH 94 EB (STAGE 2)

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	EBS Note 3	Mass Ordinate Note 4
525+00	52500.00	0.00	140.34	48.00	0.00	0.00	0	0	0	0	0	0	0	0
525+50	52550.00	50.00	144.42	48.00	0.00	0.00	264	89	0	0	264	0	0	175
526+00	52600.00	50.00	145.18	48.00	0.00	0.00	268	89	0	0	532	0	0	354
526+50	52650.00	50.00	142.03	48.00	0.00	0.00	266	89	0	0	798	0	0	531
527+00	52700.00	50.00	134.03	48.00	0.00	0.00	256	89	0	0	1,053	0	0	698
527+50	52750.00	50.00	152.90	48.00	0.00	0.00	266	89	0	0	1,319	0	0	875
528+00	52800.00	50.00	134.80	48.00	1.95	0.00	266	89	2	0	1,585	2	0	1,050
528+50	52850.00	50.00	115.63	48.00	14.48	0.00	232	89	15	0	1,817	21	0	1,174
529+00	52900.00	50.00	113.34	48.00	19.87	0.00	212	89	32	0	2,029	61	0	1,257
529+50	52950.00	50.00	118.10	48.00	24.78	0.00	214	89	41	0	2,244	113	0	1,331
530+00	53000.00	50.00	122.85	48.00	28.64	0.00	223	89	49	0	2,467	175	0	1,403
530+50	53050.00	50.00	123.98	48.00	34.24	0.00	229	89	58	0	2,695	247	0	1,470
531+00	53100.00	50.00	125.89	48.00	35.68	0.00	231	89	65	0	2,927	328	0	1,532
531+50	53150.00	50.00	127.35	48.00	32.26	0.00	234	89	63	0	3,161	407	0	1,599
532+00	53200.00	50.00	128.42	48.00	24.12	0.00	237	89	52	0	3,398	472	0	1,681
532+50	53250.00	50.00	133.28	48.00	21.43	0.00	242	89	42	0	3,640	525	0	1,782
533+00	53300.00	50.00	137.16	48.00	27.76	0.00	250	89	46	0	3,891	582	0	1,887
533+50	53350.00	50.00	151.19	48.00	26.38	0.00	267	89	50	0	4,158	644	0	2,002
534+00	53400.00	50.00	149.96	48.00	24.33	0.00	279	89	47	0	4,436	703	0	2,133
534+50	53450.00	50.00	144.19	48.00	18.78	0.00	272	89	40	0	4,709	753	0	2,267
535+00	53500.00	50.00	134.30	48.00	18.49	0.00	258	89	35	0	4,967	796	0	2,393
535+50	53550.00	50.00	141.28	48.00	15.45	0.00	255	89	31	0	5,222	835	0	2,520
536+00	53600.00	50.00	133.06	48.00	10.95	0.00	254	89	24	0	5,476	866	0	2,654
536+50	53650.00	50.00	126.92	48.00	9.67	0.00	241	89	19	0	5,717	890	0	2,782
537+00	53700.00	50.00	122.06	48.00	3.25	0.00	231	89	12	0	5,947	905	0	2,909
537+50	53750.00	50.00	119.00	48.00	3.46	0.00	223	89	6	0	6,170	913	0	3,036
538+00	53800.00	50.00	119.70	48.00	0.36	0.00	221	89	4	0	6,391	917	0	3,163
538+50	53850.00	50.00	126.83	48.00	0.74	0.00	228	89	1	0	6,620	918	0	3,301
539+00	53900.00	50.00	134.68	48.00	1.08	0.00	242	89	2	0	6,862	920	0	3,453
539+50	53950.00	50.00	139.44	48.00	0.88	0.00	254	89	2	0	7,116	923	0	3,615
540+00	54000.00	50.00	136.18	48.00	5.05	0.00	255	89	5	0	7,371	929	0	3,775
540+50	54050.00	50.00	142.29	48.00	9.74	0.00	258	89	14	0	7,629	947	0	3,927
541+00	54100.00	50.00	143.64	48.00	9.67	0.00	265	89	18	0	7,893	969	0	4,080
541+50	54150.00	50.00	143.85	48.00	9.30	0.00	266	89	18	0	8,160	991	0	4,235
542+00	54200.00	50.00	137.05	48.00	9.44	0.00	260	89	17	0	8,420	1,013	0	4,385
542+50	54250.00	50.00	143.20	48.00	7.79	0.00	259	89	16	0	8,679	1,033	0	4,535
543+00	54300.00	50.00	139.54	48.00	9.54	0.00	262	89	16	0	8,941	1,053	0	4,688
543+50	54350.00	50.00	144.65	48.00	7.89	0.00	263	89	16	0	9,204	1,073	0	4,842
544+00	54400.00	50.00	146.29	48.00	6.40	0.00	269	89	13	0	9,474	1,089	0	5,006
544+50	54450.00	50.00	143.55	48.00	7.13	0.00	268	89	13	0	9,742	1,105	0	5,170
545+00	54500.00	50.00	163.49	48.00	6.78	24.00	284	89	13	22	10,026	1,121	22	5,349
545+50	54550.00	50.00	171.64	48.00	11.04	24.00	310	89	16	44	10,336	1,142	67	5,550
546+00	54600.00	50.00	166.58	48.00	16.07	24.00	313	89	25	44	10,650	1,173	111	5,743
546+50	54650.00	50.00	164.98	48.00	18.72	24.00	307	89	32	44	10,957	1,213	156	5,921
547+00	54700.00	50.00	173.60	48.00	16.02	24.00	314	89	32	44	11,270	1,254	200	6,105
547+50	54750.00	50.00	186.13	48.00	12.48	24.00	333	89	26	44	11,603	1,287	244	6,317
548+00	54800.00	50.00	209.87	48.00	13.40	24.00	367	89	24	44	11,970	1,317	289	6,564
548+50	54850.00	50.00	245.99	48.00	14.18	24.00	422	89	26	44	12,392	1,349	333	6,866
549+00	54900.00	50.00	266.95	48.00	13.69	24.00	475	89	26	44	12,867	1,381	378	7,219
549+50	54950.00	50.00	283.44	48.00	15.13	24.00	510	89	27	44	13,377	1,414	422	7,607
550+00	55000.00	50.00	271.86	48.00	16.30	24.00	514	89	29	44	13,891	1,451	467	7,996
550+50	55050.00	50.00	237.78	48.00	20.36	24.00	472	89	34	44	14,363	1,493	511	8,336
551+00	55100.00	50.00	245.05	48.00	18.92	24.00	447	89	36	44	14,810	1,538	556	8,649
551+50	55150.00	50.00	255.92	48.00	12.86	24.00	464	89	29	44	15,274	1,575	600	8,987
552+00	55200.00	50.00	264.83	48.00	13.82	24.00	482	89	25	44	15,756	1,606	644	9,350
552+50	55250.00	50.00	281.56	48.00	14.91	24.00	506	89	27	44	16,262	1,639	689	9,733
553+00	55300.00	50.00	296.02	48.00	12.79	24.00	535	89	26	44	16,796	1,671	733	10,147
553+50	55350.00	50.00	314.71	48.00	17.67	24.00	565	89	28	44	17,362	1,707	778	10,589
554+00	55400.00	50.00	319.46	48.00	18.93	24.00	587	89	34	44	17,949	1,749	822	11,045
554+50	55450.00	50.00	281.71	48.00	24.90	24.00	557	89	41	44	18,506	1,800	867	11,462
555+00	55500.00	50.00	206.55	48.00	30.98	24.00	452	89	52	44	18,958	1,864	911	11,760
555+50	55550.00	50.00	195.62	48.00	35.03	24.00	372	89	61	44	19,330	1,941	956	11,967
556+00	55600.00	50.00	176.89	48.00	57.63	24.00	345	89	86	44	19,675	2,048	1,000	12,116
556+50	55650.00	50.00	180.05	48.00	80.48	24.00	331	89	128	44	20,006	2,208	1,044	12,198
557+00	55700.00	50.00	148.72	48.00	105.16	24.00	304	89	172	44	20,310	2,423	1,089	12,198
557+50	55750.00	50.00	152.99	48.00	135.21	24.00	279	89	223	44	20,589	2,701	1,133	12,111
558+00	55800.00	50.00	142.77	48.00	160.70	24.00	274	89	274	44	20,863	3,043	1,178	11,953
558+50	55850.00	50.00	144.72	48.00	213.86	24.00	266	89	347	44	21,129	3,477	1,222	11,697
559+00	55900.00	50.00	141.72	48.00	286.97	24.00	265	89	464	44	21,395	4,057	1,267	11,294
559+50	55950.00	50.00	142.09	48.00	349.05	24.00	263	89	589	44	21,657	4,793	1,311	10,731
560+00	56000.00	50.00	136.11	48.00	407.67	24.00	258	89	701	44	21,915	5,669	1,356	10,024
560+50	56050.00	50.00	130.49	48.00	454.02	24.00	247	89	798	44	22,162	6,666	1,400	9,185
561+00	56100.00	50.00	122.92	48.00	501.66	24.00	235	89	885	44	22,397	7,772	1,444	8,225
561+50	56150.00	50.00	114.59	48.00	526.72	24.00	220	89	952	44	22,617	8,962	1,489	7,165
562+00	56200.00	50.00	97.53	48.00	551.88	24.00	196	89	999	44	22,813	10,211	1,533	6,024

Division 2 - IH 94 EB (STAGE 2)

STATION	Real Station	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill	EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	EBS Note 3	Mass Ordinate Note 4
562+50	56250.00	50.00	90.80	48.00	562.74	24.00	174	89	1,032	44	22,987	11,501	1,578	4,820
563+00	56300.00	50.00	84.87	48.00	561.39	24.00	163	89	1,041	44	23,150	12,802	1,622	3,593
563+50	56350.00	50.00	80.00	48.00	561.49	24.00	153	89	1,040	44	23,303	14,101	1,667	2,357
564+00	56400.00	50.00	77.54	48.00	566.89	24.00	146	89	1,045	44	23,448	15,407	1,711	1,108
564+50	56450.00	50.00	77.25	0.00	623.55	24.00	143	44	1,102	44	23,592	16,785	1,756	-171
565+00	56500.00	50.00	102.70	0.00	593.92	24.00	167	0	1,127	44	23,758	18,194	1,800	-1,414
565+50	56550.00	50.00	120.52	0.00	597.88	0.00	207	0	1,104	22	23,965	19,574	1,822	-2,586
566+00	56600.00	50.00	131.11	0.00	582.82	0.00	233	0	1,093	0	24,198	20,940	1,822	-3,720
566+50	56650.00	50.00	102.34	0.00	592.71	0.00	216	0	1,088	0	24,414	22,301	1,822	-4,864
567+00	56700.00	50.00	31.27	0.00	732.78	0.00	124	0	1,227	0	24,538	23,835	1,822	-6,275
567+50	56750.00	50.00	25.03	0.00	828.70	0.00	52	0	1,446	0	24,590	25,642	1,822	-8,030
568+00	56800.00	50.00	59.43	0.00	620.29	0.00	78	0	1,342	0	24,668	27,319	1,822	-9,629
568+50	56850.00	50.00	60.14	0.00	565.94	0.00	111	0	1,098	0	24,779	28,692	1,822	-10,891
569+00	56900.00	50.00	0.00	0.00	541.97	0.00	56	0	1,026	0	24,835	29,975	1,822	-12,118
569+50	56950.00	50.00	0.00	0.00	510.16	0.00	0	0	974	0	24,835	31,192	1,822	-13,335
569+82	56982.00	32.00	0.00	0.00	524.29	0.00	0	0	613	0	24,835	31,959	1,822	-14,102
570+00	57000.00	18.00	0.00	0.00	300.95	0.00	0	0	275	0	24,835	32,303	1,822	-14,446
570+17	57017.00	17.00	0.00	0.00	367.63	0.00	0	0	210	0	24,835	32,566	1,822	-14,709
570+50	57050.00	33.00	0.00	0.00	0.00	0.00	0	0	225	0	24,835	32,846	1,822	-14,990
571+00	57100.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	24,835	32,846	1,822	-14,990
571+44.5	57144.50	44.50	0.00	0.00	157.06	0.00	0	0	129	0	24,835	33,008	1,822	-15,151
571+50	57150.00	5.50	0.00	0.00	159.93	0.00	0	0	32	0	24,835	33,049	1,822	-15,192
571+78.5	57178.50	28.50	3.58	0.00	617.09	0.00	2	0	410	0	24,837	33,561	1,822	-15,702
572+00	57200.00	21.50	7.88	0.00	549.60	0.00	5	0	465	0	24,841	34,142	1,822	-16,278
572+50	57250.00	50.00	11.22	0.00	538.85	0.00	18	0	1,008	0	24,859	35,402	1,822	-17,521
573+00	57300.00	50.00	0.00	0.00	486.83	0.00	10	0	950	0	24,869	36,589	1,822	-18,697
573+50	57350.00	50.00	0.00	0.00	446.36	0.00	0	0	864	0	24,869	37,669	1,822	-19,777
574+00	57400.00	50.00	0.00	0.00	386.94	0.00	0	0	772	0	24,869	38,633	1,822	-20,742
574+50	57450.00	50.00	0.00	0.00	337.07	0.00	0	0	670	0	24,869	39,471	1,822	-21,580
575+00	57500.00	50.00	0.00	0.00	315.40	0.00	0	0	604	0	24,869	40,226	1,822	-22,335
575+50	57550.00	50.00	0.00	0.00	297.33	0.00	0	0	567	0	24,869	40,936	1,822	-23,044
576+00	57600.00	50.00	0.00	0.00	294.84	0.00	0	0	548	0	24,869	41,621	1,822	-23,730
576+50	57650.00	50.00	0.00	0.00	292.58	0.00	0	0	544	0	24,869	42,301	1,822	-24,409
577+00	57700.00	50.00	0.00	0.00	280.65	0.00	0	0	531	0	24,869	42,964	1,822	-25,073
577+50	57750.00	50.00	0.00	0.00	266.39	0.00	0	0	507	0	24,869	43,597	1,822	-25,706
578+00	57800.00	50.00	0.00	0.00	250.09	0.00	0	0	478	0	24,869	44,195	1,822	-26,304
578+50	57850.00	50.00	0.00	0.00	231.89	0.00	0	0	446	0	24,869	44,753	1,822	-26,862
579+00	57900.00	50.00	0.00	0.00	214.30	0.00	0	0	413	0	24,869	45,270	1,822	-27,378
579+50	57950.00	50.00	0.00	0.00	209.15	0.00	0	0	392	0	24,869	45,760	1,822	-27,868
580+00	58000.00	50.00	0.00	0.00	206.52	0.00	0	0	385	0	24,869	46,241	1,822	-28,349
580+50	58050.00	50.00	0.00	0.00	192.84	0.00	0	0	370	0	24,869	46,703	1,822	-28,812
581+00	58100.00	50.00	0.00	0.00	183.83	0.00	0	0	349	0	24,869	47,139	1,822	-29,247
581+50	58150.00	50.00	0.00	0.00	195.46	0.00	0	0	351	0	24,869	47,578	1,822	-29,686
582+00	58200.00	50.00	0.00	0.00	202.27	0.00	0	0	368	0	24,869	48,038	1,822	-30,147
582+50	58250.00	50.00	11.18	0.00	210.74	0.00	10	0	382	0	24,880	48,516	1,822	-30,614
583+00	58300.00	50.00	17.36	0.00	223.58	0.00	26	0	402	0	24,906	49,019	1,822	-31,091
583+50	58350.00	50.00	9.47	0.00	199.06	0.00	25	0	391	0	24,931	49,508	1,822	-31,555
584+00	58400.00	50.00	36.11	0.00	249.11	0.00	42	0	415	0	24,973	50,027	1,822	-32,032
584+50	58450.00	50.00	32.35	0.00	256.30	0.00	63	0	468	0	25,036	50,612	1,822	-32,553
585+00	58500.00	50.00	32.08	0.00	229.25	0.00	60	0	450	0	25,096	51,174	1,822	-33,055
585+50	58550.00	50.00	39.81	0.00	219.76	0.00	67	0	416	0	25,163	51,693	1,822	-33,509
586+00	58600.00	50.00	69.20	48.00	248.65	0.00	101	44	434	0	25,264	52,236	1,822	-33,994
586+50	58650.00	50.00	68.59	48.00	241.46	0.00	128	89	454	0	25,391	52,803	1,822	-34,523
587+00	58700.00	50.00	68.97	48.00	220.35	0.00	127	89	428	0	25,519	53,337	1,822	-35,019
587+50	58750.00	50.00	72.42	48.00	216.98	0.00	131	89	405	0	25,649	53,844	1,822	-35,483
588+00	58800.00	50.00	82.02	48.00	199.87	0.00	143	89	386	0	25,792	54,326	1,822	-35,911
588+50	58850.00	50.00	99.34	48.00	178.95	0.00	168	89	351	0	25,960	54,764	1,822	-36,271
589+00	58900.00	50.00	102.70	48.00	160.49	0.00	187	89	314	0	26,147	55,157	1,822	-36,565
589+50	58950.00	50.00	96.83	48.00	204.53	0.00	185	89	338	0	26,332	55,580	1,822	-36,892
590+00	59000.00	50.00	89.81	48.00	146.46	0.00	173	89	325	0	26,505	55,986	1,822	-37,214
590+50	59050.00	50.00	98.74	48.00	137.87	0.00	175	89	263	0	26,680	56,315	1,822	-37,458
591+00	59100.00	50.00	103.52	48.00	105.88	0.00	187	89	226	0	26,867	56,597	1,822	-37,641
591+50	59150.00	50.00	103.90	48.00	105.53	0.00	192	89	196	0	27,059	56,842	1,822	-37,783
592+00	59200.00	50.00	108.39	48.00	115.79	0.00	197	89	205	0	27,255	57,098	1,822	-37,931
592+50	59250.00	50.00	111.42	48.00	161.55	0.00	204	89	257	0	27,459	57,419	1,822	-38,138
593+00	59300.00	50.00	111.23	48.00	143.65	0.00	206	89	283	0	27,665	57,772	1,822	-38,374
593+50	59350.00	50.00	110.58	48.00	126.06	0.00	205	89	250	0	27,871	58,084	1,822	-38,569
594+00	59400.00	50.00	113.89	48.00	98.84	0.00	208	89	208	0	28,078	58,345	1,822	-38,711
594+50	59450.00	50.00	121.66	48.00	77.13	0.00	218	89	163	0	28,297	58,548	1,822	-38,785
595+00	59500.00	50.00	129.93	48.00	49.99	0.00	233	89	118	0	28,529	58,696	1,822	-38,788
595+50	59550.00	50.00	150.30	48.00	22.32	0.00	259	89	67	0	28,789	58,779	1,822	-38,701
596+00	59600.00	50.00	168.85	48.00	14.08	0.00	296	89	34	0	29,084	58,821	1,822	-38,537
596+50	59650.00	50.00	174.15	48.00	15.40	0.00	318	89	27	0	29,402	58,856	1,822	-38,342
597+00	59700.00	50.00	169.52	48.00	18.78	0.00	318	89	32	0	29,720	58,895	1,822	-38,153
597+50	59750.00	50.00	159.71	48.00	27.52	0.00	305	89	43	0	30,025	58,949	1,822	-37,990

(CONTINUED ON NEXT SHEET)

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

Division 2 - IH 94 EB (STAGE 2)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
598+00	59800.00	50.00	158.99	48.00	46.31	0.00	295	89	68	0	30,320	59,034	1,822	-37,869
598+50	59850.00	50.00	165.62	48.00	68.23	0.00	301	89	106	0	30,621	59,167	1,822	-37,790
599+00	59900.00	50.00	177.94	48.00	71.80	0.00	318	89	130	0	30,939	59,329	1,822	-37,723
599+50	59950.00	50.00	186.66	48.00	80.29	0.00	338	89	141	0	31,276	59,505	1,822	-37,651
600+00	60000.00	50.00	197.59	48.00	81.28	24.00	356	89	150	22	31,632	59,692	1,844	-37,571
600+50	60050.00	50.00	202.31	48.00	77.96	24.00	370	89	147	44	32,003	59,876	1,889	-37,474
601+00	60100.00	50.00	203.74	48.00	85.88	24.00	376	89	152	44	32,378	60,066	1,933	-37,376
601+50	60150.00	50.00	208.10	48.00	36.98	24.00	381	89	114	44	32,760	60,208	1,978	-37,226
602+00	60200.00	50.00	217.08	48.00	19.85	24.00	394	89	53	44	33,154	60,274	2,022	-36,987
602+50	60250.00	50.00	226.52	48.00	25.73	24.00	411	89	42	44	33,564	60,326	2,067	-36,718
603+00	60300.00	50.00	247.52	48.00	26.91	24.00	439	89	49	44	34,003	60,387	2,111	-36,429
603+50	60350.00	50.00	269.53	48.00	19.76	24.00	479	89	43	44	34,482	60,441	2,156	-36,093
604+00	60400.00	50.00	268.80	48.00	7.50	24.00	498	89	25	44	34,980	60,473	2,200	-35,715
604+50	60450.00	50.00	299.63	48.00	10.12	24.00	526	89	16	44	35,507	60,493	2,244	-35,298
605+00	60500.00	50.00	301.42	48.00	8.68	24.00	557	89	17	44	36,063	60,515	2,289	-34,852
605+50	60550.00	50.00	334.43	48.00	7.56	24.00	589	89	15	44	36,652	60,534	2,333	-34,371
606+00	60600.00	50.00	340.75	48.00	9.94	24.00	625	89	16	44	37,277	60,554	2,378	-33,855
606+50	60650.00	50.00	327.05	48.00	10.00	24.00	618	89	18	44	37,895	60,577	2,422	-33,348
607+00	60700.00	50.00	290.64	48.00	8.59	24.00	572	89	17	44	38,467	60,599	2,467	-32,887
607+50	60750.00	50.00	239.04	48.00	11.04	24.00	490	89	18	44	38,958	60,621	2,511	-32,508
608+00	60800.00	50.00	205.51	48.00	15.47	24.00	412	89	25	44	39,370	60,652	2,556	-32,216
608+50	60850.00	50.00	176.81	48.00	21.35	24.00	354	89	34	44	39,724	60,695	2,600	-31,993
609+00	60900.00	50.00	166.61	48.00	27.20	24.00	318	89	45	44	40,041	60,751	2,644	-31,821
609+50	60950.00	50.00	136.74	48.00	27.25	24.00	281	89	50	44	40,322	60,814	2,689	-31,692
610+00	61000.00	50.00	115.40	48.00	27.27	24.00	233	89	50	44	40,556	60,877	2,733	-31,610
610+50	61050.00	50.00	121.89	48.00	23.09	24.00	220	89	47	44	40,776	60,935	2,778	-31,538
611+00	61100.00	50.00	91.26	48.00	17.89	24.00	197	89	38	44	40,973	60,983	2,822	-31,477
611+50	61150.00	50.00	105.80	48.00	16.72	24.00	182	89	32	44	41,155	61,023	2,867	-31,423
612+00	61200.00	50.00	112.64	48.00	3.78	24.00	202	89	19	44	41,358	61,047	2,911	-31,333
612+50	61250.00	50.00	94.74	48.00	6.58	24.00	192	89	10	44	41,550	61,059	2,956	-31,242
613+00	61300.00	50.00	104.35	48.00	6.30	24.00	184	89	12	44	41,734	61,073	3,000	-31,162
613+50	61350.00	50.00	117.48	48.00	1.03	24.00	205	89	7	44	41,939	61,082	3,044	-31,054
614+00	61400.00	50.00	120.38	48.00	26.76	24.00	220	89	26	44	42,160	61,114	3,089	-30,954
614+50	61450.00	50.00	117.23	48.00	105.32	24.00	220	89	122	44	42,380	61,267	3,133	-30,976
615+00	61500.00	50.00	117.94	48.00	208.11	24.00	218	89	290	44	42,597	61,630	3,178	-31,210
615+34	61534.00	34.00	109.53	48.00	321.01	24.00	143	60	333	30	42,741	62,046	3,208	-31,544
615+43	61543.00	9.00	93.66	48.00	0.95	0.00	34	16	54	4	42,774	62,113	3,212	-31,593
615+50	61550.00	7.00	0.00	0.00	0.00	0.00	12	6	0	0	42,787	62,113	3,212	-31,587
616+00	61600.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	42,787	62,113	3,212	-31,587
616+30	61630.00	30.00	9.31	0.00	0.00	0.00	5	0	0	0	42,792	62,113	3,212	-31,582
616+50	61650.00	20.00	19.12	0.00	0.00	0.00	11	0	0	0	42,802	62,113	3,212	-31,572
616+86.25	61686.25	36.25	104.71	48.00	498.82	150.00	83	32	335	101	42,885	62,532	3,313	-31,939
617+00	61700.00	13.75	114.54	48.00	513.70	150.00	56	24	258	76	42,941	62,854	3,389	-32,230
617+50	61750.00	50.00	108.17	48.00	523.46	150.00	206	89	960	278	43,147	64,055	3,667	-33,313
618+00	61800.00	50.00	108.05	48.00	433.98	150.00	200	89	887	278	43,348	65,163	3,945	-34,310
618+50	61850.00	50.00	110.43	48.00	434.23	150.00	202	89	804	278	43,550	66,168	4,222	-35,201
619+00	61900.00	50.00	120.17	48.00	337.06	150.00	214	89	714	278	43,764	67,060	4,500	-35,970
619+50	61950.00	50.00	234.03	48.00	270.20	24.00	328	89	562	161	44,091	67,763	4,661	-36,433
620+00	62000.00	50.00	330.68	48.00	79.62	24.00	523	89	324	44	44,614	68,168	4,706	-36,404
620+50	62050.00	50.00	387.57	48.00	31.35	24.00	665	89	103	44	45,279	68,297	4,750	-35,956
621+00	62100.00	50.00	295.07	48.00	24.03	24.00	632	89	51	44	45,911	68,361	4,795	-35,477
621+30	62130.00	30.00	293.41	48.00	19.25	24.00	327	53	24	27	46,238	68,391	4,821	-35,234
621+50	62150.00	20.00	223.01	48.00	10.60	24.00	191	36	11	18	46,430	68,405	4,839	-35,092
622+00	62200.00	50.00	192.26	48.00	12.57	24.00	385	89	21	44	46,814	68,431	4,884	-34,823
622+50	62250.00	50.00	157.25	48.00	12.38	24.00	324	89	23	44	47,138	68,460	4,928	-34,617
623+00	62300.00	50.00	129.63	48.00	11.50	24.00	266	89	22	44	47,403	68,488	4,972	-34,468
623+50	62350.00	50.00	116.16	48.00	11.90	24.00	228	89	22	44	47,631	68,515	5,017	-34,357
624+00	62400.00	50.00	103.02	48.00	12.01	24.00	203	89	22	44	47,834	68,543	5,061	-34,270
624+50	62450.00	50.00	116.32	48.00	9.68	24.00	203	89	20	44	48,037	68,568	5,106	-34,181
625+00	62500.00	50.00	78.29	0.00	14.45	24.00	180	44	22	44	48,217	68,596	5,150	-34,073
625+50	62550.00	50.00	108.92	0.00	9.05	24.00	173	0	22	44	48,391	68,623	5,195	-33,927
626+00	62600.00	50.00	128.56	0.00	11.37	24.00	220	0	19	44	48,611	68,646	5,239	-33,731
626+50	62650.00	50.00	66.03	0.00	10.40	0.00	180	0	20	22	48,791	68,672	5,261	-33,576
627+00	62700.00	50.00	1.87	0.00	2.72	0.00	63	0	12	0	48,854	68,687	5,261	-33,528
627+50	62750.00	50.00	86.53	0.00	0.00	0.00	82	0	3	0	48,935	68,690	5,261	-33,449
628+00	62800.00	50.00	104.36	0.00	0.00	0.00	177	0	0	0	49,112	68,690	5,261	-33,273
628+50	62850.00	50.00	45.96	0.00	0.00	0.00	139	0	0	0	49,251	68,690	5,261	-33,134
629+00	62900.00	50.00	35.83	0.00	0.00	0.00	76	0	0	0	49,327	68,690	5,261	-33,058
629+50	62950.00	50.00	22.75	0.00	2.31	0.00	54	0	2	0	49,381	68,693	5,261	-33,006
630+00	63000.00	50.00	20.01	0.00	1.14	0.00	40	0	3	0	49,421	68,697	5,261	-32,971
630+50	63050.00	50.00	21.74	0.00	0.59	0.00	39	0	2	0	49,460	68,699	5,261	-32,934
631+00	63100.00	50.00	19.50	0.00	0.65	0.00	38	0	1	0	49,498	68,700	5,261	-32,897
631+50	63150.00	50.00	14.59	0.00	1.61	0.00	32	0	2	0	49,529	68,703	5,261	-32,868
632+00	63200.00	50.00	13.13	0.00	1.16	0.00	26	0	3	0	49,555	68,706	5,261	-32,846
632+50	63250.00	50.00	17.60	0.00	0.03	0.00	28	0	1	0	49,583	68,707	5,261	-32,819

Division 2 - IH 94 EB (STAGE 2)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
633+00	63300.00	50.00	17.09	0.00	0.00	0.00	32	0	0	0	49,616	68,707	5,261	-32,787
633+50	63350.00	50.00	16.15	0.00	0.45	0.00	31	0	0	0	49,646	68,708	5,261	-32,756
634+00	63400.00	50.00	15.10	0.00	0.48	0.00	29	0	1	0	49,675	68,709	5,261	-32,729
634+50	63450.00	50.00	14.15	0.00	0.88	0.00	27	0	1	0	49,702	68,711	5,261	-32,703
635+00	63500.00	50.00	15.09	0.00	0.37	0.00	27	0	1	0	49,729	68,712	5,261	-32,677
635+50	63550.00	50.00	17.62	0.00	0.73	0.00	30	0	1	0	49,760	68,713	5,261	-32,648
636+00	63600.00	50.00	19.45	0.00	0.08	0.00	34	0	1	0	49,794	68,714	5,261	-32,615
							COLUMN TOTALS	49,794	13,695	54,971	5,261			

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

Division 3 - IH 94 WB (STAGE 3)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
525+42	52542.00	0.00	111.03	43.00	0.00	0.00	0	0	0	0	0	0	0	0
525+50	52550.00	8.00	111.10	43.00	0.00	0.00	33	13	0	0	33	0	0	20
526+00	52600.00	50.00	106.61	43.00	4.11	0.00	202	80	4	0	234	5	0	137
526+50	52650.00	50.00	103.83	43.00	9.91	0.00	195	80	13	0	429	21	0	236
527+00	52700.00	50.00	104.23	43.00	9.73	0.00	193	80	18	0	622	44	0	327
527+50	52750.00	50.00	101.23	43.00	13.58	0.00	190	80	22	0	812	71	0	410
528+00	52800.00	50.00	100.79	43.00	14.72	0.00	187	80	26	0	999	103	0	485
528+50	52850.00	50.00	90.19	43.00	18.83	0.00	177	80	31	0	1,176	142	0	543
529+00	52900.00	50.00	92.46	43.00	23.99	0.00	169	80	40	0	1,345	192	0	583
529+50	52950.00	50.00	94.20	43.00	36.09	0.00	173	80	56	0	1,518	261	0	607
530+00	53000.00	50.00	95.29	43.00	48.85	0.00	175	80	79	0	1,694	360	0	604
530+50	53050.00	50.00	99.02	43.00	64.33	0.00	180	80	105	0	1,873	491	0	574
531+00	53100.00	50.00	98.58	43.00	63.68	0.00	183	80	119	0	2,056	639	0	529
531+50	53150.00	50.00	97.60	43.00	58.73	0.00	182	80	113	0	2,238	781	0	489
532+00	53200.00	50.00	102.85	43.00	55.66	0.00	186	80	106	0	2,424	913	0	463
532+50	53250.00	50.00	102.03	43.00	59.58	0.00	190	80	107	0	2,613	1,046	0	439
533+00	53300.00	50.00	96.17	43.00	42.52	0.00	184	80	95	0	2,797	1,164	0	425
533+50	53350.00	50.00	99.61	43.00	31.78	0.00	181	80	69	0	2,978	1,250	0	441
534+00	53400.00	50.00	98.16	43.00	28.07	0.00	183	80	55	0	3,161	1,320	0	475
534+50	53450.00	50.00	97.32	43.00	28.22	0.00	181	80	52	0	3,342	1,385	0	511
535+00	53500.00	50.00	97.64	43.00	25.45	0.00	181	80	50	0	3,523	1,447	0	550
535+50	53550.00	50.00	95.40	43.00	40.17	0.00	179	80	61	0	3,702	1,523	0	573
536+00	53600.00	50.00	92.95	43.00	39.78	0.00	174	80	74	0	3,876	1,615	0	575
536+50	53650.00	50.00	93.64	43.00	33.78	0.00	173	80	68	0	4,049	1,701	0	583
537+00	53700.00	50.00	90.79	43.00	48.90	0.00	171	80	77	0	4,219	1,796	0	579
537+50	53750.00	50.00	93.16	43.00	71.32	0.00	170	80	111	0	4,390	1,935	0	530
538+00	53800.00	50.00	94.28	43.00	76.81	0.00	174	80	137	0	4,563	2,107	0	453
538+50	53850.00	50.00	91.37	43.00	81.83	0.00	172	80	147	0	4,735	2,291	0	362
539+00	53900.00	50.00	93.14	43.00	52.03	0.00	171	80	124	0	4,906	2,445	0	298
539+50	53950.00	50.00	93.55	43.00	41.21	0.00	173	80	86	0	5,079	2,553	0	283
540+00	54000.00	50.00	95.32	43.00	38.97	0.00	175	80	74	0	5,254	2,646	0	286
540+50	54050.00	50.00	95.64	43.00	30.05	0.00	177	80	64	0	5,431	2,726	0	303
541+00	54100.00	50.00	95.34	43.00	28.98	0.00	177	80	55	0	5,607	2,794	0	332
541+50	54150.00	50.00	97.50	43.00	26.80	0.00	179	80	52	0	5,786	2,859	0	366
542+00	54200.00	50.00	96.08	43.00	21.98	0.00	179	80	45	0	5,965	2,915	0	409
542+50	54250.00	50.00	99.37	43.00	18.58	0.00	181	80	38	0	6,146	2,962	0	464
543+00	54300.00	50.00	104.64	43.00	10.81	0.00	189	80	27	0	6,335	2,996	0	539
543+50	54350.00	50.00	109.91	43.00	7.88	0.00	199	80	17	0	6,534	3,018	0	636
544+00	54400.00	50.00	113.11	43.00	5.75	0.00	207	80	13	0	6,740	3,034	0	748
544+50	54450.00	50.00	119.77	43.00	1.15	0.00	216	80	6	0	6,956	3,042	0	876
545+00	54500.00	50.00	123.37	43.00	0.83	0.00	225	80	2	0	7,181	3,044	0	1,019
545+50	54550.00	50.00	126.15	43.00	0.00	0.00	231	80	1	0	7,412	3,045	0	1,169
546+00	54600.00	50.00	126.75	43.00	0.00	0.00	234	80	0	0	7,646	3,045	0	1,324
546+50	54650.00	50.00	131.27	43.00	0.00	0.00	239	80	0	0	7,885	3,045	0	1,483
547+00	54700.00	50.00	137.61	43.00	0.00	0.00	249	80	0	0	8,134	3,045	0	1,652
547+50	54750.00	50.00	123.79	43.00	0.00	0.00	242	80	0	0	8,376	3,045	0	1,815
548+00	54800.00	50.00	123.99	43.00	0.00	0.00	229	80	0	0	8,606	3,045	0	1,965
548+50	54850.00	50.00	121.16	43.00	0.00	0.00	227	80	0	0	8,833	3,045	0	2,112
549+00	54900.00	50.00	119.25	43.00	0.00	0.00	223	80	0	0	9,055	3,045	0	2,255
549+50	54950.00	50.00	112.88	43.00	0.00	0.00	215	80	0	0	9,270	3,045	0	2,390
550+00	55000.00	50.00	112.60	43.00	0.00	0.00	209	80	0	0	9,479	3,045	0	2,519
550+50	55050.00	50.00	97.87	43.00	0.00	0.00	195	80	0	0	9,674	3,045	0	2,635
551+00	55100.00	50.00	98.19	43.00	0.13	0.00	182	80	0	0	9,855	3,045	0	2,736
551+50	55150.00	50.00	97.70	25.00	0.55	0.00	181	63	1	0	10,037	3,046	0	2,854
552+00	55200.00	50.00	90.67	25.00	1.04	0.00	174	46	1	0	10,211	3,048	0	2,980
552+50	55250.00	50.00	82.19	25.00	2.30	0.00	160	46	3	0	10,371	3,052	0	3,090
553+00	55300.00	50.00	71.46	8.00	1.60	0.00	142	31	4	0	10,513	3,056	0	3,197
553+50	55350.00	50.00	23.73	0.00	2.88	0.00	88	7	4	0	10,602	3,061	0	3,273
554+00	55400.00	50.00	19.54	0.00	6.50	0.00	40	0	9	0	10,642	3,072	0	3,302
554+50	55450.00	50.00	16.77	0.00	8.68	0.00	34	0	14	0	10,675	3,090	0	3,318
555+00	55500.00	50.00	16.01	0.00	15.66	0.00	30	0	23	0	10,706	3,118	0	3,320
555+50	55550.00	50.00	16.01	0.00	8.08	0.00	30	0	22	0	10,735	3,145	0	3,323
556+00	55600.00	50.00	16.01	0.00	13.78	0.00	30	0	20	0	10,765	3,171	0	3,327
556+50	55650.00	50.00	16.01	0.00	19.88	0.00	30	0	31	0	10,795	3,210	0	3,318
557+00	55700.00	50.00	16.01	0.00	22.88	0.00	30	0	40	0	10,824	3,259	0	3,298
557+50	55750.00	50.00	16.01	0.00	29.12	0.00	30	0	48	0	10,854	3,319	0	3,267
558+00	55800.00	50.00	29.49	0.00	6.54	0.00	42	0	33	0	10,896	3,361	0	3,268
558+50	55850.00	50.00	7.01	0.00	20.04	0.00	34	0	25	0	10,930	3,391	0	3,271
559+00	55900.00	50.00	7.01	0.00	24.59	0.00	13	0	41	0	10,943	3,443	0	3,232
559+50	55950.00	50.00	7.01	0.00	29.85	0.00	13	0	50	0	10,956	3,506	0	3,182
560+00	56000.00	50.00	7.01	0.00	36.42	0.00	13	0	61	0	10,969	3,583	0	3,119
560+50	56050.00	50.00	7.01	0.00	44.27	0.00	13	0	75	0	10,982	3,676	0	3,038
561+00	56100.00	50.00	7.01	0.00	50.37	0.00	13	0	88	0	10,995	3,786	0	2,942
561+50	56150.00	50.00	7.01	0.00	56.30	0.00	13	0	99	0	11,008	3,909	0	2,831
562+00	56200.00	50.00	7.01	0.00	62.75	0.00	13	0	110	0	11,021	4,047	0	2,706

Division 3 - IH 94 WB (STAGE 3)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
562+50	56250.00	50.00	7.01	0.00	69.05	0.00	13	0	122	0	11,034	4,199	0	2,567
563+00	56300.00	50.00	7.01	0.00	74.62	0.00	13	0	133	0	11,047	4,366	0	2,413
563+50	56350.00	50.00	7.01	0.00	77.05	0.00	13	0	140	0	11,060	4,541	0	2,251
564+00	56400.00	50.00	7.01	0.00	80.30	0.00	13	0	146	0	11,073	4,723	0	2,082
564+25	56425.00	25.00	330.28	0.00	83.27	0.00	156	0	76	0	11,229	4,818	0	2,143
564+50	56450.00	25.00	280.98	0.00	87.12	0.00	283	0	79	0	11,512	4,917	0	2,328
564+75	56475.00	25.00	7.01	0.00	87.12	0.00	133	0	81	0	11,645	5,017	0	2,360
565+00	56500.00	25.00	7.01	0.00	84.87	0.00	6	0	80	0	11,651	5,117	0	2,267
565+50	56550.00	50.00	7.01	0.00	85.55	0.00	13	0	158	0	11,664	5,314	0	2,083
566+00	56600.00	50.00	7.01	0.00	84.74	0.00	13	0	158	0	11,677	5,511	0	1,899
566+50	56650.00	50.00	7.01	0.00	88.82	0.00	13	0	161	0	11,690	5,712	0	1,711
567+00	56700.00	50.00	7.01	0.00	94.91	0.00	13	0	170	0	11,703	5,925	0	1,511
567+50	56750.00	50.00	7.01	0.00	99.97	0.00	13	0	180	0	11,716	6,150	0	1,299
568+00	56800.00	50.00	7.01	0.00	109.52	0.00	13	0	194	0	11,729	6,393	0	1,069
568+50	56850.00	50.00	7.01	0.00	100.54	0.00	13	0	194	0	11,742	6,636	0	839
569+00	56900.00	50.00	0.00	0.00	0.00	0.00	6	0	93	0	11,749	6,752	0	729
569+50	56950.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	11,749	6,752	0	729
570+00	57000.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	11,749	6,752	0	729
570+13.5	57013.50	13.50	7.04	0.00	97.16	0.00	2	0	24	0	11,751	6,783	0	700
570+25	57025.00	11.50	7.01	0.00	96.77	0.00	3	0	41	0	11,754	6,834	0	652
570+50	57050.00	25.00	7.01	0.00	95.97	0.00	6	0	89	0	11,760	6,946	0	547
571+00	57100.00	50.00	7.01	0.00	94.24	0.00	13	0	176	0	11,773	7,166	0	340
571+50	57150.00	50.00	7.01	0.00	84.78	0.00	13	0	166	0	11,786	7,373	0	145
571+75	57175.00	25.00	79.78	0.00	91.94	0.00	40	0	82	0	11,826	7,476	0	83
572+00	57200.00	25.00	271.09	0.00	83.95	0.00	162	0	81	0	11,989	7,577	0	144
572+25	57225.00	25.00	315.13	0.00	62.53	0.00	271	0	68	0	12,260	7,662	0	331
572+50	57250.00	25.00	11.87	0.00	38.20	0.00	151	0	47	0	12,411	7,720	0	424
573+00	57300.00	50.00	8.87	0.00	43.89	0.00	19	0	76	0	12,431	7,815	0	348
573+50	57350.00	50.00	5.87	0.00	38.56	0.00	14	0	76	0	12,444	7,911	0	266
574+00	57400.00	50.00	2.87	0.00	30.28	0.00	8	0	64	0	12,452	7,990	0	195
574+50	57450.00	50.00	2.87	0.00	27.29	0.00	5	0	53	0	12,458	8,057	0	133
575+00	57500.00	50.00	2.87	0.00	26.04	0.00	5	0	49	0	12,463	8,119	0	77
575+50	57550.00	50.00	2.87	0.00	24.70	0.00	5	0	47	0	12,468	8,178	0	23
576+00	57600.00	50.00	2.87	0.00	23.92	0.00	5	0	45	0	12,474	8,234	0	-28
576+50	57650.00	50.00	2.87	0.00	22.42	0.00	5	0	43	0	12,479	8,287	0	-76
577+00	57700.00	50.00	2.87	0.00	20.93	0.00	5	0	40	0	12,484	8,338	0	-121
577+50	57750.00	50.00	6.14	0.00	7.74	0.00	8	0	27	0	12,493	8,371	0	-146
578+00	57800.00	50.00	0.00	0.00	7.44	0.00	6	0	14	0	12,498	8,388	0	-157
578+50	57850.00	50.00	0.00	0.00	7.47	0.00	0	0	14	0	12,498	8,406	0	-175
579+00	57900.00	50.00	0.00	0.00	7.12	0.00	0	0	14	0	12,498	8,423	0	-192
579+50	57950.00	50.00	0.00	0.00	5.54	0.00	0	0	12	0	12,498	8,437	0	-206
579+75	57975.00	25.00	0.00	0.00	4.68	0.00	0	0	5	0	12,498	8,443	0	-212
580+00	58000.00	25.00	178.76	48.00	4.04	0.00	83	22	4	0	12,581	8,448	0	-157
580+50	58050.00	50.00	281.34	48.00	2.80	0.00	426	89	6	0	13,007	8,456	0	173
581+00	58100.00	50.00	163.56	48.00	1.79	0.00	412	89	4	0	13,419	8,461	0	490
581+25	58125.00	25.00	147.29	0.00	1.36	0.00	144	22	1	0	13,563	8,463	0	610
581+50	58150.00	25.00	0.00	0.00	0.77	0.00	68	0	1	0	13,631	8,464	0	677
582+00	58200.00	50.00	0.00	0.00	0.00	0.00	0	0	1	0	13,631	8,465	0	676
582+50	58250.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	13,631	8,465	0	676
583+00	58300.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	13,631	8,465	0	676
583+50	58350.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	13,631	8,465	0	676
584+00	58400.00	50.00	0.15	0.00	0.00	0.00	0	0	0	0	13,631	8,465	0	676
584+50	58450.00	50.00	0.21	0.00	0.00	0.00	0	0	0	0	13,632	8,465	0	677
585+00	58500.00	50.00	1.08	0.00	0.00	0.00	1	0	0	0	13,633	8,465	0	678
585+50	58550.00	50.00	1.88	0.00	0.00	0.00	3	0	0	0	13,636	8,465	0	681
586+00	58600.00	50.00	3.25	0.00	0.00	0.00	5	0	0	0	13,640	8,465	0	685
586+25	58625.00	25.00	135.40	0.00	0.00	0.00	64	0	0	0	13,705	8,465	0	750
586+50	58650.00	25.00	257.67	48.00	0.00	0.00	182	22	0	0	13,886	8,465	0	909
586+75	58675.00	25.00	288.38	48.00	0.00	0.00	253	44	0	0	14,139	8,465	0	1,118
587+00	58700.00	25.00	145.58	48.00	0.00	0.00	201	44	0	0	14,340	8,465	0	1,274
587+25	58725.00	25.00	8.51	0.00	0.00	0.00	71	22	0	0	14,412	8,465	0	1,323
587+50	58750.00	25.00	9.22	0.00	0.00	0.00	8	0	0	0	14,420	8,465	0	1,331
588+00	58800.00	50.00	9.57	0.00	0.00	0.00	17	0	0	0	14,437	8,465	0	1,349
588+50	58850.00	50.00	13.43	0.00	0.00	0.00	21	0	0	0	14,458	8,465	0	1,370
589+00	58900.00	50.00	14.42	0.00	0.00	0.00	26	0	0	0	14,484	8,465	0	1,396
589+50	58950.00	50.00	16.42	0.00	0.00	0.00	29	0	0	0	14,513	8,465	0	1,425
590+00	59000.00	50.00	16.92	0.00	0.00	0.00	31	0	0	0	14,544	8,465	0	1,455
590+50	59050.00	50.00	18.68	0.00	0.00	0.00	33	0	0	0	14,577	8,465	0	1,488
591+00	59100.00	50.00	19.33	48.00	0.00	0.00	35	44	0	0	14,612	8,465	0	1,479
591+25	59125.00	25.00	198.79	48.00	0.00	0.00	101	44	0	0	14,713	8,465	0	1,536
591+50	59150.00	25.00	367.37	48.00	0.00	0.00	262	44	0	0	14,975	8,465	0	1,753
592+00	59200.00	50.00	356.47	48.00	0.00	0.00	670	89	0	0	15,645	8,465	0	2,335
592+25	59225.00	25.00	218.56	0.00	0.00	0.00	266	22	0	0	15,911	8,465	0	2,579
592+50	59250.00	25.00	26.11	0.00	0.00	0.00	113	0	0	0	16,025	8,465	0	2,692
593+00	59300.00	50.00	25.89	18.00	0.00	0.00	48	17	0	0	16,073	8,465	0	2,723

(CONTINUED ON NEXT SHEET)

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

Division 3 - IH 94 WB (STAGE 3)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
593+50	59350.00	50.00	25.72	18.00	0.00	0.00	48	33	0	0	16,120	8,465	0	2,738
594+00	59400.00	50.00	27.15	18.00	0.00	0.00	49	33	0	0	16,169	8,465	0	2,753
594+50	59450.00	50.00	29.48	18.00	0.00	0.00	52	33	0	0	16,222	8,465	0	2,773
595+00	59500.00	50.00	31.83	18.00	0.00	0.00	57	33	0	0	16,279	8,465	0	2,796
595+50	59550.00	50.00	33.49	18.00	0.00	0.00	60	33	0	0	16,339	8,465	0	2,823
596+00	59600.00	50.00	41.70	18.00	0.00	0.00	70	33	0	0	16,409	8,465	0	2,859
596+50	59650.00	50.00	51.00	18.00	0.00	0.00	86	33	0	0	16,495	8,465	0	2,912
597+00	59700.00	50.00	65.44	18.00	0.01	0.00	108	33	0	0	16,602	8,465	0	2,986
597+50	59750.00	50.00	81.30	18.00	0.00	0.00	136	33	0	0	16,738	8,465	0	3,089
598+00	59800.00	50.00	89.63	18.00	0.00	0.00	158	33	0	0	16,897	8,465	0	3,214
598+50	59850.00	50.00	93.67	18.00	0.00	0.00	170	33	0	0	17,066	8,465	0	3,350
599+00	59900.00	50.00	124.55	18.00	3.70	0.00	202	33	3	0	17,268	8,470	0	3,515
599+50	59950.00	50.00	136.26	18.00	2.27	0.00	241	33	6	0	17,510	8,477	0	3,716
600+00	60000.00	50.00	134.01	18.00	2.26	0.00	250	33	4	0	17,760	8,482	0	3,928
600+25	60025.00	25.00	134.56	48.00	1.63	0.00	124	31	2	0	17,884	8,484	0	4,019
600+50	60050.00	25.00	230.92	48.00	1.10	0.00	169	44	1	0	18,054	8,486	0	4,142
600+80	60080.00	30.00	292.52	48.00	11.04	0.00	291	53	7	0	18,344	8,494	0	4,371
601+00	60100.00	20.00	246.57	48.00	6.96	0.00	200	36	7	0	18,544	8,502	0	4,527
601+25	60125.00	25.00	158.65	48.00	4.70	0.00	188	44	5	0	18,732	8,509	0	4,664
601+50	60150.00	25.00	161.24	48.00	4.06	0.00	148	44	4	0	18,880	8,514	0	4,762
602+00	60200.00	50.00	164.95	48.00	2.16	0.00	302	89	6	0	19,182	8,521	0	4,968
602+50	60250.00	50.00	166.49	48.00	1.71	0.00	307	89	4	0	19,489	8,526	0	5,182
603+00	60300.00	50.00	169.82	48.00	0.61	0.00	311	89	2	0	19,800	8,529	0	5,401
603+50	60350.00	50.00	166.29	48.00	0.56	0.00	311	89	1	0	20,111	8,530	0	5,622
604+00	60400.00	50.00	161.47	48.00	0.56	0.00	303	89	1	0	20,415	8,531	0	5,836
604+50	60450.00	50.00	168.67	48.00	21.09	0.00	306	89	20	0	20,720	8,556	0	6,027
605+00	60500.00	50.00	166.04	48.00	1.74	24.00	310	89	21	22	21,030	8,583	22	6,222
605+50	60550.00	50.00	161.29	48.00	9.79	24.00	303	89	11	44	21,333	8,596	67	6,423
606+00	60600.00	50.00	158.87	48.00	12.55	24.00	296	89	21	44	21,630	8,622	111	6,605
606+50	60650.00	50.00	147.90	48.00	16.28	24.00	284	89	27	44	21,914	8,655	156	6,766
607+00	60700.00	50.00	145.69	48.00	15.82	24.00	272	89	30	44	22,186	8,692	200	6,912
607+50	60750.00	50.00	138.66	48.00	13.57	24.00	263	89	27	44	22,449	8,726	244	7,052
608+00	60800.00	50.00	132.28	48.00	12.01	24.00	251	89	24	44	22,700	8,756	289	7,185
608+50	60850.00	50.00	123.88	48.00	11.68	24.00	237	89	22	44	22,937	8,783	333	7,306
609+00	60900.00	50.00	119.41	48.00	10.58	24.00	225	89	21	44	23,162	8,809	378	7,416
609+50	60950.00	50.00	112.67	48.00	9.02	24.00	215	89	18	44	23,377	8,832	422	7,520
610+00	61000.00	50.00	111.88	48.00	6.04	24.00	208	89	14	44	23,585	8,849	467	7,621
610+50	61050.00	50.00	104.16	48.00	7.06	24.00	200	89	12	44	23,785	8,865	511	7,717
611+00	61100.00	50.00	101.63	48.00	13.31	24.00	191	89	19	44	23,976	8,888	556	7,795
611+50	61150.00	50.00	97.34	48.00	1.25	24.00	184	89	13	44	24,160	8,905	600	7,874
612+00	61200.00	50.00	97.60	48.00	5.25	24.00	181	89	6	44	24,341	8,912	644	7,958
612+50	61250.00	50.00	124.38	48.00	28.94	24.00	206	89	32	44	24,546	8,952	689	8,035
613+00	61300.00	50.00	127.35	48.00	37.23	24.00	233	89	61	44	24,779	9,029	733	8,103
613+50	61350.00	50.00	144.50	48.00	60.86	0.00	252	89	91	22	25,031	9,142	756	8,152
614+00	61400.00	50.00	133.01	48.00	95.65	0.00	257	89	145	0	25,288	9,323	756	8,139
614+50	61450.00	50.00	136.30	48.00	140.74	0.00	249	89	219	0	25,537	9,597	756	8,026
615+00	61500.00	50.00	139.54	48.00	175.32	0.00	255	89	293	0	25,793	9,963	756	7,826
615+50	61550.00	50.00	6.64	0.00	0.00	0.00	135	44	162	0	25,928	10,166	756	7,714
615+75	61575.00	25.00	4.44	0.00	0.00	0.00	5	0	0	0	25,933	10,166	756	7,719
616+00	61600.00	25.00	0.00	0.00	0.00	0.00	2	0	0	0	25,935	10,166	756	7,722
616+17	61617.00	17.00	1.86	0.00	0.00	0.00	1	0	0	0	25,936	10,166	756	7,722
616+50	61650.00	33.00	103.37	48.00	7.07	150.00	64	29	4	92	26,000	10,171	847	7,752
616+60	61660.00	10.00	144.18	48.00	359.78	150.00	46	18	68	56	26,046	10,256	903	7,695
617+00	61700.00	40.00	155.09	48.00	383.22	150.00	222	71	550	222	26,268	10,944	1,125	7,157
617+50	61750.00	50.00	152.51	48.00	384.15	150.00	285	89	711	278	26,552	11,832	1,403	6,465
618+00	61800.00	50.00	154.54	48.00	371.12	150.00	284	89	699	278	26,837	12,706	1,681	5,787
618+50	61850.00	50.00	154.07	48.00	328.09	150.00	286	89	647	278	27,122	13,516	1,958	5,174
619+00	61900.00	50.00	157.15	48.00	287.19	150.00	288	89	570	278	27,411	14,228	2,236	4,661
619+50	61950.00	50.00	146.23	48.00	307.74	24.00	281	89	551	161	27,691	14,916	2,397	4,165
620+00	62000.00	50.00	155.81	48.00	256.92	24.00	280	89	523	44	27,971	15,570	2,442	3,702
620+50	62050.00	50.00	149.33	48.00	271.11	24.00	283	89	489	44	28,254	16,181	2,486	3,284
621+00	62100.00	50.00	149.45	48.00	186.28	24.00	277	89	424	44	28,530	16,710	2,531	2,943
621+50	62150.00	50.00	173.47	48.00	70.46	24.00	299	89	238	44	28,829	17,007	2,575	2,856
621+75	62175.00	25.00	170.03	48.00	56.91	24.00	159	44	59	22	28,988	17,081	2,597	2,897
622+00	62200.00	25.00	145.72	48.00	59.18	24.00	146	44	54	22	29,135	17,148	2,619	2,931
622+25	62225.00	25.00	168.03	48.00	51.47	24.00	145	44	51	22	29,280	17,212	2,642	2,968
622+50	62250.00	25.00	186.65	48.00	52.03	24.00	164	44	48	22	29,444	17,272	2,664	3,028
623+00	62300.00	50.00	235.66	48.00	40.77	24.00	391	89	86	44	29,835	17,380	2,708	3,223
623+50	62350.00	50.00	274.67	48.00	25.09	24.00	473	89	61	44	30,308	17,456	2,753	3,530
624+00	62400.00	50.00	324.23	48.00	19.78	24.00	555	89	42	44	30,862	17,508	2,797	3,944
624+50	62450.00	50.00	443.69	48.00	18.78	24.00	711	89	36	44	31,573	17,552	2,842	4,521
625+00	62500.00	50.00	375.58	48.00	16.23	24.00	759	89	32	44	32,332	17,593	2,886	5,150
625+50	62550.00	50.00	218.93	48.00	10.15	0.00	550	89	24	22	32,882	17,624	2,908	5,581
625+75	62575.00	25.00	139.59	48.00	10.22	0.00	166	44	9	0	33,048	17,635	2,908	5,691
626+00	62600.00	25.00	105.70	48.00	10.40	0.00	114	44	10	0	33,162	17,647	2,908	5,748
626+50	62650.00	50.00	118.50	48.00	0.62	0.00	208	89	10	0	33,369	17,660	2,908	5,854
627+00	62700.00	50.00	109.73	48.00	0.00	0.00	211	89	1	0	33,581	17,661	2,908	5,976
					COLUMN TOTALS		33,581	9,944	14,129	2,908				

Division 3 - 130TH STREET (STAGE 3)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
107+00	10700.00	0.00	267.82	0.00	0.00	0.00	0	0	0	0	0	0	0	0
107+25	10725.00	25.00	253.60	0.00	0.00	0.00	241	0	0	0	241	0	0	241
107+50	10750.00	25.00	431.07	0.00	0.00	0.00	317	0	0	0	558	0	0	558
108+00	10800.00	50.00	222.23	0.00	1.46	0.00	605	0	1	0	1,163	2	0	1,162
108+50	10850.00	50.00	3.26	0.00	0.12	0.00	209	0	1	0	1,372	4	0	1,369
					COLUMN TOTALS		1,372	0	3	0				

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

Division 4 - IH 94 WB (STAGE 4)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
515+39	51539.00	0.00	9.61	44.00	1.06	0.00	0	0	0	0	0	0	0	0
515+50	51550.00	11.00	10.45	44.00	1.94	0.00	4	18	1	0	4	1	0	-15
516+00	51600.00	50.00	13.46	44.00	2.07	0.00	22	81	4	0	26	5	0	-79
516+50	51650.00	50.00	21.27	44.00	1.57	0.00	32	81	3	0	58	10	0	-132
517+00	51700.00	50.00	26.05	44.00	1.08	0.00	44	81	2	0	102	13	0	-173
517+50	51750.00	50.00	28.71	44.00	0.62	0.00	51	81	2	0	153	15	0	-206
518+00	51800.00	50.00	29.12	44.00	0.00	0.00	54	81	1	0	206	15	0	-234
518+50	51850.00	50.00	38.79	44.00	0.00	0.00	63	81	0	0	269	15	0	-253
519+00	51900.00	50.00	52.13	44.00	0.00	0.00	84	81	0	0	354	15	0	-250
519+50	51950.00	50.00	62.47	44.00	0.00	0.00	106	81	0	0	460	15	0	-226
520+00	52000.00	50.00	74.71	44.00	0.00	0.00	127	81	0	0	587	15	0	-180
520+50	52050.00	50.00	85.85	44.00	1.05	0.00	149	81	1	0	735	17	0	-114
521+00	52100.00	50.00	91.21	33.00	0.00	0.00	164	71	1	0	899	18	0	-23
521+50	52150.00	50.00	86.70	33.00	0.00	0.00	165	61	0	0	1,064	18	0	81
522+00	52200.00	50.00	80.40	33.00	0.00	0.00	155	61	0	0	1,219	18	0	175
522+50	52250.00	50.00	70.71	33.00	0.00	0.00	140	61	0	0	1,359	18	0	253
523+00	52300.00	50.00	73.77	22.00	0.00	0.00	134	51	0	0	1,492	18	0	336
523+50	52350.00	50.00	78.32	22.00	0.00	0.00	141	41	0	0	1,633	18	0	436
524+00	52400.00	50.00	80.84	22.00	0.00	0.00	147	41	0	0	1,781	18	0	543
524+50	52450.00	50.00	91.39	22.00	0.00	0.00	159	41	0	0	1,940	18	0	662
525+00	52500.00	50.00	103.37	22.00	0.00	0.00	180	41	0	0	2,120	18	0	801
525+50	52550.00	50.00	151.53	22.00	0.00	0.00	236	41	0	0	2,356	18	0	997
526+00	52600.00	50.00	156.06	22.00	0.00	0.00	285	41	0	0	2,641	18	0	1,241
526+50	52650.00	50.00	163.92	22.00	0.00	0.00	296	41	0	0	2,937	18	0	1,496
527+00	52700.00	50.00	173.29	22.00	0.00	0.00	312	41	0	0	3,250	18	0	1,768
527+50	52750.00	50.00	174.77	22.00	0.00	0.00	322	41	0	0	3,572	18	0	2,049
528+00	52800.00	50.00	176.51	22.00	0.28	0.00	325	41	0	0	3,897	18	0	2,333
528+50	52850.00	50.00	178.57	22.00	0.00	0.00	329	41	0	0	4,226	18	0	2,621
529+00	52900.00	50.00	175.88	22.00	0.00	0.00	328	41	0	0	4,554	18	0	2,909
529+50	52950.00	50.00	175.02	22.00	0.00	0.00	325	41	0	0	4,879	18	0	3,193
530+00	53000.00	50.00	179.95	22.00	0.00	0.00	329	41	0	0	5,208	18	0	3,481
530+50	53050.00	50.00	185.73	22.00	0.00	0.00	339	41	0	0	5,546	18	0	3,779
531+00	53100.00	50.00	191.36	22.00	0.00	0.00	349	41	0	0	5,896	18	0	4,087
531+50	53150.00	50.00	192.16	22.00	0.00	0.00	355	41	0	0	6,251	18	0	4,401
532+00	53200.00	50.00	194.17	22.00	0.00	0.00	358	41	0	0	6,608	18	0	4,718
532+50	53250.00	50.00	199.12	22.00	0.00	0.00	364	41	0	0	6,973	18	0	5,042
533+00	53300.00	50.00	192.31	22.00	0.00	0.00	362	41	0	0	7,335	18	0	5,363
533+50	53350.00	50.00	198.46	22.00	0.00	0.00	362	41	0	0	7,697	18	0	5,684
534+00	53400.00	50.00	214.98	22.00	0.00	0.00	383	41	0	0	8,080	18	0	6,027
534+50	53450.00	50.00	125.88	22.00	0.00	0.00	316	41	0	0	8,395	18	0	6,301
535+00	53500.00	50.00	158.96	22.00	0.00	0.00	264	41	0	0	8,659	18	0	6,524
535+50	53550.00	50.00	166.24	22.00	0.00	0.00	301	41	0	0	8,960	18	0	6,785
536+00	53600.00	50.00	176.39	22.00	0.00	0.00	317	41	0	0	9,277	18	0	7,061
536+50	53650.00	50.00	206.58	22.00	0.00	0.00	355	41	0	0	9,632	18	0	7,375
537+00	53700.00	50.00	206.41	22.00	0.00	0.00	382	41	0	0	10,014	18	0	7,717
537+50	53750.00	50.00	204.11	22.00	0.00	0.00	380	41	0	0	10,394	18	0	8,056
538+00	53800.00	50.00	199.30	22.00	0.00	0.00	374	41	0	0	10,768	18	0	8,389
538+50	53850.00	50.00	198.53	22.00	0.00	0.00	368	41	0	0	11,136	18	0	8,717
539+00	53900.00	50.00	198.42	22.00	0.00	0.00	368	41	0	0	11,504	18	0	9,043
539+50	53950.00	50.00	191.27	22.00	0.00	0.00	361	41	0	0	11,865	18	0	9,363
540+00	54000.00	50.00	182.01	22.00	0.00	0.00	346	41	0	0	12,210	18	0	9,668
540+50	54050.00	50.00	174.13	22.00	0.00	0.00	330	41	0	0	12,540	18	0	9,957
541+00	54100.00	50.00	171.03	22.00	0.00	0.00	320	41	0	0	12,860	18	0	10,236
541+50	54150.00	50.00	171.06	22.00	0.00	0.00	317	41	0	0	13,176	18	0	10,512
542+00	54200.00	50.00	174.71	22.00	0.00	0.00	320	41	0	0	13,497	18	0	10,792
542+50	54250.00	50.00	174.67	22.00	0.00	0.00	323	41	0	0	13,820	18	0	11,074
543+00	54300.00	50.00	170.67	22.00	0.00	0.00	320	41	0	0	14,140	18	0	11,353
543+50	54350.00	50.00	172.89	22.00	0.00	0.00	318	41	0	0	14,458	18	0	11,631
544+00	54400.00	50.00	165.29	22.00	0.00	0.00	313	41	0	0	14,771	18	0	11,903
544+50	54450.00	50.00	156.20	22.00	0.00	0.00	298	41	0	0	15,069	18	0	12,160
545+00	54500.00	50.00	144.76	22.00	0.00	0.00	279	41	0	0	15,347	18	0	12,398
545+50	54550.00	50.00	144.41	22.00	0.00	0.00	268	41	0	0	15,615	18	0	12,625
546+00	54600.00	50.00	140.10	22.00	0.00	0.00	263	41	0	0	15,879	18	0	12,848
546+50	54650.00	50.00	138.63	22.00	0.00	0.00	258	41	0	0	16,137	18	0	13,065
547+00	54700.00	50.00	136.98	22.00	0.00	0.00	255	41	0	0	16,392	18	0	13,280
547+50	54750.00	50.00	133.15	22.00	0.00	0.00	250	41	0	0	16,642	18	0	13,489
548+00	54800.00	50.00	129.76	22.00	0.00	0.00	243	41	0	0	16,885	18	0	13,692
548+50	54850.00	50.00	124.32	22.00	0.00	0.00	235	41	0	0	17,121	18	0	13,886
549+00	54900.00	50.00	119.16	22.00	0.00	0.00	225	41	0	0	17,346	18	0	14,071
549+50	54950.00	50.00	106.10	22.00	0.00	0.00	209	41	0	0	17,555	18	0	14,239
550+00	55000.00	50.00	107.71	22.00	0.00	0.00	198	41	0	0	17,753	18	0	14,396
550+50	55050.00	50.00	107.64	22.00	0.00	0.00	199	41	0	0	17,952	18	0	14,555
551+00	55100.00	50.00	105.61	22.00	0.00	0.00	197	41	0	0	18,149	18	0	14,711
551+50	55150.00	50.00	100.57	22.00	0.00	0.00	191	41	0	0	18,340	18	0	14,861
552+00	55200.00	50.00	89.81	22.00	0.00	0.00	176	41	0	0	18,517	18	0	14,997

Division 4 - IH 94 WB (STAGE 4)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
552+50	55250.00	50.00	89.39	22.00	0.00	0.00	166	41	0	0	18,683	18	0	15,122
553+00	55300.00	50.00	80.21	22.00	0.00	0.00	157	41	0	0	18,840	18	0	15,238
553+50	55350.00	50.00	50.94	22.00	0.00	0.00	121	41	0	0	18,961	18	0	15,319
554+00	55400.00	50.00	51.54	22.00	0.00	0.00	95	41	0	0	19,056	18	0	15,373
554+50	55450.00	50.00	52.50	22.00	0.00	0.00	96	41	0	0	19,152	18	0	15,429
555+00	55500.00	50.00	52.85	22.00	0.00	0.00	98	41	0	0	19,250	18	0	15,486
555+50	55550.00	50.00	52.95	22.00	0.00	0.00	98	41	0	0	19,348	18	0	15,543
556+00	55600.00	50.00	52.30	22.00	0.00	0.00	97	41	0	0	19,445	18	0	15,600
556+50	55650.00	50.00	51.65	22.00	0.00	0.00	96	41	0	0	19,542	18	0	15,655
557+00	55700.00	50.00	45.84	22.00	0.00	0.00	90	41	0	0	19,632	18	0	15,705
557+50	55750.00	50.00	40.02	11.00	0.00	0.00	80	31	0	0	19,711	18	0	15,754
558+00	55800.00	50.00	34.29	11.00	0.00	0.00	69	20	0	0	19,780	18	0	15,802
558+50	55850.00	50.00	28.72	11.00	0.00	0.00	58	20	0	0	19,838	18	0	15,840
559+00	55900.00	50.00	23.40	11.00	0.00	0.00	48	20	0	0	19,887	18	0	15,868
559+50	55950.00	50.00	18.43	11.00	0.00	0.00	39	20	0	0	19,925	18	0	15,886
560+00	56000.00	50.00	14.18	11.00	0.00	0.00	30	20	0	0	19,956	18	0	15,896
560+50	56050.00	50.00	10.85	11.00	0.00	0.00	23	20	0	0	19,979	18	0	15,899
561+00	56100.00	50.00	8.28	11.00	0.00	0.00	18	20	0	0	19,996	18	0	15,896
561+50	56150.00	50.00	4.54	11.00	0.00	0.00	12	20	0	0	20,008	18	0	15,888
562+00	56200.00	50.00	4.16	11.00	0.00	0.00	8	20	0	0	20,016	18	0	15,875
562+50	56250.00	50.00	4.16	11.00	0.00	0.00	8	20	0	0	20,024	18	0	15,863
563+00	56300.00	50.00	4.16	11.00	0.00	0.00	8	20	0	0	20,032	18	0	15,850
563+50	56350.00	50.00	4.16	0.00	0.00	0.00	8	10	0	0	20,040	18	0	15,848
564+00	56400.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,047	18	0	15,855
564+50	56450.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,055	18	0	15,863
565+00	56500.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,063	18	0	15,871
565+50	56550.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,070	18	0	15,878
566+00	56600.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,078	18	0	15,886
566+50	56650.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,086	18	0	15,894
567+00	56700.00	50.00	4.16	0.00	0.00	0.00	8	0	0	0	20,093	18	0	15,901
567+50	56750.00	50.00	2.57	0.00	0.00	0.00	6	0	0	0	20,100	18	0	15,908
568+00	56800.00	50.00	2.03	0.00	0.00	0.00	4	0	0	0	20,104	18	0	15,912
568+50	56850.00	50.00	2.44	0.00	0.00	0.00	4	0	0	0	20,108	18	0	15,916
568+85	56885.00	35.00	2.44	0.00	0.00	0.00	3	0	0	0	20,111	18	0	15,919
569+00	56900.00	15.00	0.00	0.00	0.00	0.00	1	0	0	0	20,112	18	0	15,920
569+50	56950.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,112	18	0	15,920
570+00	57000.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,112	18	0	15,920
570+50	57050.00	50.00	2.23	0.00	0.00	0.00	2	0	0	0	20,114	18	0	15,922
571+00	57100.00	50.00	1.27	0.00	0.27	0.00	3	0	0	0	20,117	19	0	15,925
571+50	57150.00	50.00	1.07	0.00	7.04	0.00	2	0	7	0	20,119	27	0	15,919
572+00	57200.00	50.00	1.53	0.00	0.00	0.00	2	0	7	0	20,122	35	0	15,913
572+50	57250.00	50.00	1.76	0.00	0.00	0.00	3	0	0	0	20,125	35	0	15,916
573+00	57300.00	50.00	1.51	0.00	0.00	0.00	3	0	0	0	20,128	35	0	15,919
573+50	57350.00	50.00	1.31	0.00	0.07	0.00	3	0	0	0	20,130	35	0	15,922
574+00	57400.00	50.00	1.14	0.00	0.32	0.00	2	0	0	0	20,133	36	0	15,923
574+50	57450.00	50.00	0.97	0.00	0.43	0.00	2	0	1	0	20,135	37	0	15,924
575+00	57500.00	50.00	0.82	0.00	0.42	0.00	2	0	1	0	20,136	38	0	15,925
575+50	57550.00	50.00	0.60	0.00	0.92	0.00	1	0	1	0	20,138	39	0	15,925
576+00	57600.00	50.00	0.38	0.00	1.62	0.00	1	0	2	0	20,139	42	0	15,923
576+50	57650.00	50.00	0.38	0.00	2.37	0.00	1	0	4	0	20,139	47	0	15,919
577+00	57700.00	50.00	0.39	0.00	7.90	0.00	1	0	10	0	20,140	59	0	15,908
577+50	57750.00	50.00	0.63	0.00	2.20	0.00	1	0	9	0	20,141	70	0	15,897
578+00	57800.00	50.00	0.85	0.00	2.20	0.00	1	0	4	0	20,142	76	0	15,893
578+17	57817.00	17.00	0.92	0.00	0.00	0.00	1	0	1	0	20,143	76	0	15,893
578+50	57850.00	33.00	0.00	0.00	0.00	0.00	1	0	0	0	20,143	76	0	15,894
579+00	57900.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
579+50	57950.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
580+00	58000.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
580+50	58050.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
581+00	58100.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
581+50	58150.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
582+00	58200.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
582+50	58250.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
583+00	58300.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
583+50	58350.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
584+00	58400.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
584+50	58450.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
585+00	58500.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
585+50	58550.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
586+00	58600.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
586+50	58650.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
587+00	58700.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
587+50	58750.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
588+00	58800.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
588+50	58850.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.

(CONTINUED ON NEXT SHEET)

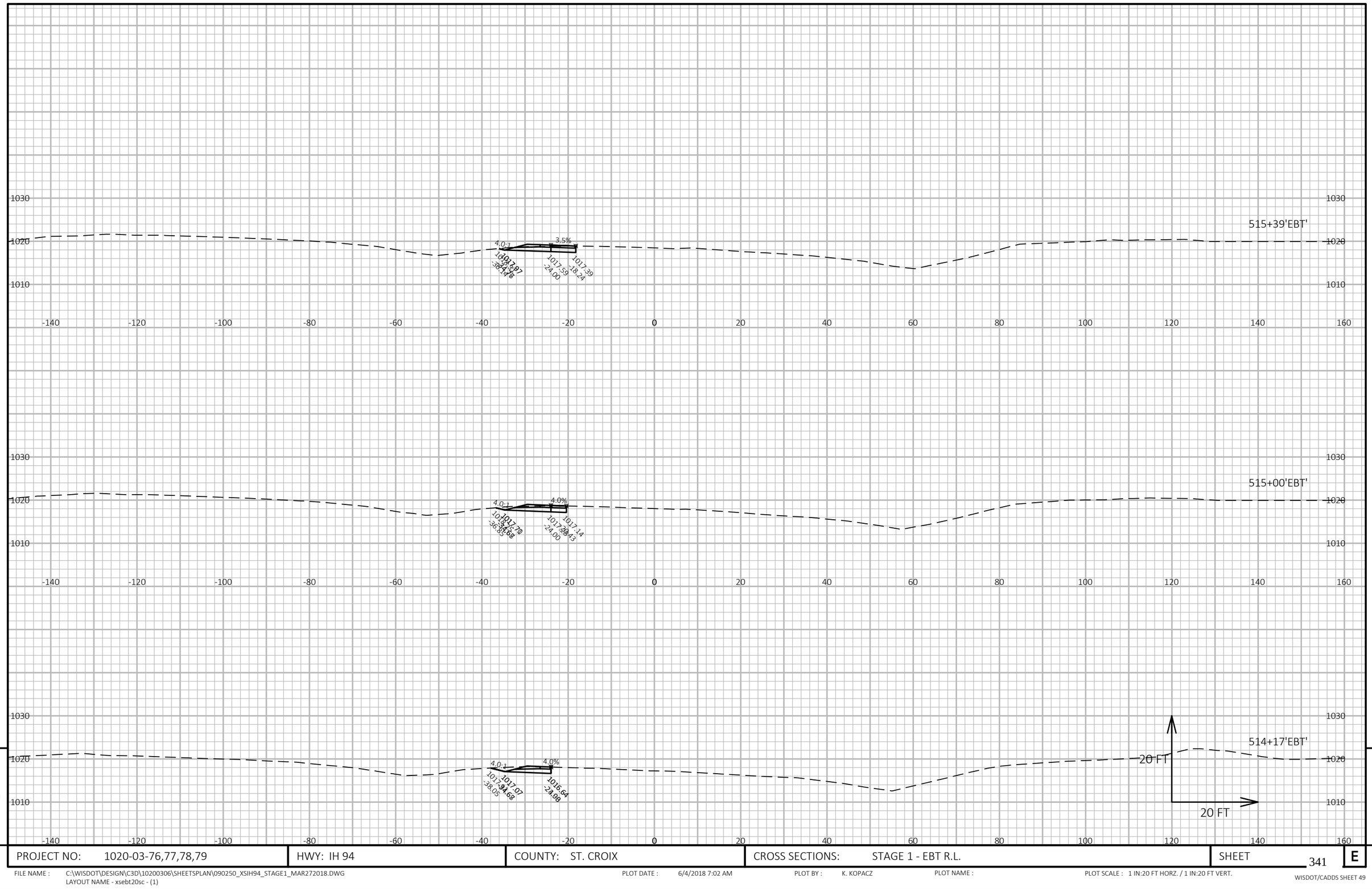
Division 4 - IH 94 WB (STAGE 4)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
589+00	58900.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
589+50	58950.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
590+00	59000.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
590+50	59050.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
591+00	59100.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
591+50	59150.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
592+00	59200.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
592+50	59250.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
593+00	59300.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
593+50	59350.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
594+00	59400.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
594+50	59450.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
595+00	59500.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
595+50	59550.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
596+00	59600.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	20,143	76	0	15,894
596+25	59625.00	25.00	7.34	0.00	0.05	0.00	3	0	0	0	20,147	76	0	15,897
596+50	59650.00	25.00	5.31	0.00	0.64	0.00	6	0	0	0	20,153	77	0	15,902
597+00	59700.00	50.00	12.00	15.00	0.00	0.00	16	14	1	0	20,169	78	0	15,904
597+50	59750.00	50.00	12.94	15.00	0.00	0.00	23	28	0	0	20,192	78	0	15,899
598+00	59800.00	50.00	13.06	15.00	0.00	0.00	24	28	0	0	20,216	78	0	15,895
598+50	59850.00	50.00	13.06	15.00	0.00	0.00	24	28	0	0	20,240	78	0	15,892
599+00	59900.00	50.00	24.28	15.00	0.00	0.00	35	28	0	0	20,275	78	0	15,899
599+50	59950.00	50.00	24.28	15.00	0.00	0.00	45	28	0	0	20,320	78	0	15,916
600+00	60000.00	50.00	31.31	15.00	0.00	0.00	51	28	0	0	20,371	78	0	15,939
600+50	60050.00	50.00	52.15	15.00	0.00	0.00	77	28	0	0	20,448	78	0	15,989
601+00	60100.00	50.00	81.10	15.00	0.00	0.00	123	28	0	0	20,572	78	0	16,085
601+50	60150.00	50.00	114.81	15.00	0.00	0.00	181	28	0	0	20,753	78	0	16,238
602+00	60200.00	50.00	127.24	15.00	0.00	0.00	224	28	0	0	20,977	78	0	16,435
602+50	60250.00	50.00	133.15	15.00	0.00	0.00	241	28	0	0	21,218	78	0	16,648
603+00	60300.00	50.00	137.78	15.00	0.00	0.00	251	28	0	0	21,469	78	0	16,871
603+50	60350.00	50.00	142.30	15.00	0.00	0.00	259	28	0	0	21,729	78	0	17,102
604+00	60400.00	50.00	118.11	15.00	0.00	0.00	241	28	0	0	21,970	78	0	17,316
604+50	60450.00	50.00	109.73	15.00	0.00	0.00	211	28	0	0	22,181	78	0	17,499
605+00	60500.00	50.00	112.54	15.00	0.00	0.00	206	28	0	0	22,386	78	0	17,677
605+50	60550.00	50.00	90.49	15.00	0.00	0.00	188	28	0	0	22,574	78	0	17,837
606+00	60600.00	50.00	74.69	15.00	0.00	0.00	153	28	0	0	22,727	78	0	17,962
606+50	60650.00	50.00	62.81	15.00	0.00	0.00	127	28	0	0	22,855	78	0	18,062
606+69.1	60669.10	19.10	59.85	15.00	0.00	0.00	43	11	0	0	22,898	78	0	18,095
607+00	60700.00	30.90	99.36	15.00	0.00	0.00	91	17	0	0	22,989	78	0	18,169
607+50	60750.00	50.00	127.39	15.00	0.00	0.00	210	28	0	0	23,199	78	0	18,351
608+00	60800.00	50.00	177.37	15.00	4.34	0.00	282	28	4	0	23,481	83	0	18,600
608+50	60850.00	50.00	229.09	15.00	7.51	0.00	376	28	11	0	23,858	96	0	18,935
609+00	60900.00	50.00	298.41	15.00	5.53	0.00	488	28	12	0	24,346	111	0	19,381
609+50	60950.00	50.00	368.97	15.00	3.01	0.00	618	28	8	0	24,964	121	0	19,961
610+00	61000.00	50.00	408.25	15.00	2.57	0.00	720	28	5	0	25,684	128	0	20,646
610+50	61050.00	50.00	452.82	15.00	1.42	0.00	797	28	4	0	26,481	132	0	21,411
611+00	61100.00	50.00	487.05	15.00	0.48	0.00	870	28	2	0	27,351	135	0	22,252
611+50	61150.00	50.00	496.94	15.00	0.00	0.00	911	28	0	0	28,262	135	0	23,134
612+00	61200.00	50.00	477.35	15.00	0.00	0.00	902	28	0	0	29,164	135	0	24,009
612+50	61250.00	50.00	449.82	15.00	0.00	0.00	858	28	0	0	30,023	135	0	24,839
613+00	61300.00	50.00	392.99	15.00	0.00	0.00	780	28	0	0	30,803	135	0	25,592
613+50	61350.00	50.00	327.64	15.00	0.00	0.00	667	28	0	0	31,471	135	0	26,231
614+00	61400.00	50.00	261.61	15.00	0.00	0.00	546	28	0	0	32,016	135	0	26,749
614+50	61450.00	50.00	201.66	15.00	0.00	0.00	429	28	0	0	32,445	135	0	27,150
614+88	61488.00	38.00	172.85	15.00	0.00	0.00	264	21	0	0	32,709	135	0	27,393
615+00	61500.00	12.00	0.00	0.00	0.00	0.00	38	3	0	0	32,747	135	0	27,428
615+50	61550.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	32,747	135	0	27,428
616+00	61600.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	32,747	135	0	27,428
616+50	61650.00	50.00	43.15	15.00	6.62	0.00	40	14	6	0	32,787	143	0	27,446
617+00	61700.00	50.00	78.32	15.00	5.68	0.00	112	28	11	0	32,900	157	0	27,517
617+50	61750.00	50.00	77.58	15.00	7.15	0.00	144	28	12	0	33,044	172	0	27,619
618+00	61800.00	50.00	81.68	15.00	4.44	0.00	147	28	11	0	33,191	185	0	27,725
618+50	61850.00	50.00	84.23	15.00	1.54	0.00	154	28	6	0	33,345	192	0	27,844
619+00	61900.00	50.00	91.37	15.00	1.42	0.00	163	28	3	0	33,508	196	0	27,975
619+50	61950.00	50.00	79.30	15.00	3.22	0.00	158	28	4	0	33,666	201	0	28,100
620+00	62000.00	50.00	85.82	15.00	2.67	0.00	153	28	5	0	33,818	208	0	28,218
620+50	62050.00	50.00	88.50	15.00	0.00	0.00	161	28	2	0	33,980	211	0	28,349
620+69.9	62069.90	19.90	86.30	15.00	0.38	0.00	64	11	0	0	34,044	211	0	28,402
621+00	62100.00	30.10	109.24	15.00	0.00	0.00	109	17	0	0	34,153	211	0	28,494
621+50	62150.00	50.00	97.79	15.00	0.00	0.00	192	28	0	0	34,345	211	0	28,658
622+00	62200.00	50.00	96.22	15.00	0.00	0.00	180	28	0	0	34,525	211	0	28,810
622+50	62250.00	50.00	92.17	15.00	0.00	0.00	174	28	0	0	34,699	211	0	28,956
623+00	62300.00	50.00	88.24	15.00	0.01	0.00	167	28	0	0	34,866	211	0	29,096
623+50	62350.00	50.00	80.36	15.00	0.24	0.00	156	28	0	0	35,022	212	0	29,224
624+00	62400.00	50.00	72.47	15.00	0.06	0.00	142	28	0	0	35,164	212	0	29,337

Division 4 - IH 94 WB (STAGE 4)

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) EBS Note 3	Cumulative Vol (CY) Mass Ordinate Note 4
624+14.5	62414.50	14.50	52.45	15.00	0.00	0.00	34	8	0	0	35,197	212	0	29,363
624+50	62450.00	35.50	47.80	15.00	0.00	0.00	66	20	0	0	35,263	212	0	29,409
625+00	62500.00	50.00	40.77	15.00	0.00	0.00	82	28	0	0	35,345	212	0	29,463
625+50	62550.00	50.00	43.57	15.00	0.00	0.00	78	28	0	0	35,423	212	0	29,513
626+00	62600.00	50.00	21.66	15.00	0.00	0.00	60	28	0	0	35,484	212	0	29,546
626+50	62650.00	50.00	26.21	15.00	0.07	0.00	44	28	0	0	35,528	212	0	29,562
627+00	62700.00	50.00	12.52	15.00	0.05	0.00	36	28	0	0	35,564	212	0	29,570
627+50	62750.00	50.00	14.79	15.00	0.01	0.00	25	28	0	0	35,589	212	0	29,568
628+00	62800.00	50.00	15.15	15.00	0.00	0.00	28	28	0	0	35,617	212	0	29,568
628+50	62850.00	50.00	10.32	15.00	0.00	0.00	24	28	0	0	35,640	212	0	29,564
629+00	62900.00	50.00	32.00	15.00	2.26	0.00	39	28	2	0	35,680	215	0	29,572
629+50	62950.00	50.00	44.99	15.00	0.00	0.00	71	28	2	0	35,751	218	0	29,613
630+00	63000.00	50.00	44.08	15.00	0.00	0.00	82	28	0	0	35,833	218	0	29,668
630+50	63050.00	50.00	43.40	15.00	0.00	0.00	81	28	0	0	35,914	218	0	29,721
631+00	63100.00	50.00	43.77	15.00	0.00	0.00	81	28	0	0	35,995	218	0	29,774
631+14	63114.00	14.00	46.49	15.00	0.00	0.00	23	8	0	0	36,019	218	0	29,790
631+50	63150.00	36.00	57.53	15.00	0.00	0.00	69	20	0	0	36,088	218	0	29,839
632+00	63200.00	50.00	63.37	15.00	0.00	0.00	112	28	0	0	36,200	218	0	29,923
632+50	63250.00	50.00	60.19	15.00	0.02	0.00	114	28	0	0	36,314	218	0	30,010
633+00	63300.00	50.00	59.68	15.00	0.33	0.00	111	28	0	0	36,425	218	0	30,093
633+50	63350.00	50.00	65.26	15.00	0.00	0.00	116	28	0	0	36,541	218	0	30,180
634+00	63400.00	50.00	69.33	15.00	0.00	0.00	125	28	0	0	36,666	218	0	30,277
634+50	63450.00	50.00	61.55	15.00	0.00	0.00	121	28	0	0	36,787	218	0	30,370
635+00	63500.00	50.00	48.66	15.00	1.41	0.00	102	28	1	0	36,889	220	0	30,443
635+50	63550.00	50.00	39.96	15.00	2.22	0.00	82	28	3	0	36,971	224	0	30,493
635+64	63564.00	14.00	38.01	15.00	3.05	0.00	20	8	1	0	36,991	226	0	30,504
636+00	63600.00	36.00	32.14	15.00	0.00	0.00	47	20	2	0	37,038	228	0	30,528
636+50	63650.00	50.00	24.58	15.00	0.00	0.00	53	28	0	0	37,090	228	0	30,553
637+00	63700.00	50.00	16.94	15.00	0.00	0.00	38	28	0	0	37,129	228	0	30,563
637+50	63750.00	50.00	16.94	15.00	0.00	0.00	31	28	0	0	37,160	228	0	30,567
638+00	63800.00	50.00	16.94	15.00	0.00	0.00	31	28	0	0	37,191	228	0	30,571
638+50	63850.00	50.00	16.94	15.00	0.00	0.00	31	28	0	0	37,223	228	0	30,574
639+00	63900.00	50.00	8.00	0.00	0.00	0.00	23	14	0	0	37,246	228	0	30,583
639+50	63950.00	50.00	8.00	0.00	0.00	0.00	15	0	0	0	37,261	228	0	30,598
640+00	64000.00	50.00	8.00	0.00	0.00	0.00	15	0	0	0	37,276	228	0	30,613
640+50	64050.00	50.00	8.00	0.00	0.00	0.00	15	0	0	0	37,290	228	0	30,628
							COLUMN TOTALS	37,290	6,337	183	0			

Note 1: Cut includes Salvaged/Unusable Material.
Note 2: Salvaged/Unusable Material is not depicted on the cross sections.
Note 3: EBS is not depicted on the cross sections and is not used to balance earthwork.
Note 4: Positive quantity indicates an excess of material and negative quantity indicates shortage of material.



9

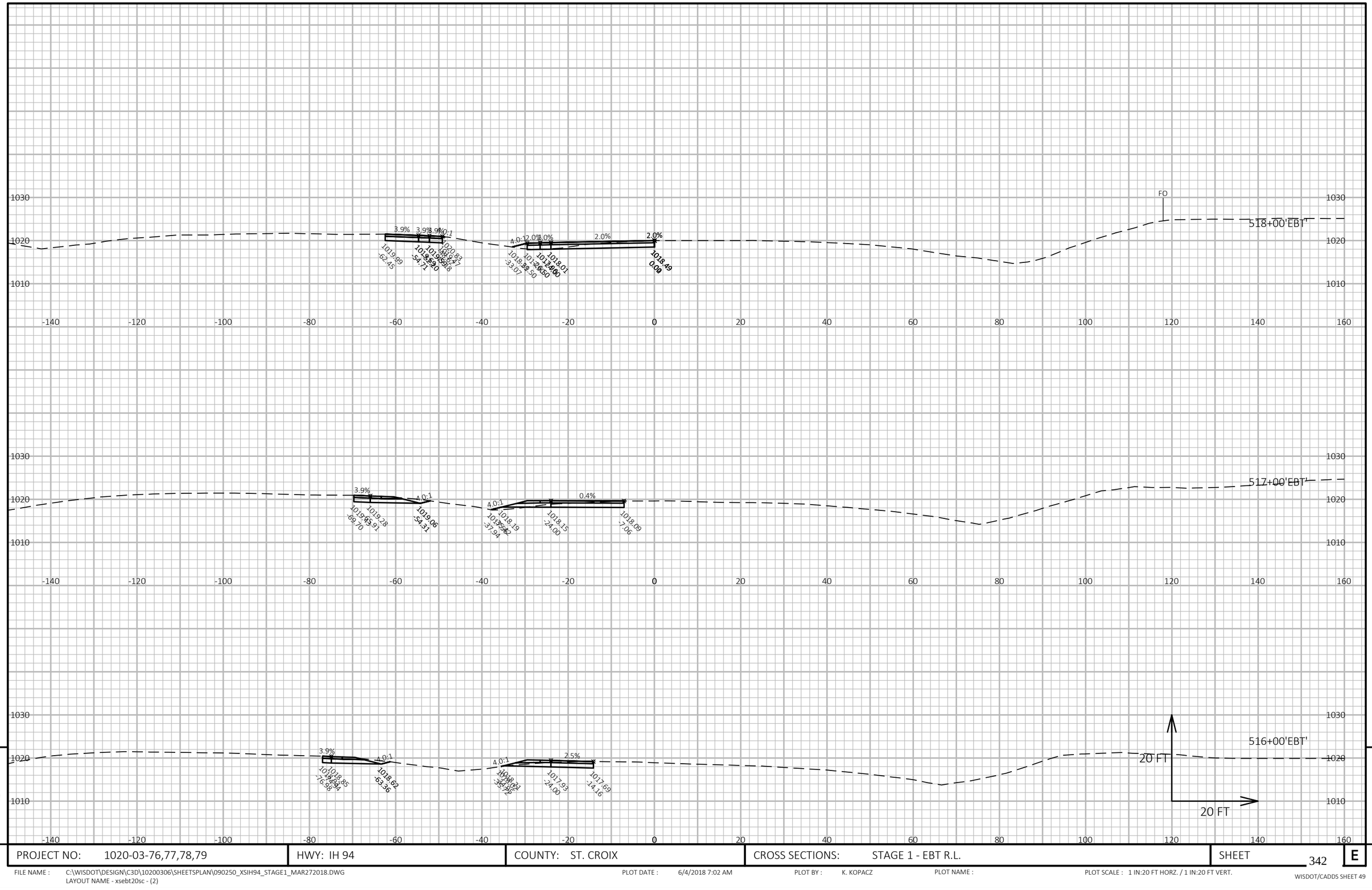
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 341	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (1)

PLOT DATE : 6/4/2018 7:02 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

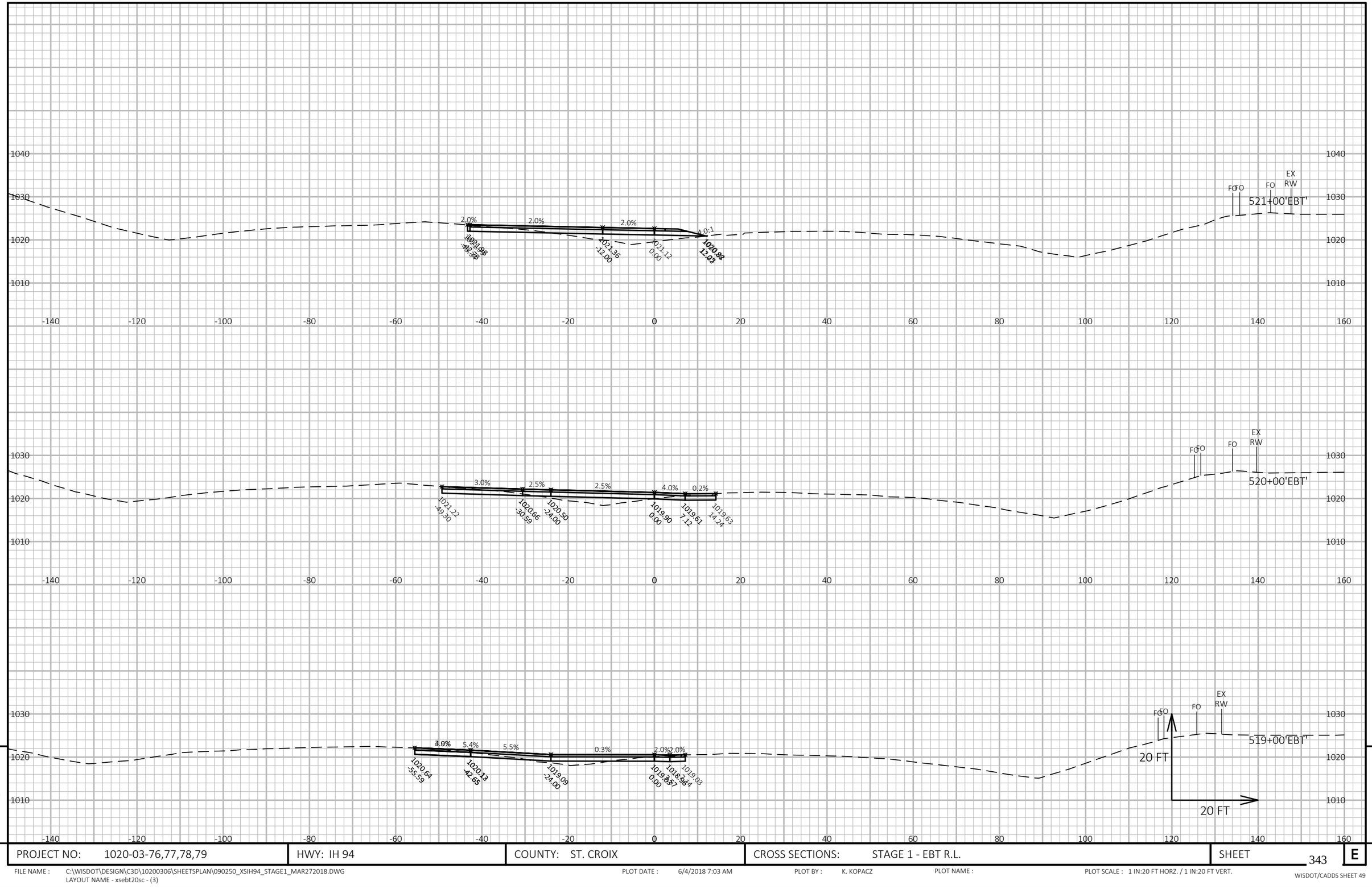


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 342	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (2)

PLOT DATE : 6/4/2018 7:02 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



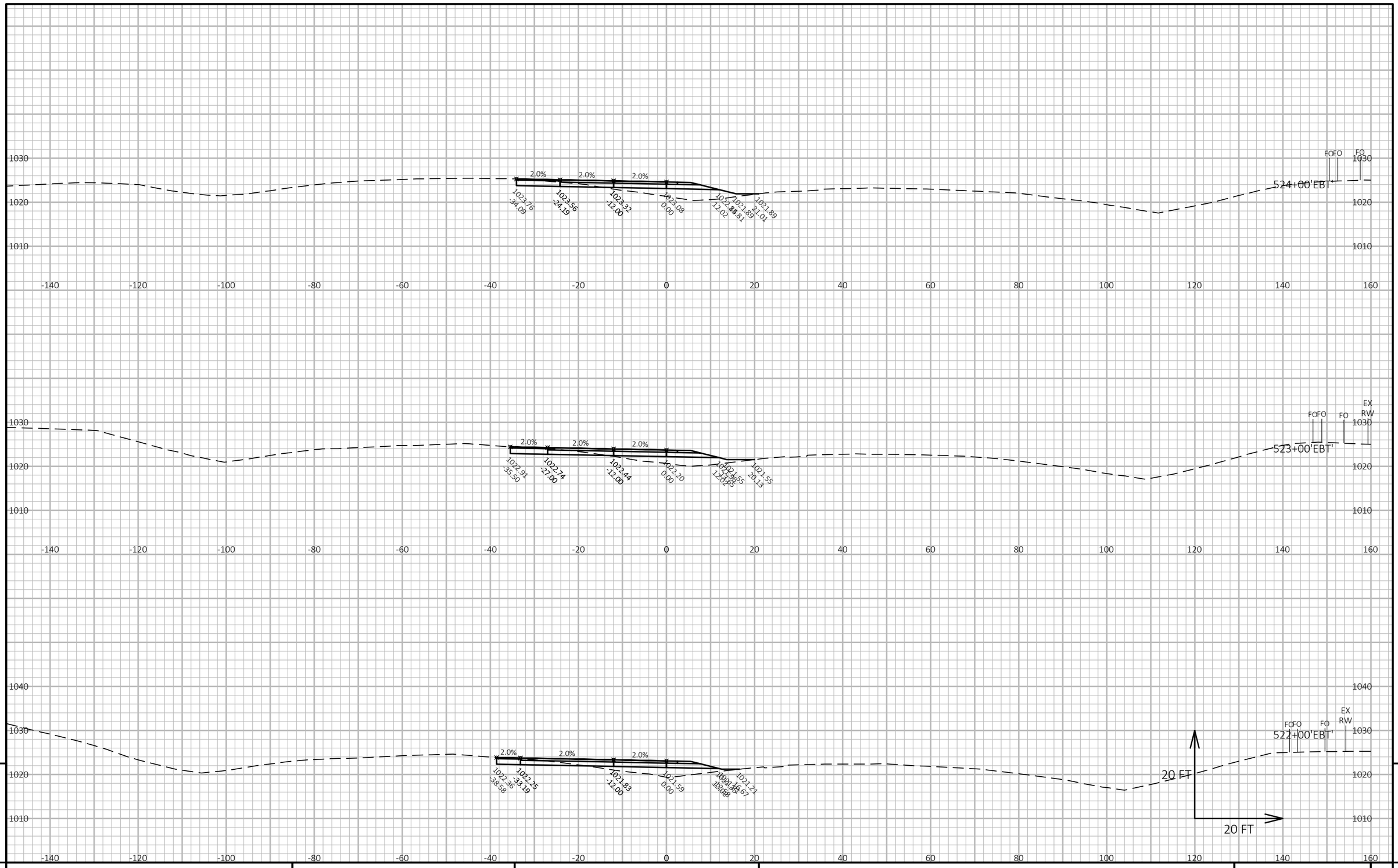
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 343	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (3)

PLOT DATE : 6/4/2018 7:03 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

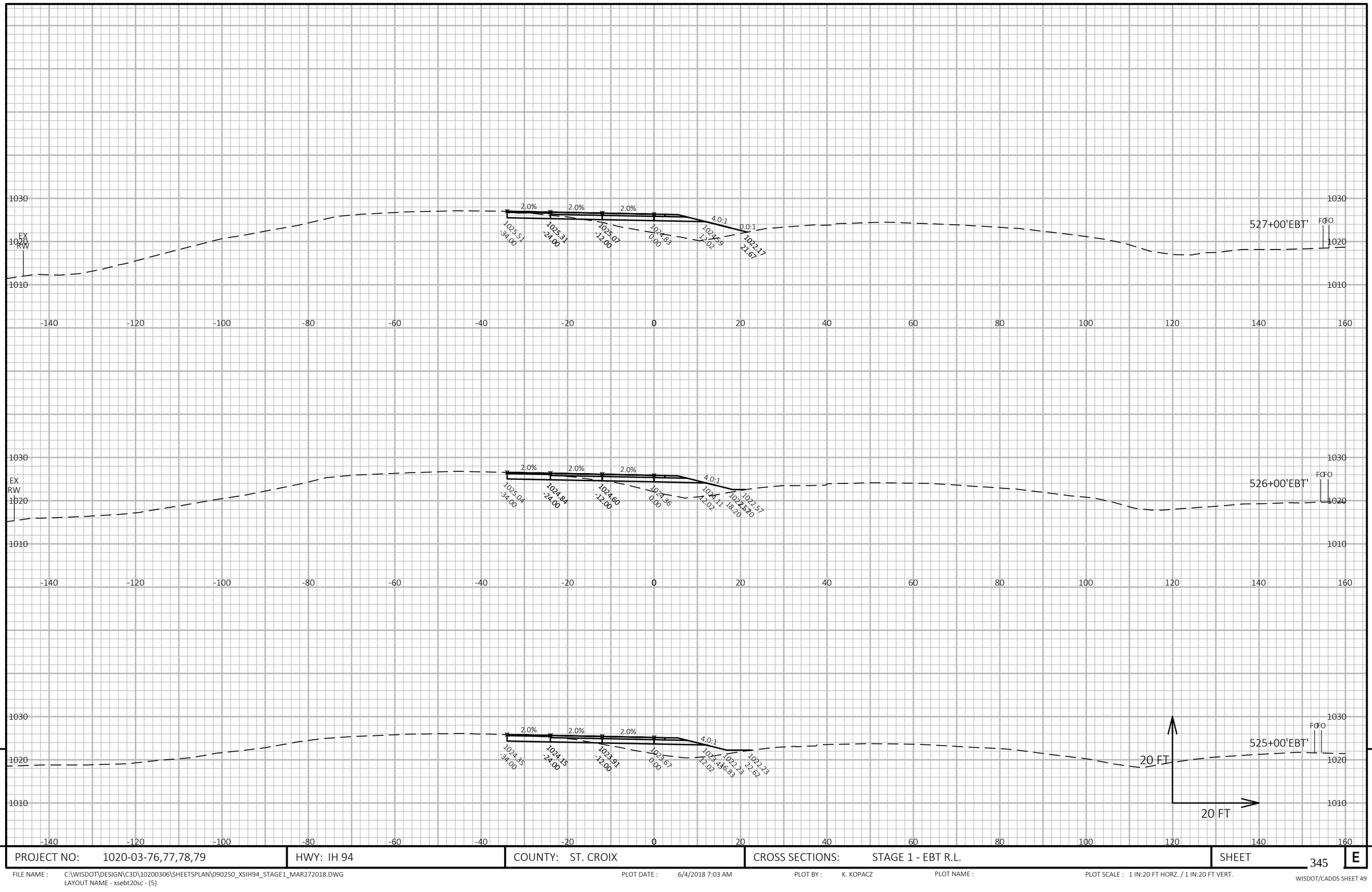
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 344	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (4)

PLOT DATE : 6/4/2018 7:03 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

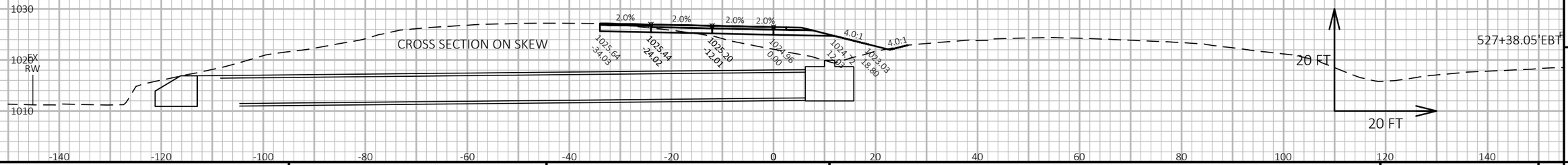
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 345	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (5)

PLOT DATE : 6/4/2018 7:03 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

STA. 527+38.05'EBT'
1-60" R.C.P.S.S. CL. III REQ'D.
1-APRON ENDWALL (A.E.W.) LT. REQ'D.
SLOPE=1.00%



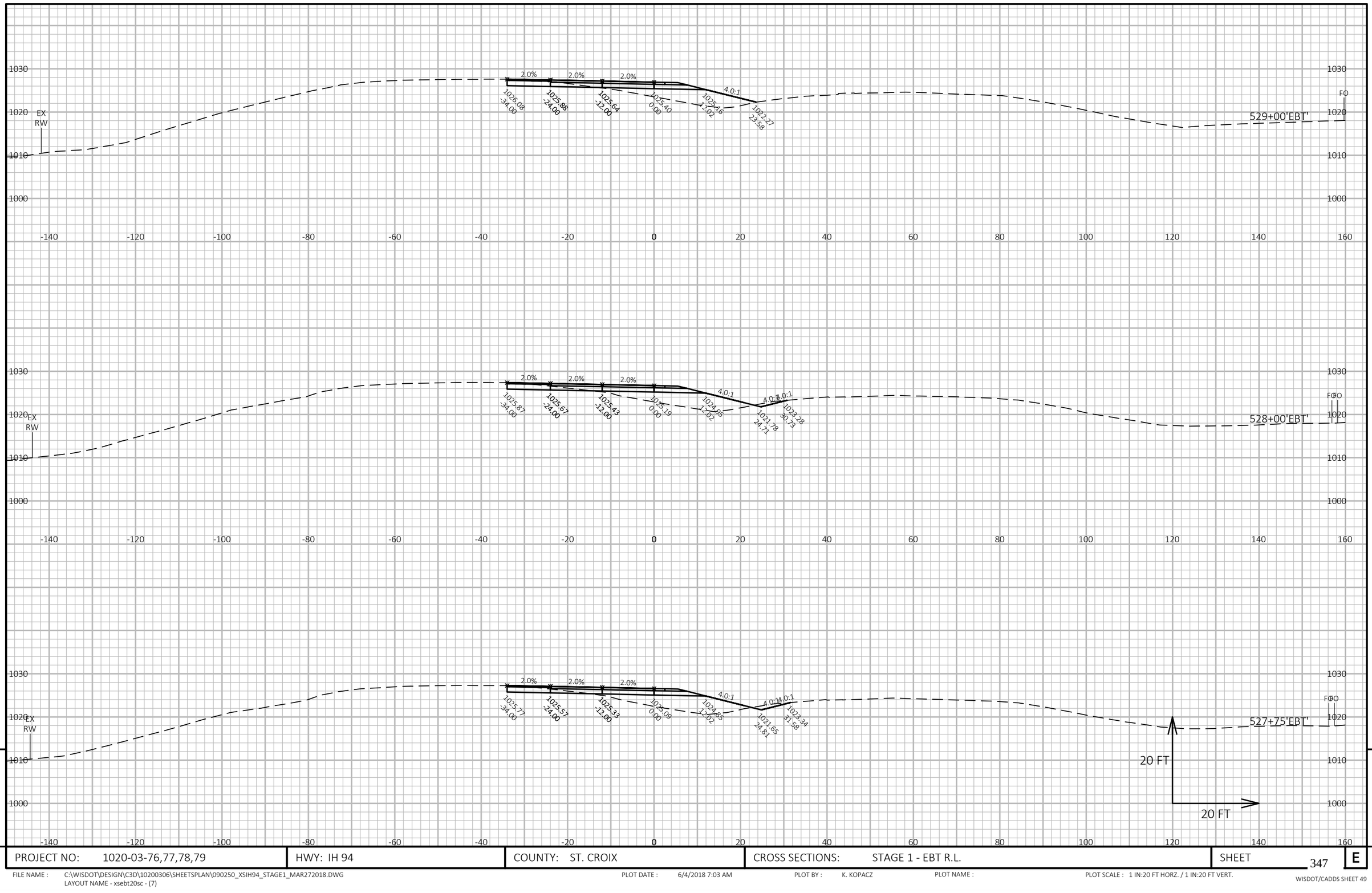
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 346	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (6)

PLOT DATE : 6/5/2018 12:53 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

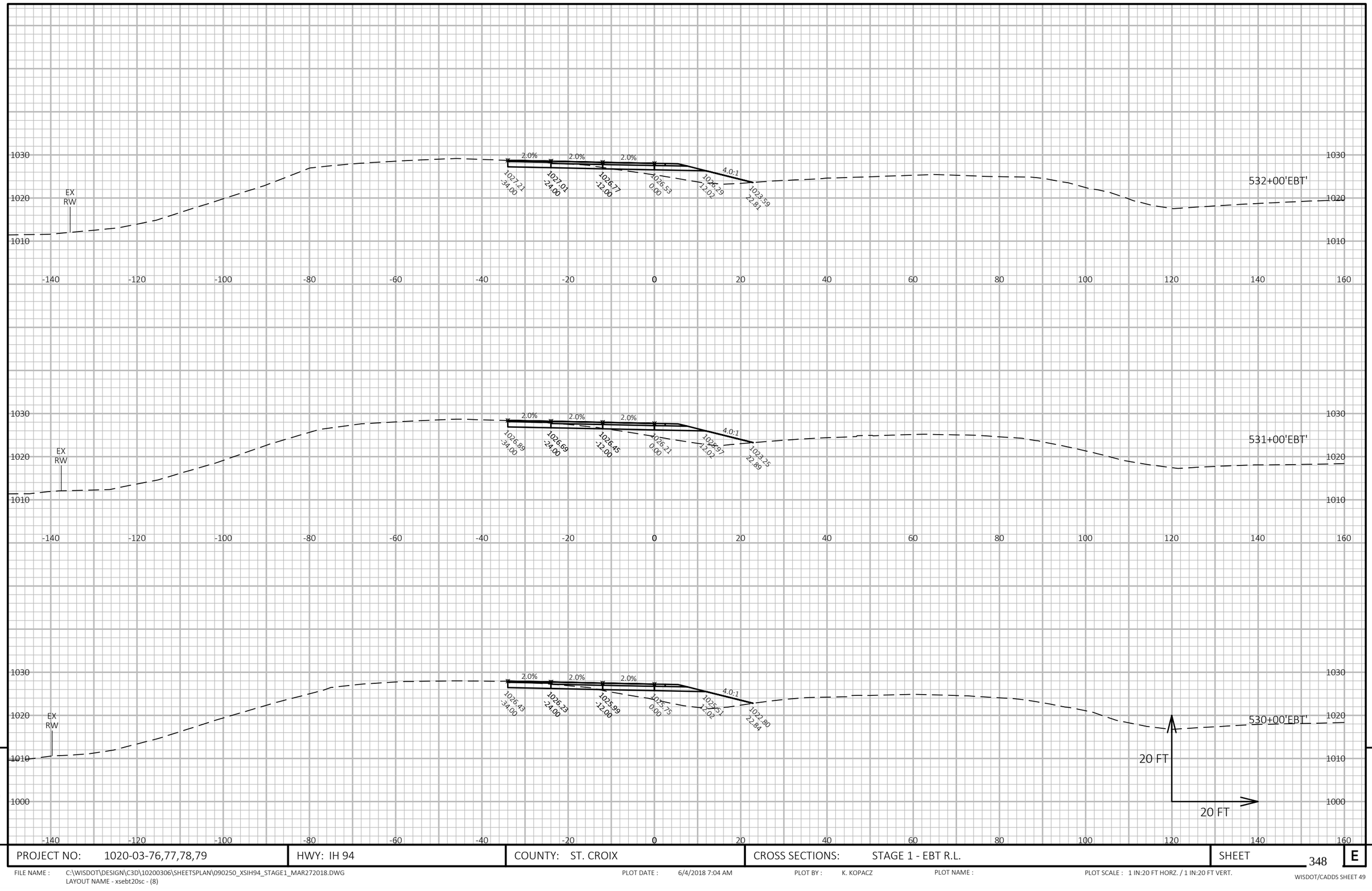


9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 347	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (7)
PLOT DATE : 6/4/2018 7:03 AM
PLOT BY : K. KOPACZ
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



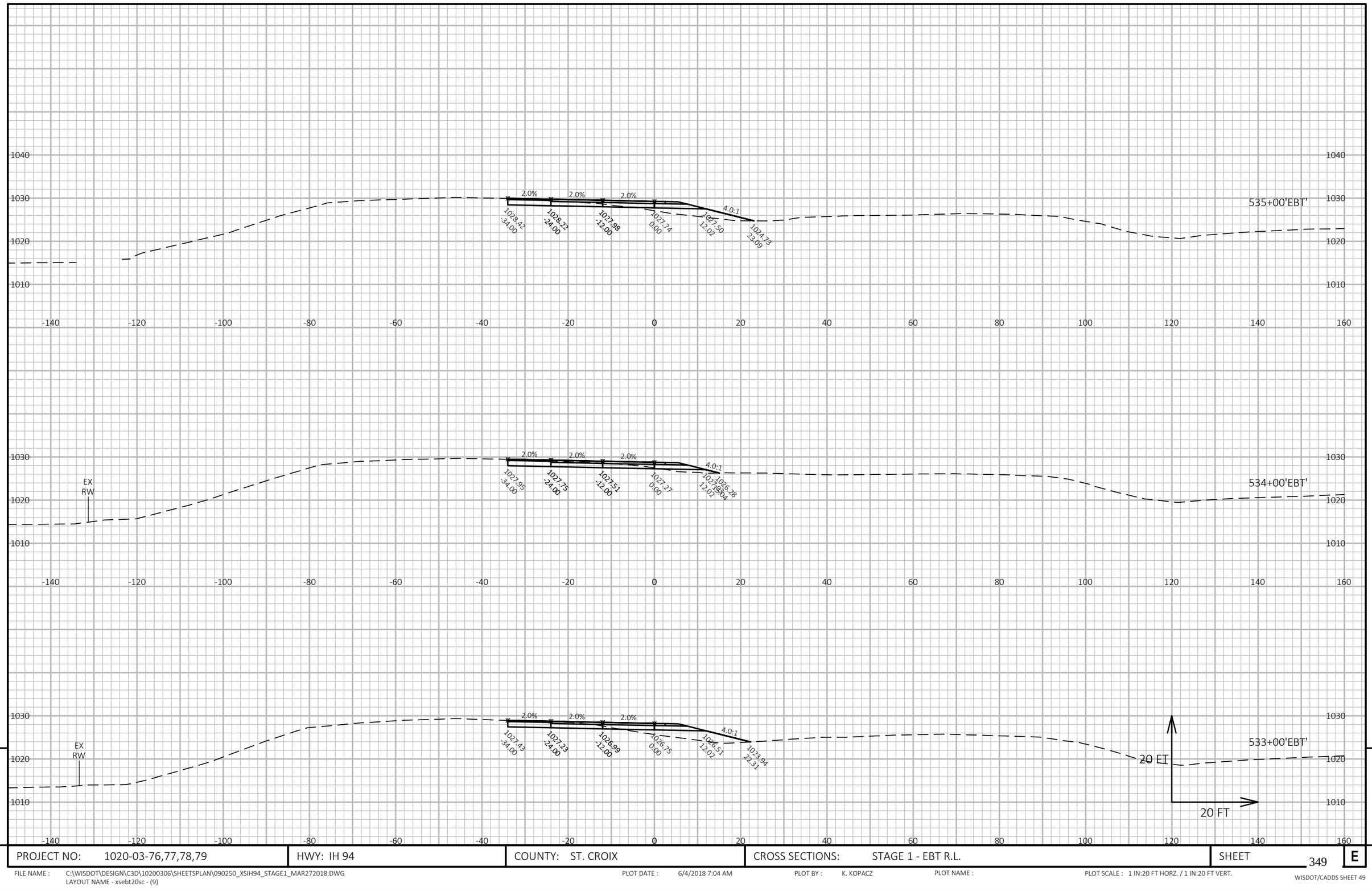
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 348	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (8)

PLOT DATE : 6/4/2018 7:04 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



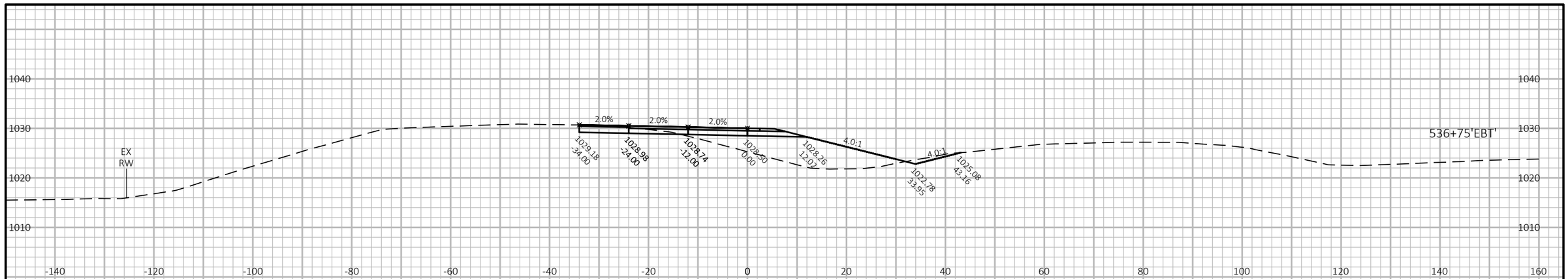
9

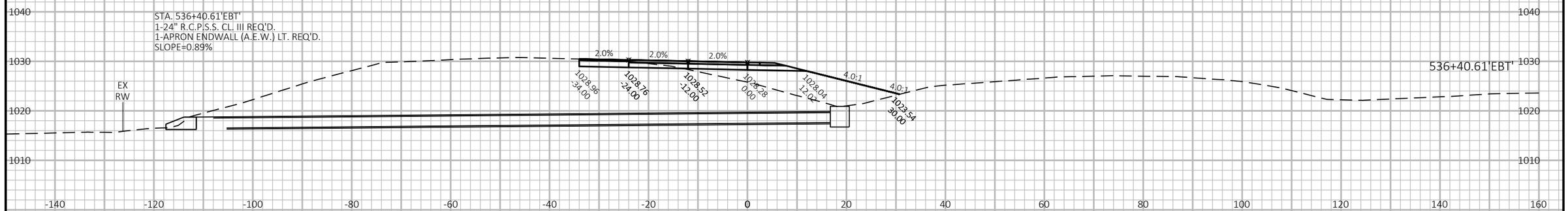
9

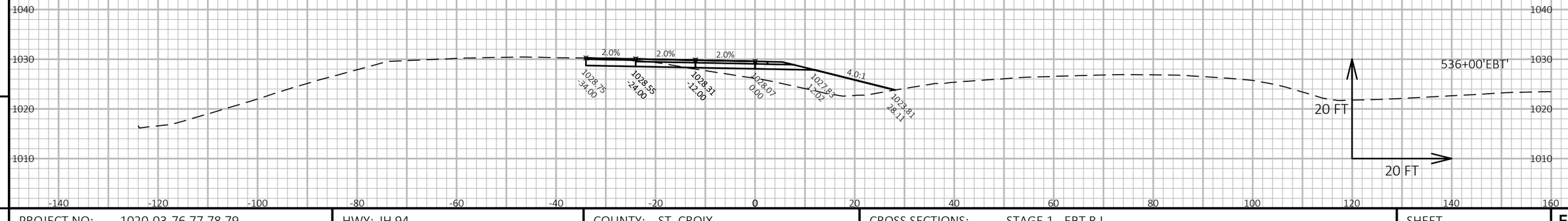
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 349	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (9)

PLOT DATE : 6/4/2018 7:04 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.







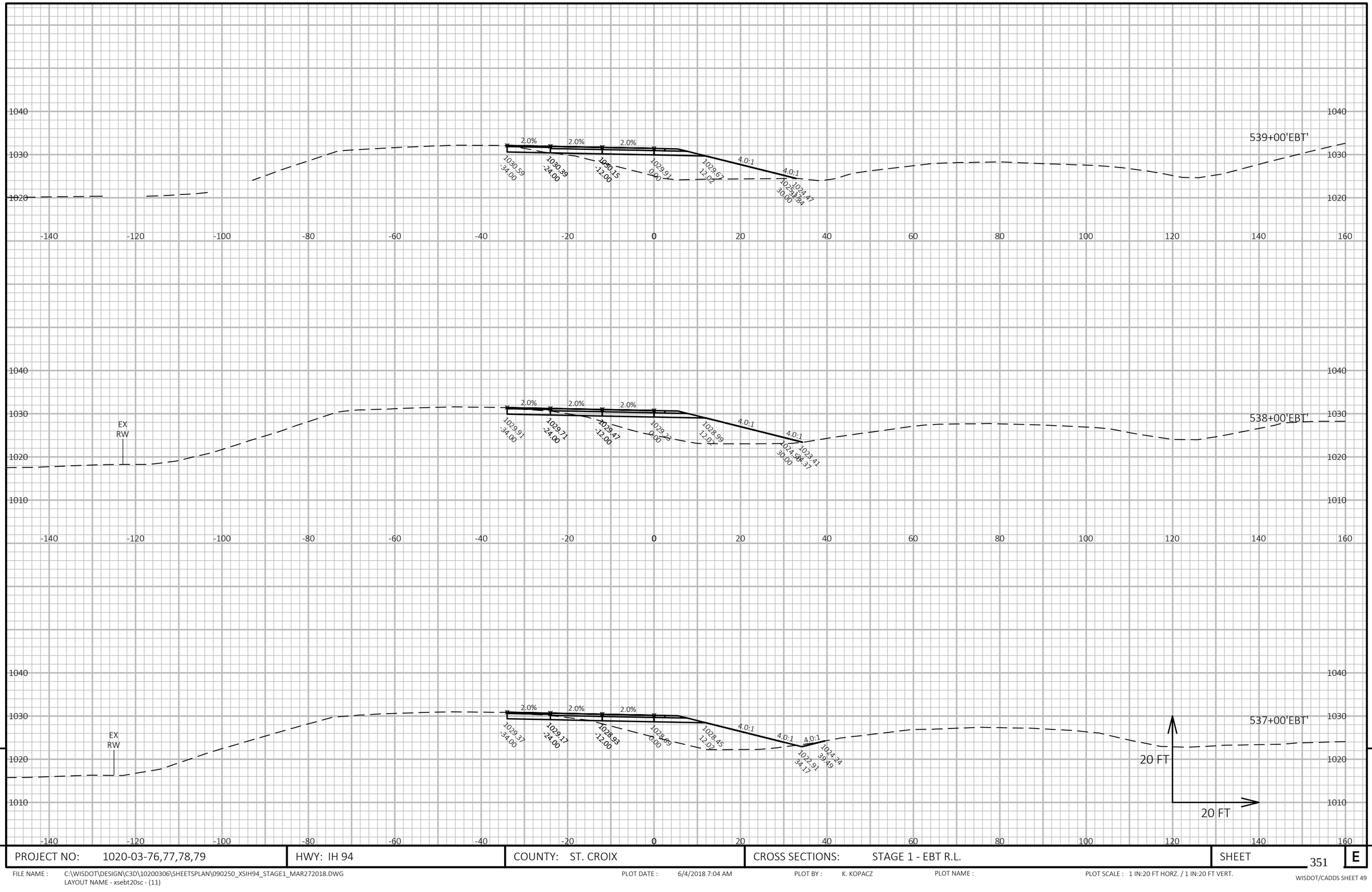
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 350	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (10)

PLOT DATE : 6/5/2018 1:05 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



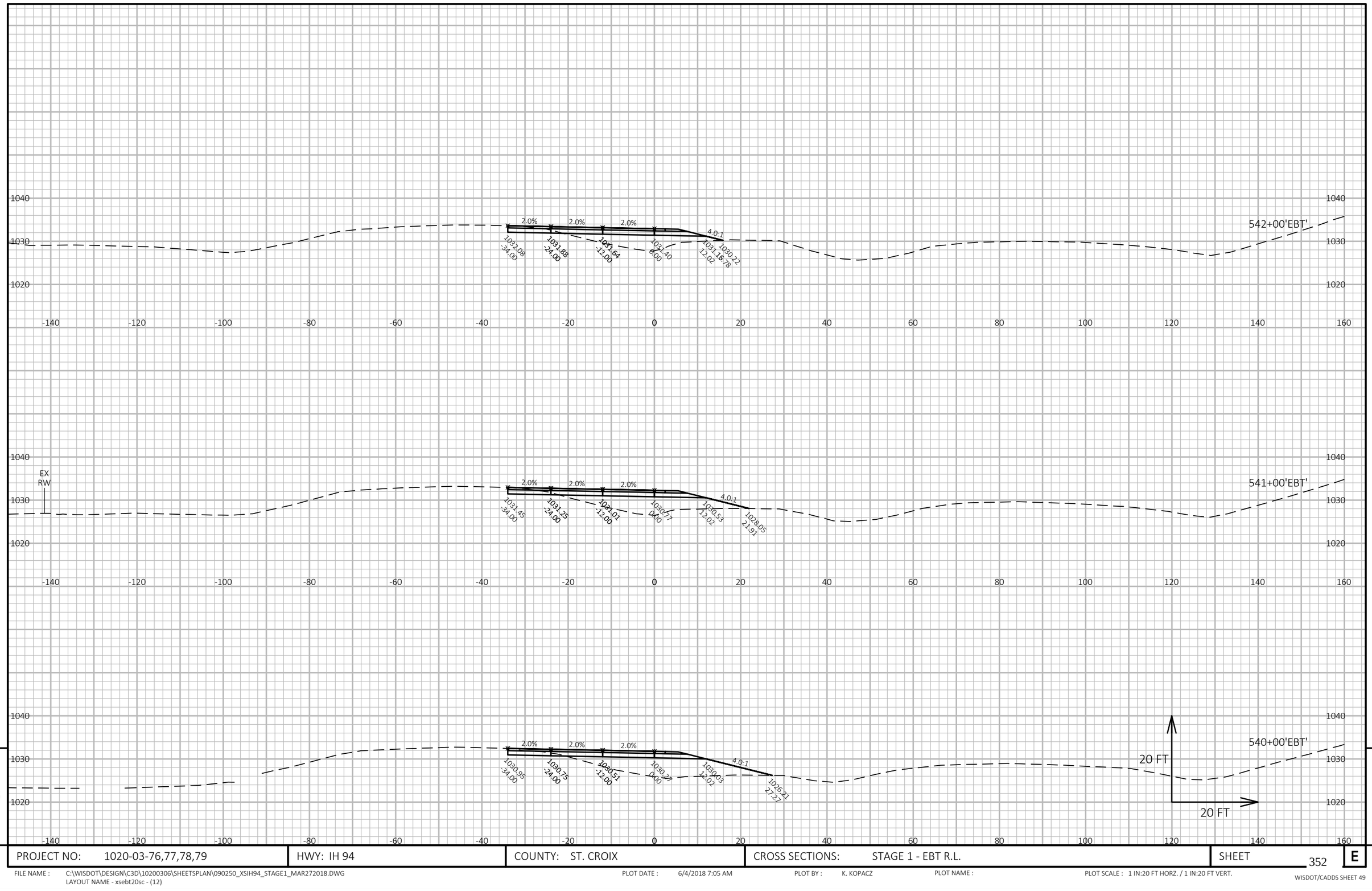
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 351	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (11)

PLOT DATE : 6/4/2018 7:04 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

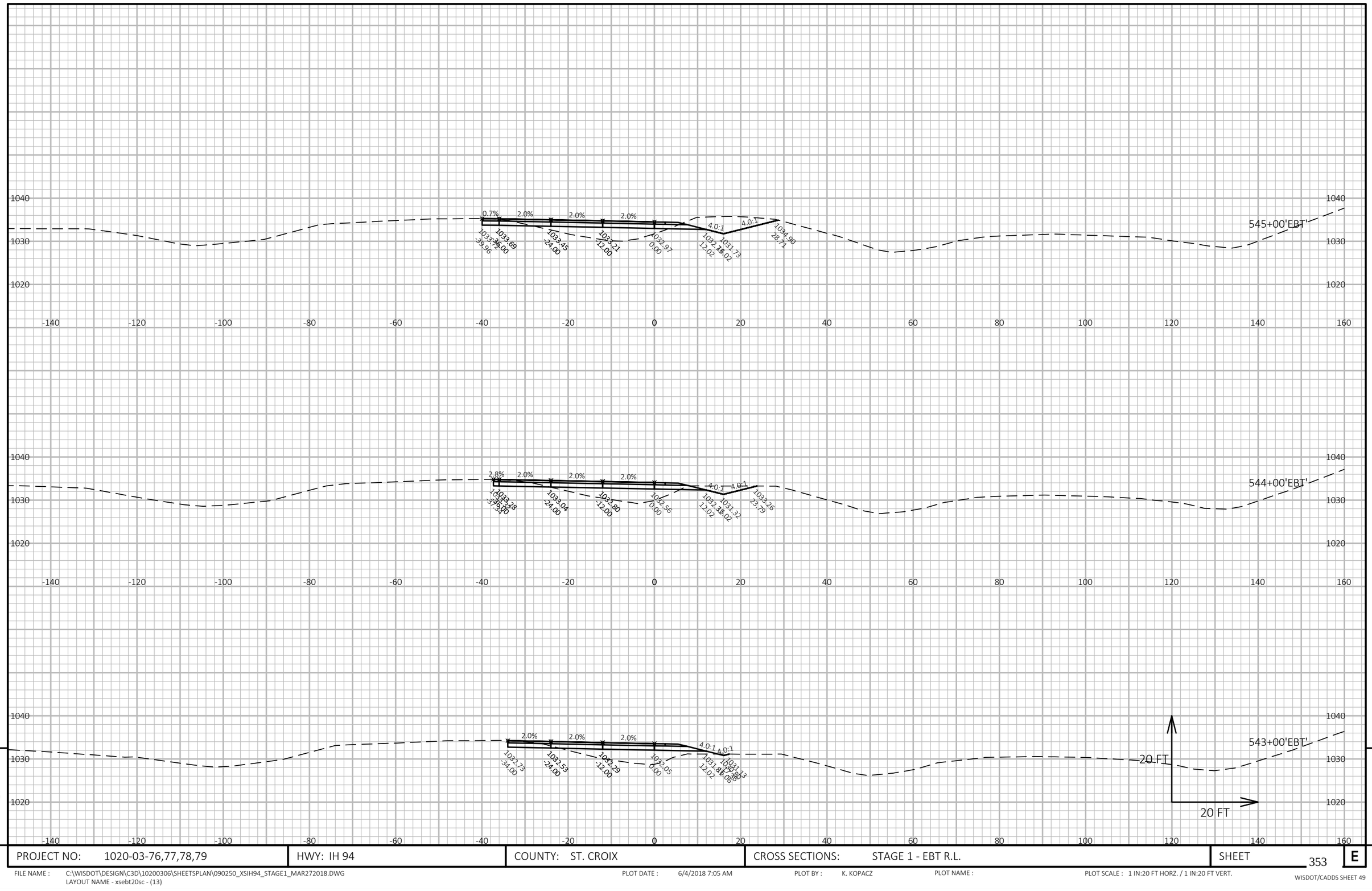
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 352	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (12)

PLOT DATE : 6/4/2018 7:05 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



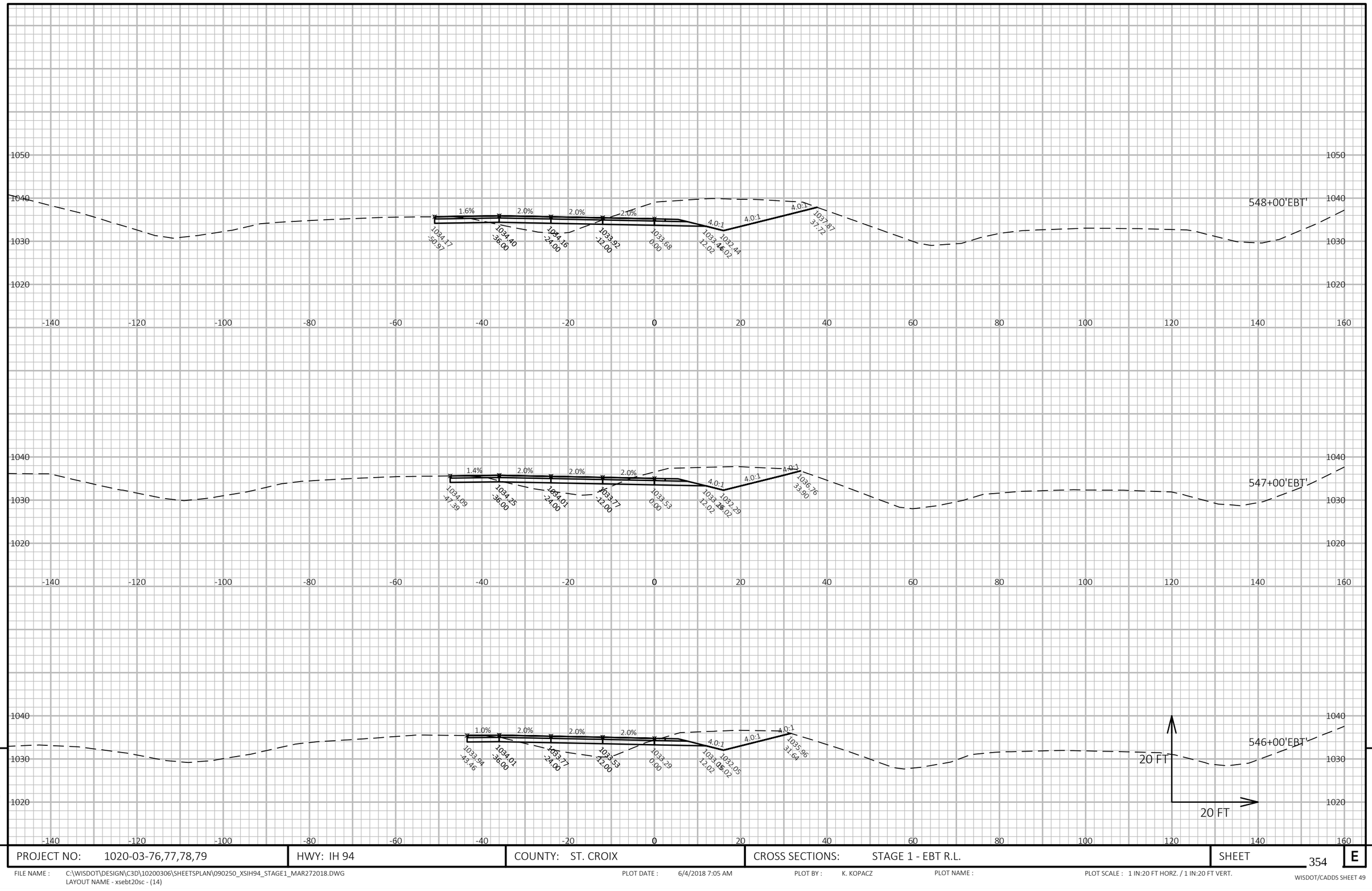
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 353	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (13)

PLOT DATE : 6/4/2018 7:05 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



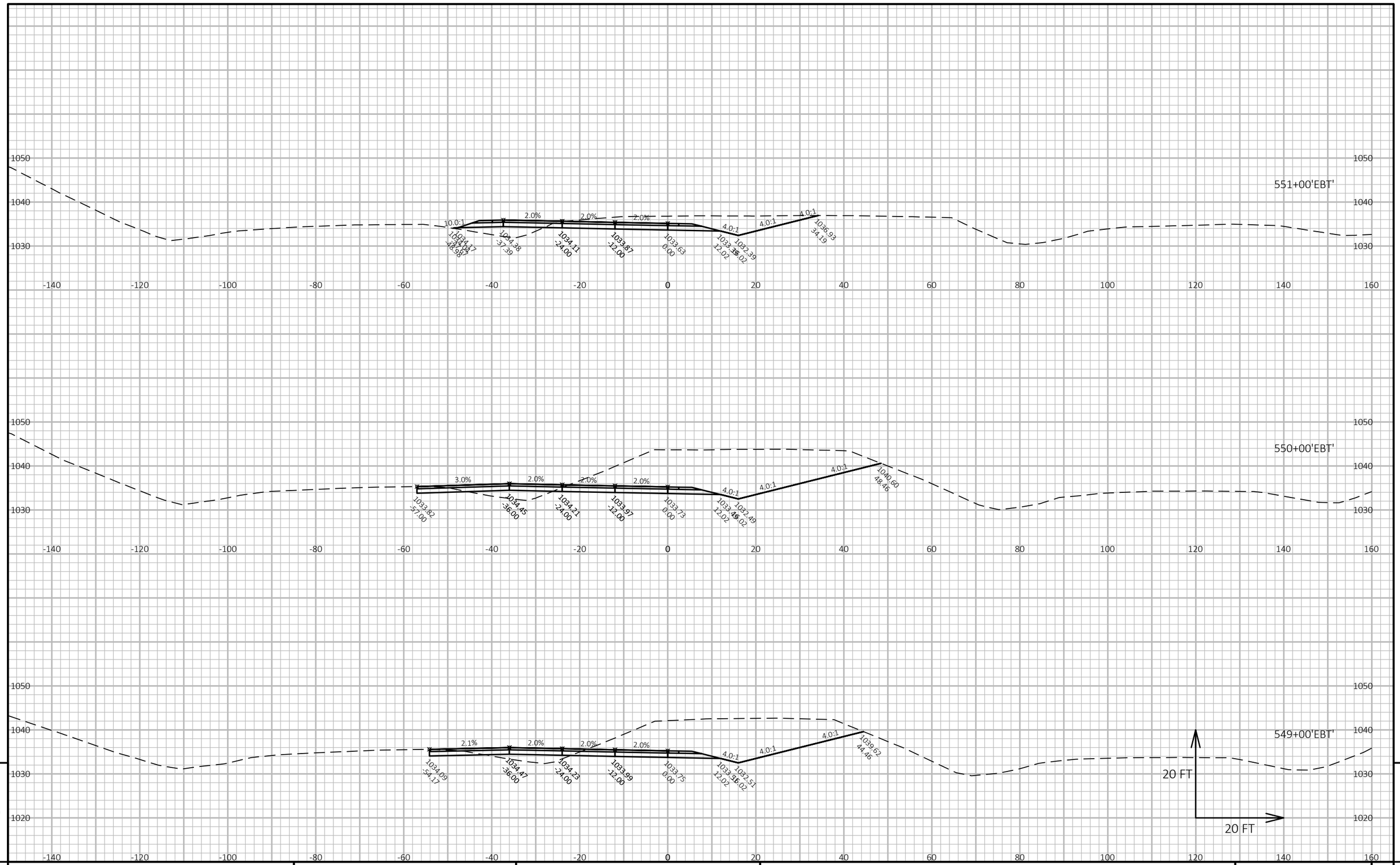
9

9

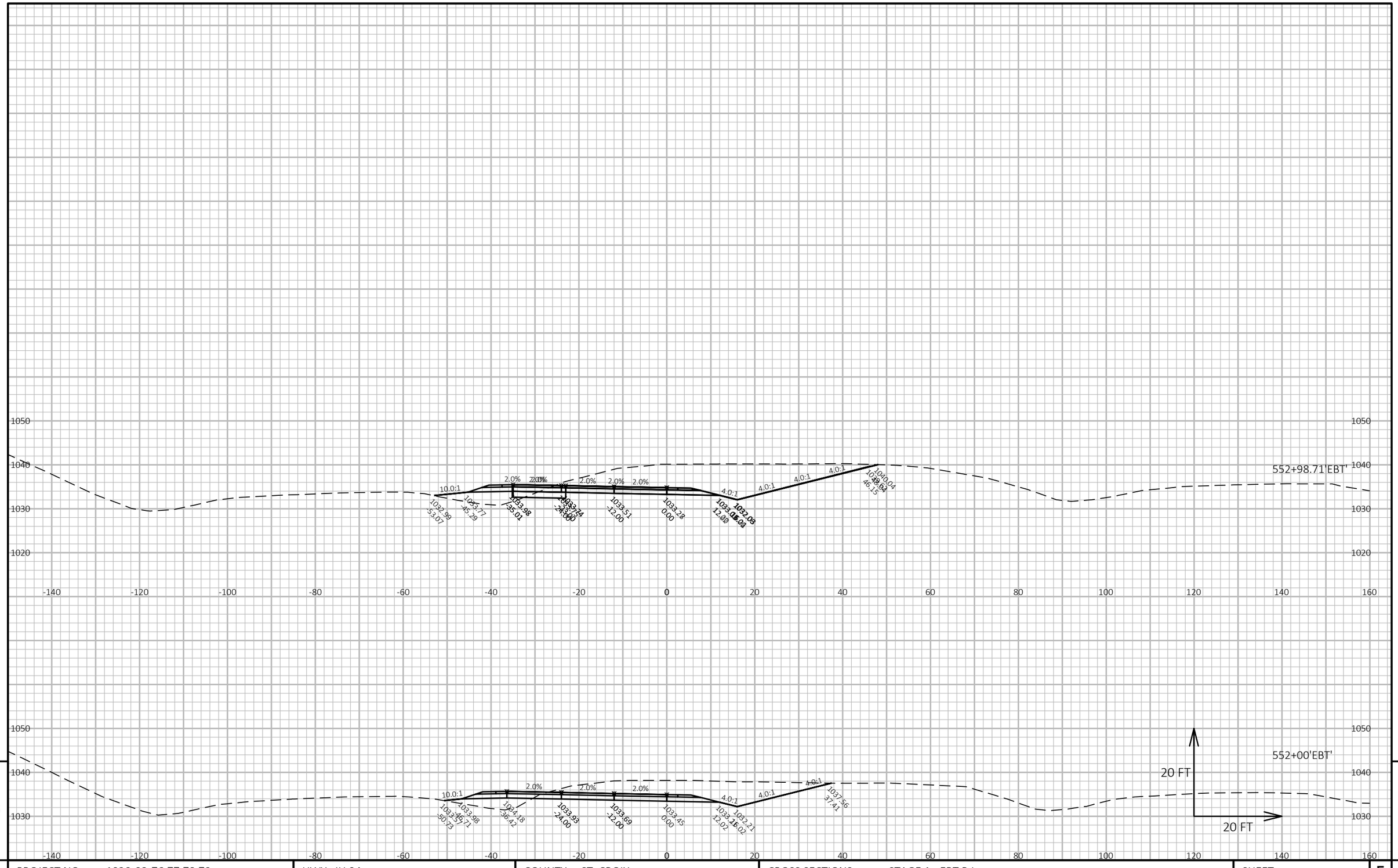
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 354	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (14)

PLOT DATE : 6/4/2018 7:05 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9	PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 355 E



9

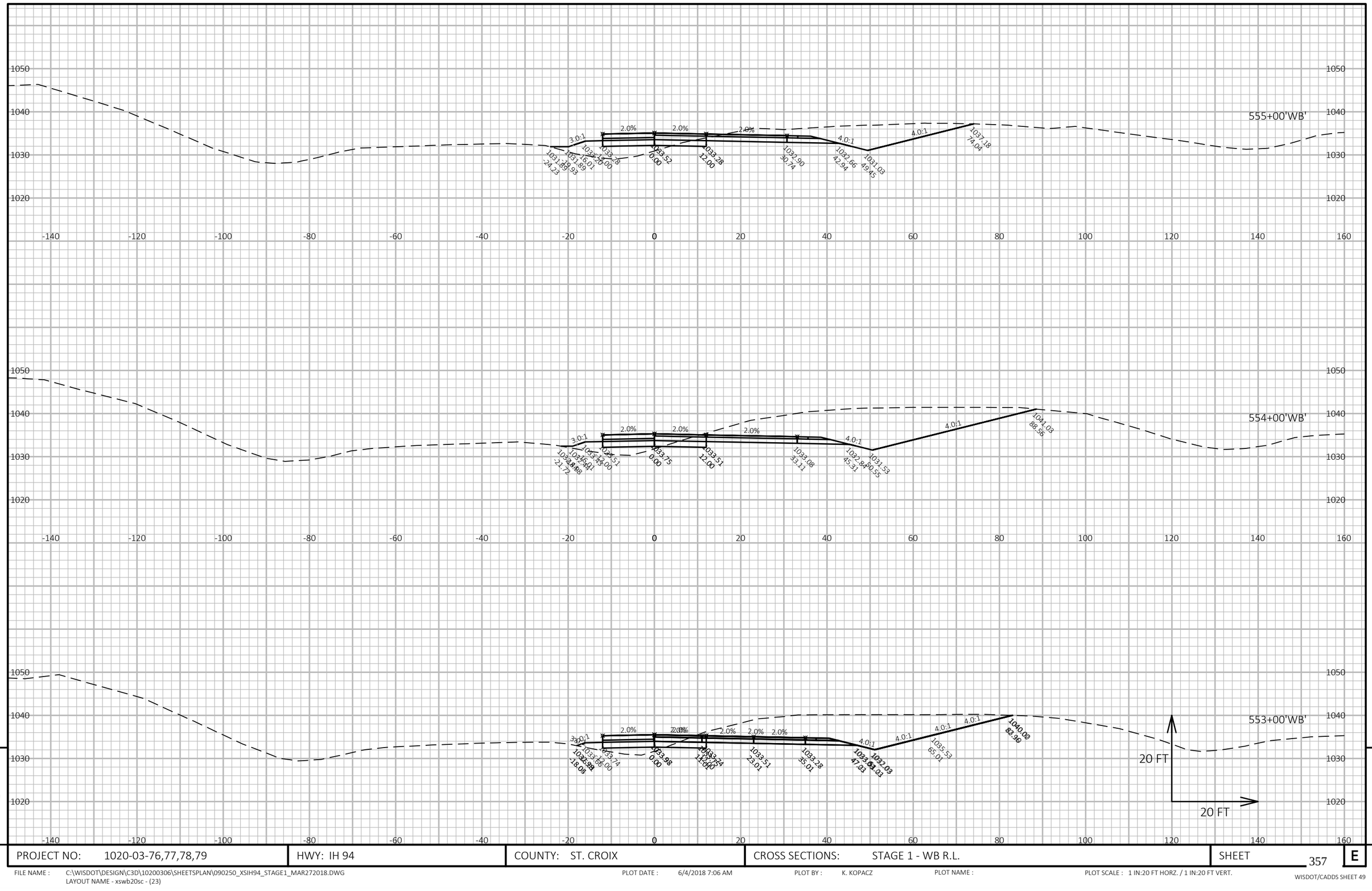
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 356	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (16)

PLOT DATE : 6/4/2018 7:05 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

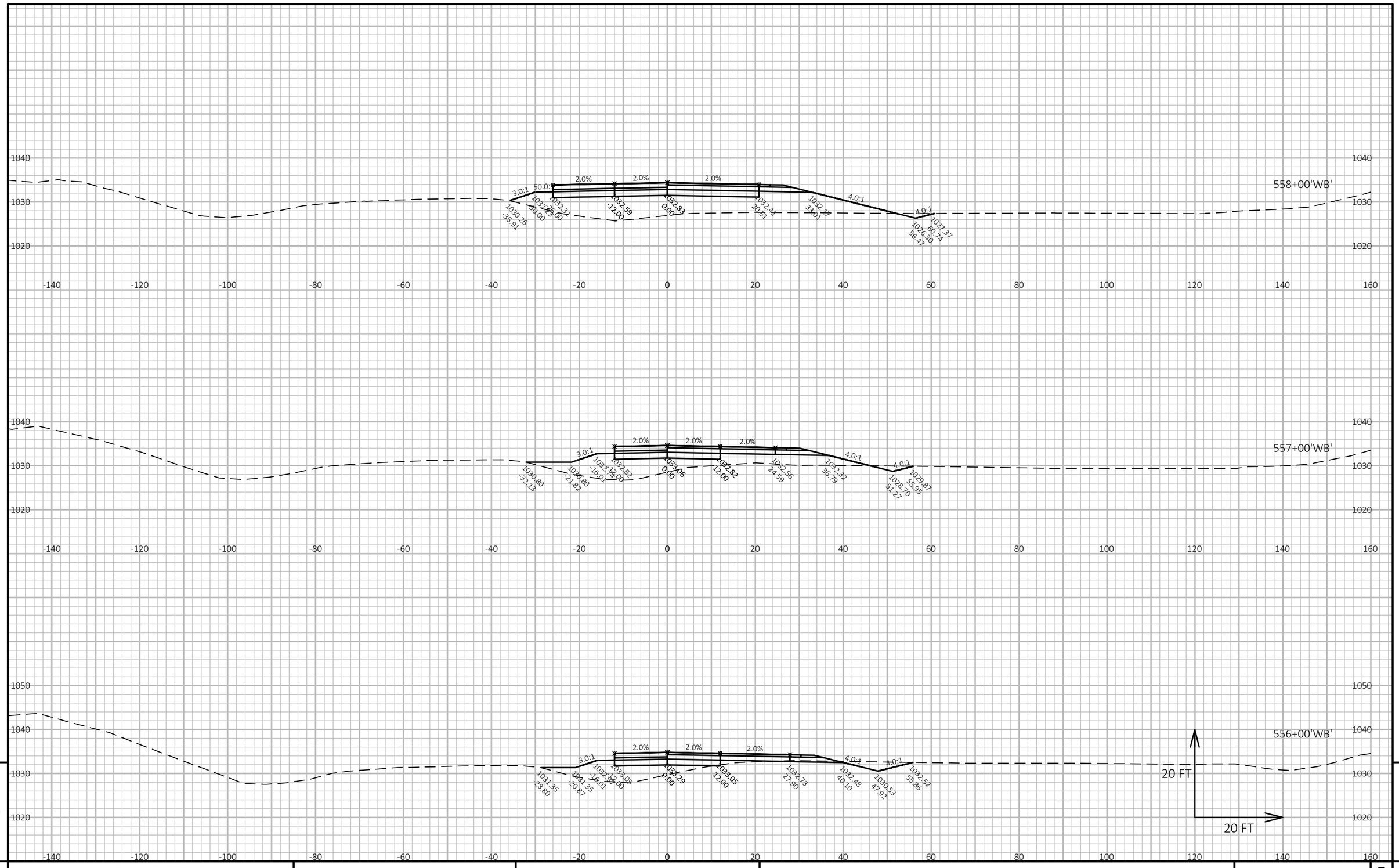
WISDOT/CADDS SHEET 49



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 357 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (23)

PLOT DATE : 6/4/2018 7:06 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

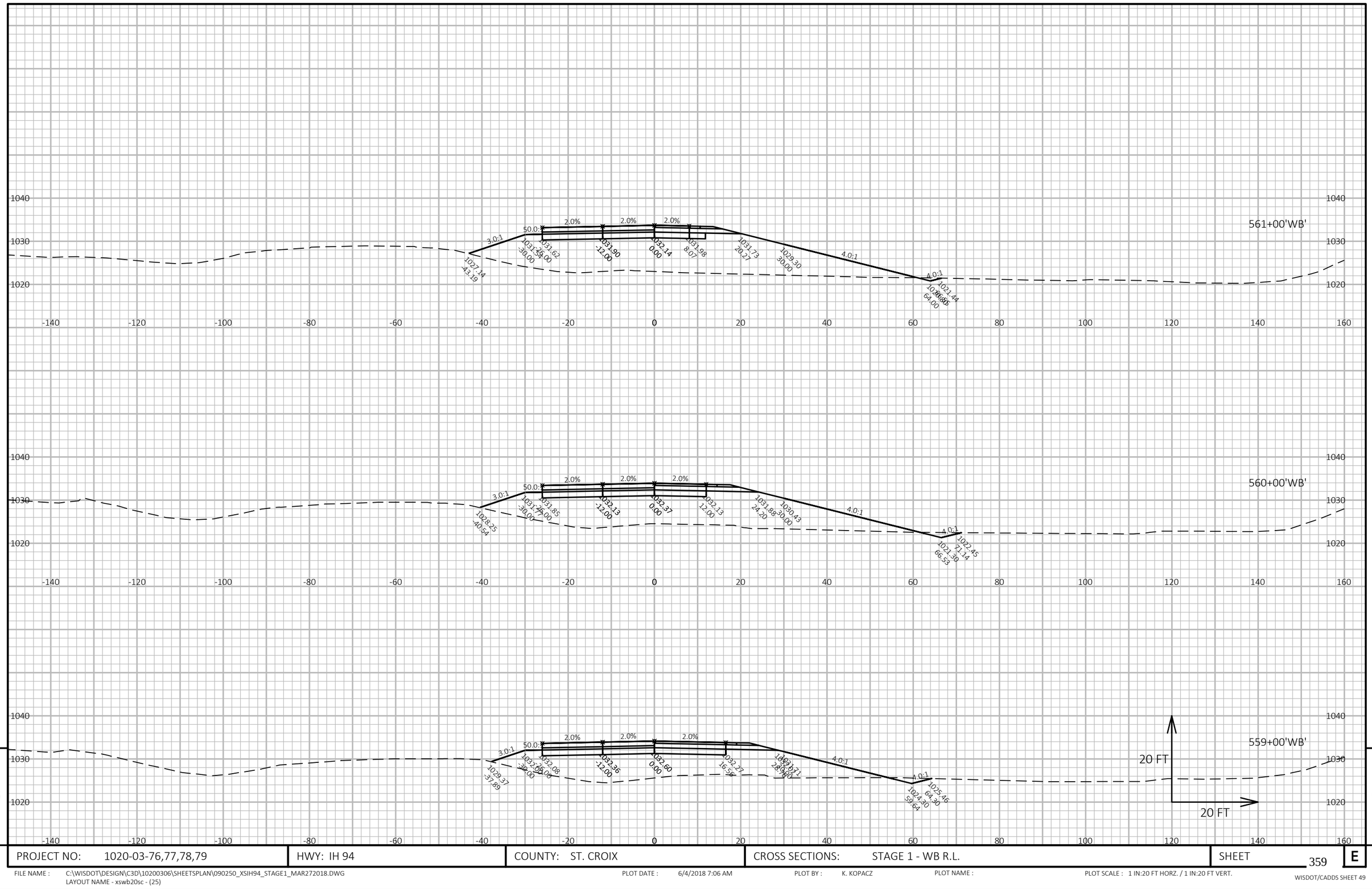


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 358 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (24)

PLOT DATE : 6/4/2018 7:06 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 359	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (25)

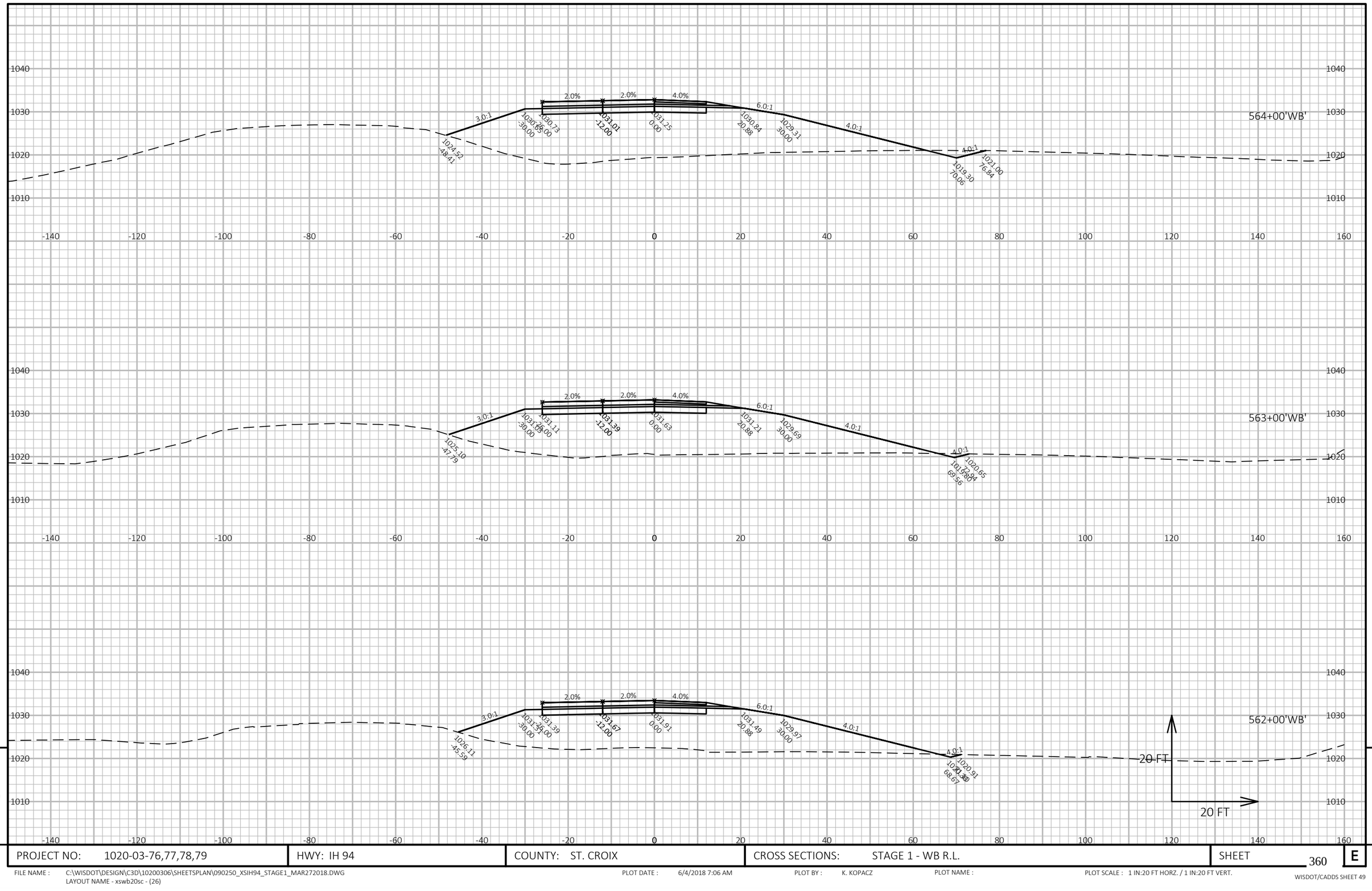
PLOT DATE : 6/4/2018 7:06 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

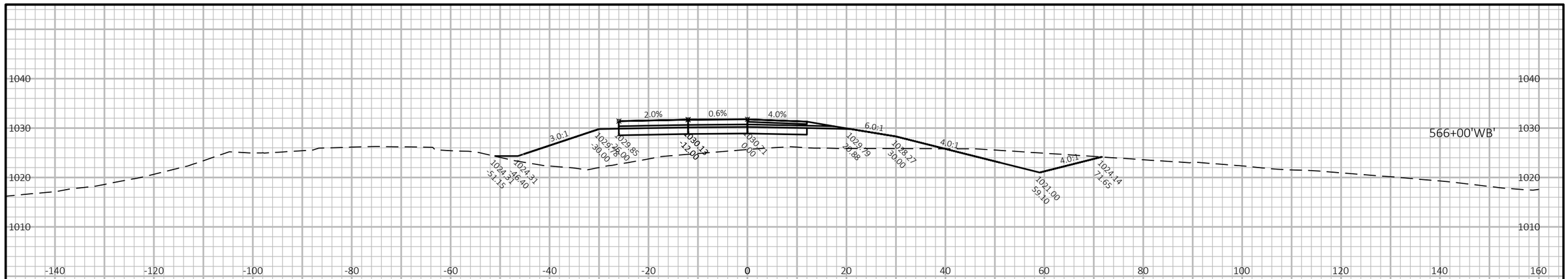
WISDOT/CADDS SHEET 49

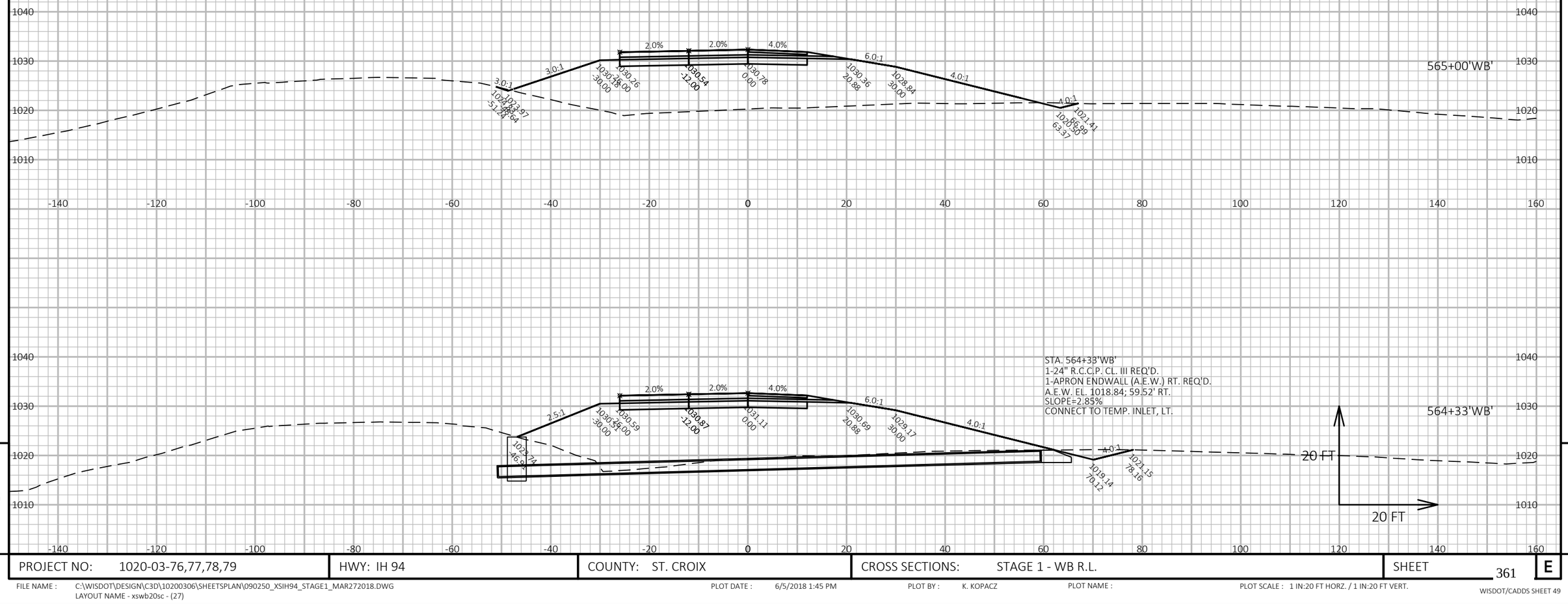


9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 360	E



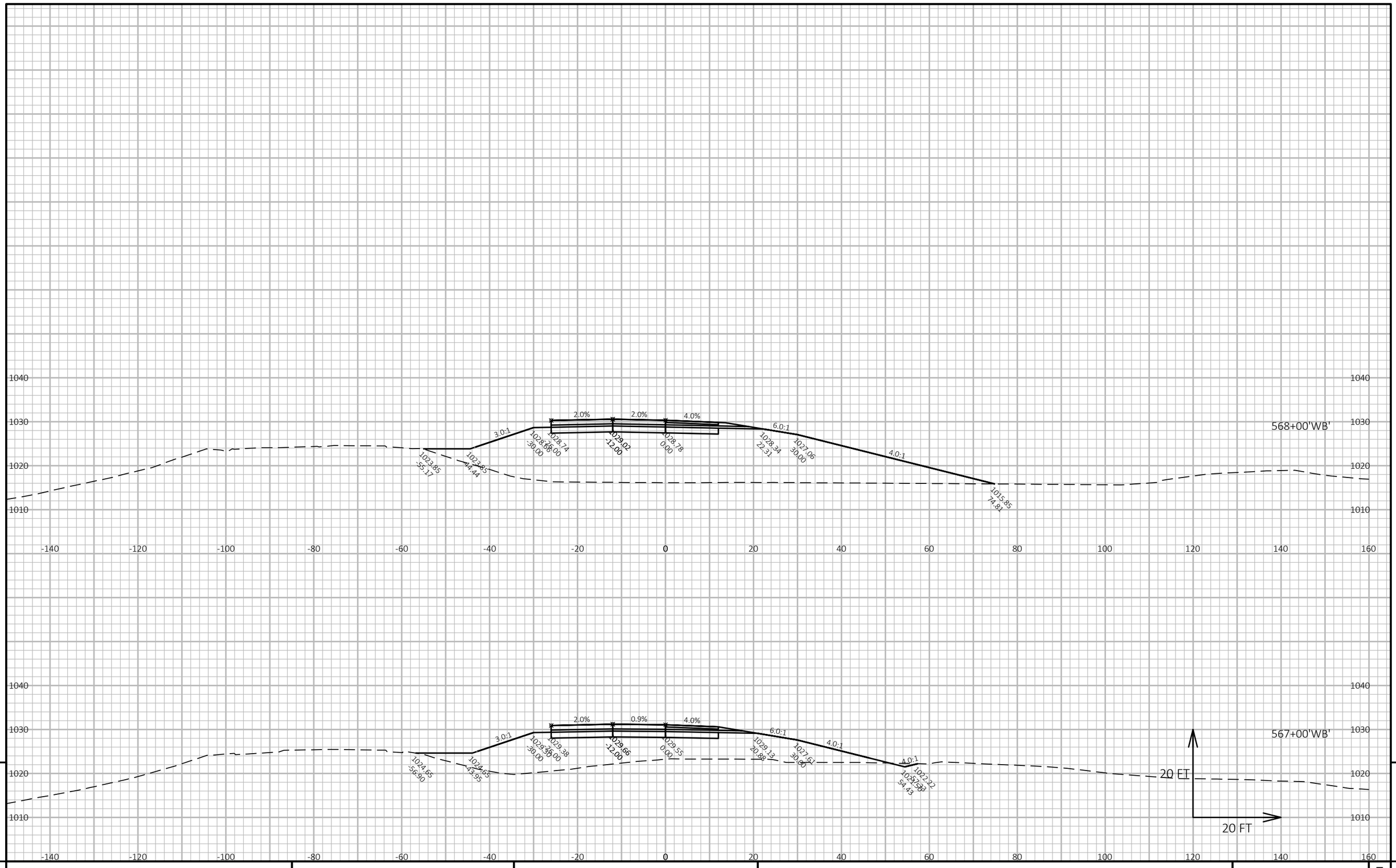


STA. 564+33'WB'
1-24" R.C.C.P. CL. III REQ'D.
1-APRON ENDWALL (A.E.W.) RT. REQ'D.
A.E.W. EL. 1018.84; 59.52' RT.
SLOPE=2.85%
CONNECT TO TEMP. INLET, LT.

9 9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 361 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (27)
PLOT DATE : 6/5/2018 1:45 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



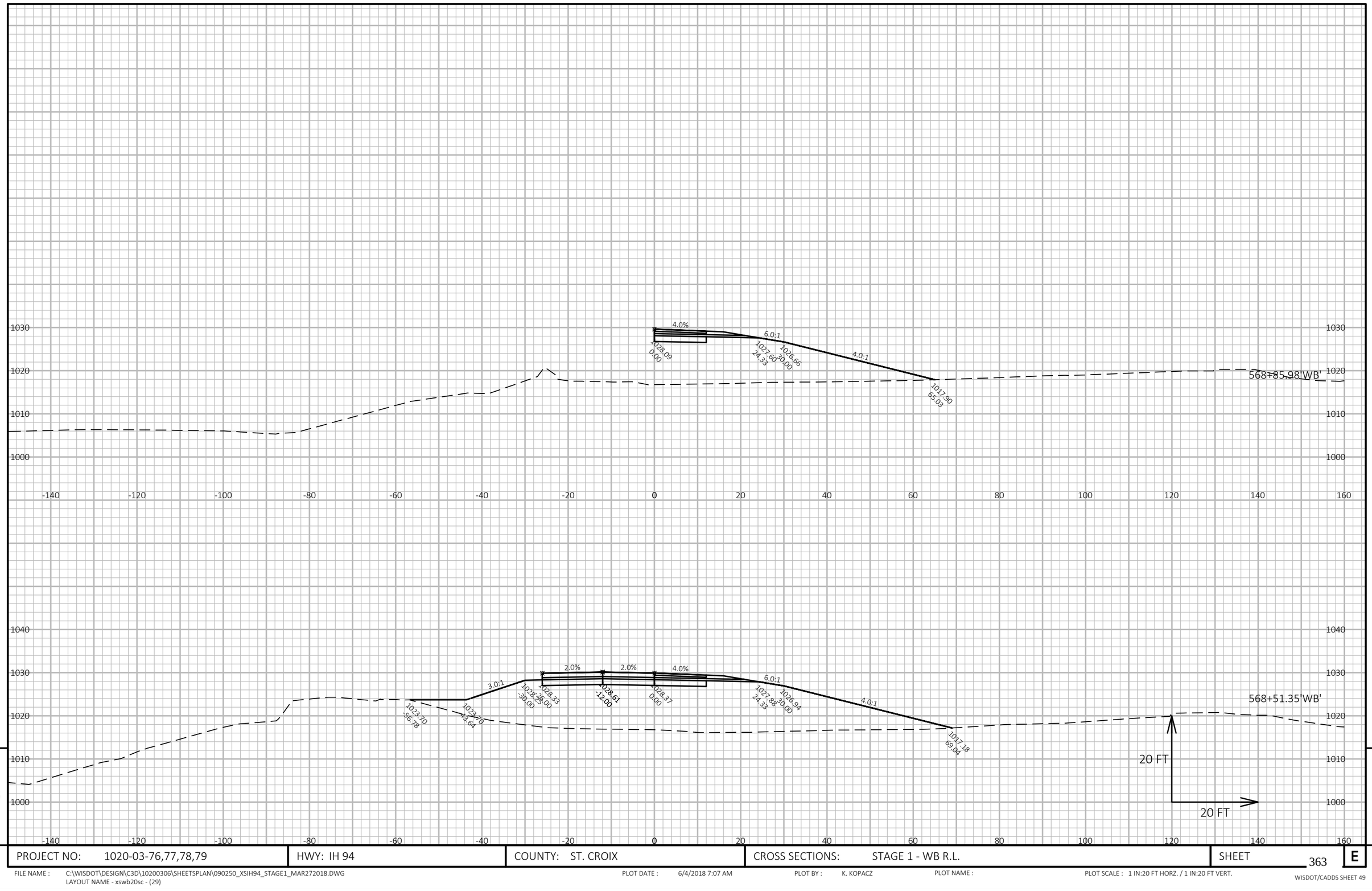
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 362	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (28)

PLOT DATE : 6/4/2018 7:07 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



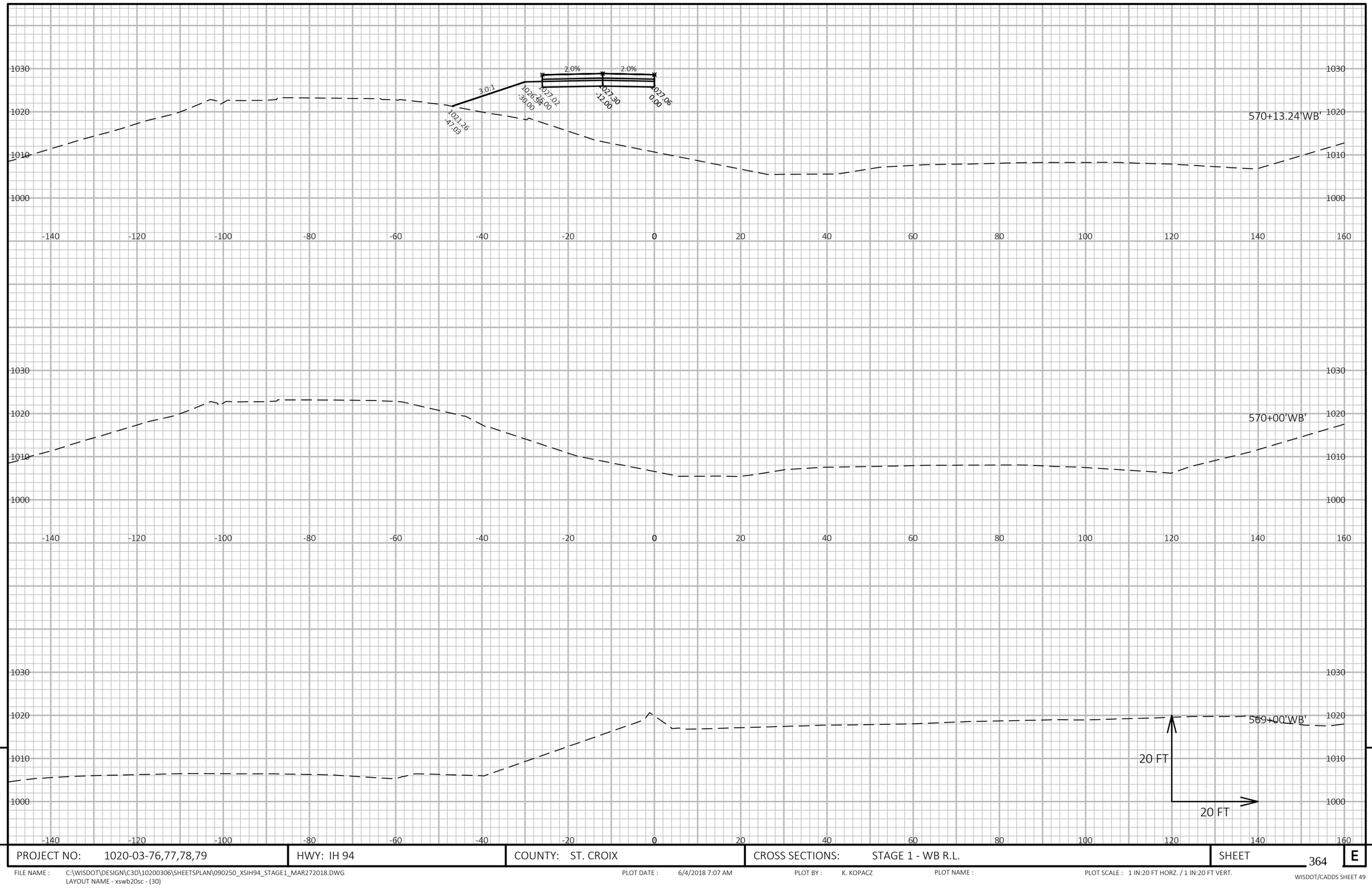
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 363	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (29)

PLOT DATE : 6/4/2018 7:07 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

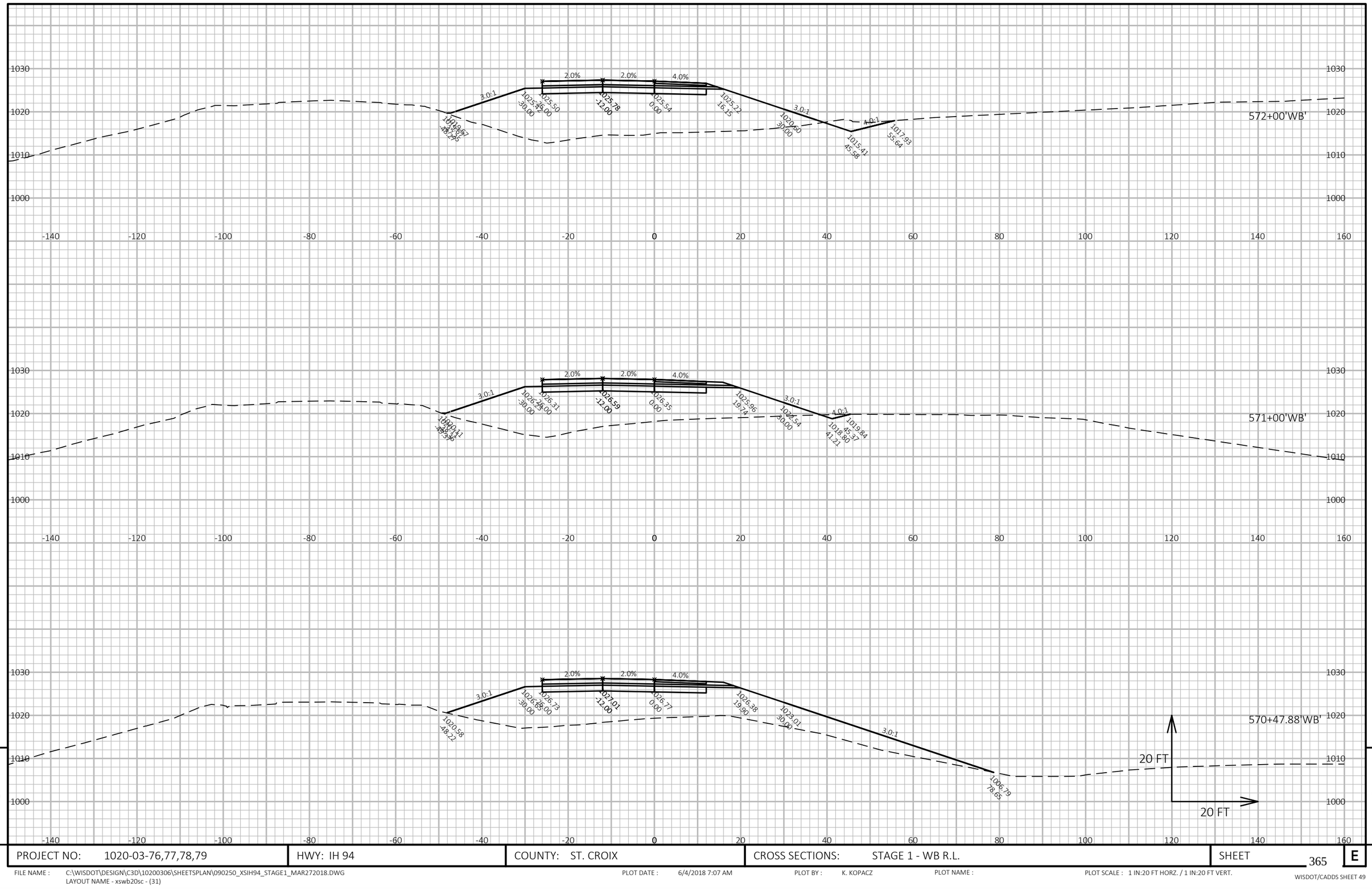
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 364	E

9

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (30)

PLOT DATE : 6/4/2018 7:07 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



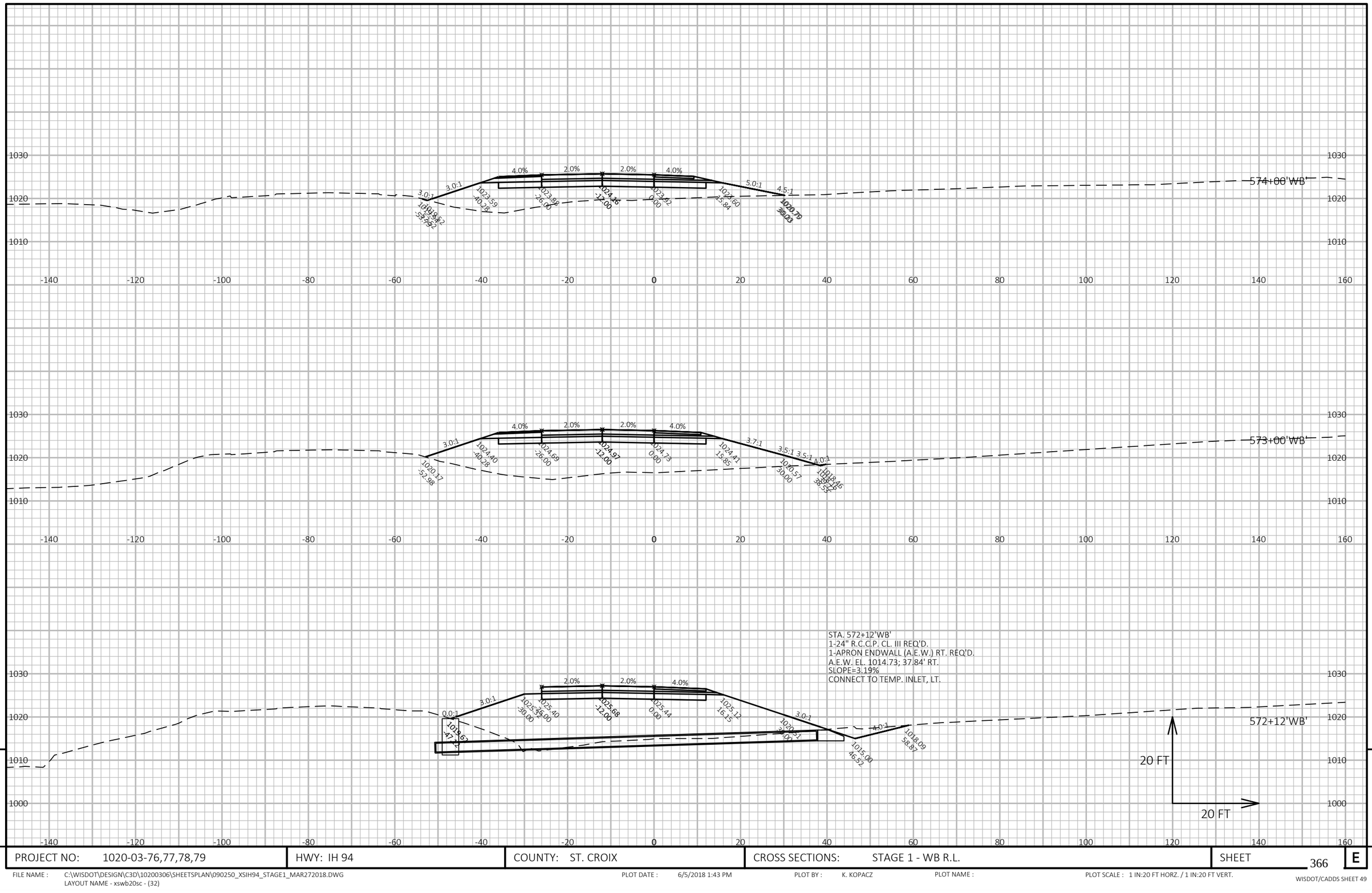
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 365	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (31)

PLOT DATE : 6/4/2018 7:07 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



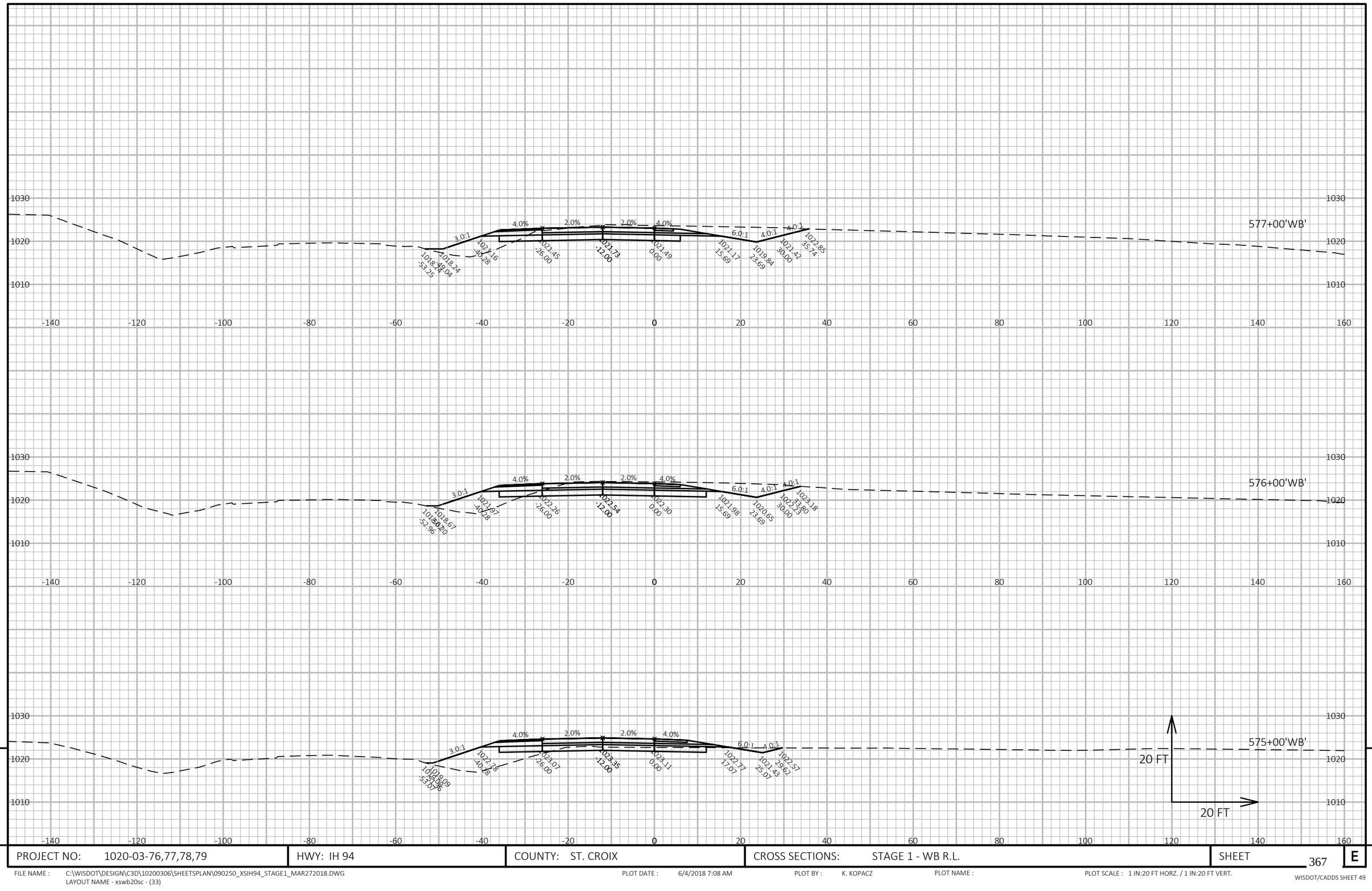
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 366	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (32)

PLOT DATE : 6/5/2018 1:43 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



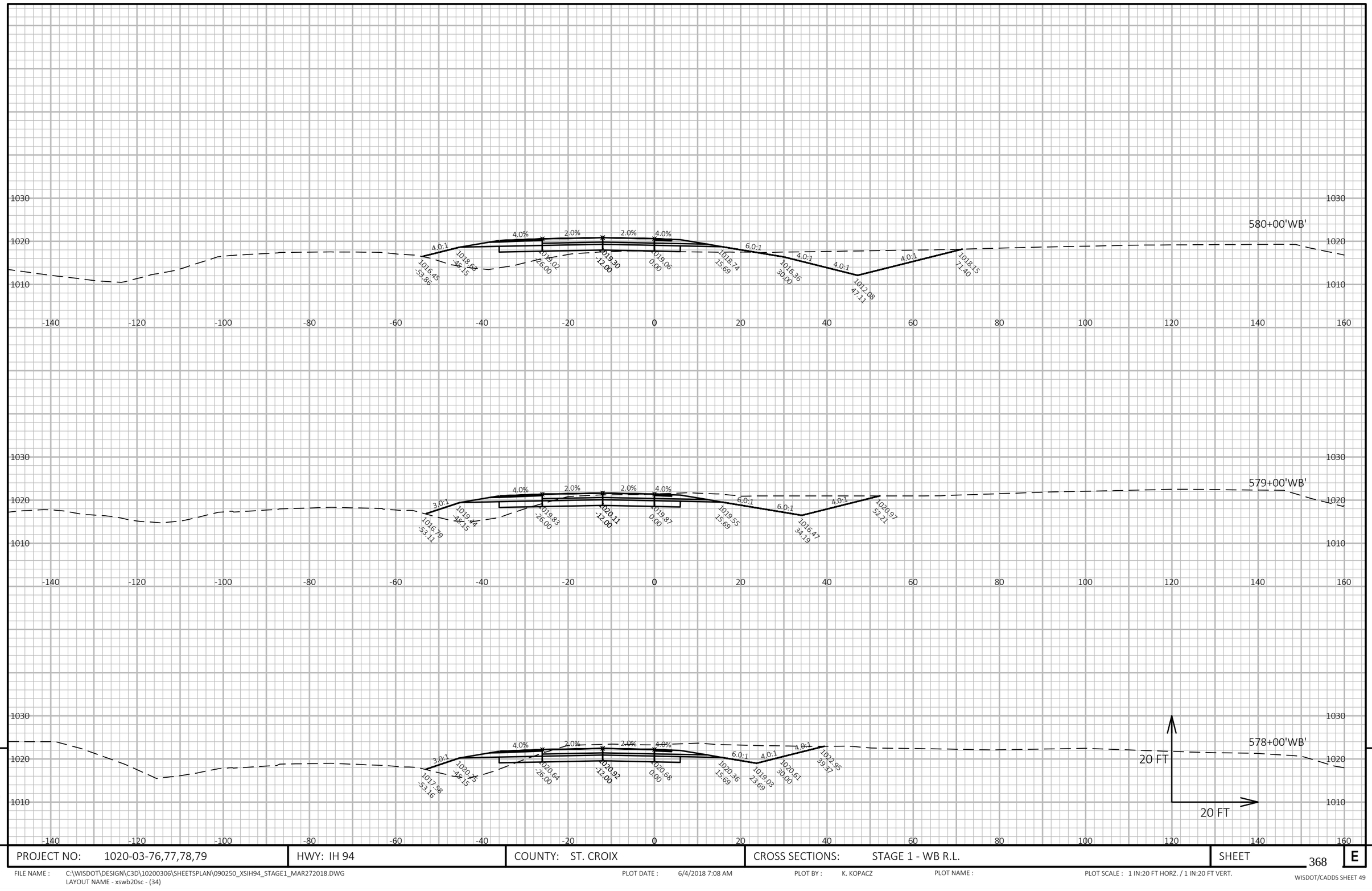
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 367	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (33)

PLOT DATE : 6/4/2018 7:08 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 368	E

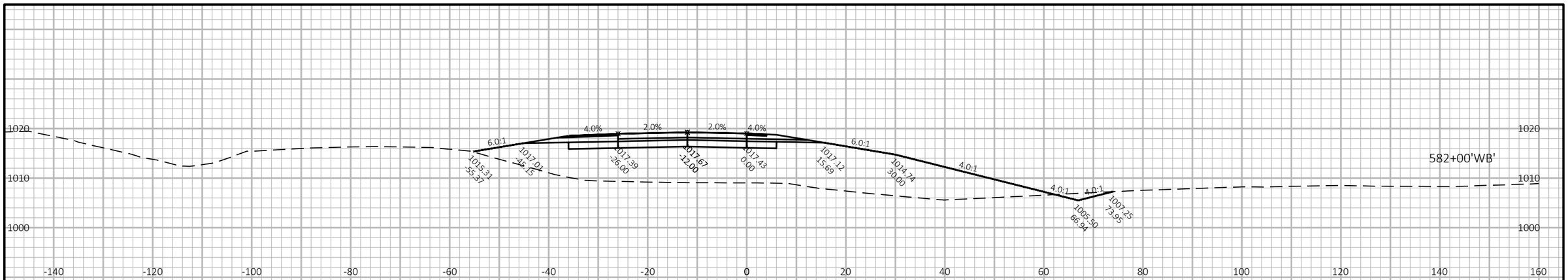
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (34)

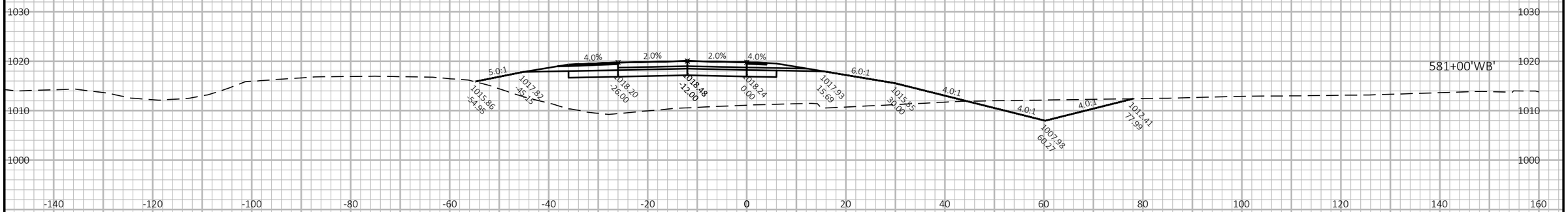
PLOT DATE : 6/4/2018 7:08 AM

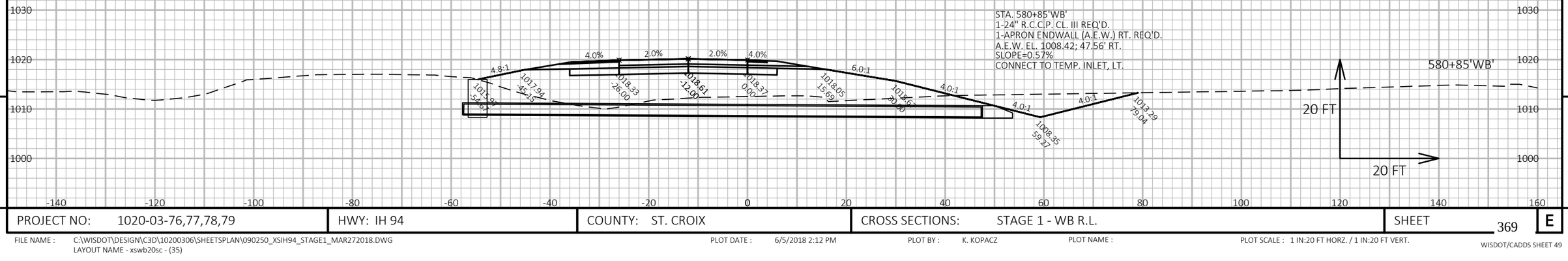
PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





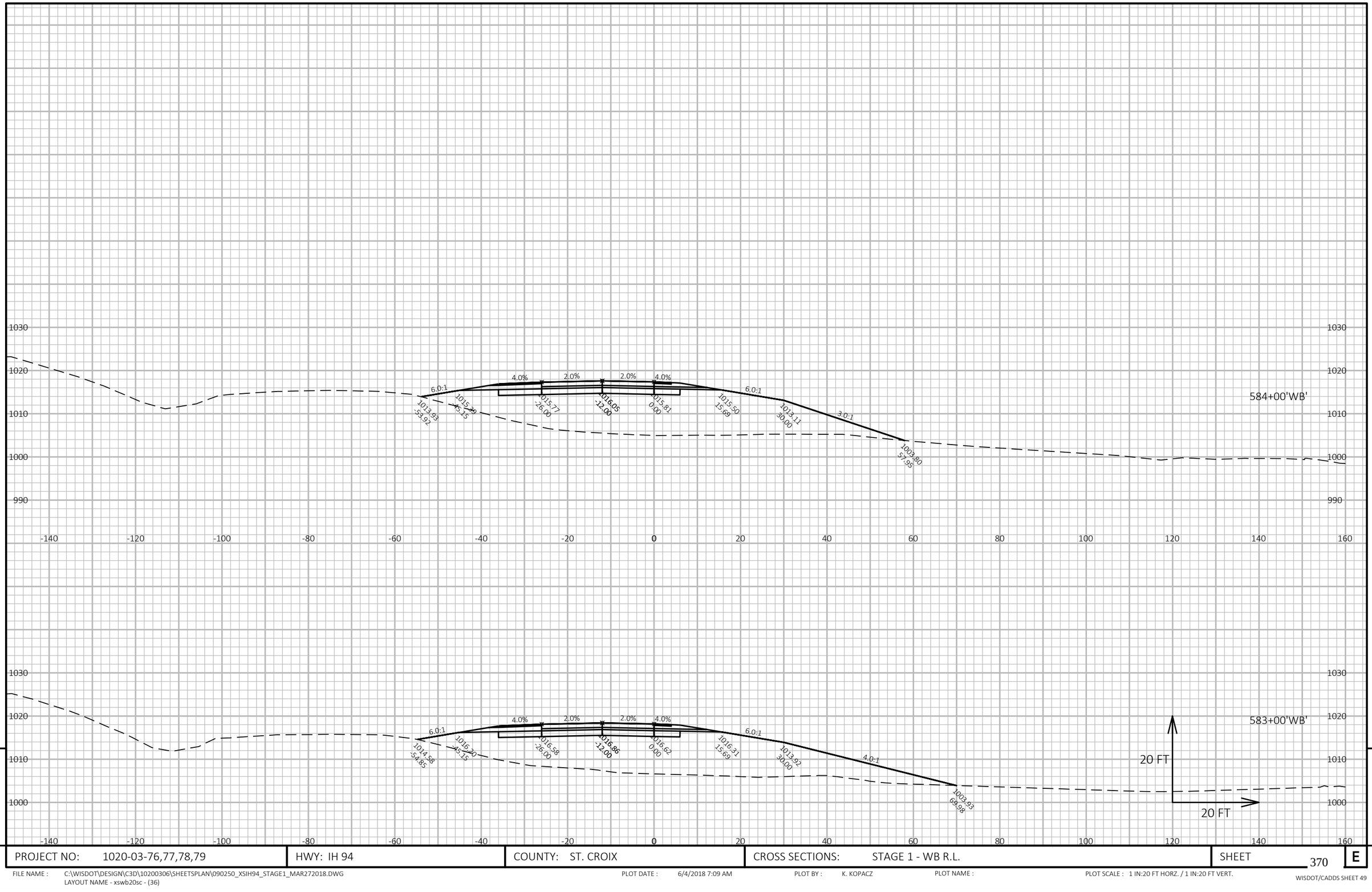


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 369 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (35)

PLOT DATE : 6/5/2018 2:12 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 370	E

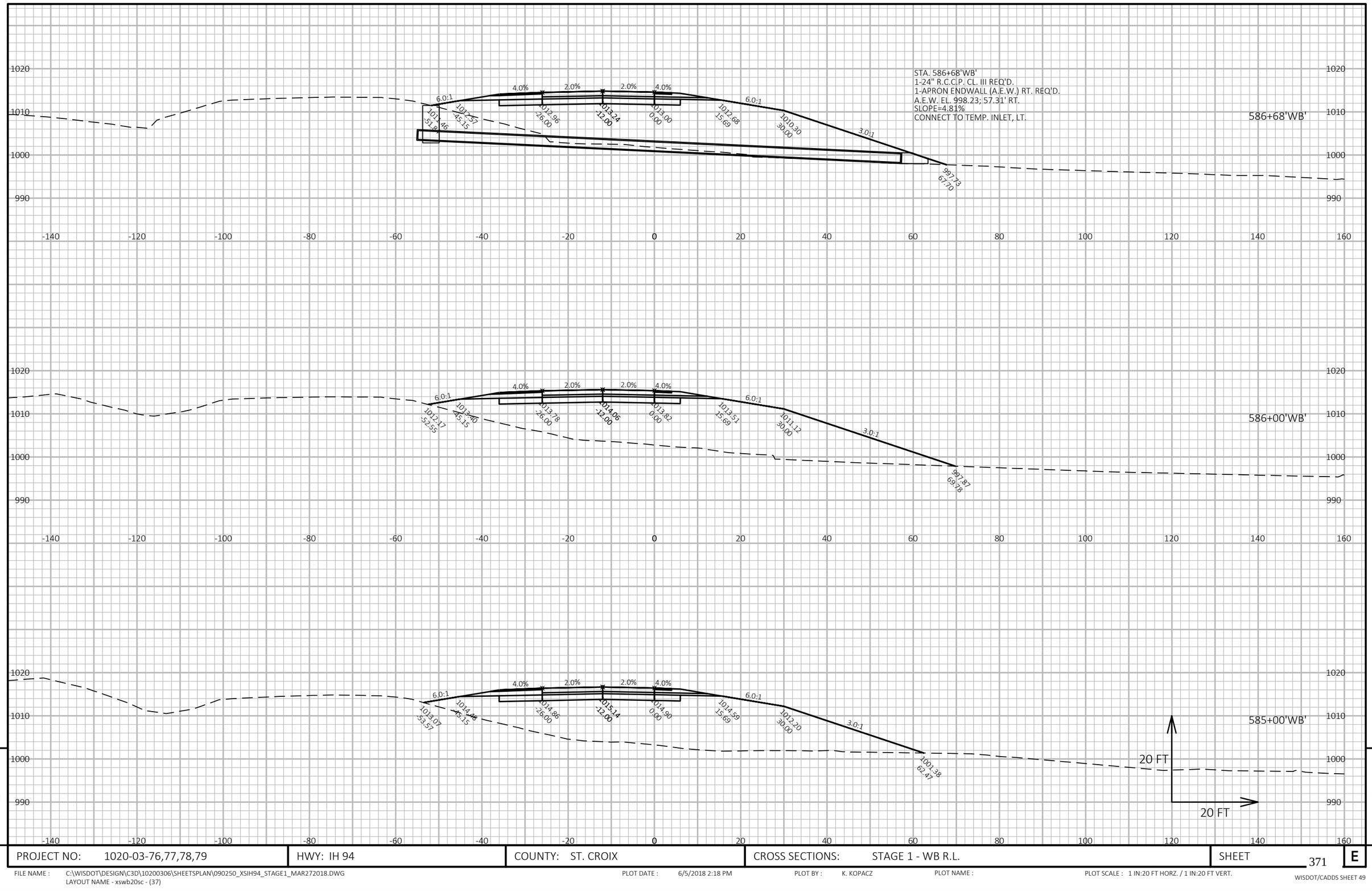
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (36)

PLOT DATE : 6/4/2018 7:09 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



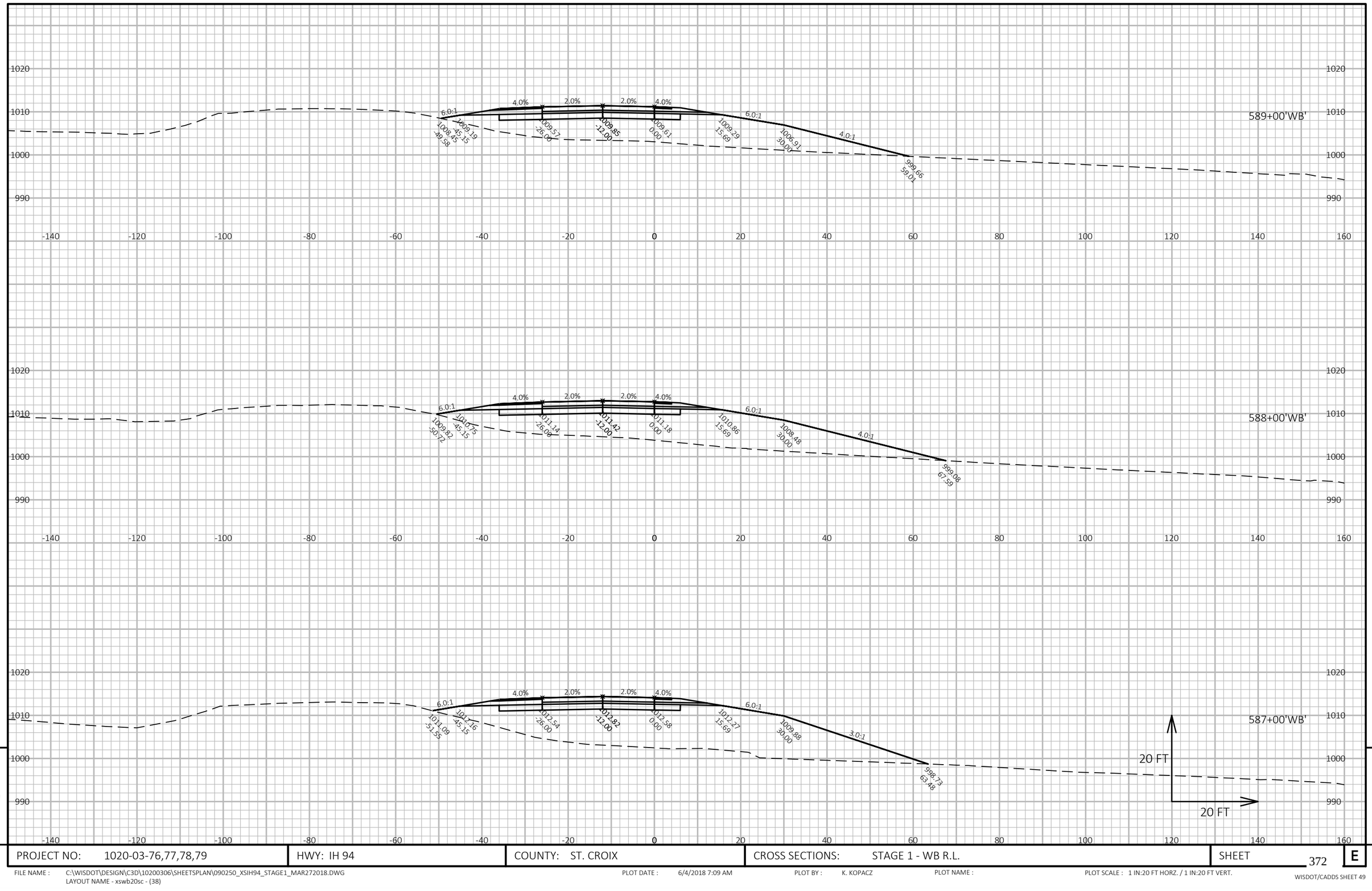
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 371	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (37)

PLOT DATE : 6/5/2018 2:18 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



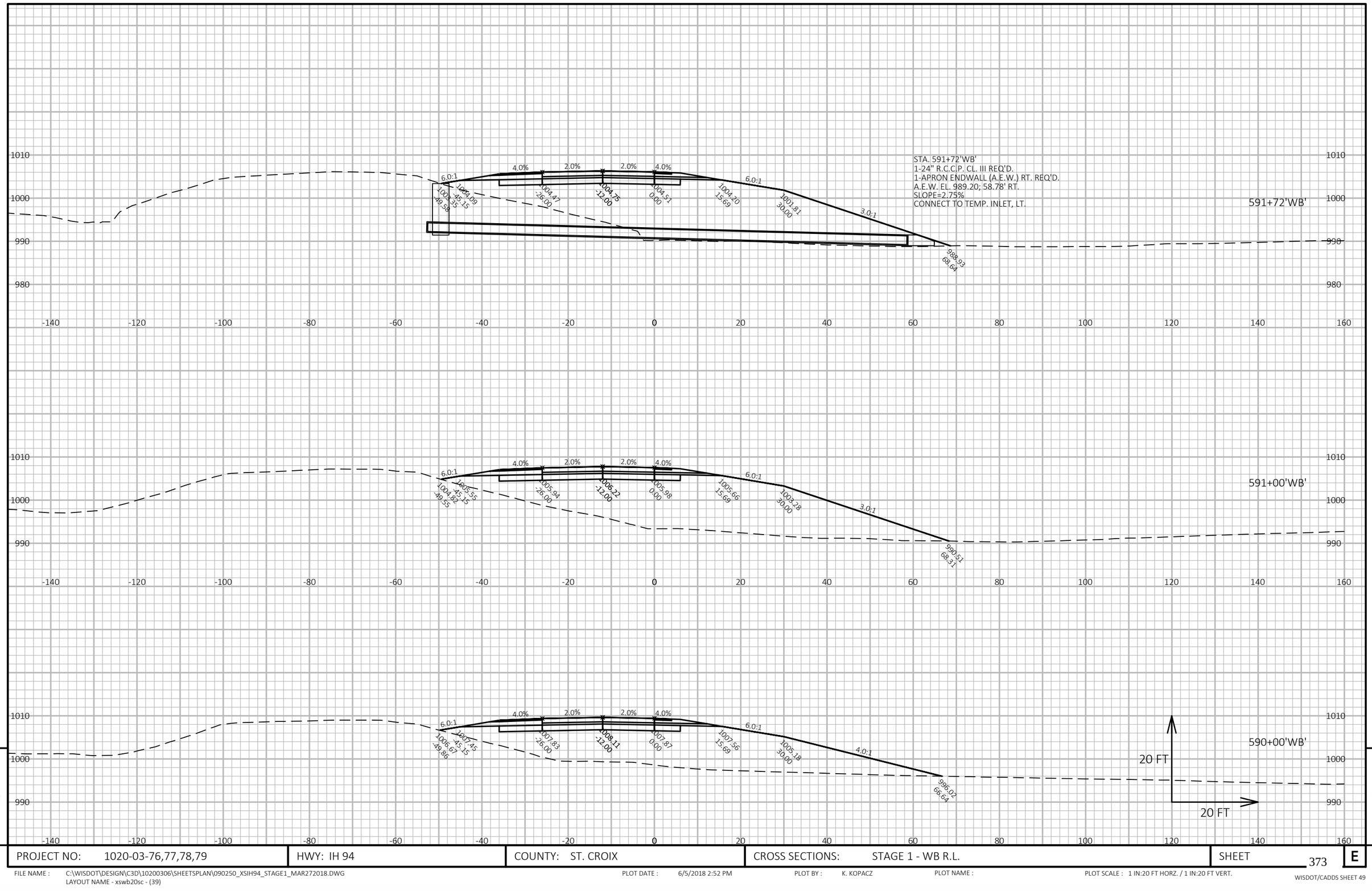
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 372	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (38)

PLOT DATE : 6/4/2018 7:09 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 373	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (39)

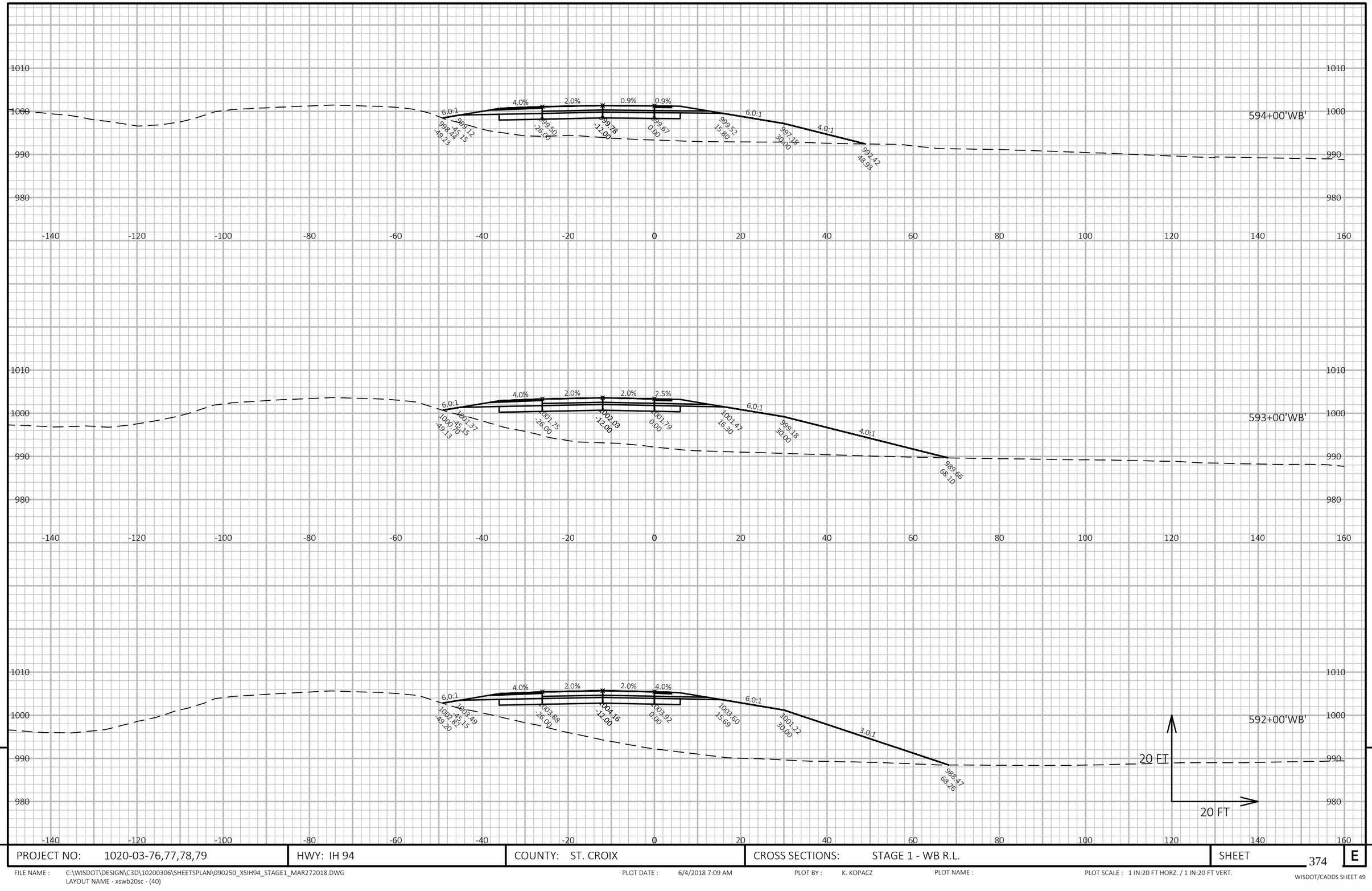
PLOT DATE : 6/5/2018 2:52 PM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



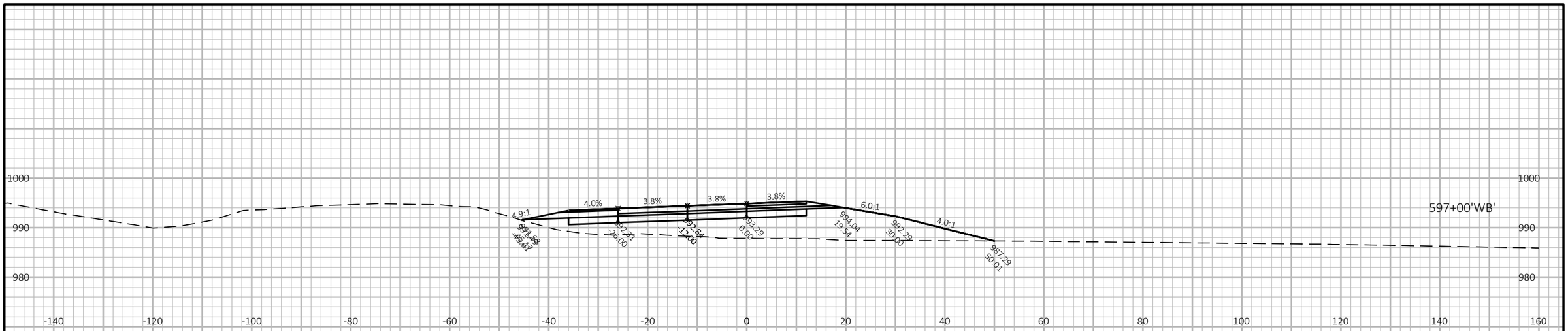
9

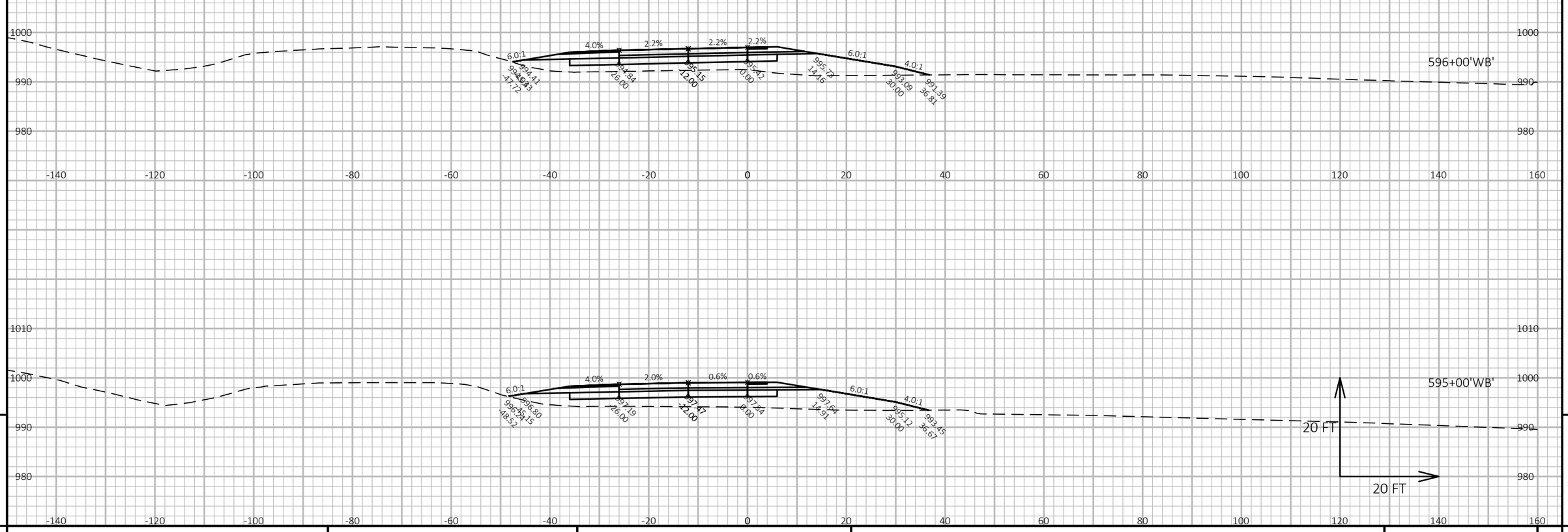
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 374	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (40)

PLOT DATE : 6/4/2018 7:09 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





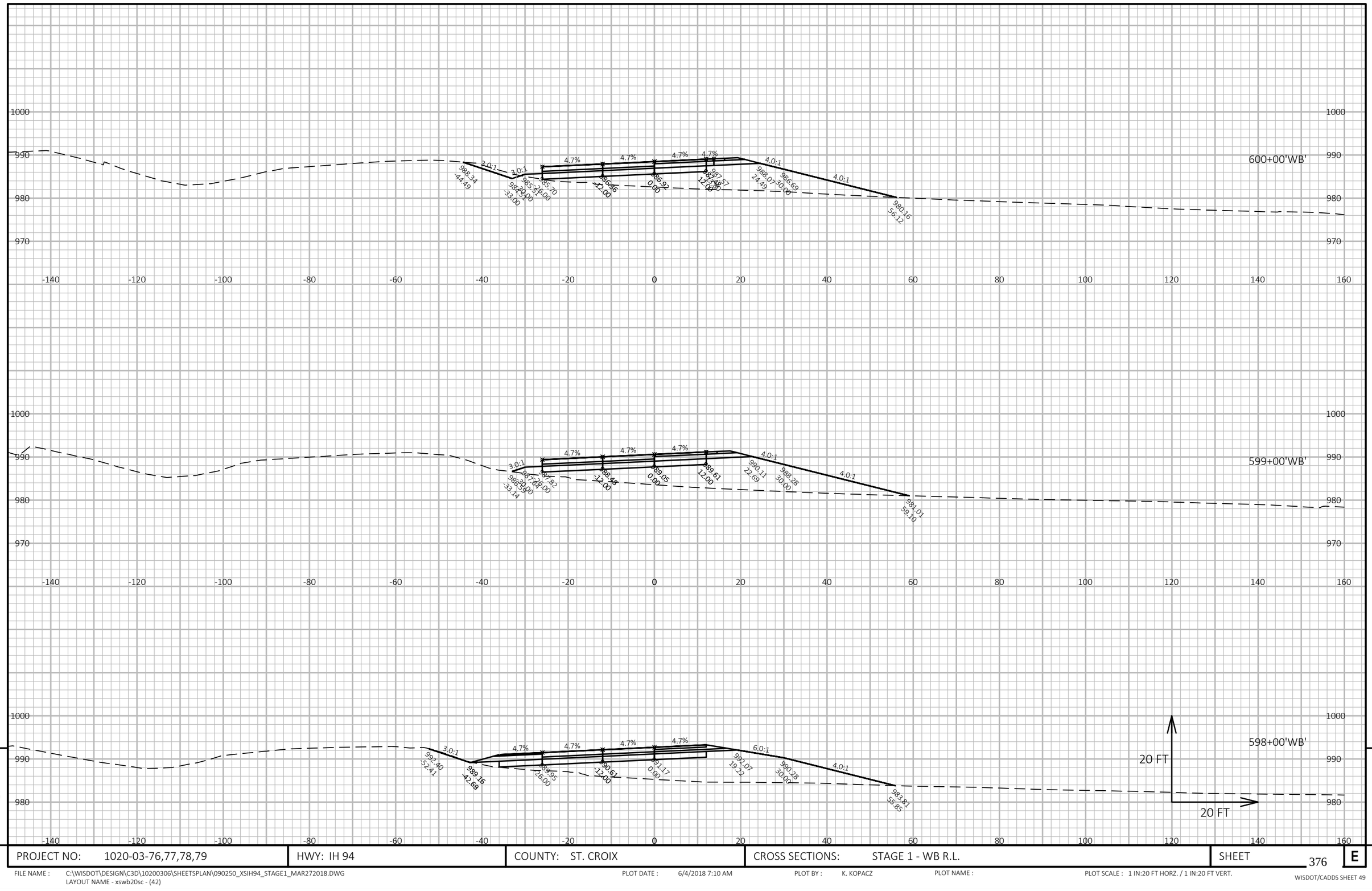
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 375	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (41)

PLOT DATE : 6/4/2018 7:10 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

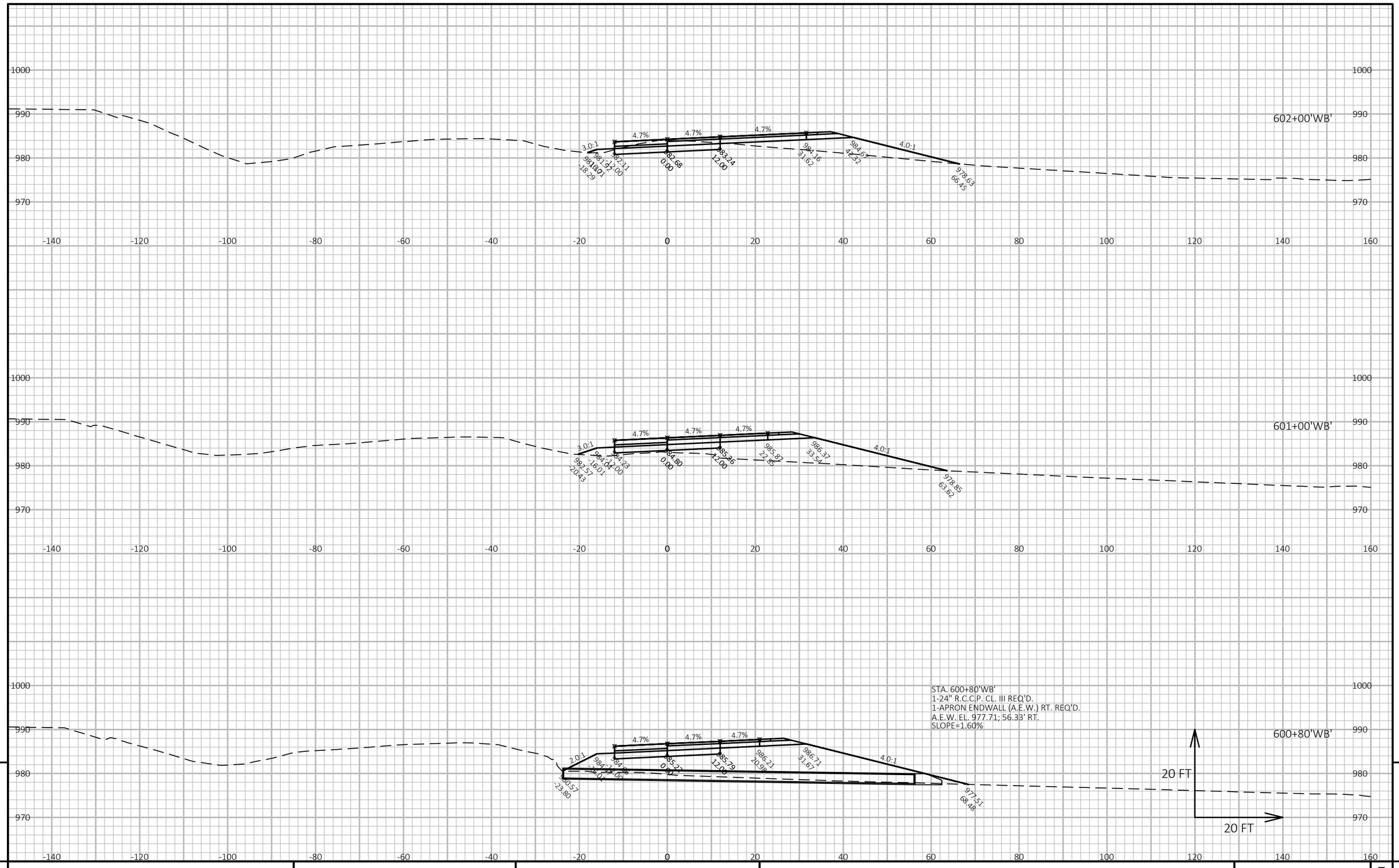


9	PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 376 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (42)

PLOT DATE : 6/4/2018 7:10 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 377

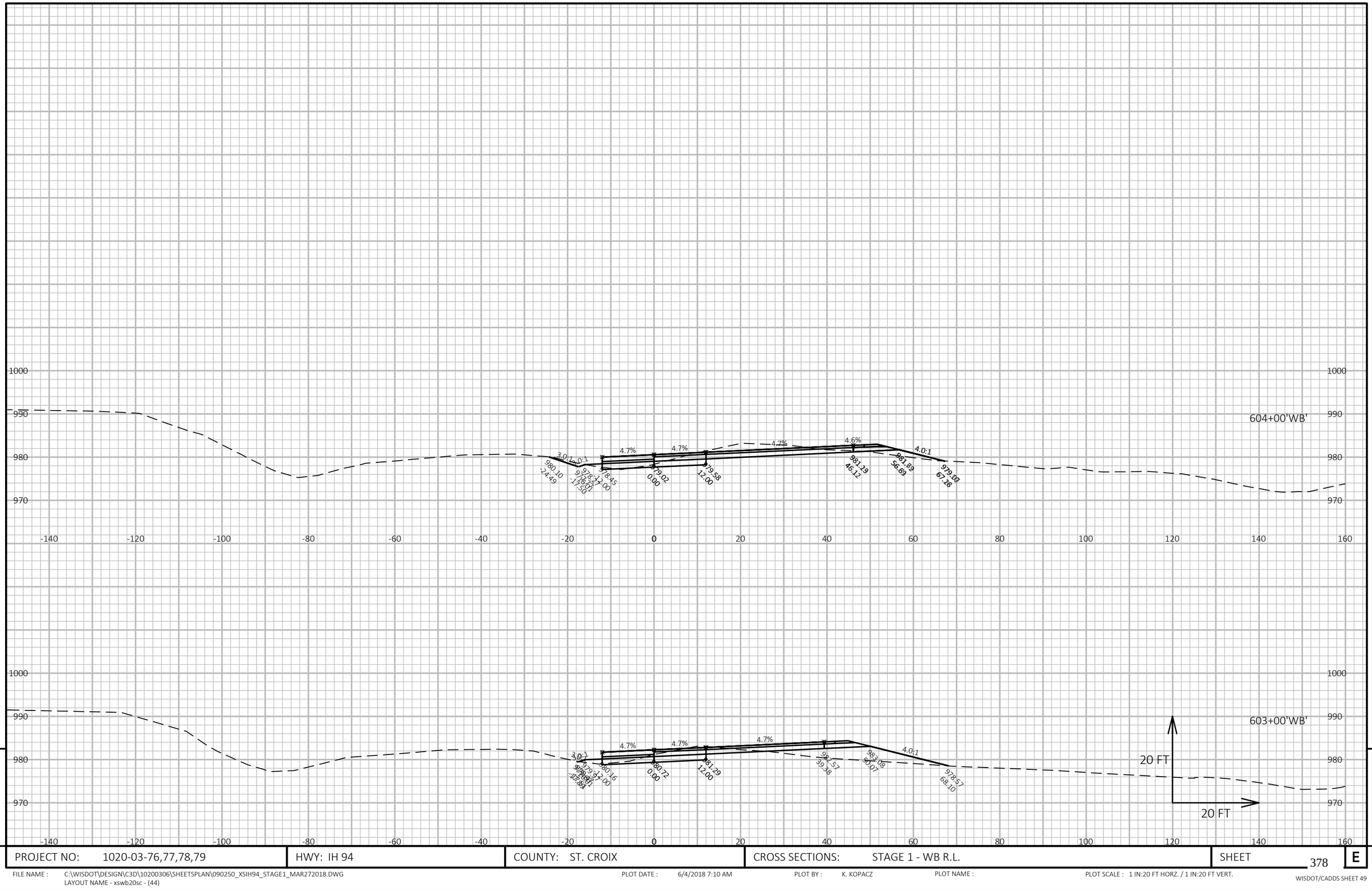
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (43)

PLOT DATE : 6/5/2018 2:58 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9 9

E



9

9

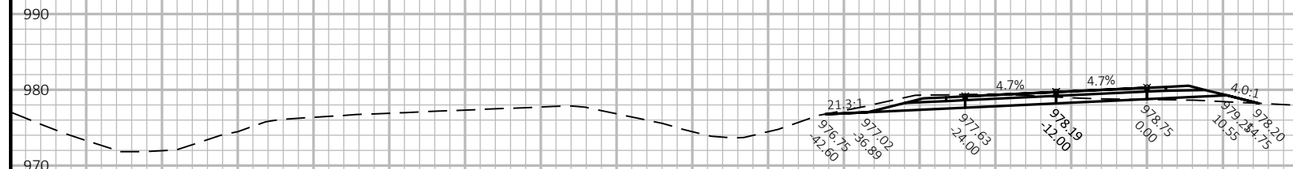
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WB R.L.	SHEET 378	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswb20sc - (44)

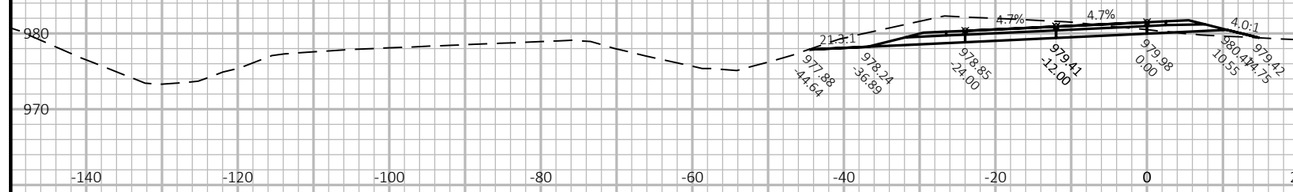
PLOT DATE : 6/4/2018 7:10 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

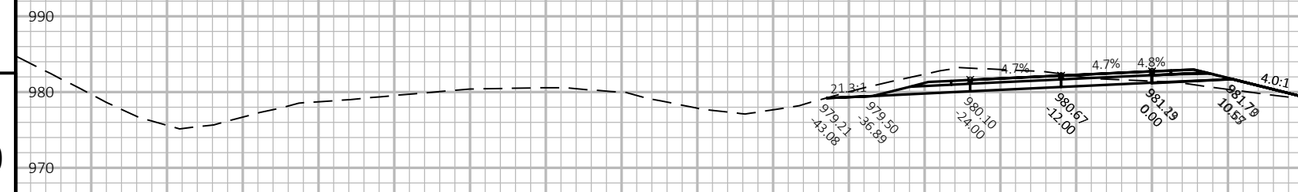
606+00'EBT'



605+00'EBT'



604+05.20'EBT'



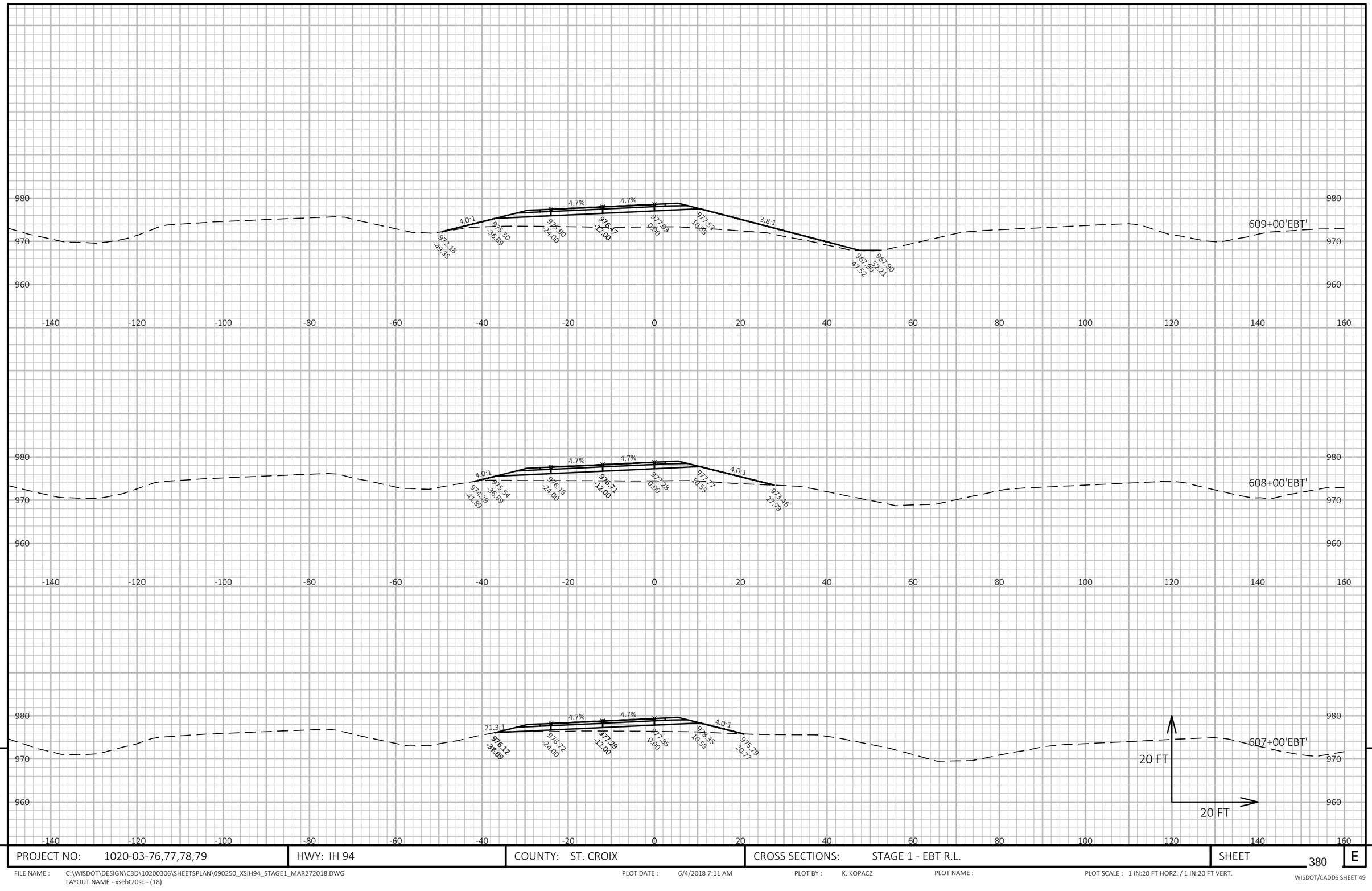


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 379 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (17)

PLOT DATE : 6/4/2018 7:10 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

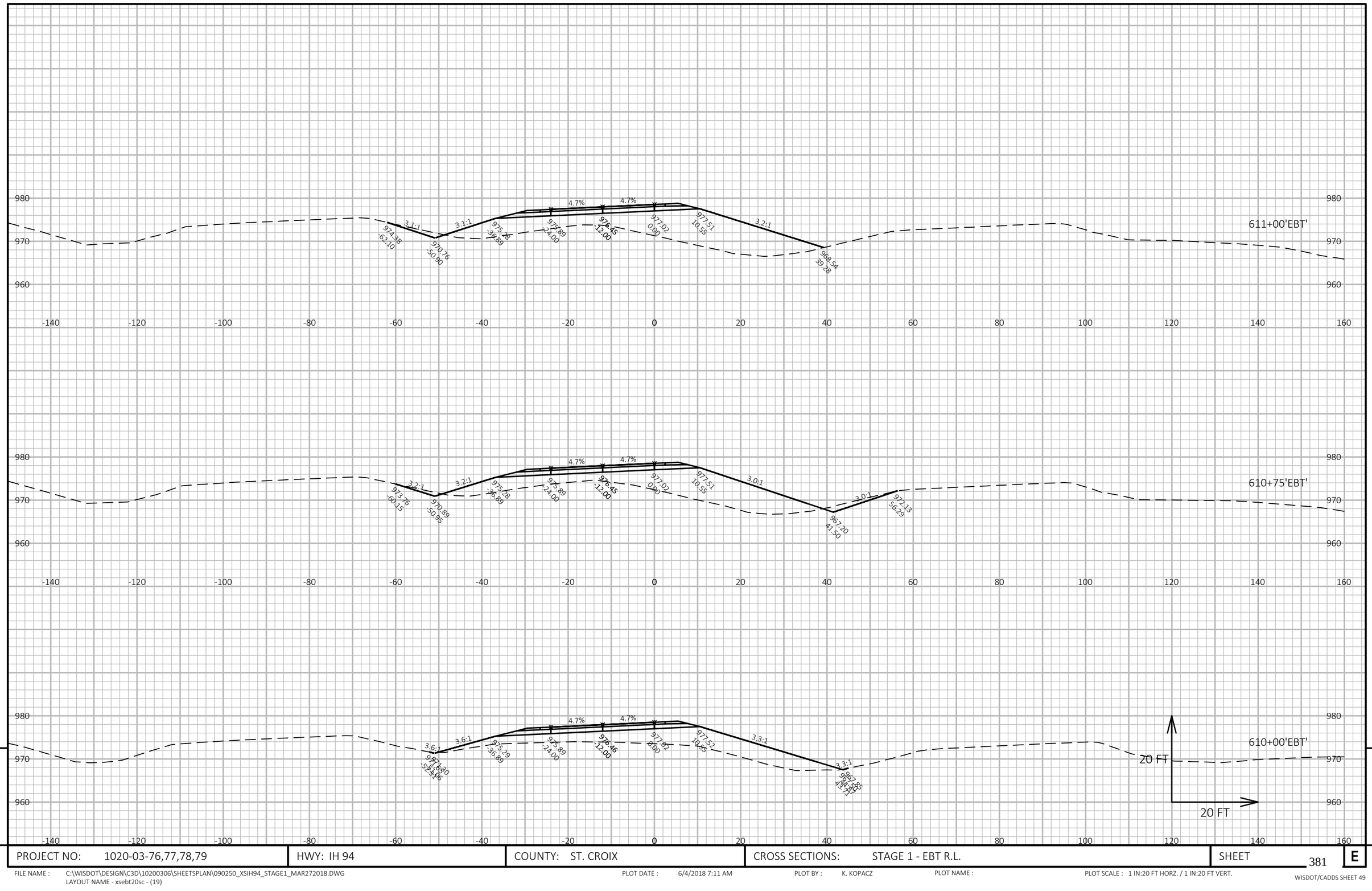
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 380	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (18)

PLOT DATE : 6/4/2018 7:11 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 381	E

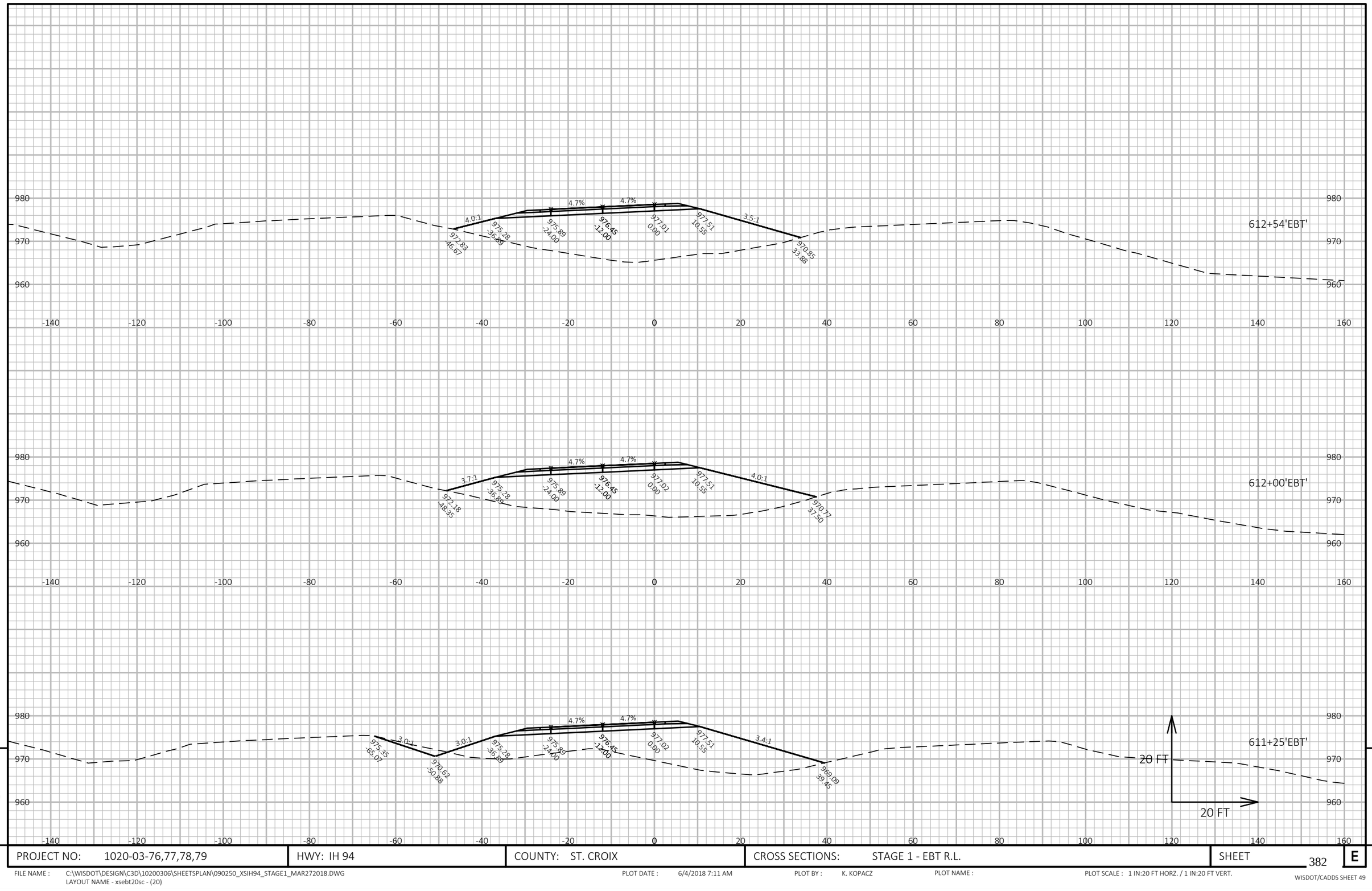
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (19)

PLOT DATE : 6/4/2018 7:11 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



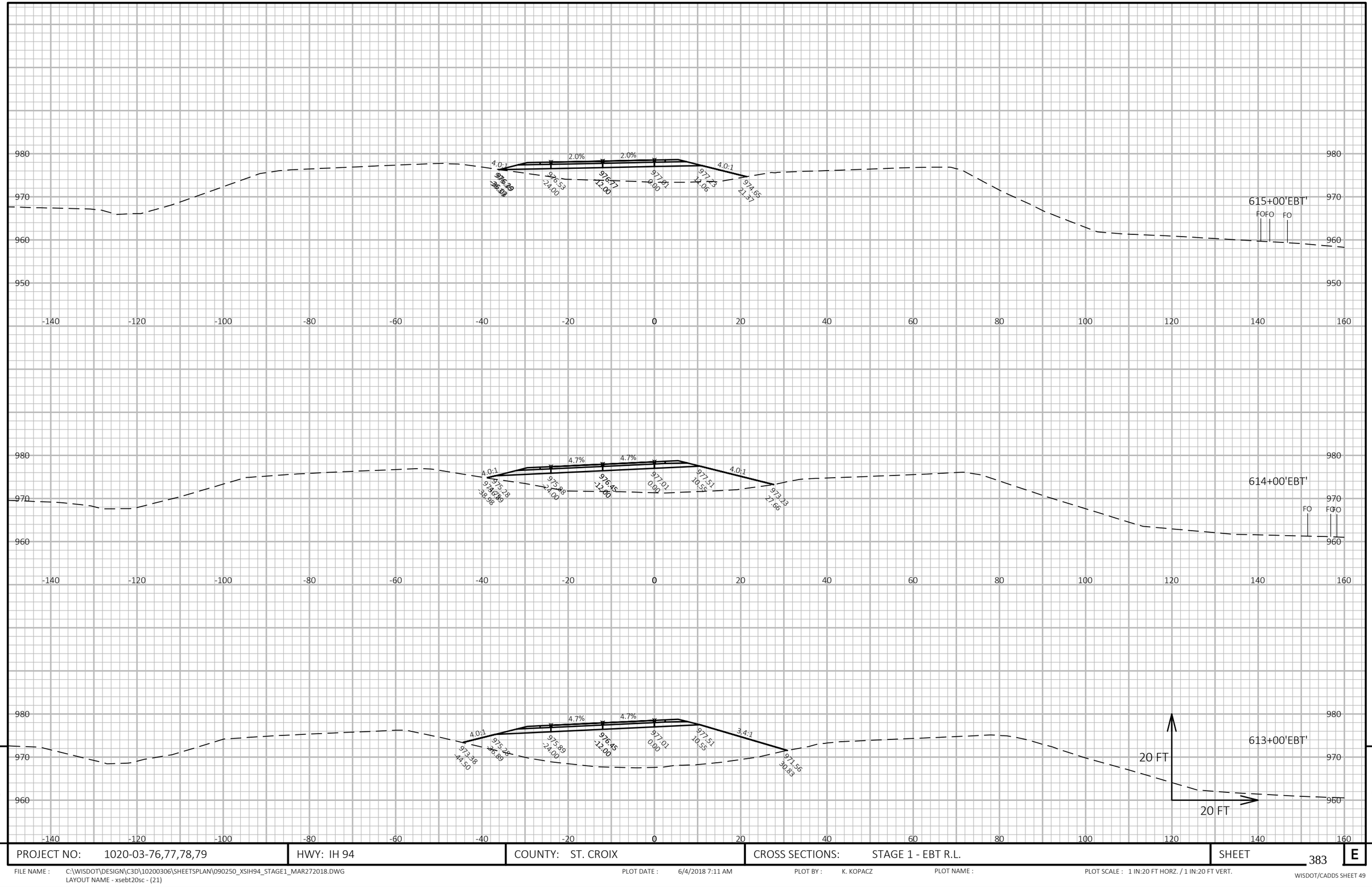
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 382	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (20)

PLOT DATE : 6/4/2018 7:11 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



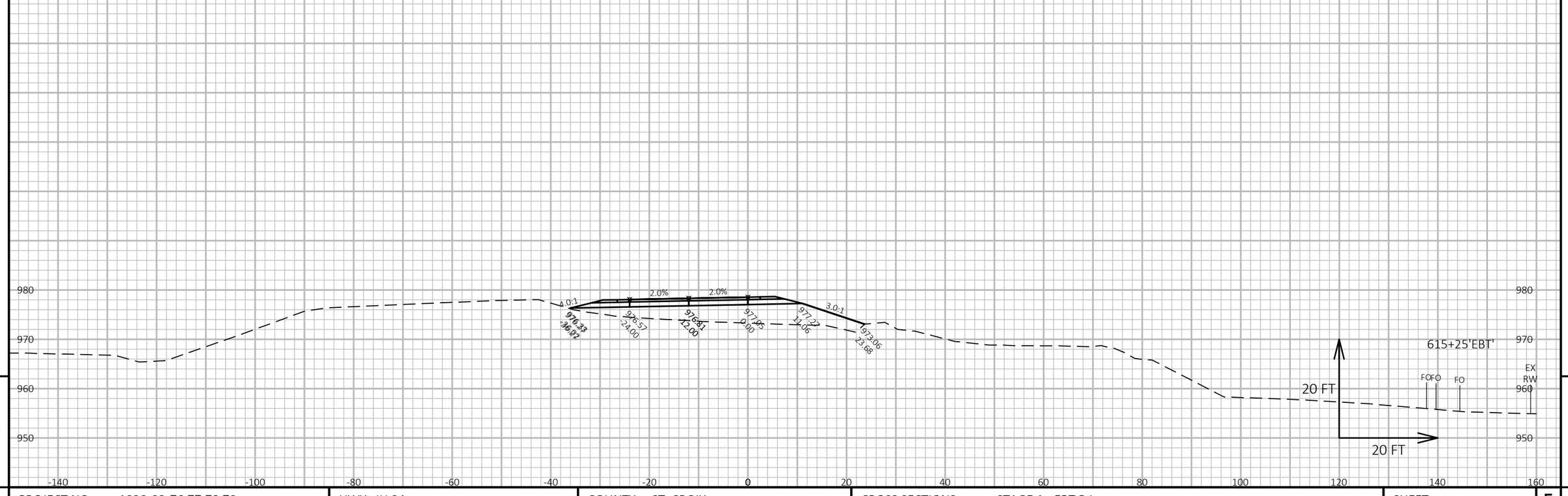
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 383	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (21)

PLOT DATE : 6/4/2018 7:11 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



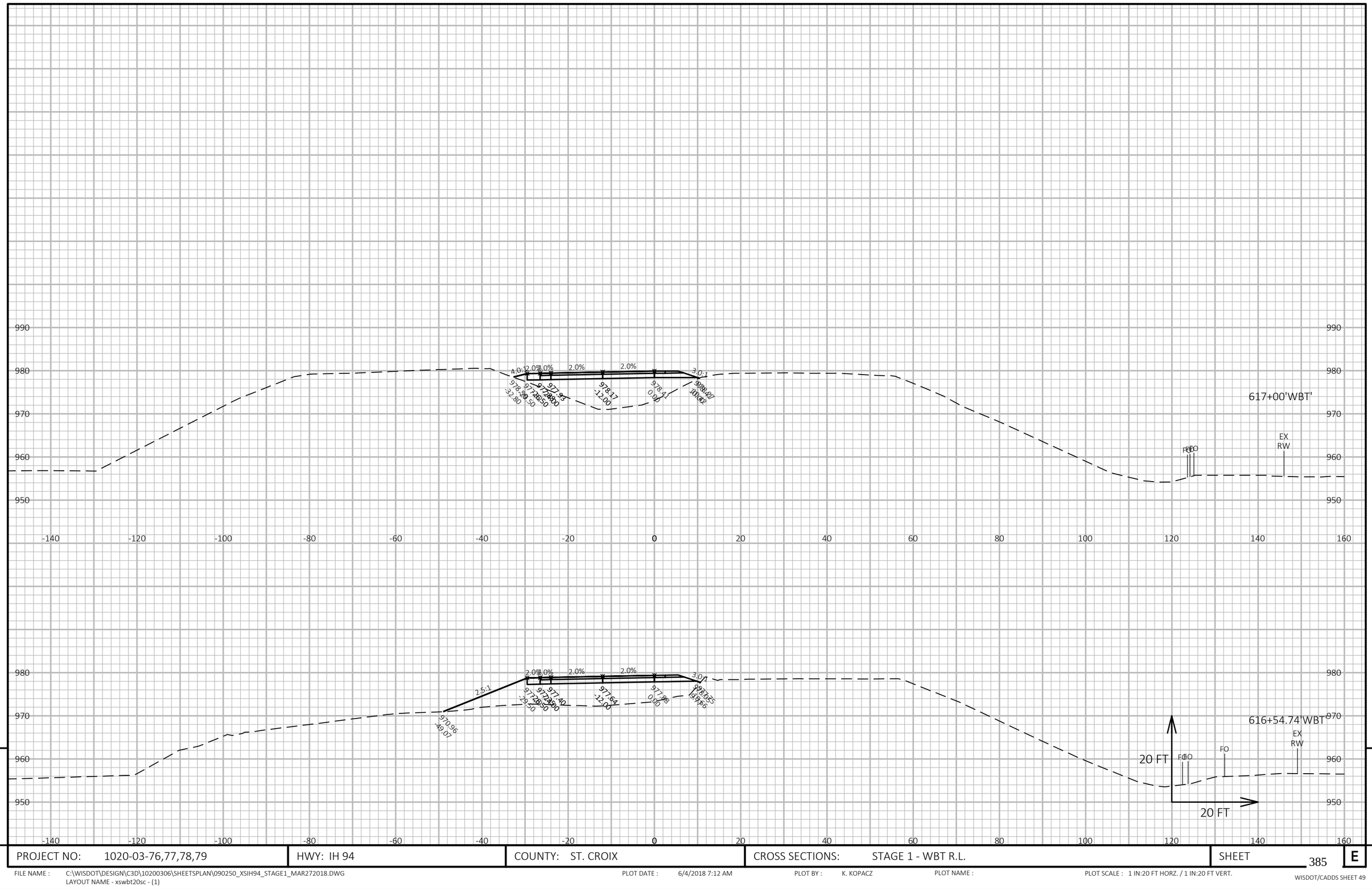
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - EBT R.L.	SHEET 384	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xsebt20sc - (22)

PLOT DATE : 6/4/2018 7:12 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



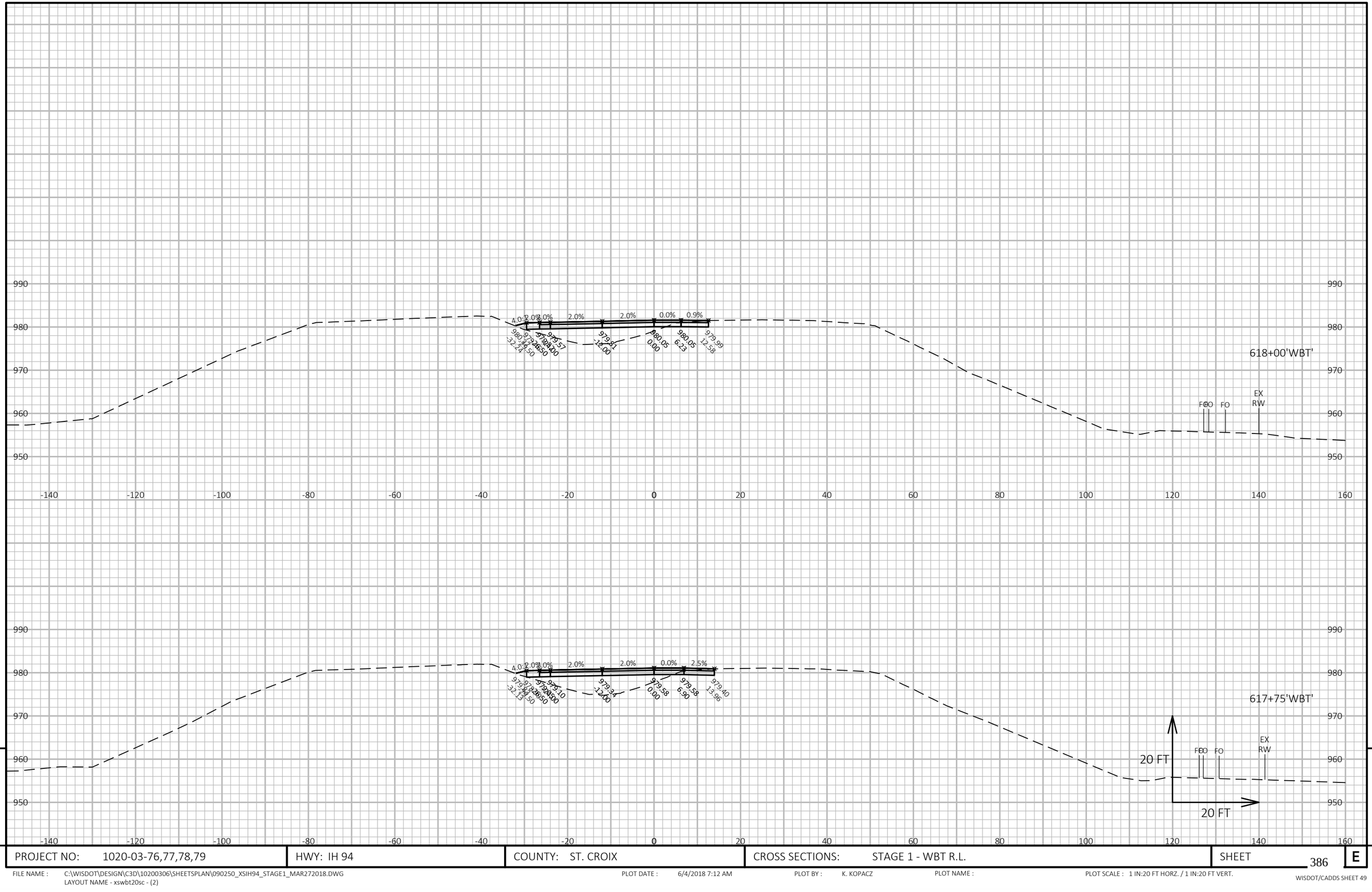
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 385	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (1)

PLOT DATE : 6/4/2018 7:12 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

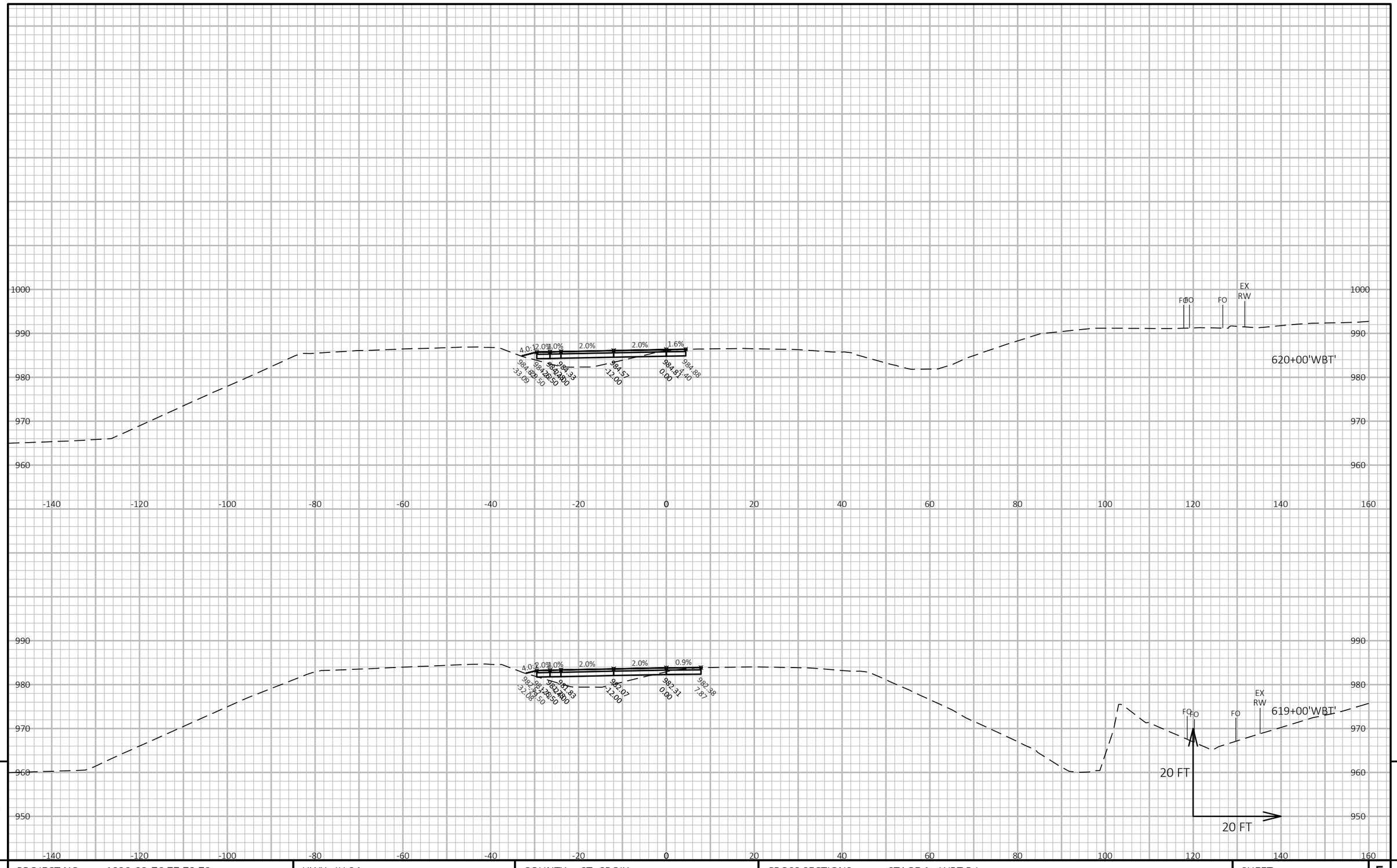
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 386	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (2)

PLOT DATE : 6/4/2018 7:12 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 387 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (3)

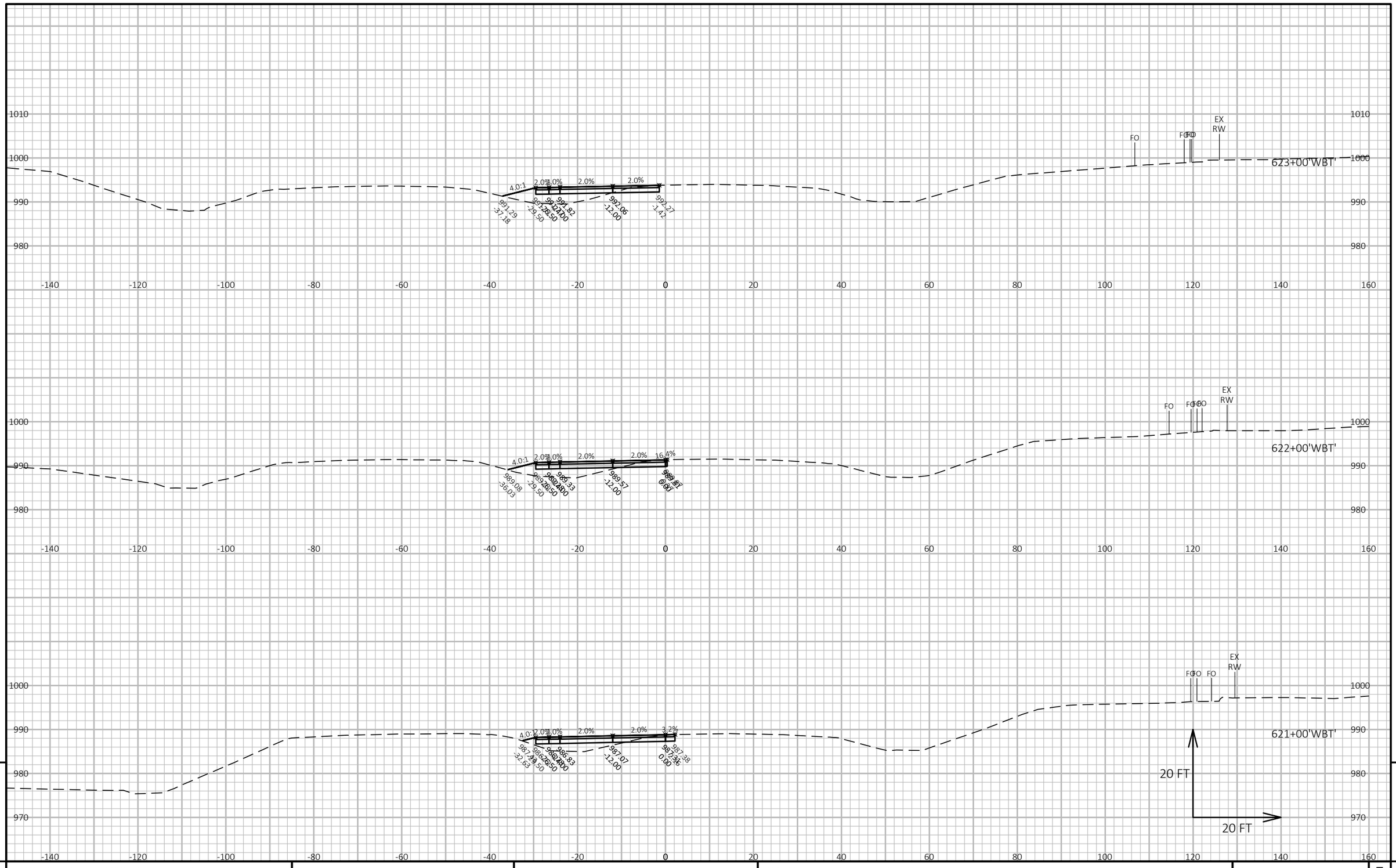
PLOT DATE : 6/4/2018 7:12 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

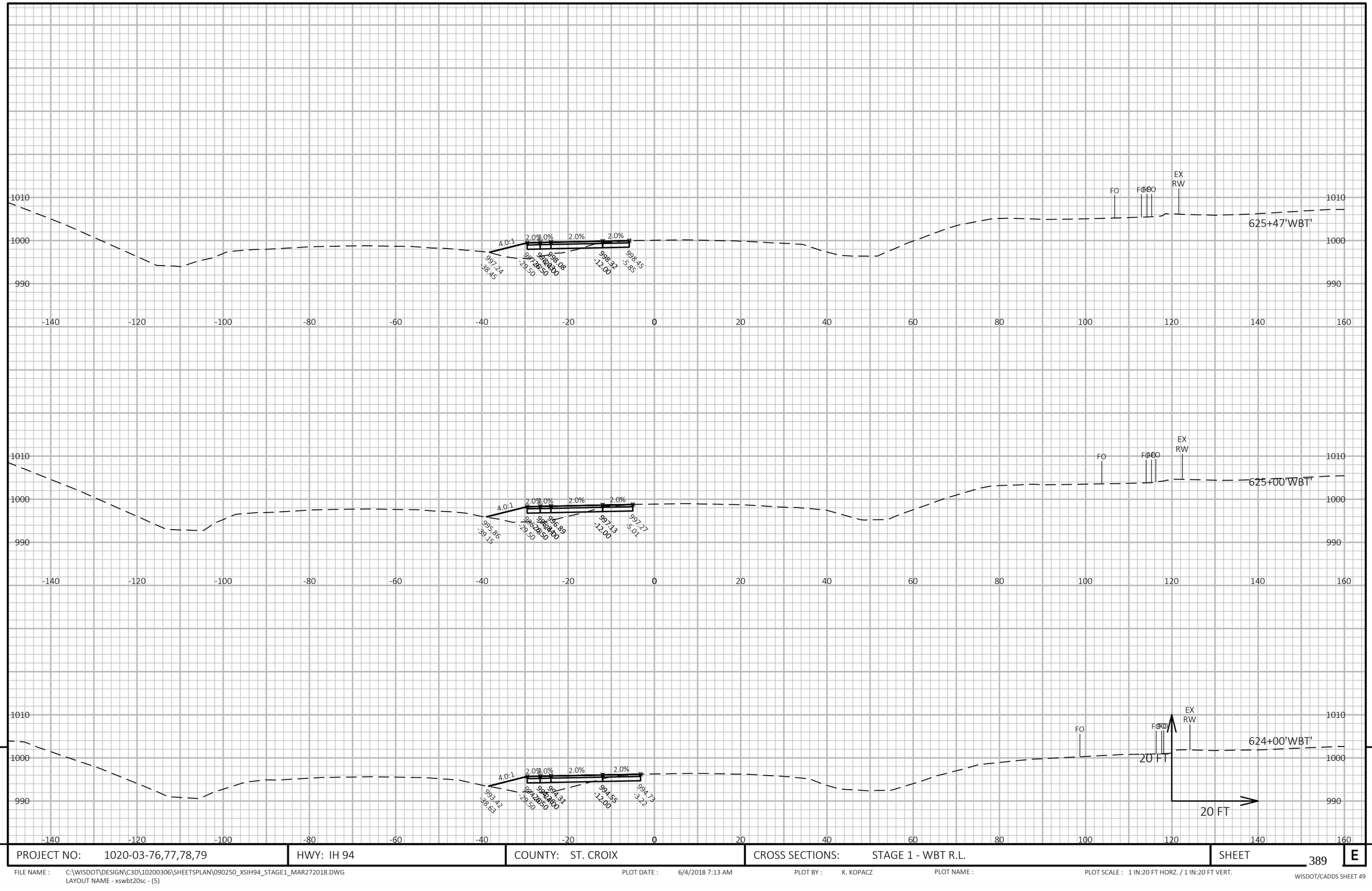
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 388	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (4)

PLOT DATE : 6/4/2018 7:12 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

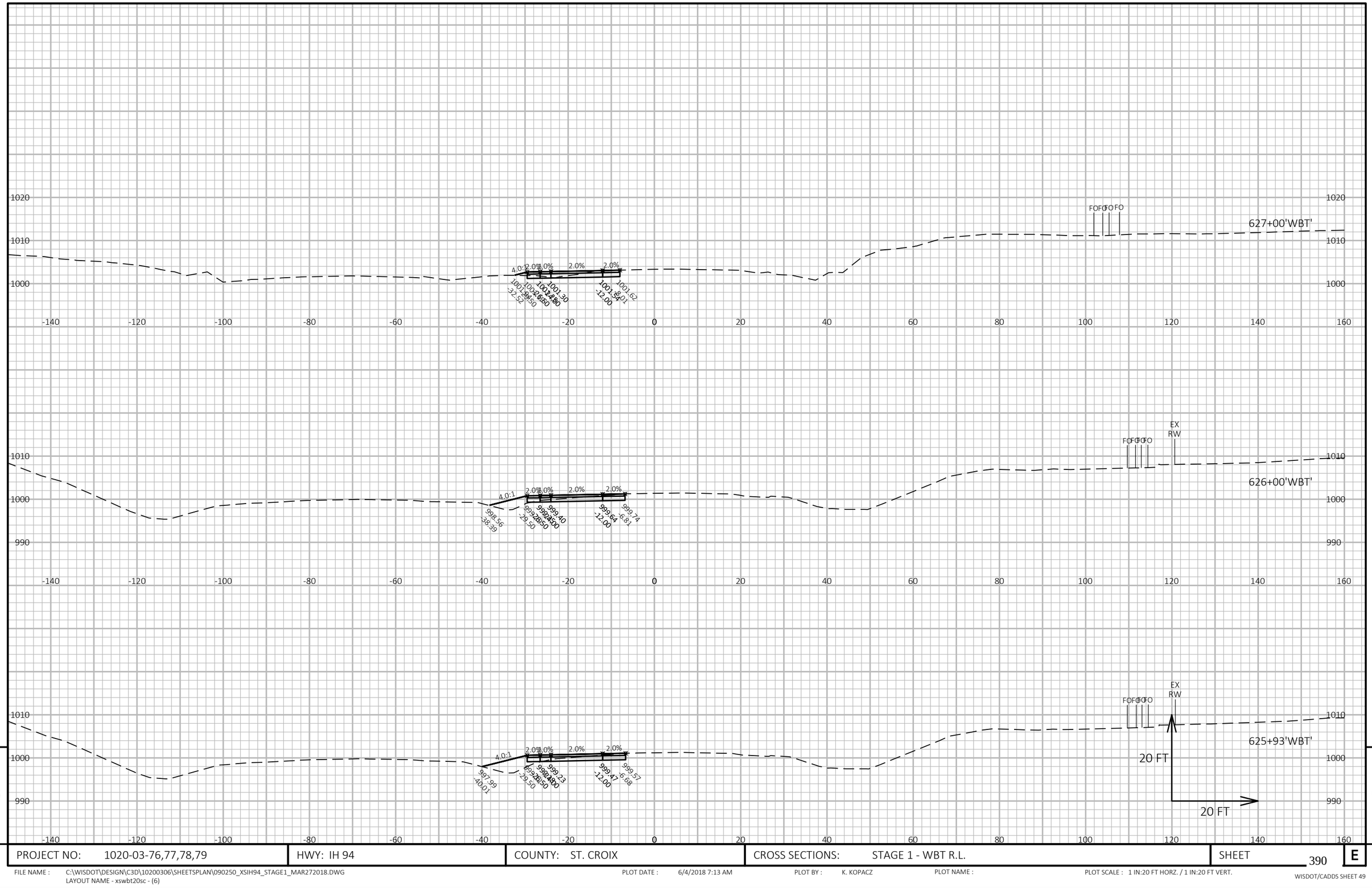


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 389	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (5)

PLOT DATE : 6/4/2018 7:13 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



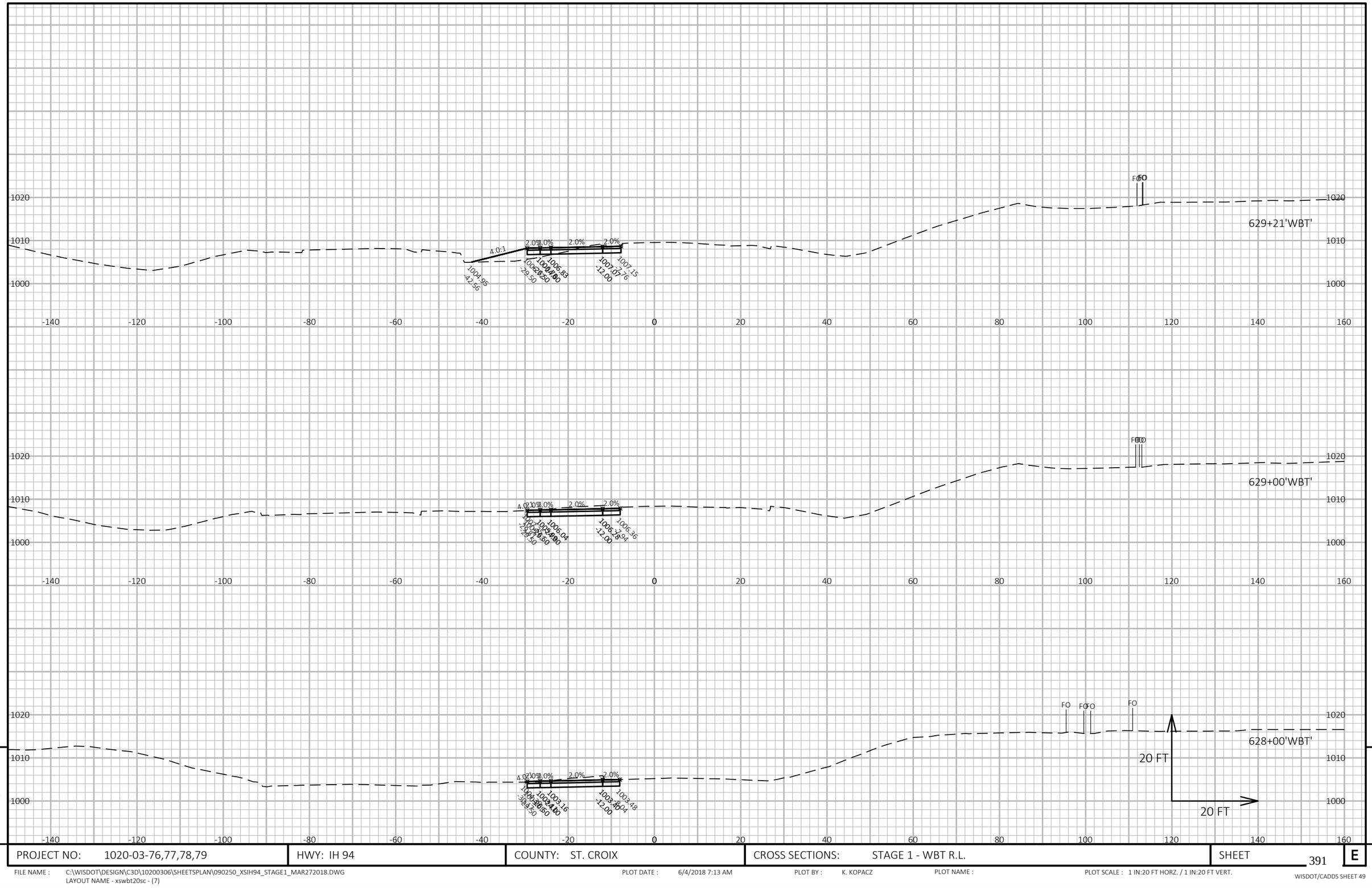
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 390 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (6)

PLOT DATE : 6/4/2018 7:13 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9 9



9

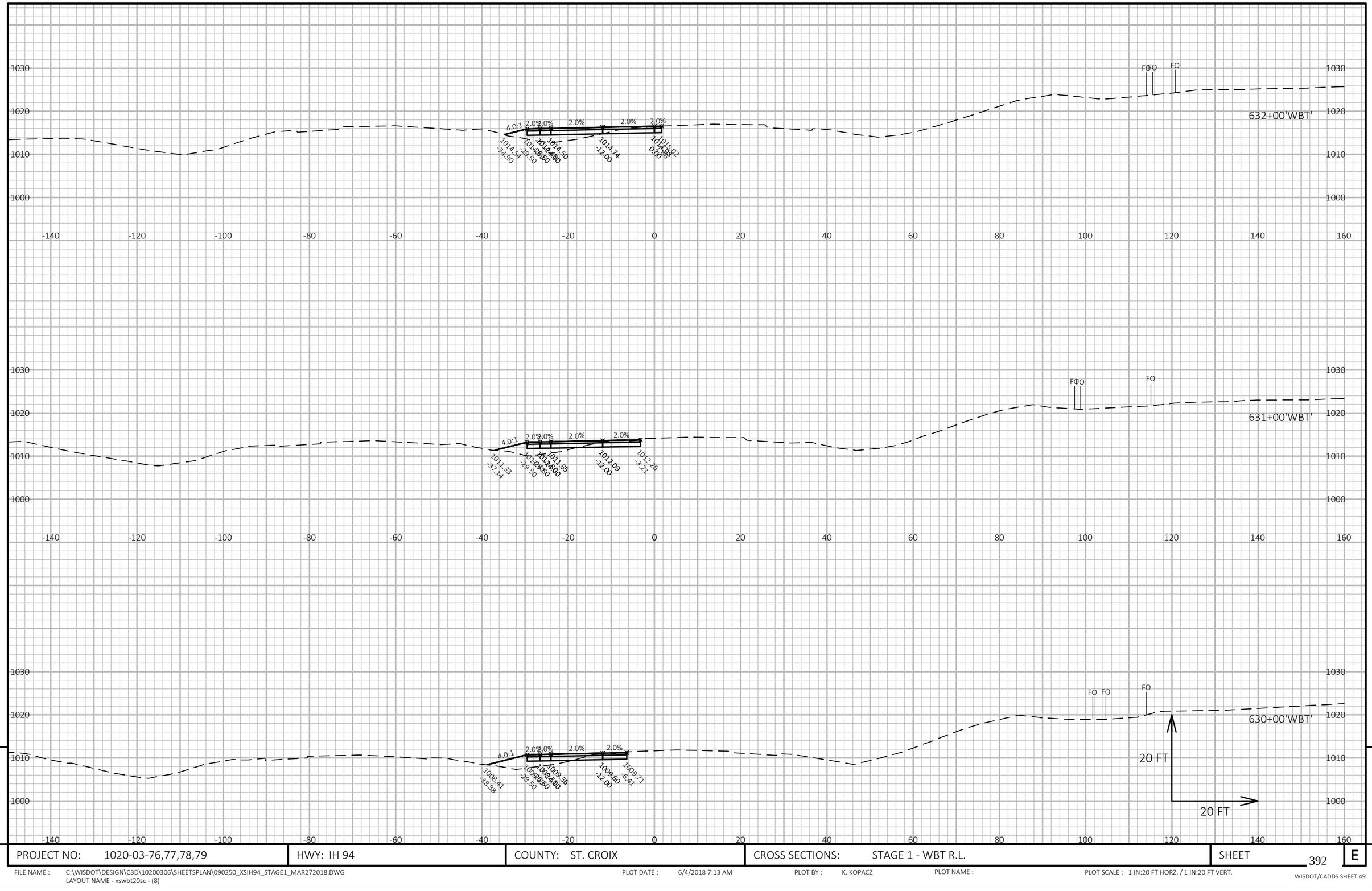
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 391	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (7)

PLOT DATE : 6/4/2018 7:13 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

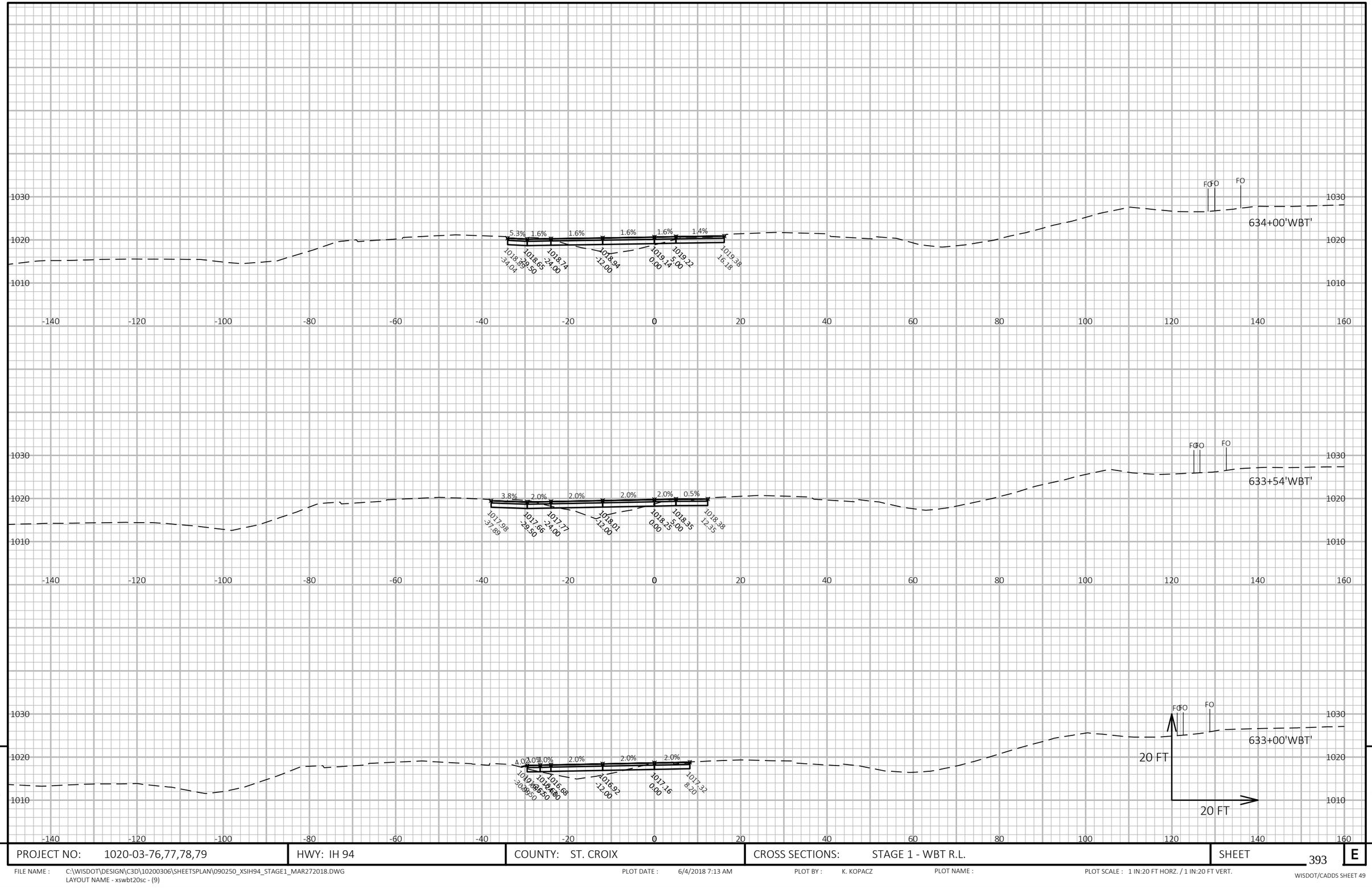


9	PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 392 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (8)

PLOT DATE : 6/4/2018 7:13 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



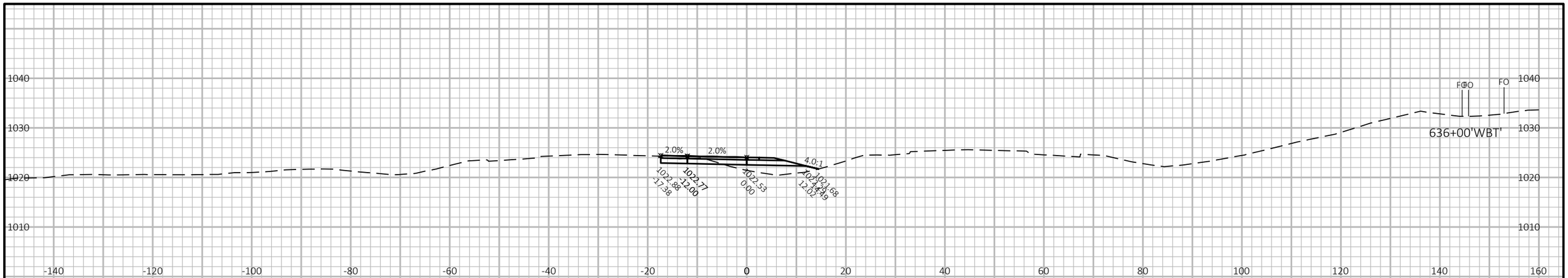
9

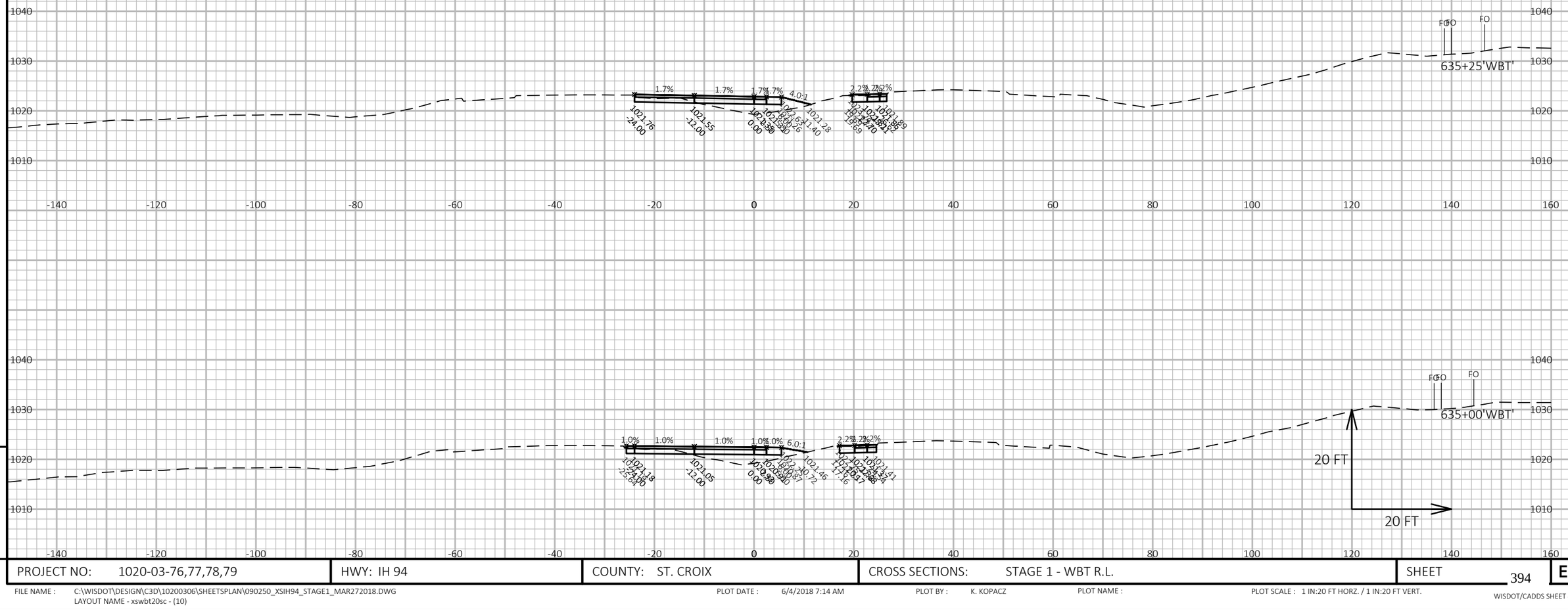
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 393	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (9)

PLOT DATE : 6/4/2018 7:13 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





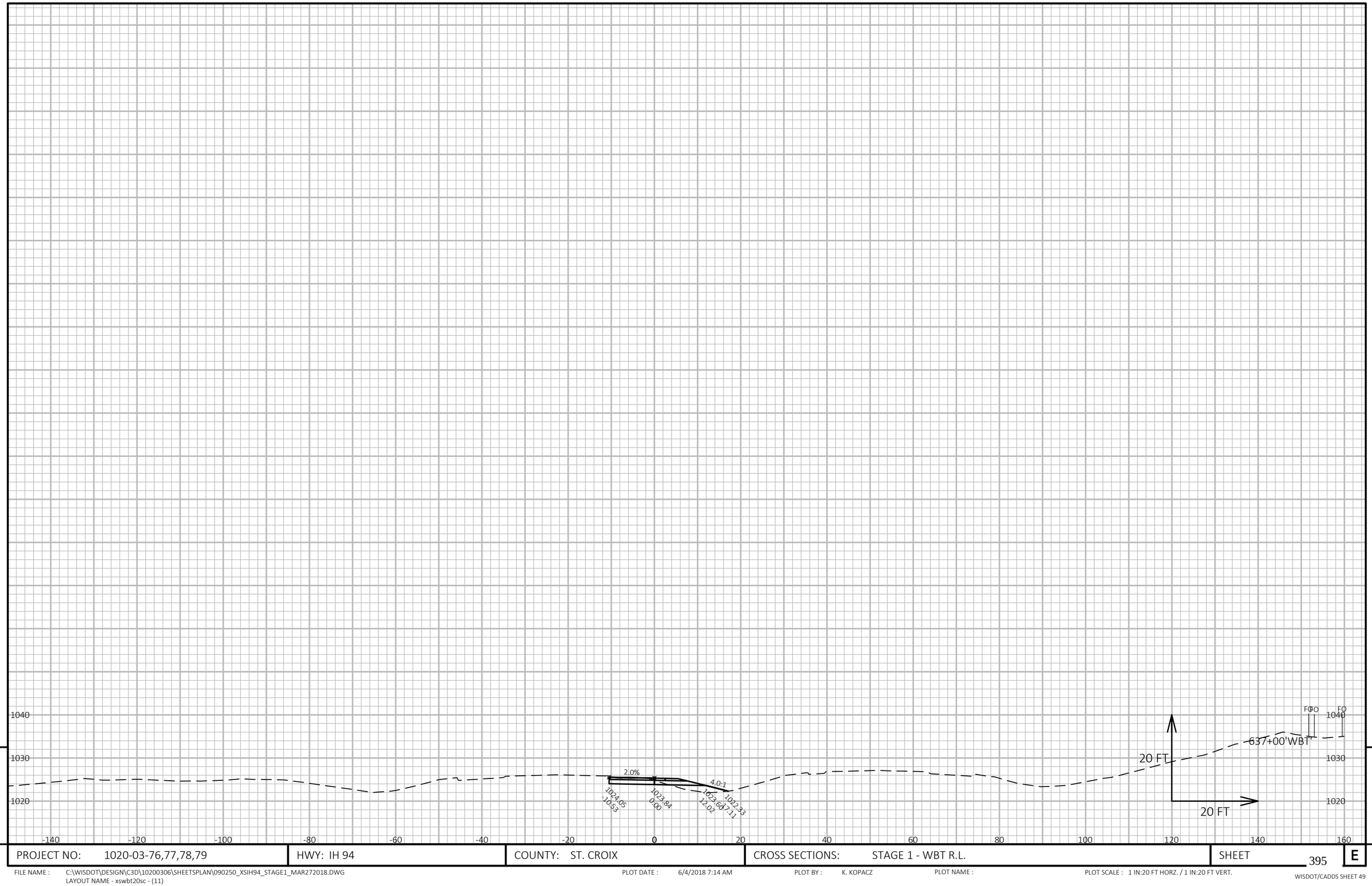
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 394 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (10)

PLOT DATE : 6/4/2018 7:14 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9 9



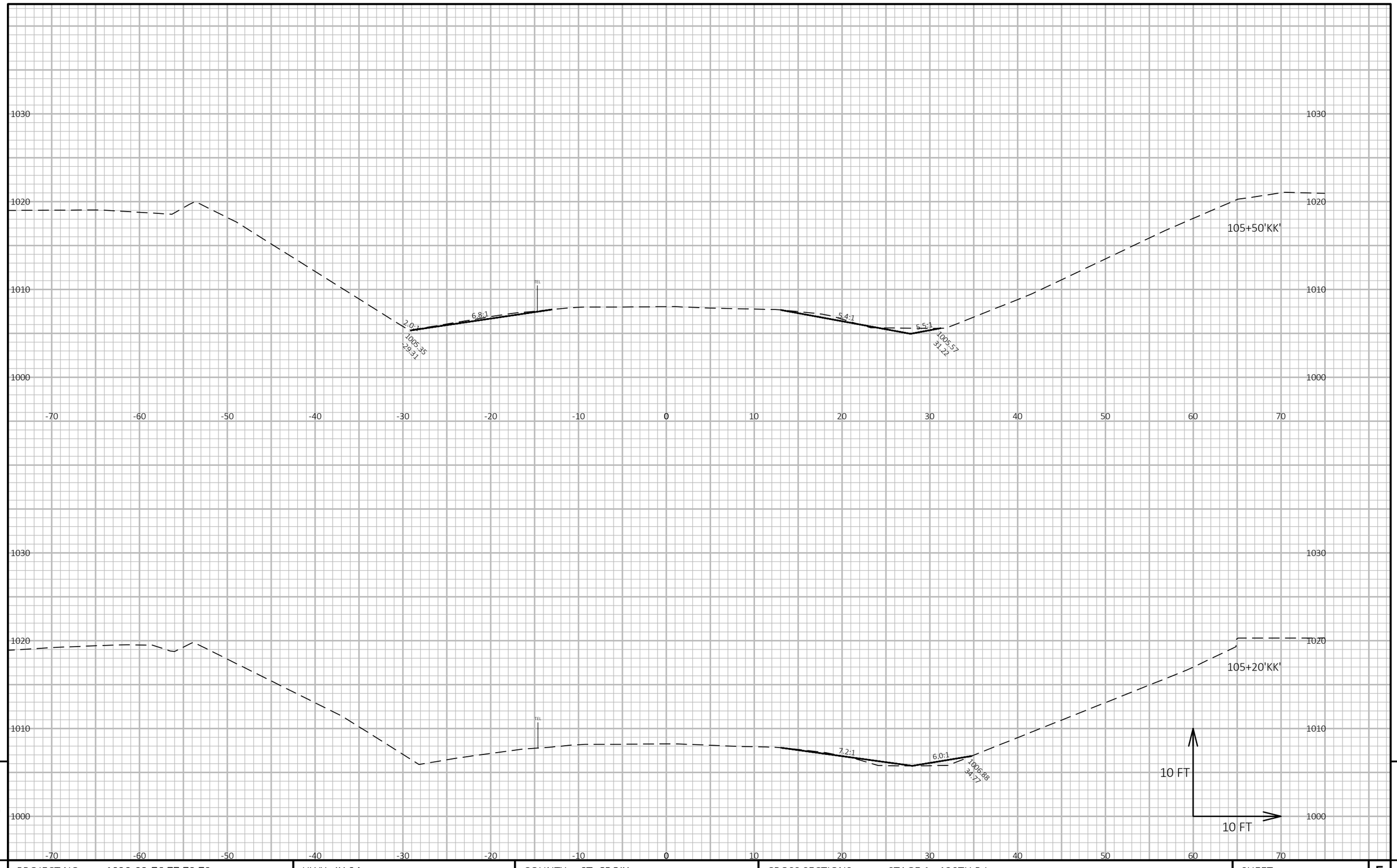
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - WBT R.L.	SHEET 395	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090250_XSIH94_STAGE1_MAR272018.DWG
LAYOUT NAME - xswbt20sc - (11)

PLOT DATE : 6/4/2018 7:14 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

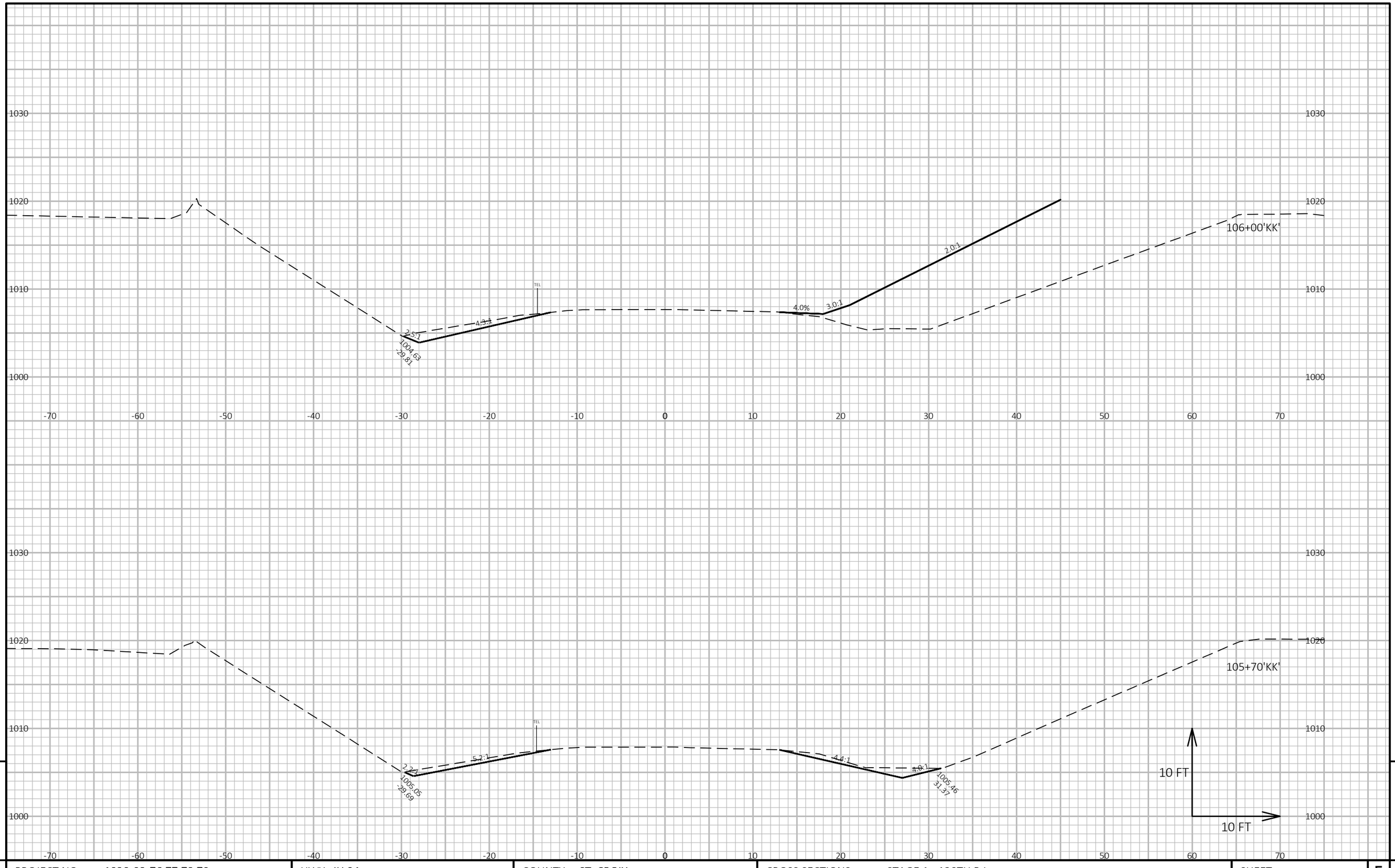
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - 130TH R.L.	SHEET 396	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage1 - (1)

PLOT DATE : 6/4/2018 7:30 AM PLOT BY : KOPACZ, KARL S PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - 130TH R.L.	SHEET 397	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage1 - (2)

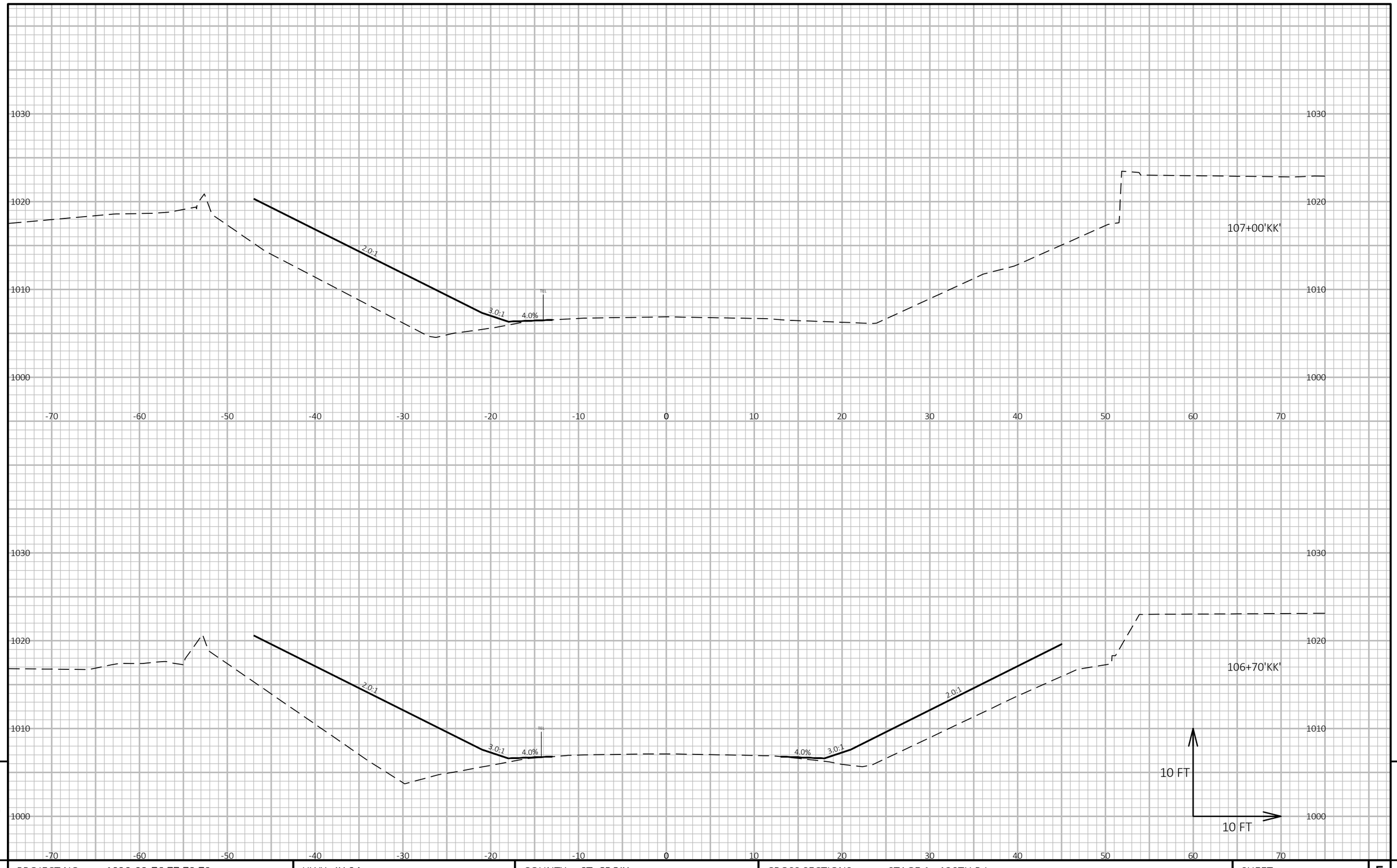
PLOT DATE : 6/4/2018 7:30 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



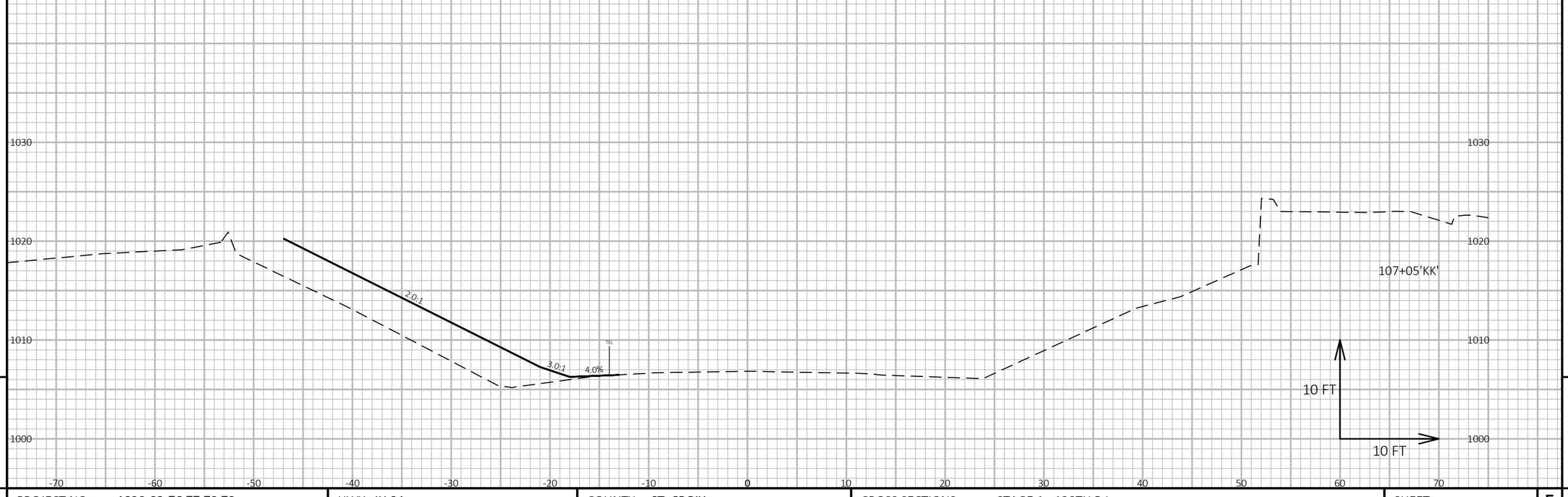
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - 130TH R.L.	SHEET 398	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage1 - (3)

PLOT DATE : 6/4/2018 7:30 AM PLOT BY : KOPACZ, KARL S PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

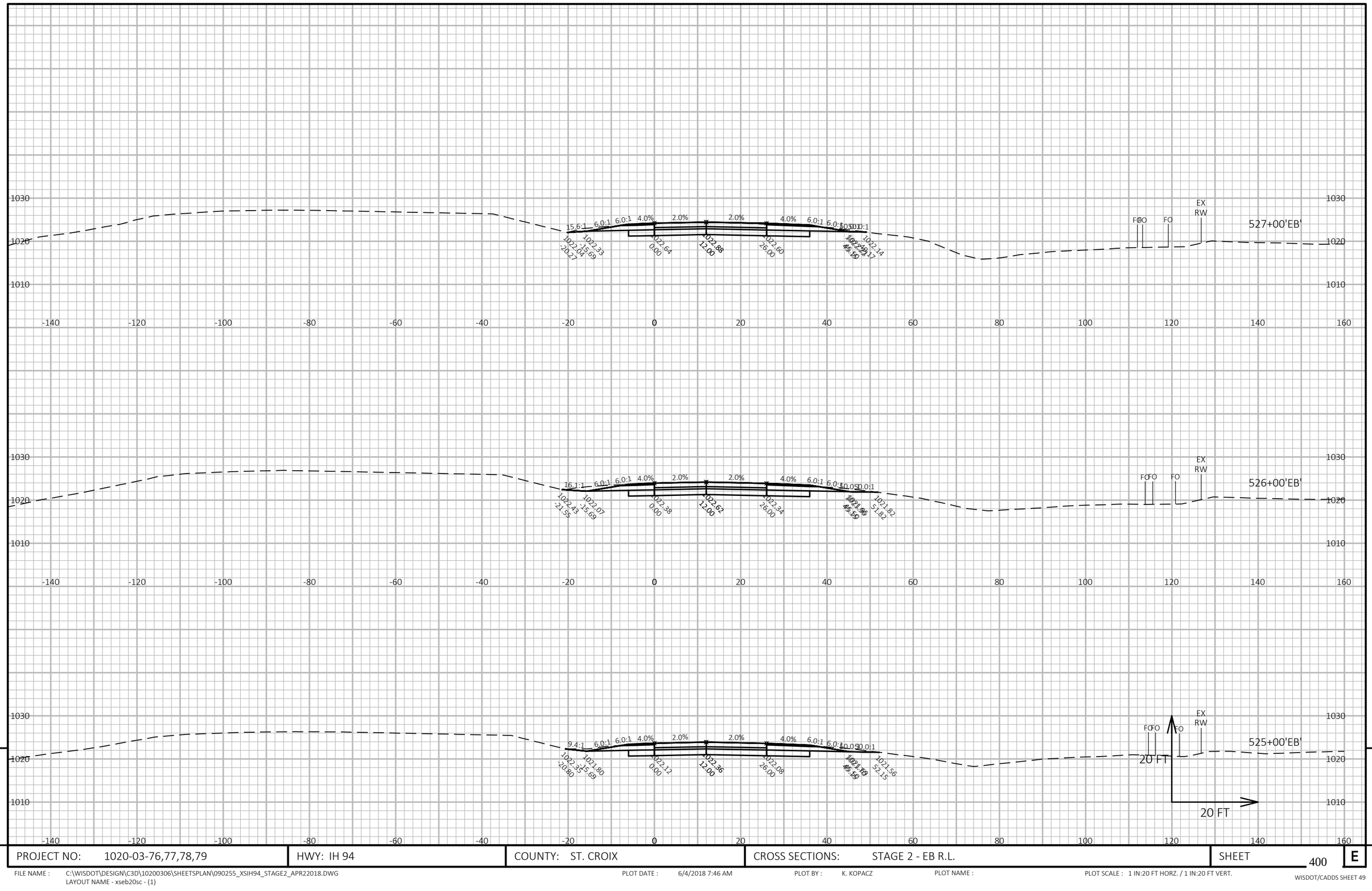
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 1 - 130TH R.L.	SHEET 399	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage1 - (4)

PLOT DATE : 6/4/2018 7:30 AM PLOT BY : KOPACZ, KARL S PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



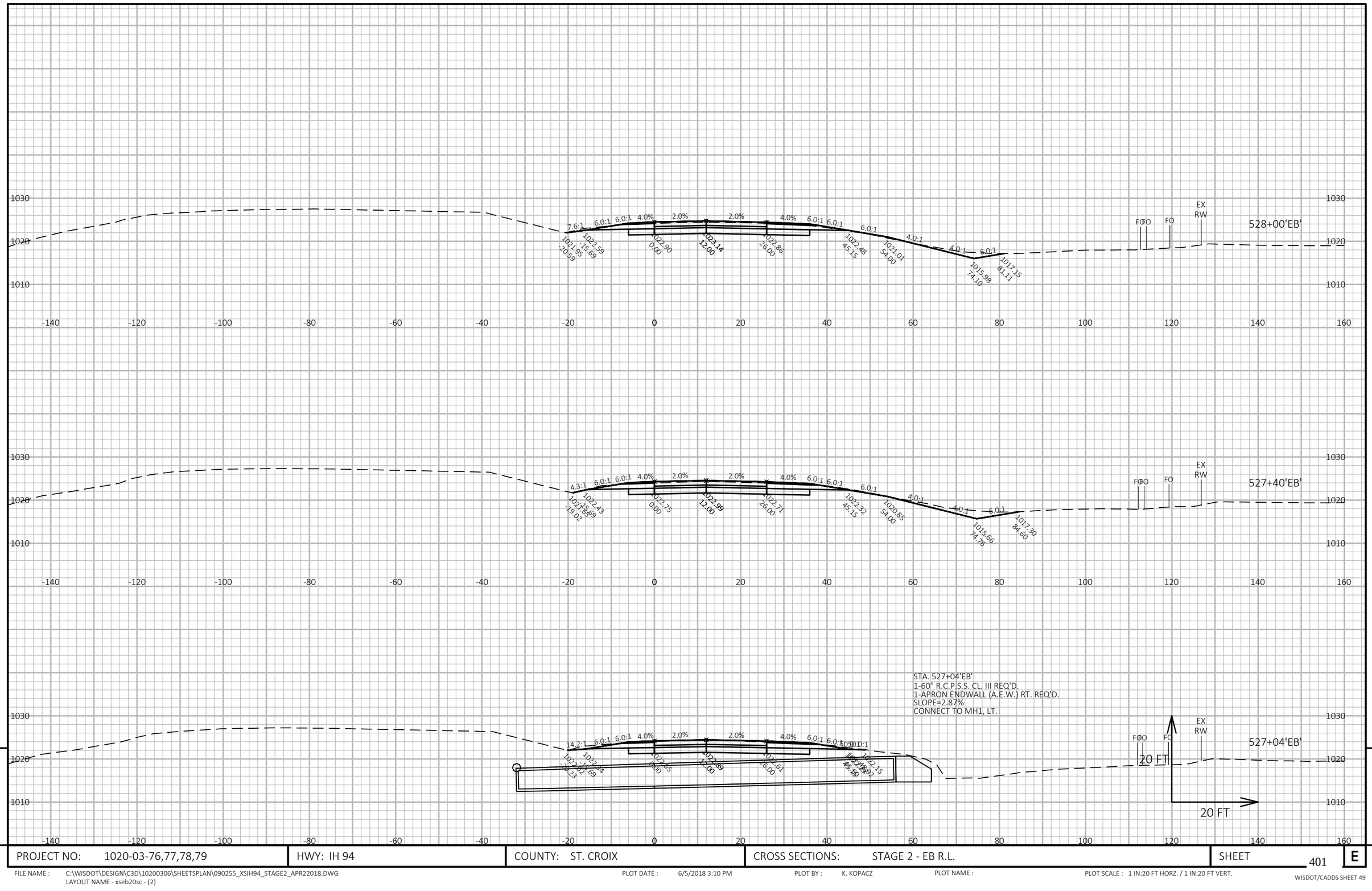
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 400	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (1)

PLOT DATE : 6/4/2018 7:46 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



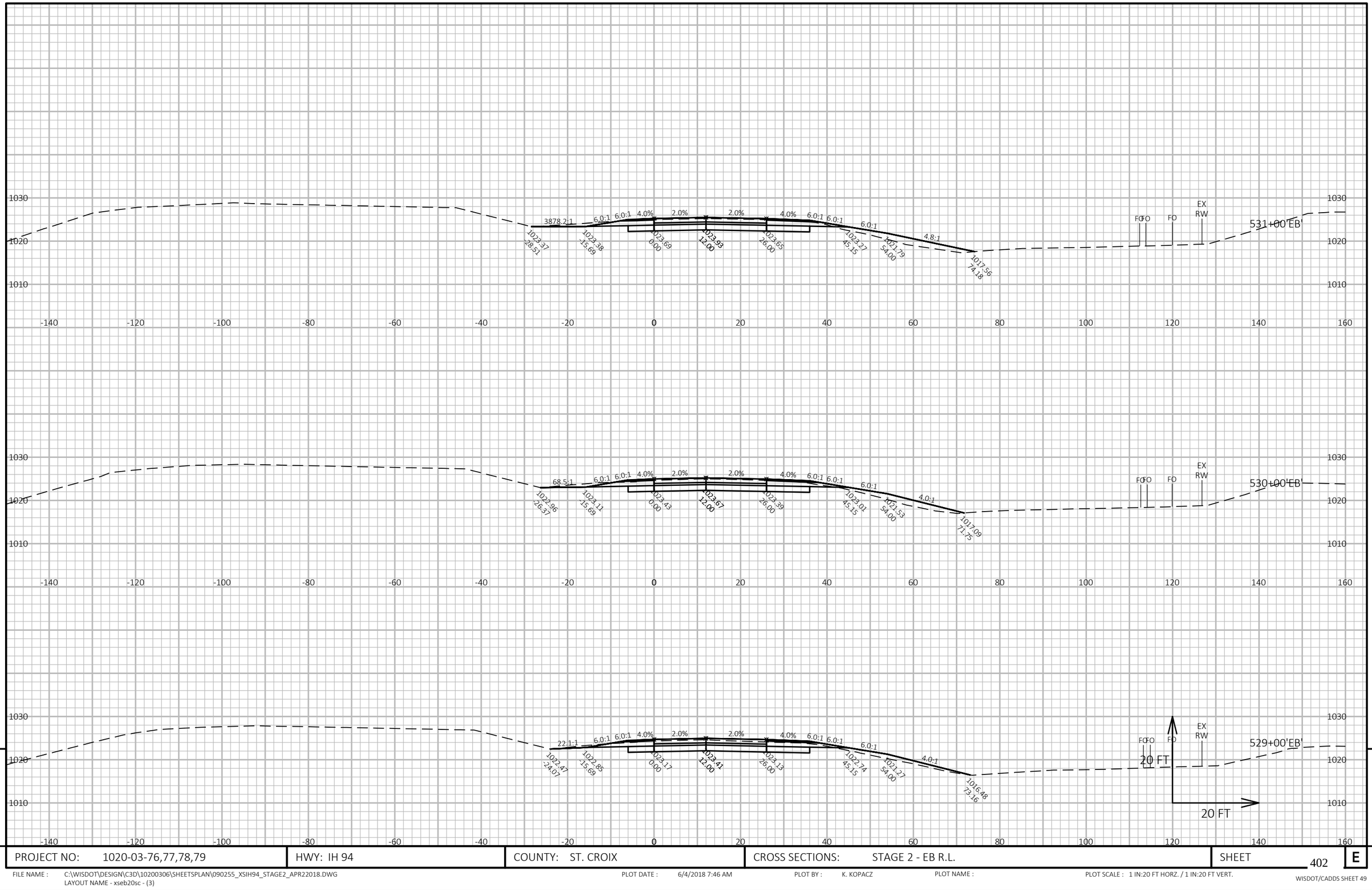
9

9

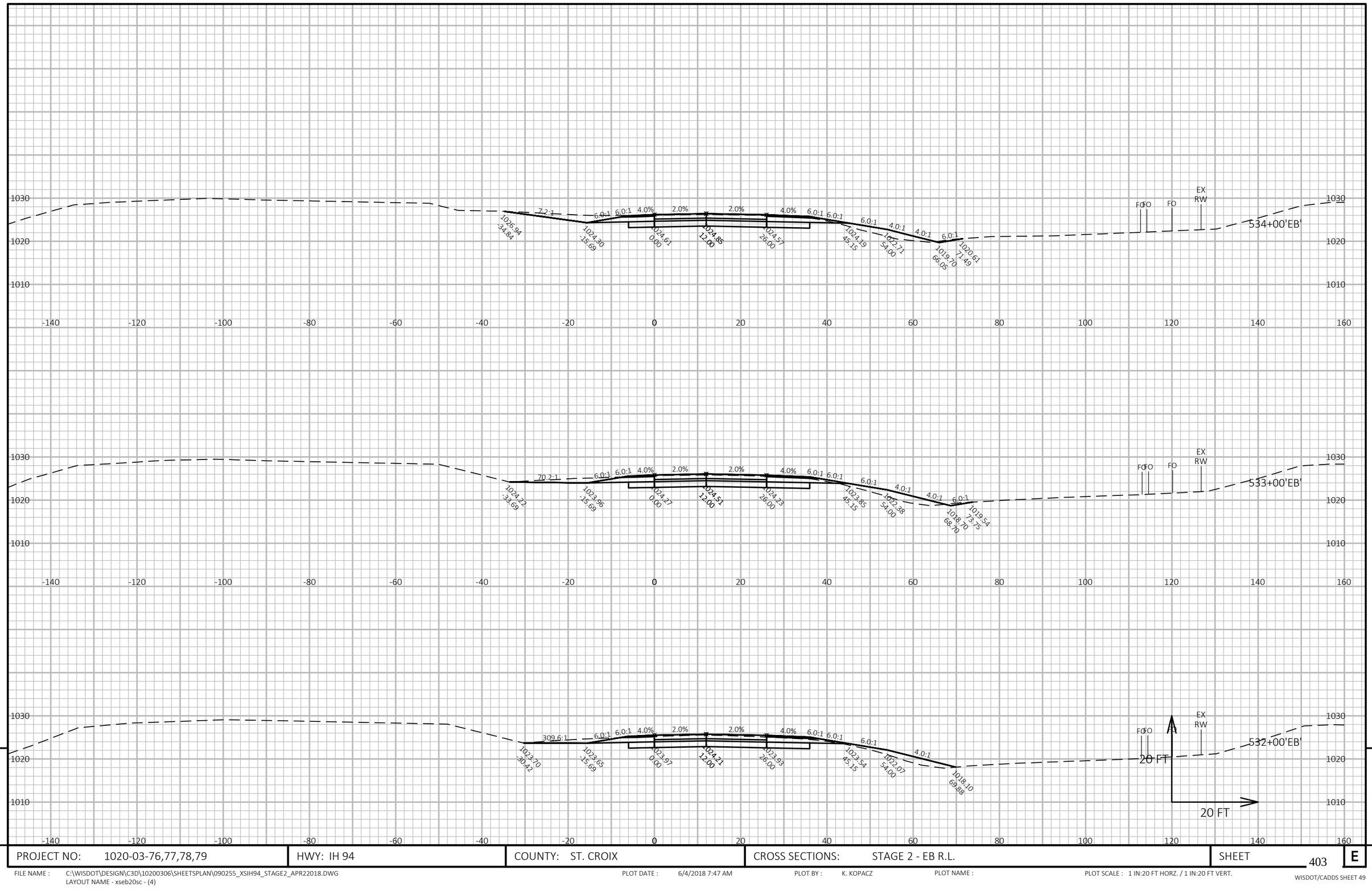
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 401	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (2)

PLOT DATE : 6/5/2018 3:10 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 402	E



9

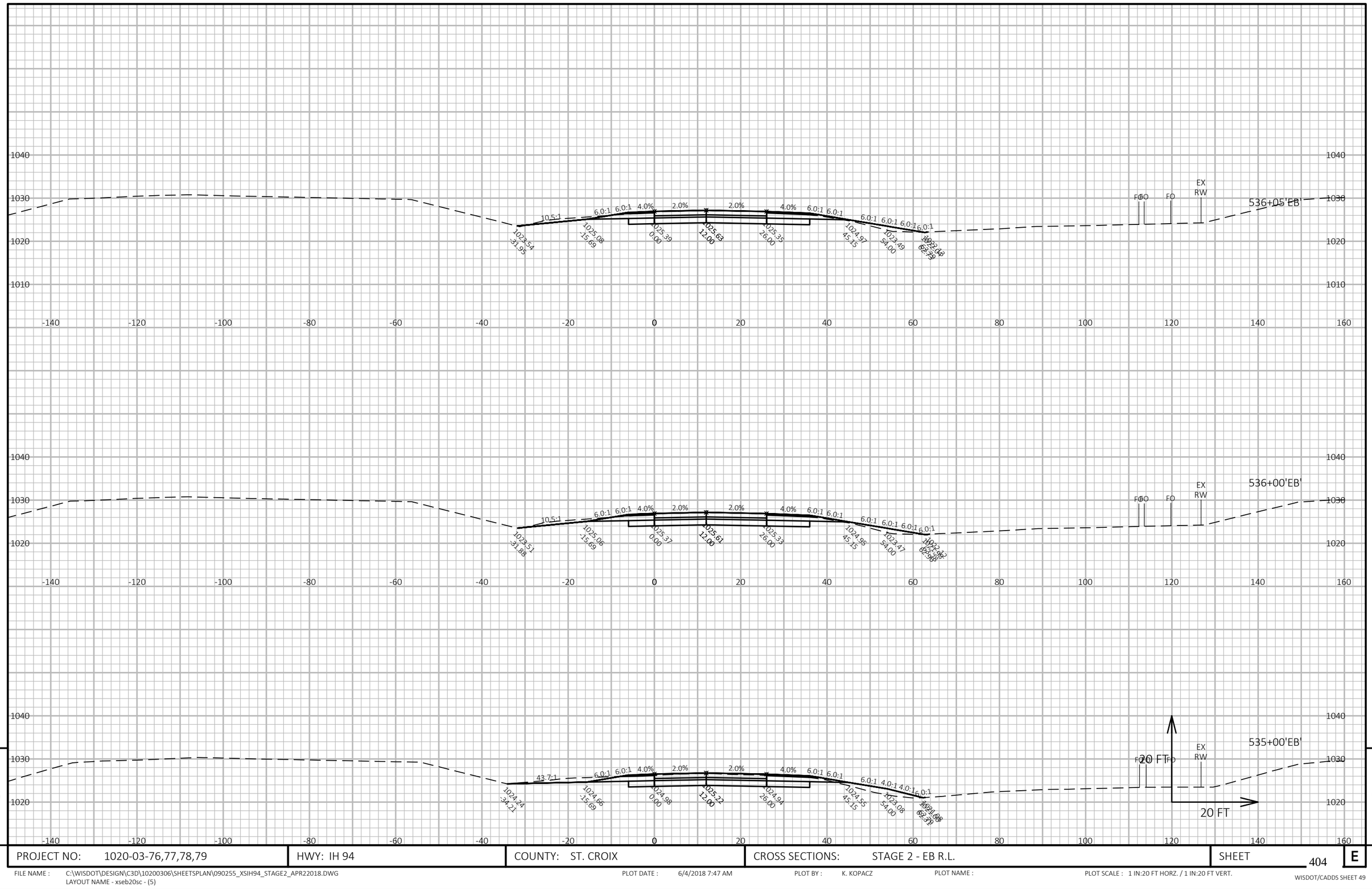
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 403	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (4)

PLOT DATE : 6/4/2018 7:47 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



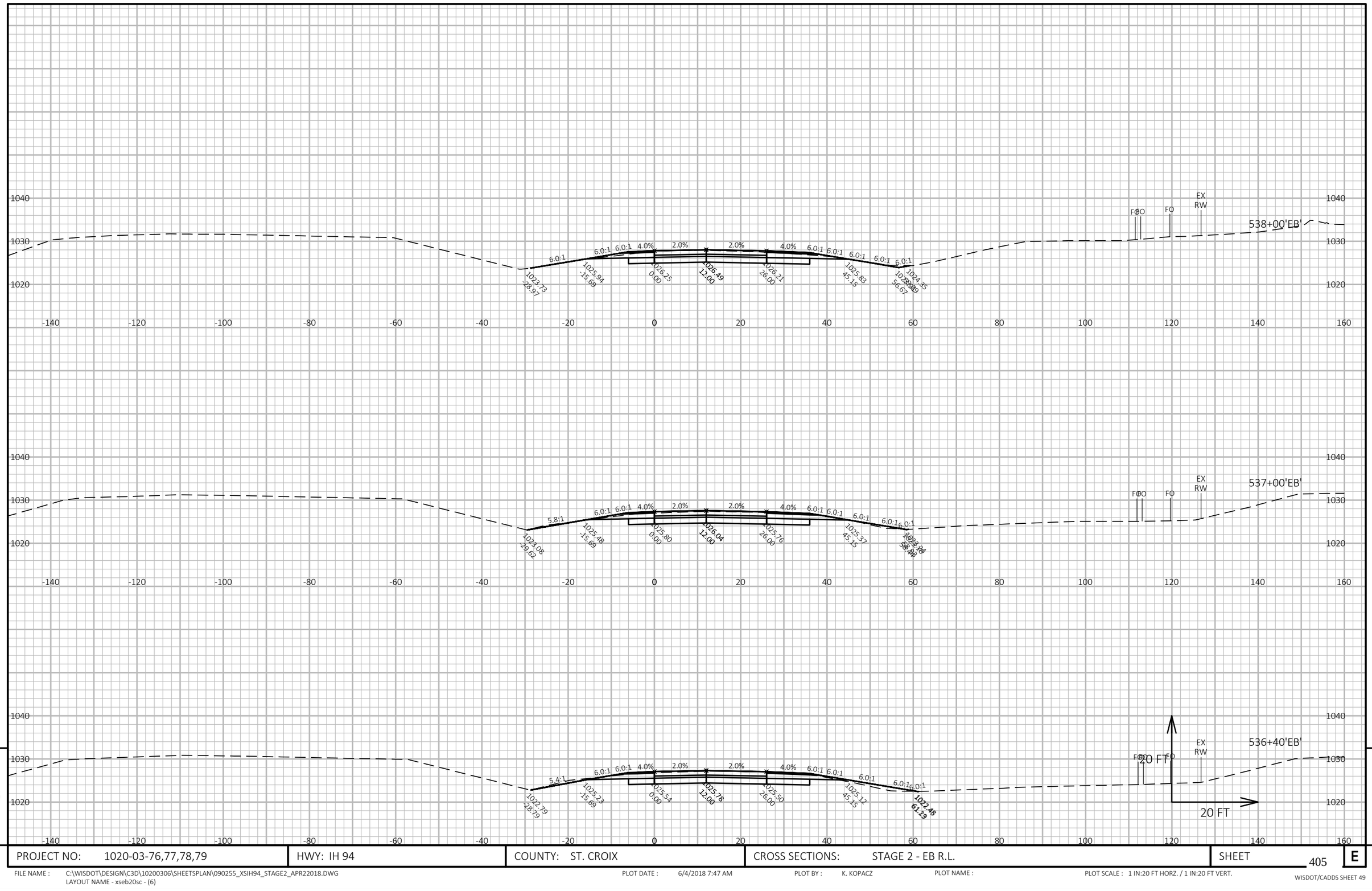
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 404	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (5)

PLOT DATE : 6/4/2018 7:47 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

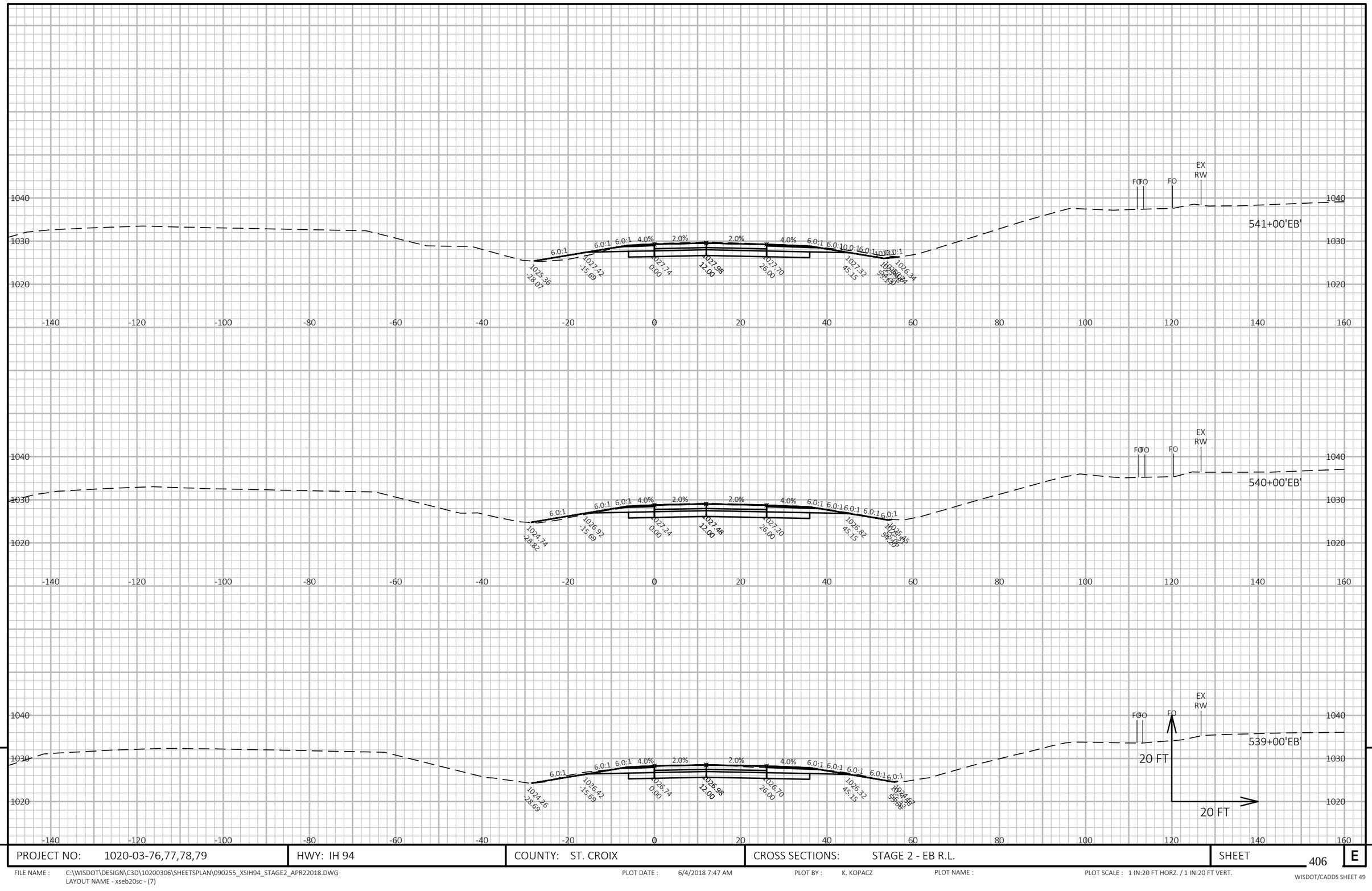


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 405	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (6)

PLOT DATE : 6/4/2018 7:47 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

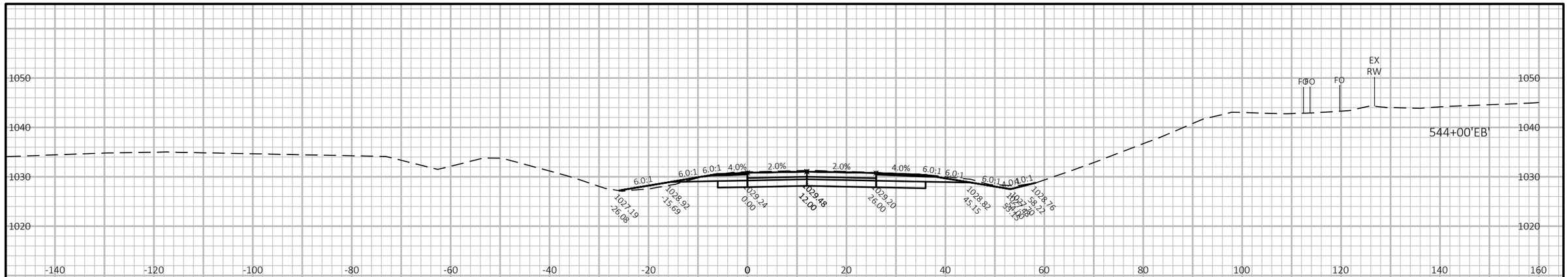


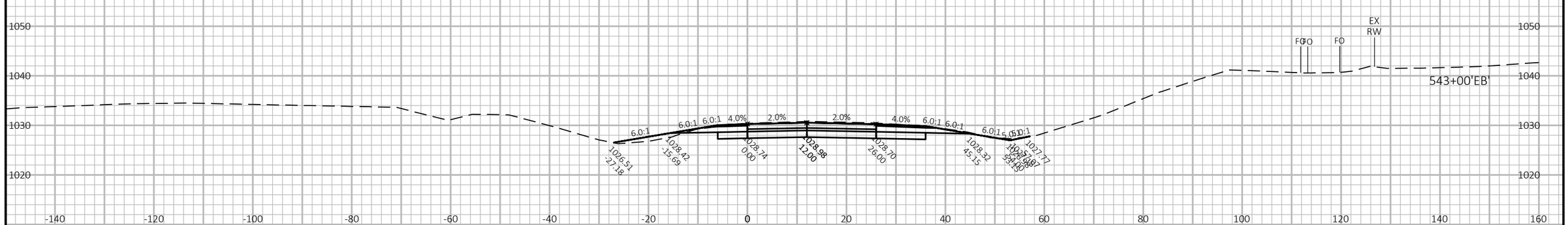
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 406	E

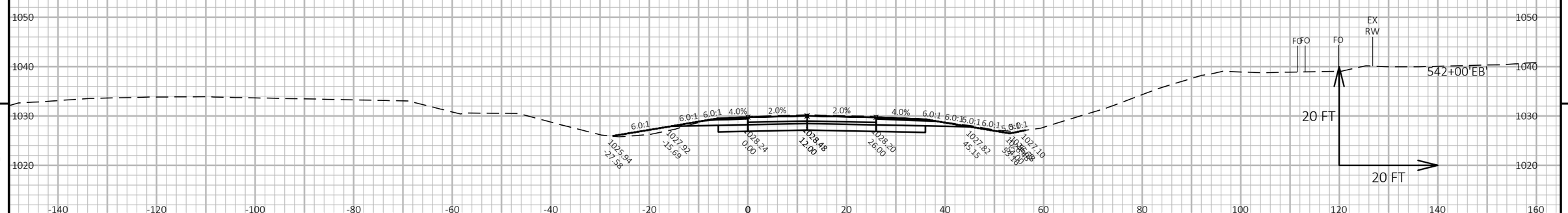
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (7)

PLOT DATE : 6/4/2018 7:47 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

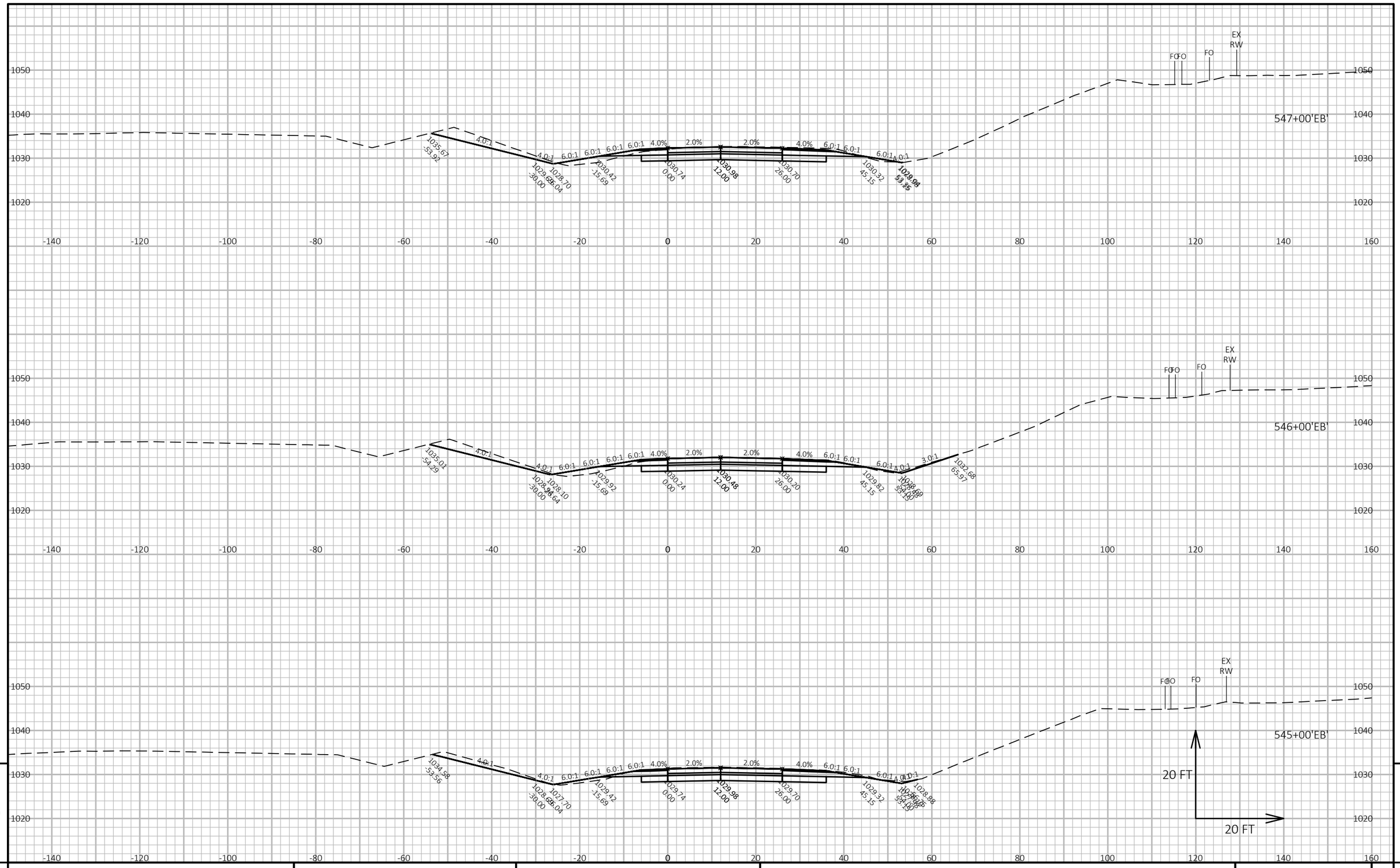
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 407	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (8)

PLOT DATE : 6/4/2018 7:47 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



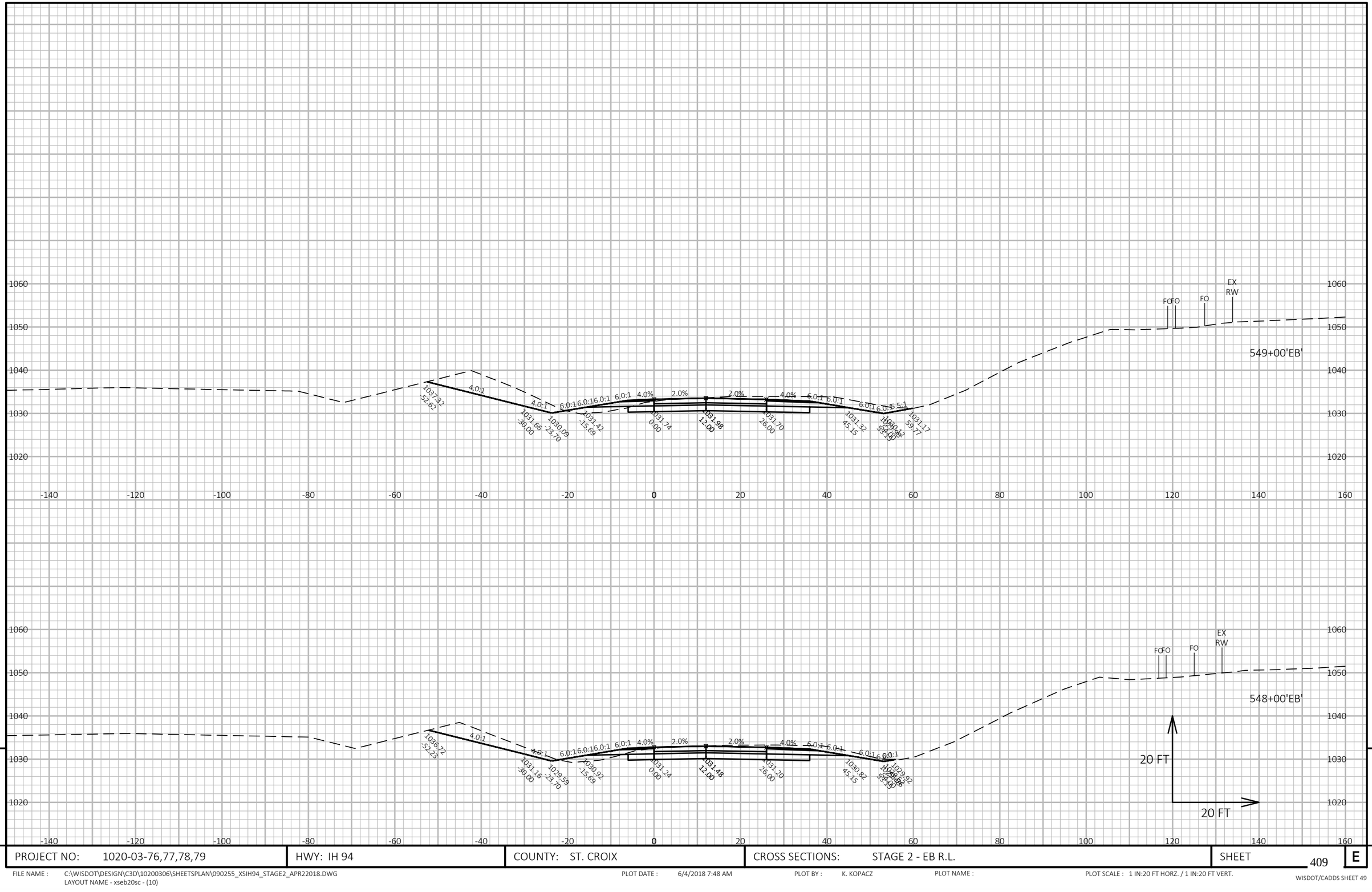
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 408	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (9)

PLOT DATE : 6/4/2018 7:48 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

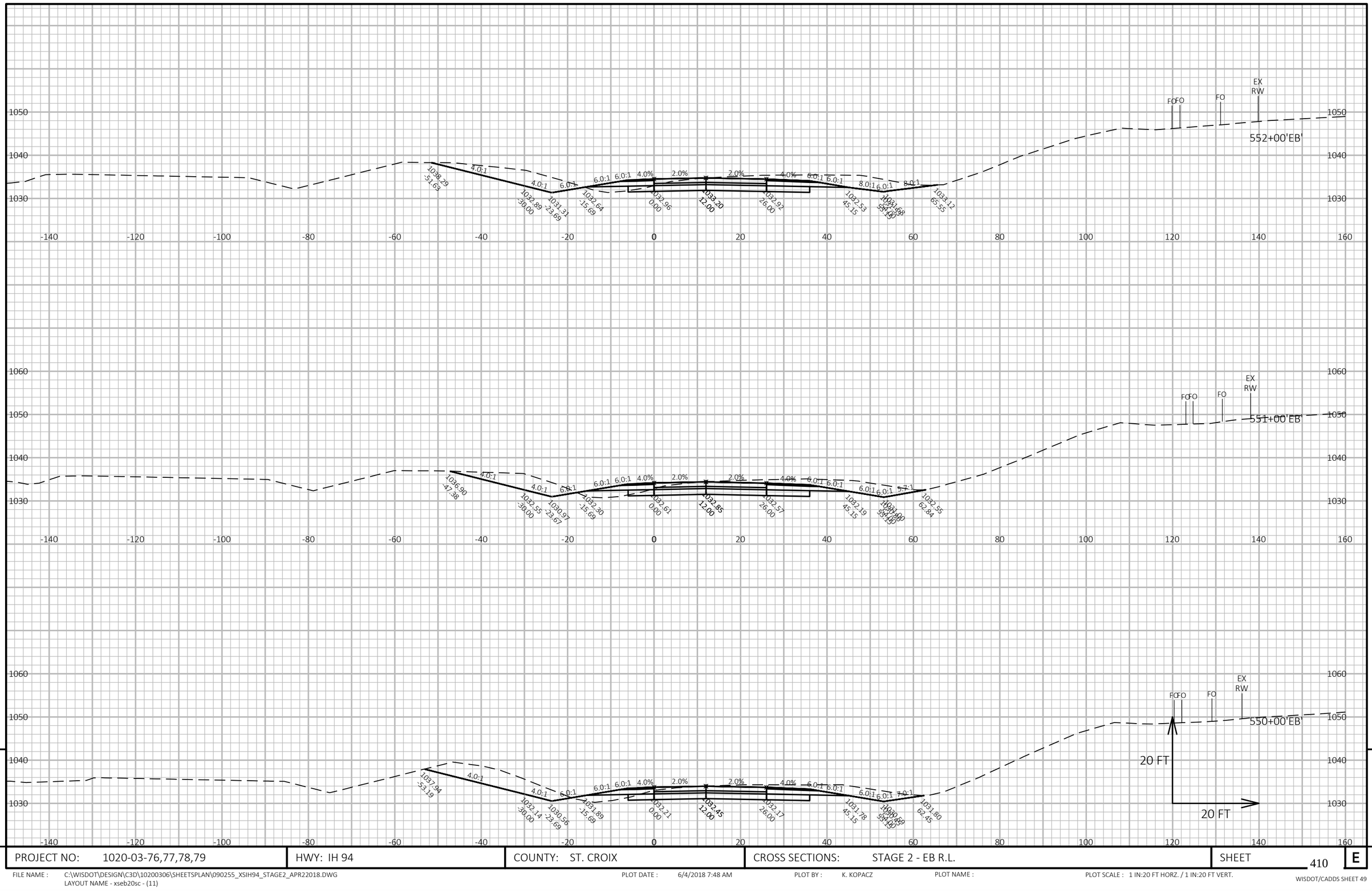


9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 409	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (10)
PLOT DATE : 6/4/2018 7:48 AM
PLOT BY : K. KOPACZ
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

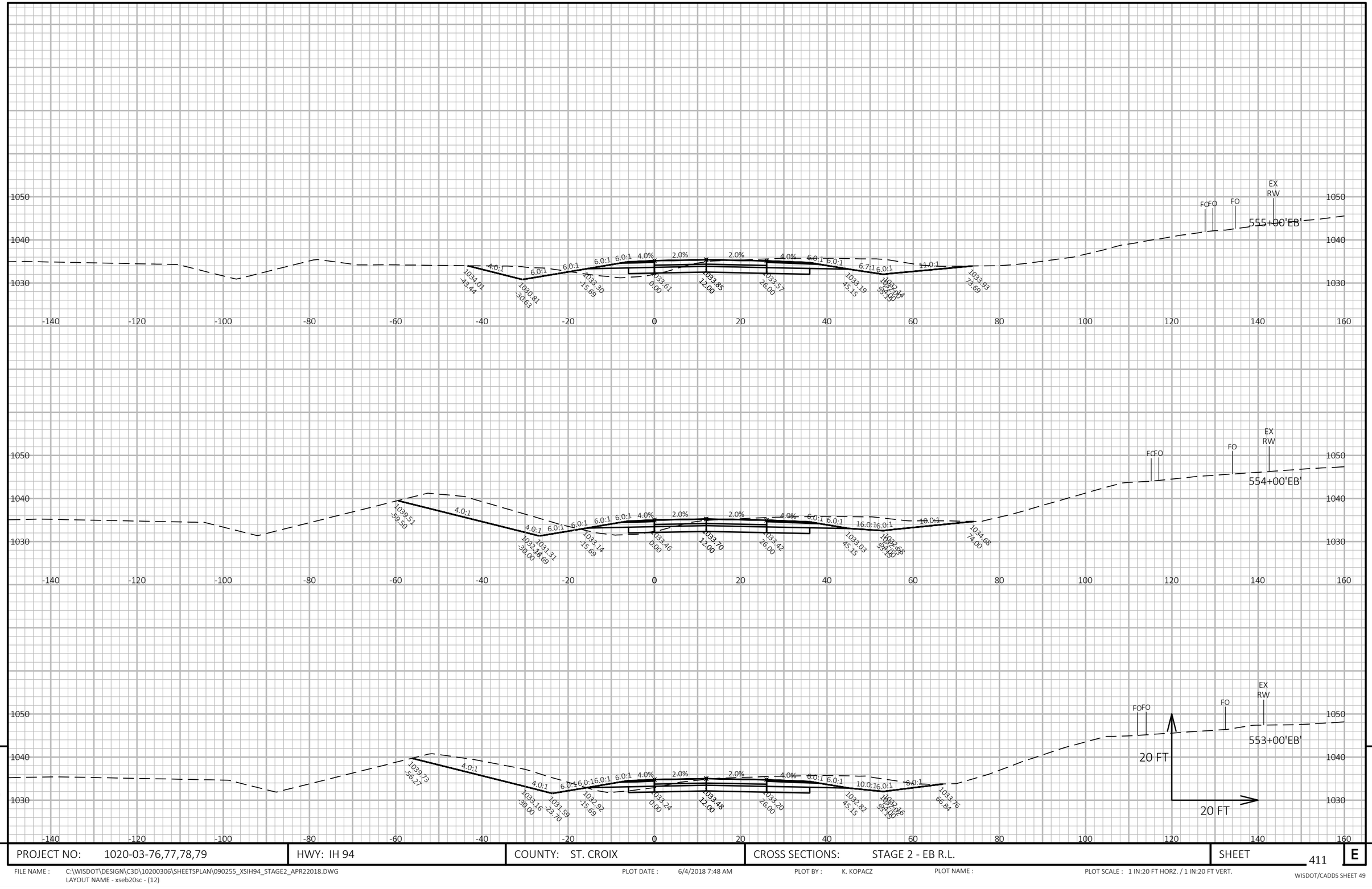
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 410	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (11)

PLOT DATE : 6/4/2018 7:48 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

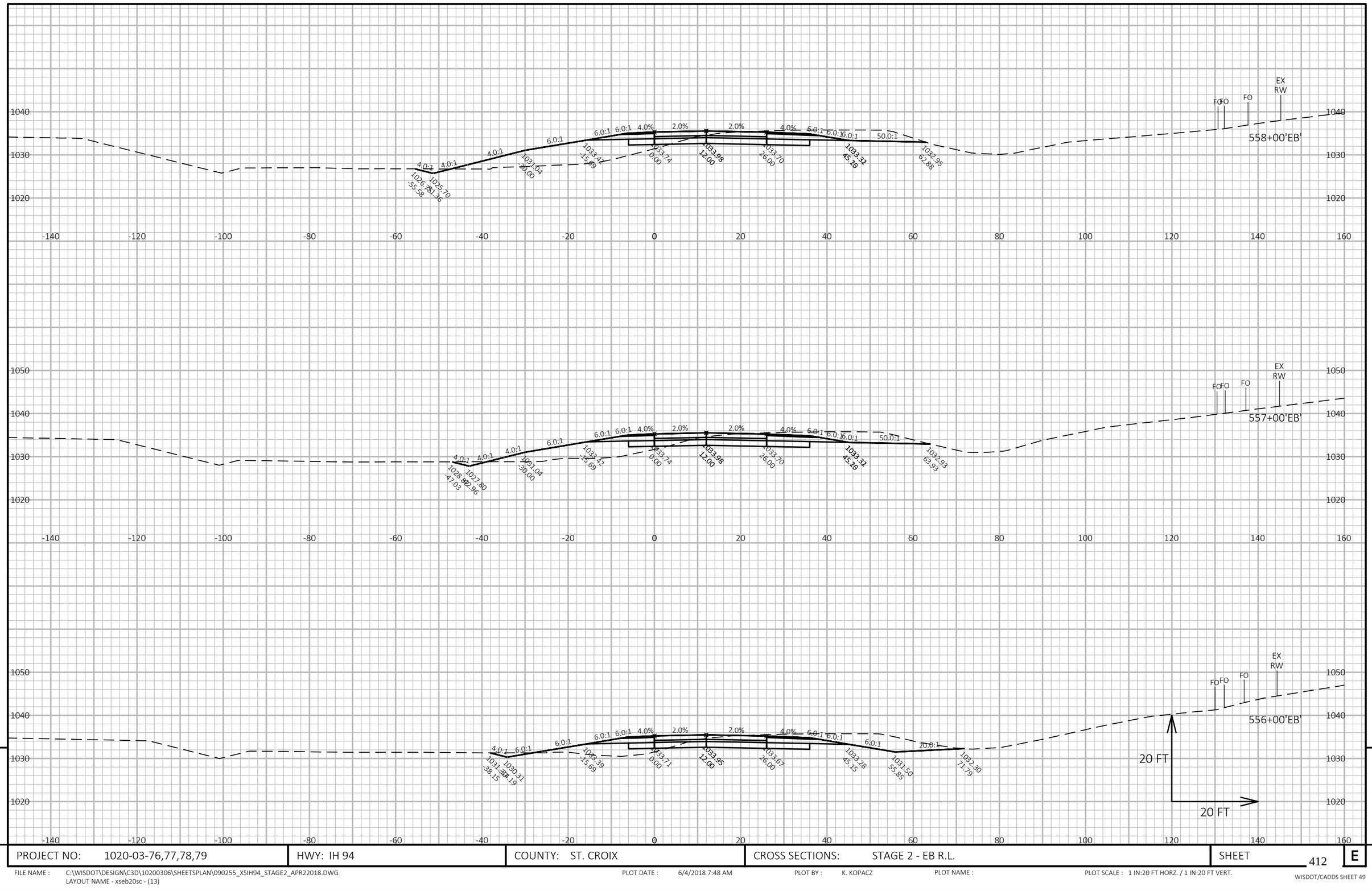


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 411	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (12)

PLOT DATE : 6/4/2018 7:48 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

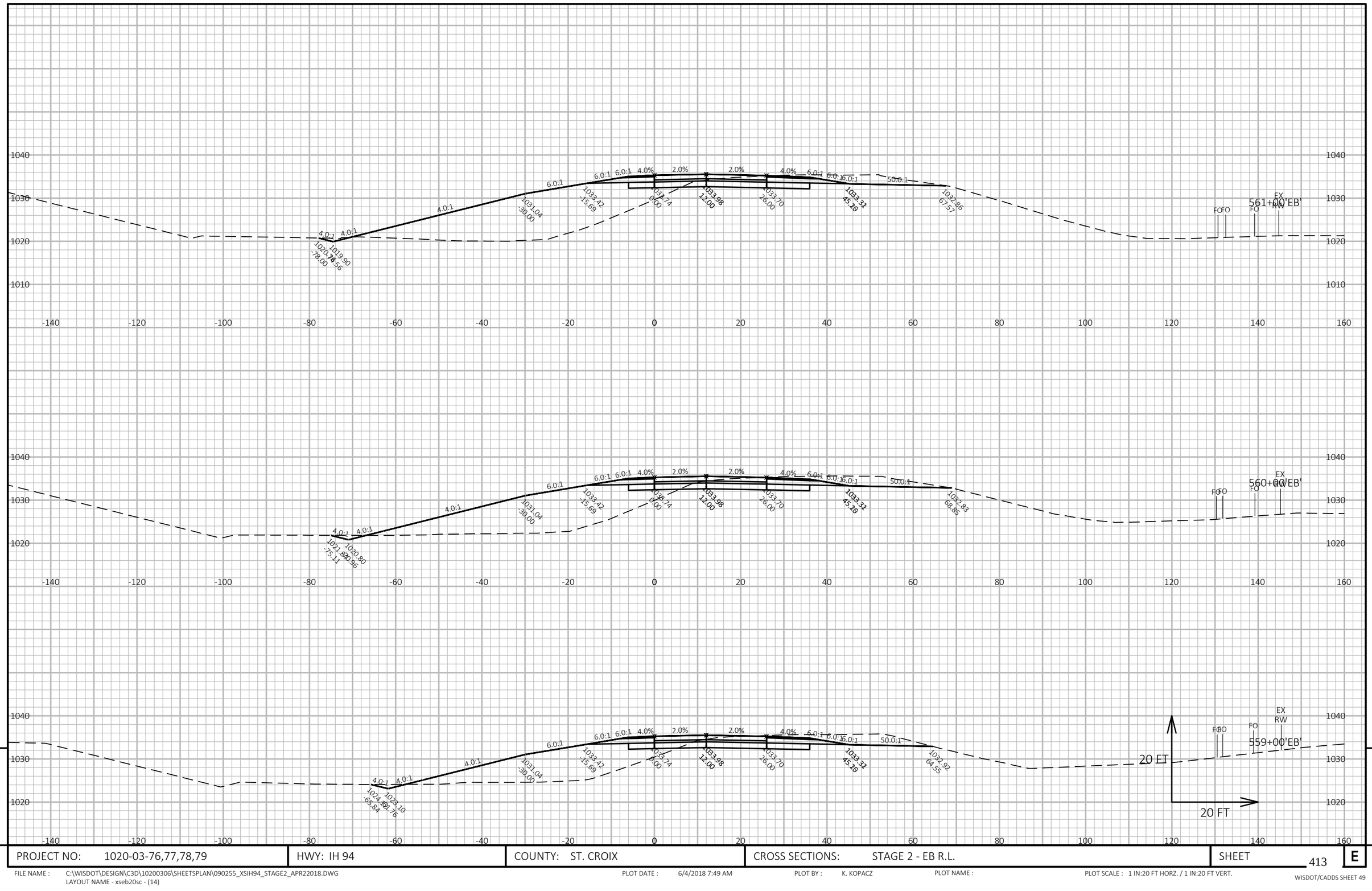


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 412	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (13)

PLOT DATE : 6/4/2018 7:48 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 413	E

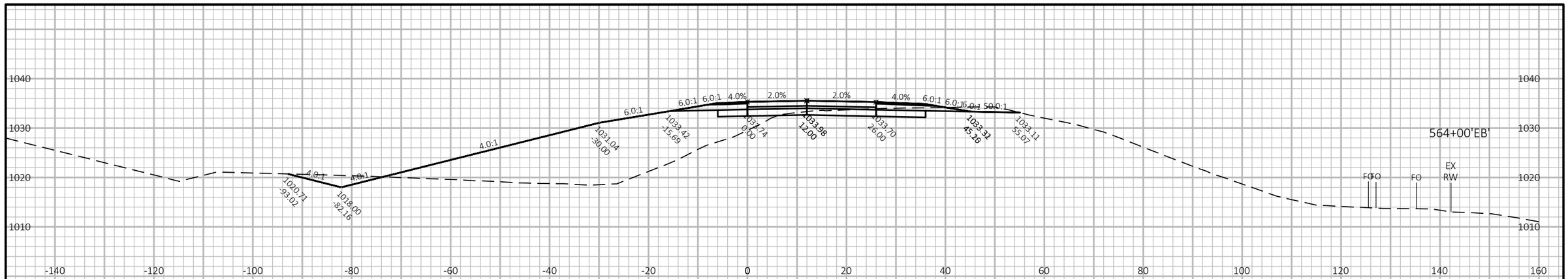
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (14)

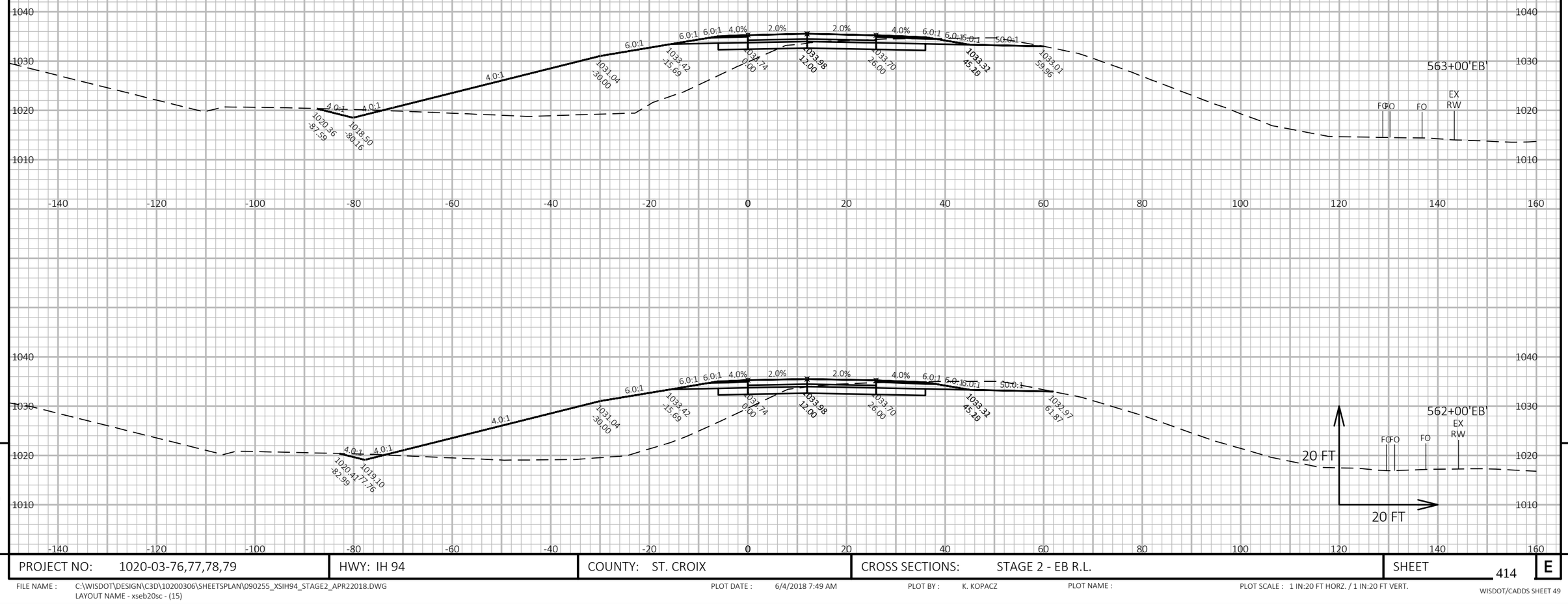
PLOT DATE : 6/4/2018 7:49 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





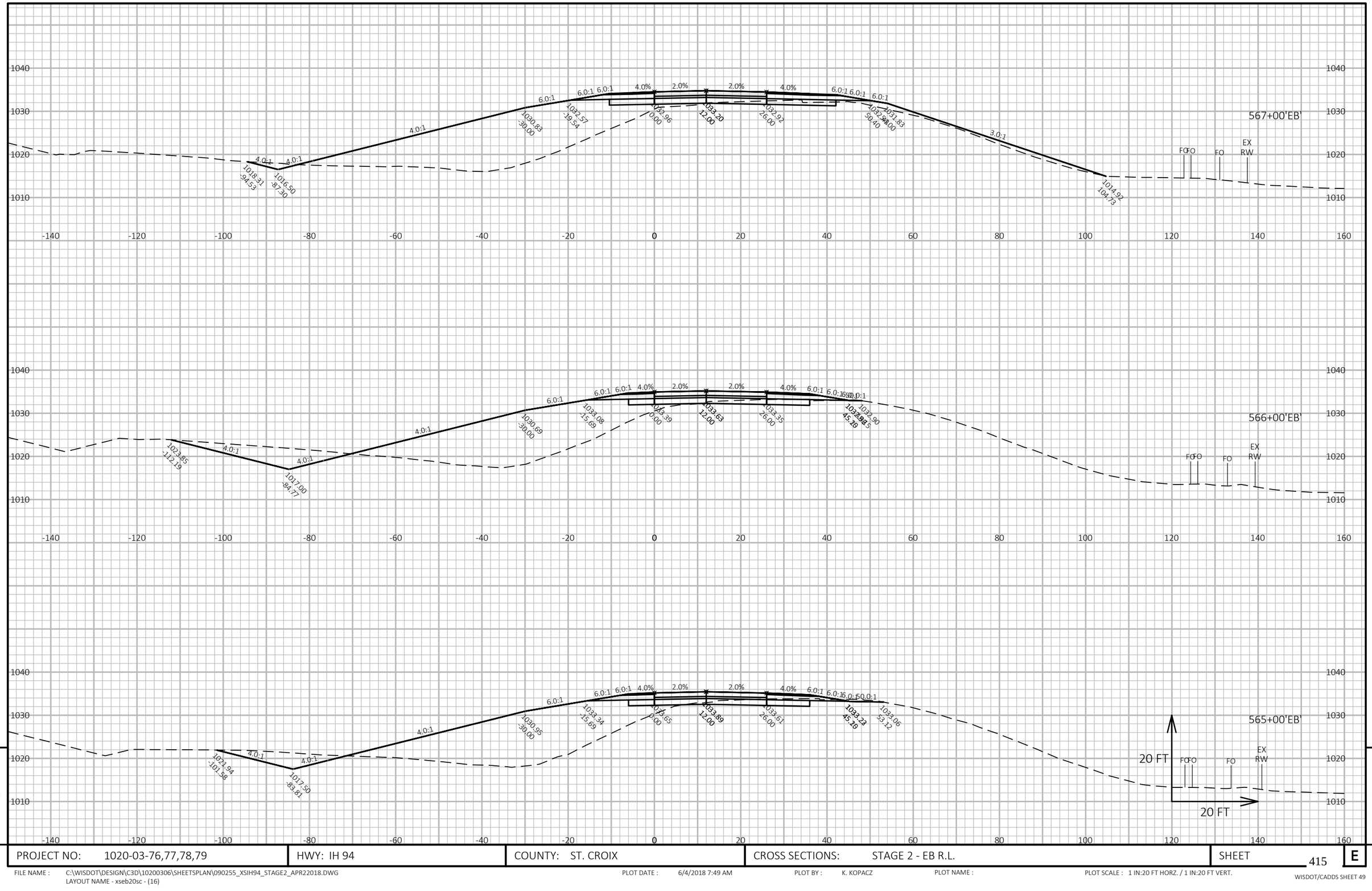
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 414	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (15)

PLOT DATE : 6/4/2018 7:49 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



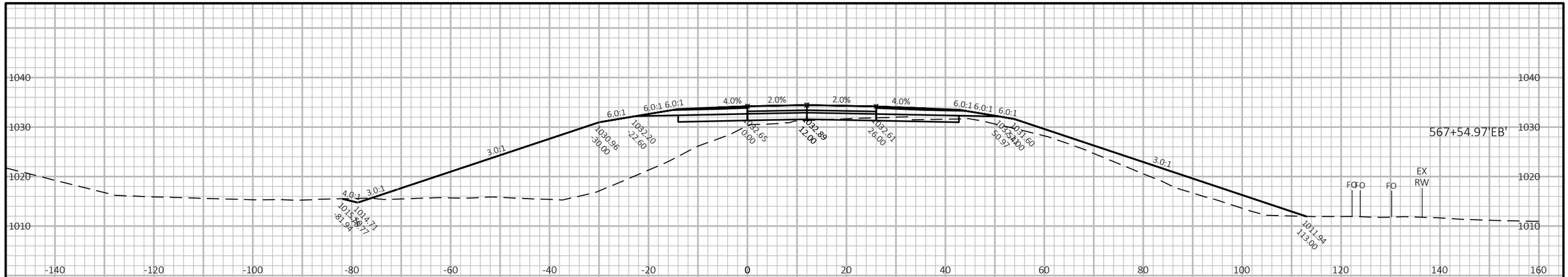
9

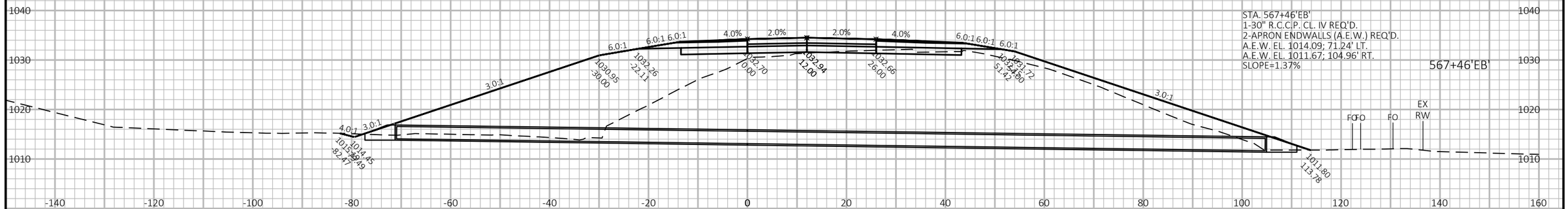
9

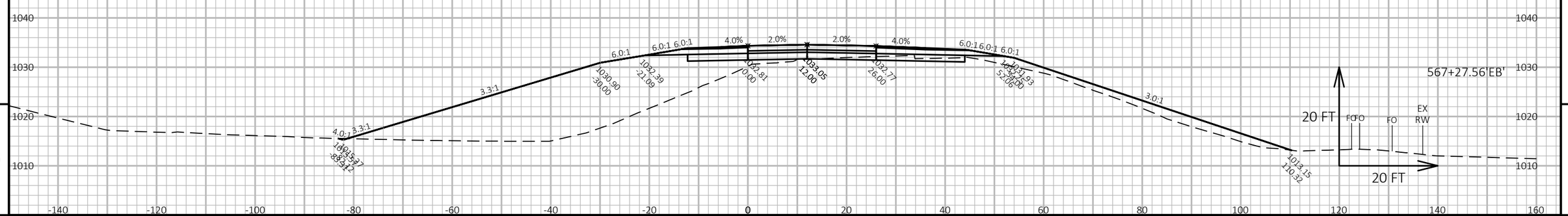
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 415	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (16)

PLOT DATE : 6/4/2018 7:49 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.







9

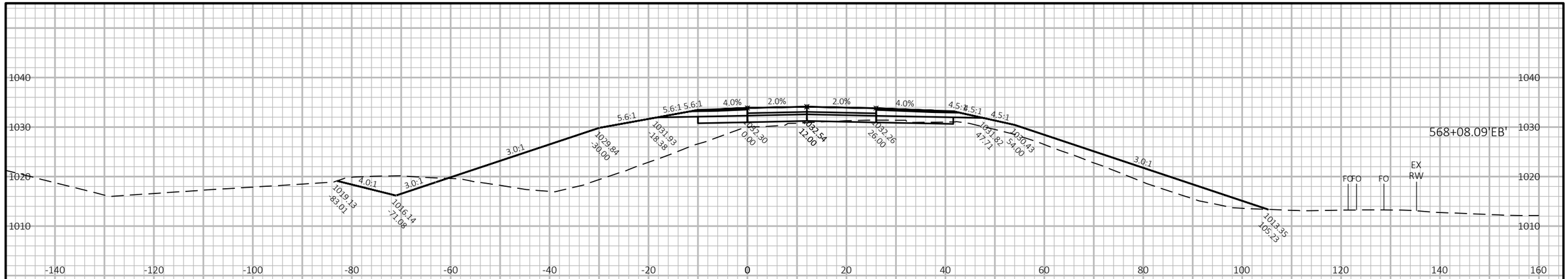
9

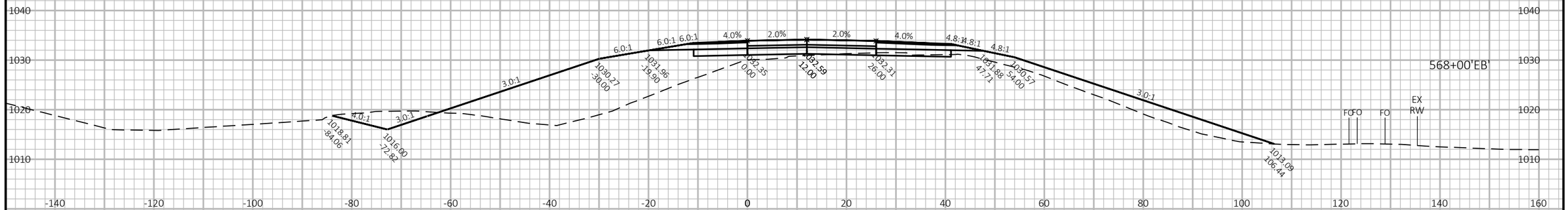
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 416 E

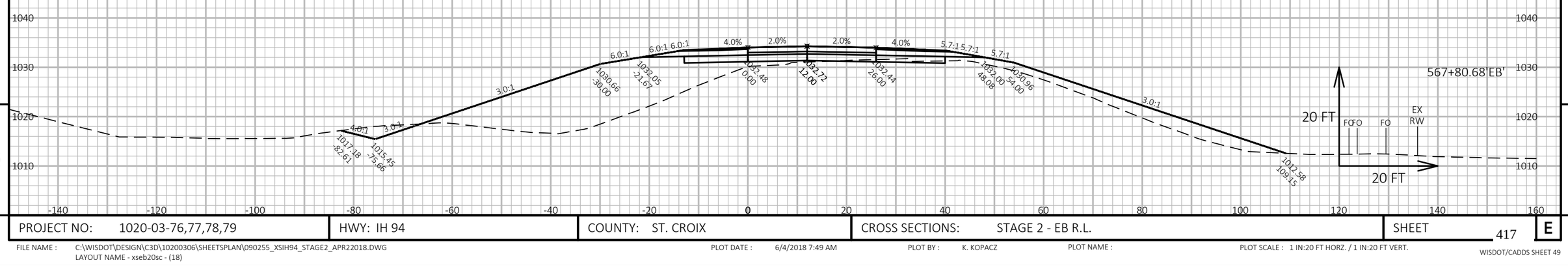
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (17)

PLOT DATE : 6/5/2018 3:25 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

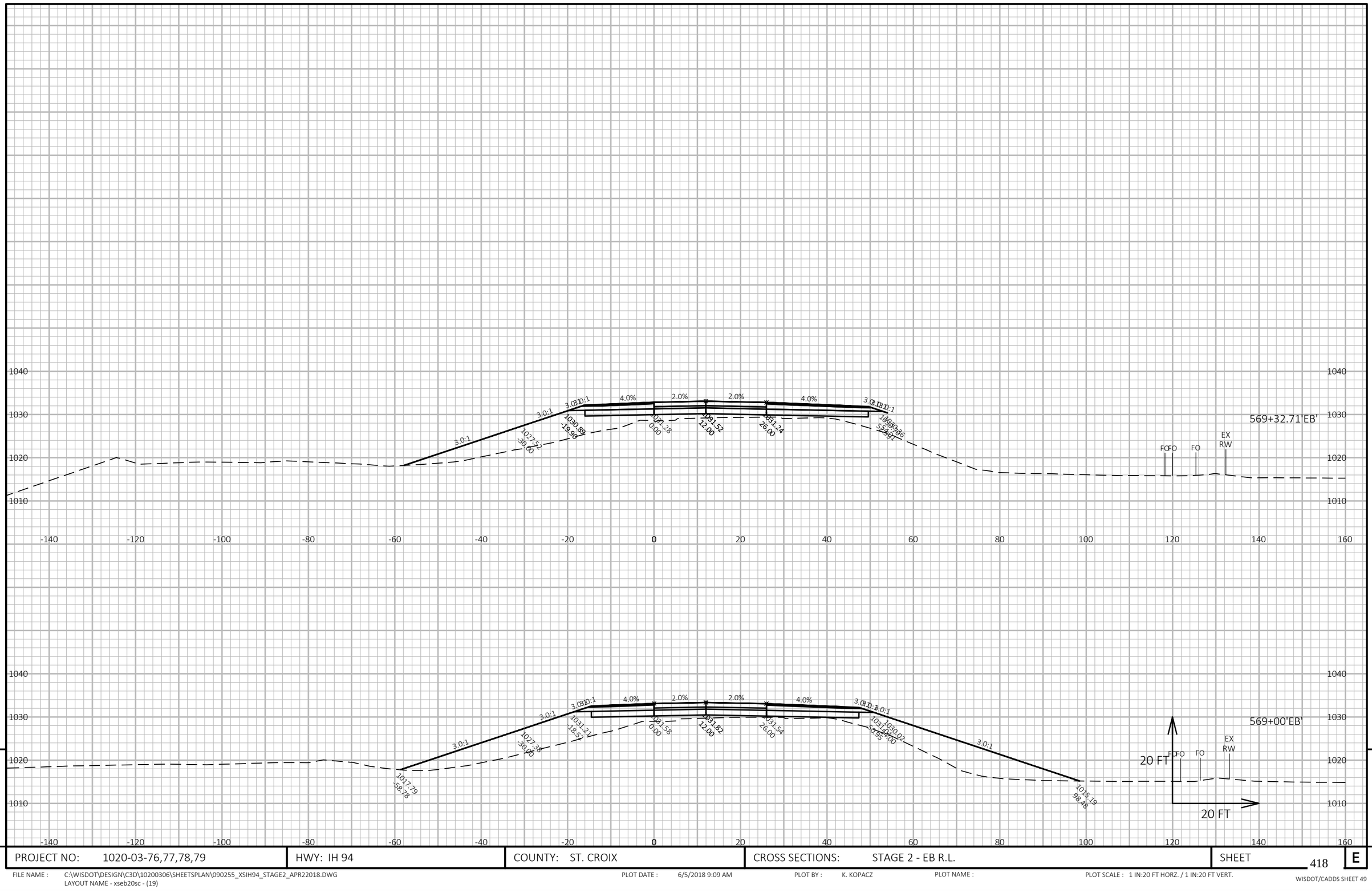
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 417	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (18)

PLOT DATE : 6/4/2018 7:49 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

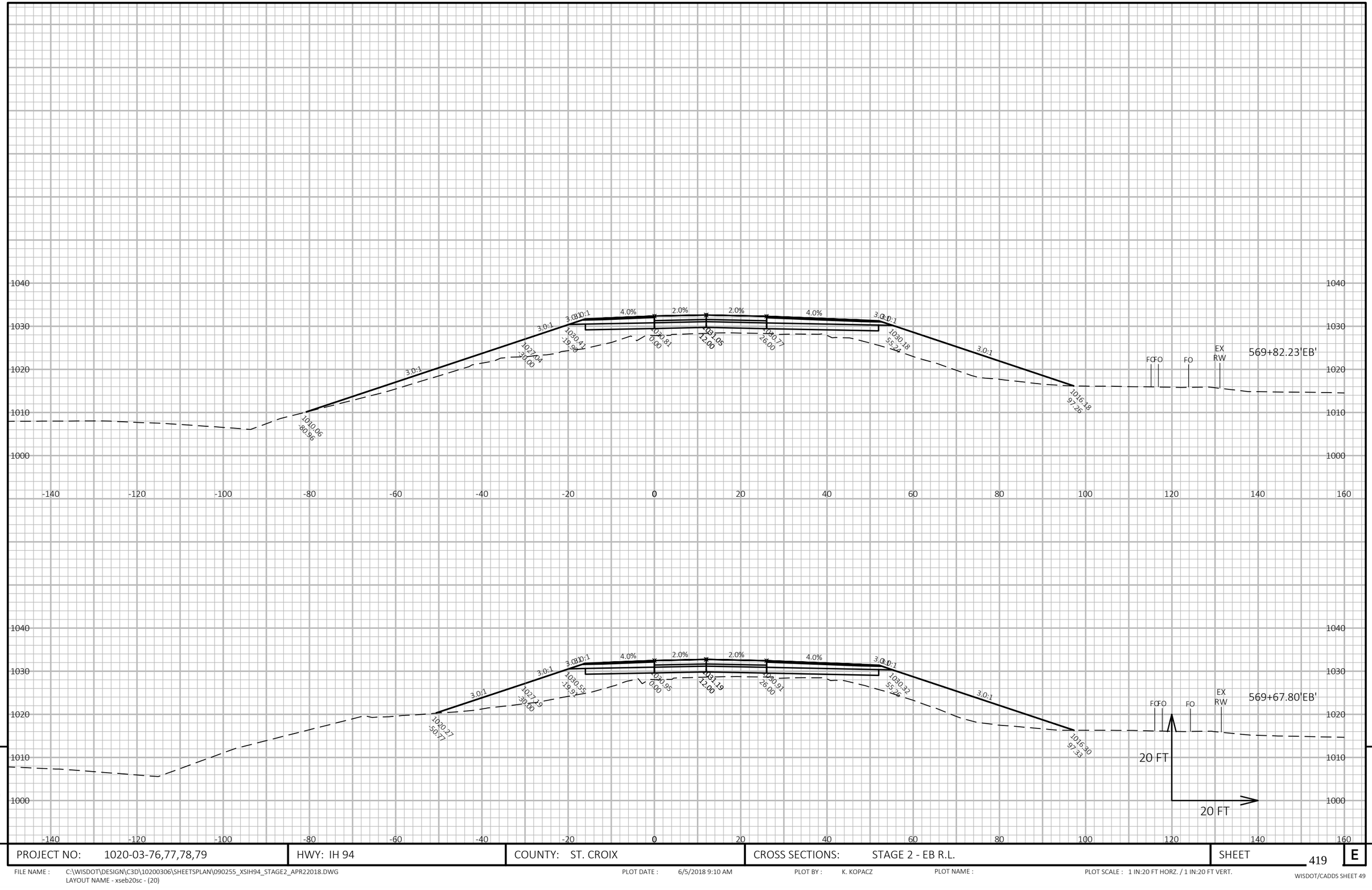
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 418	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (19)

PLOT DATE : 6/5/2018 9:09 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



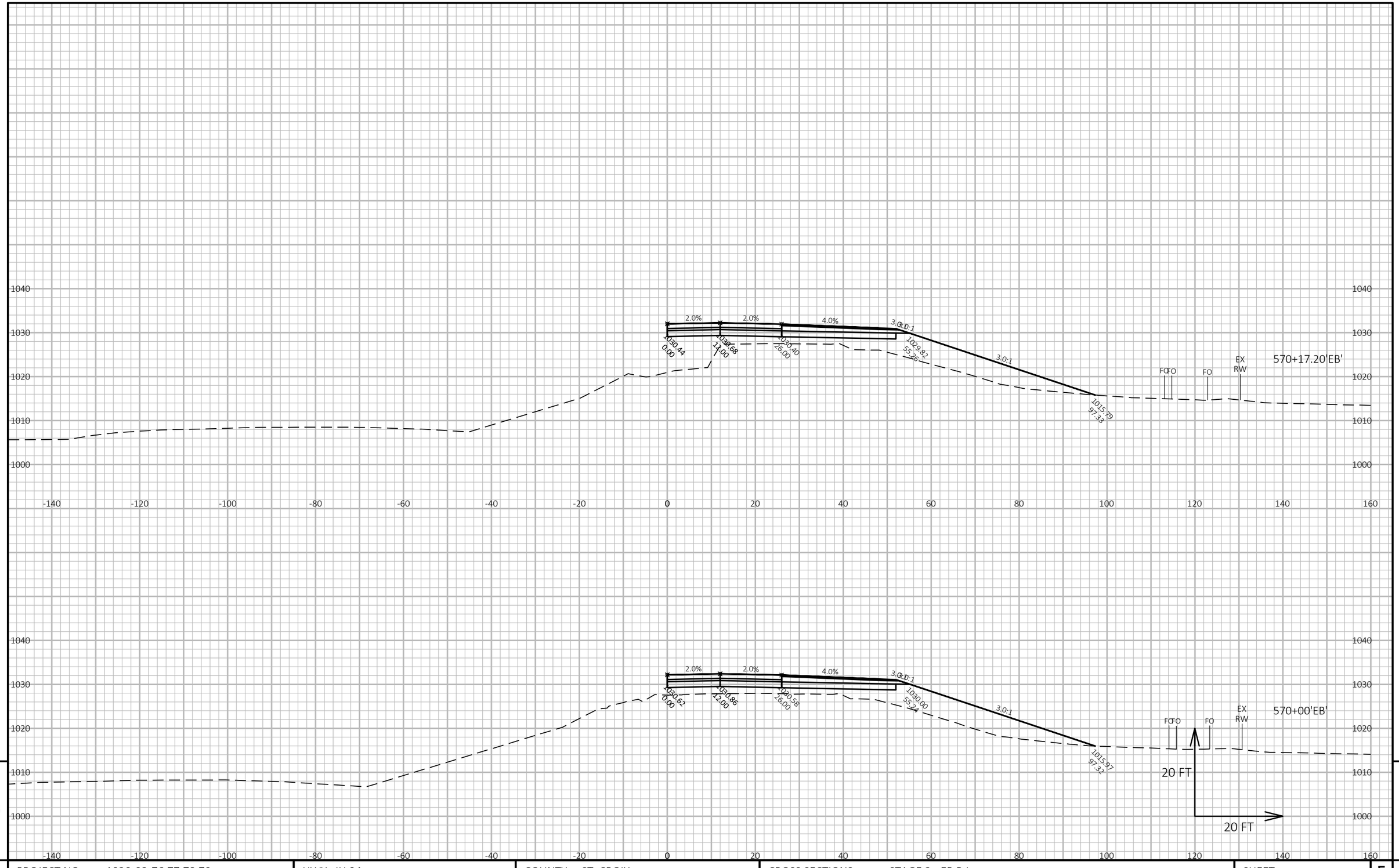
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 419	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (20)

PLOT DATE : 6/5/2018 9:10 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



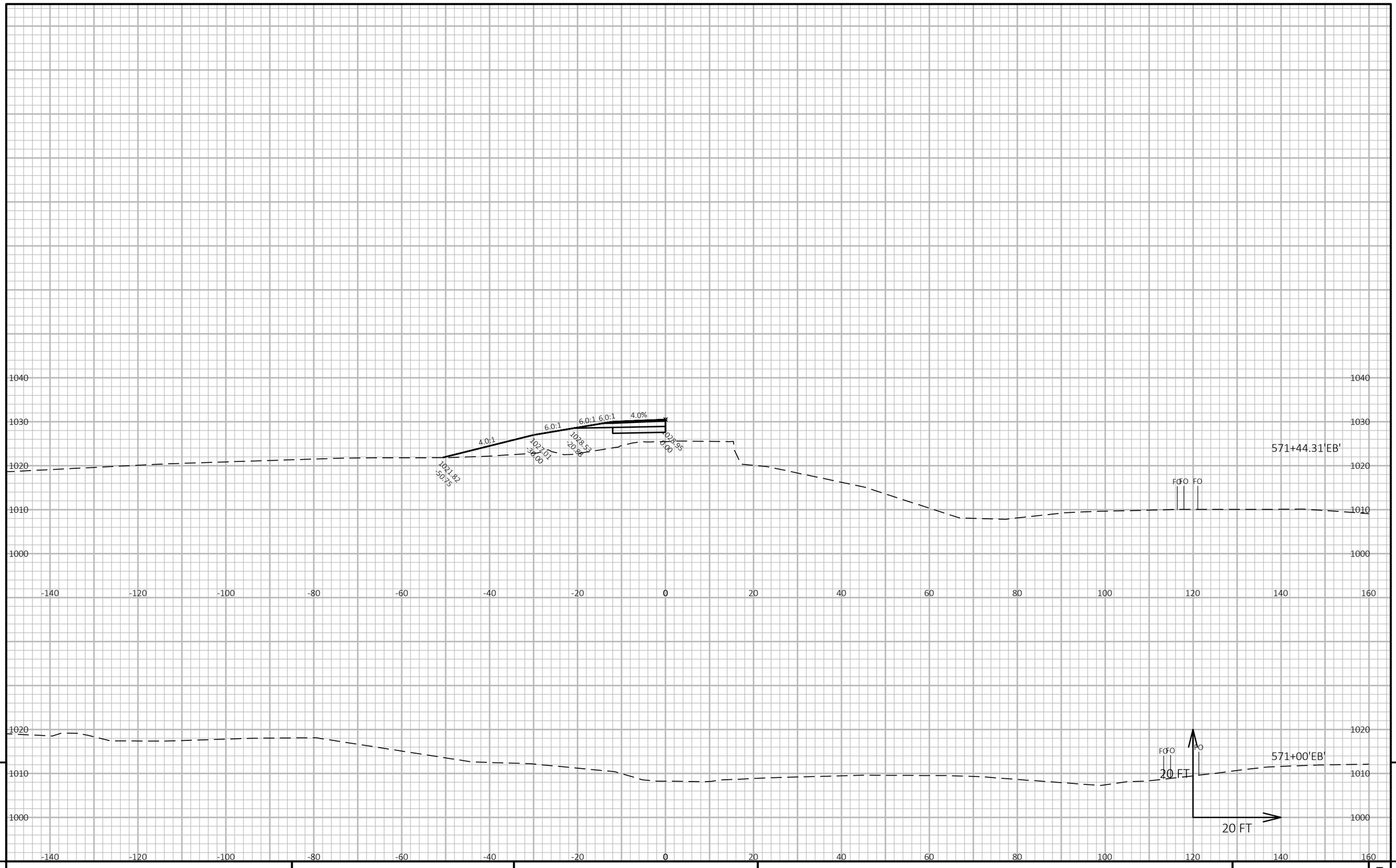
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 420	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (21)

PLOT DATE : 6/5/2018 9:11 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



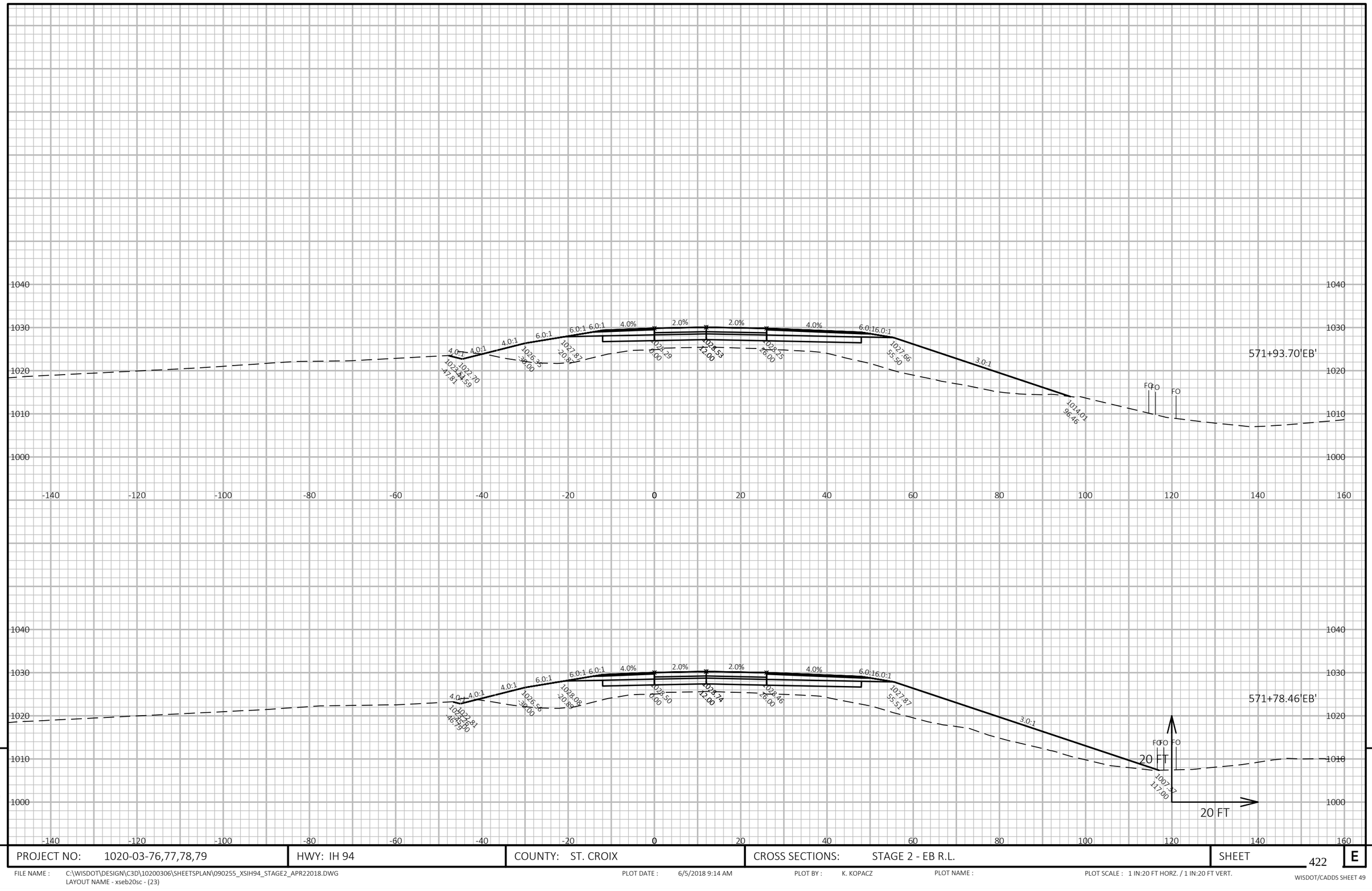
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 421	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (22)

PLOT DATE : 6/5/2018 9:12 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

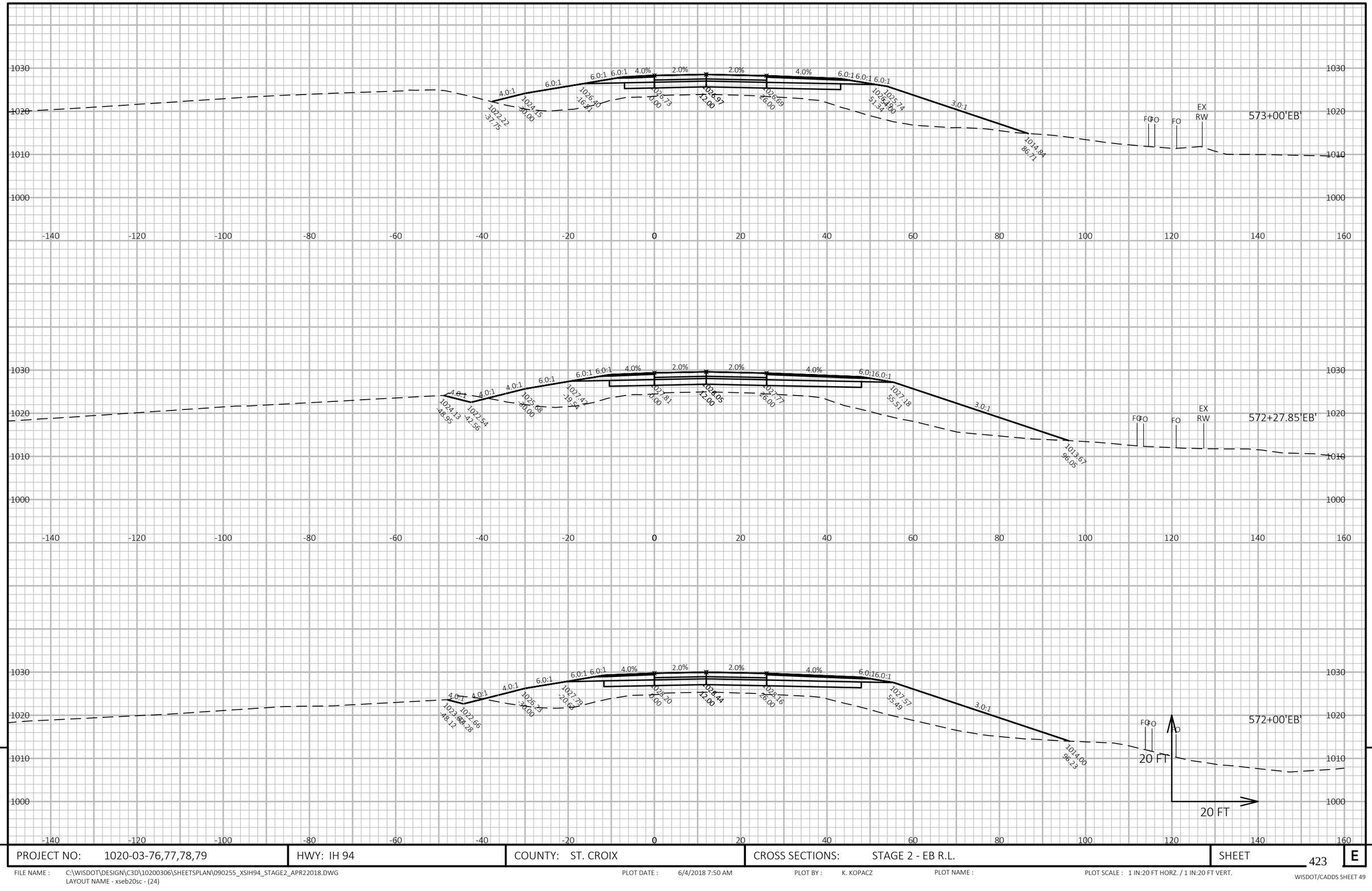
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 422	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (23)

PLOT DATE : 6/5/2018 9:14 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

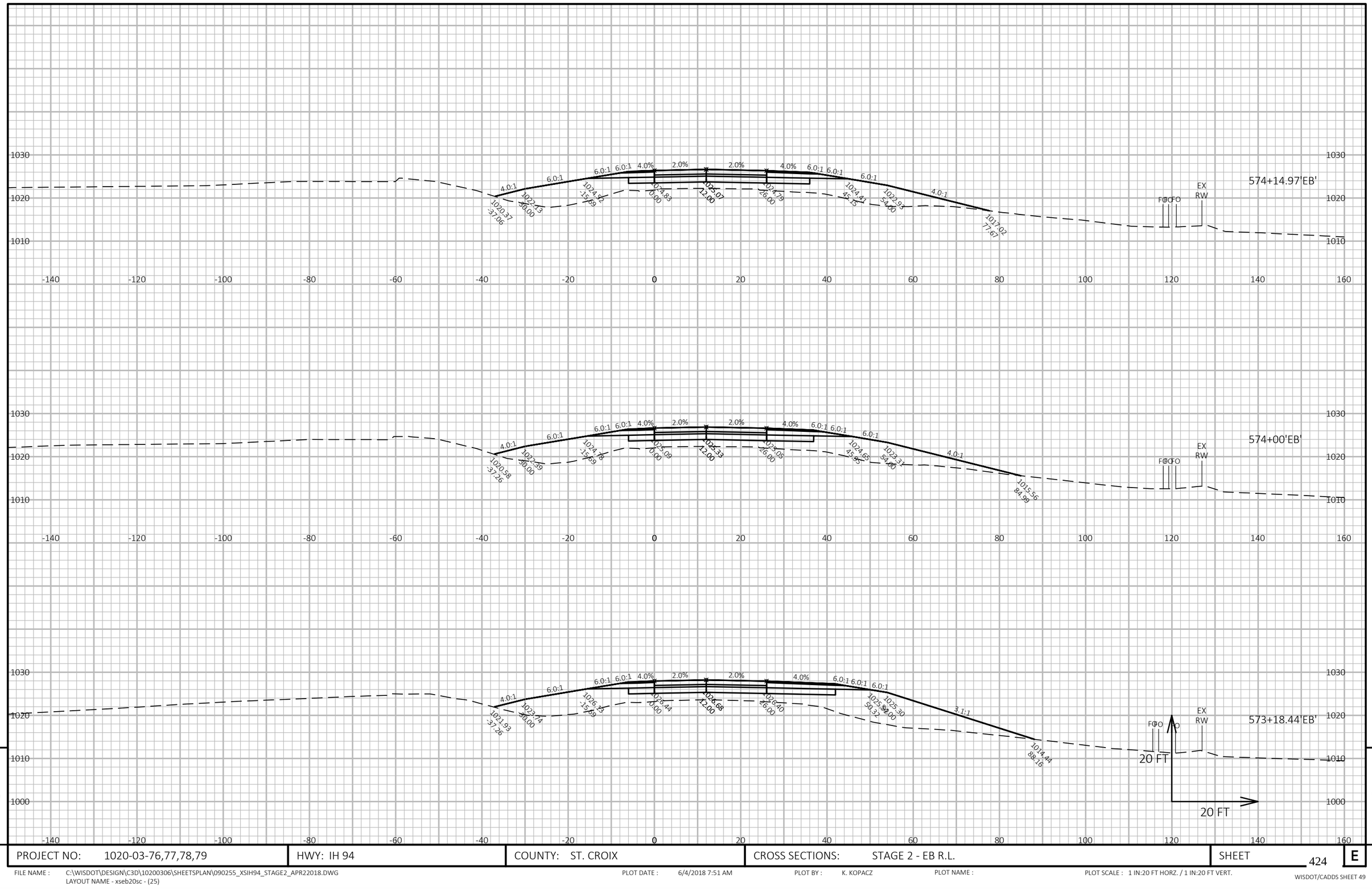


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 423 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (24)

PLOT DATE : 6/4/2018 7:50 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

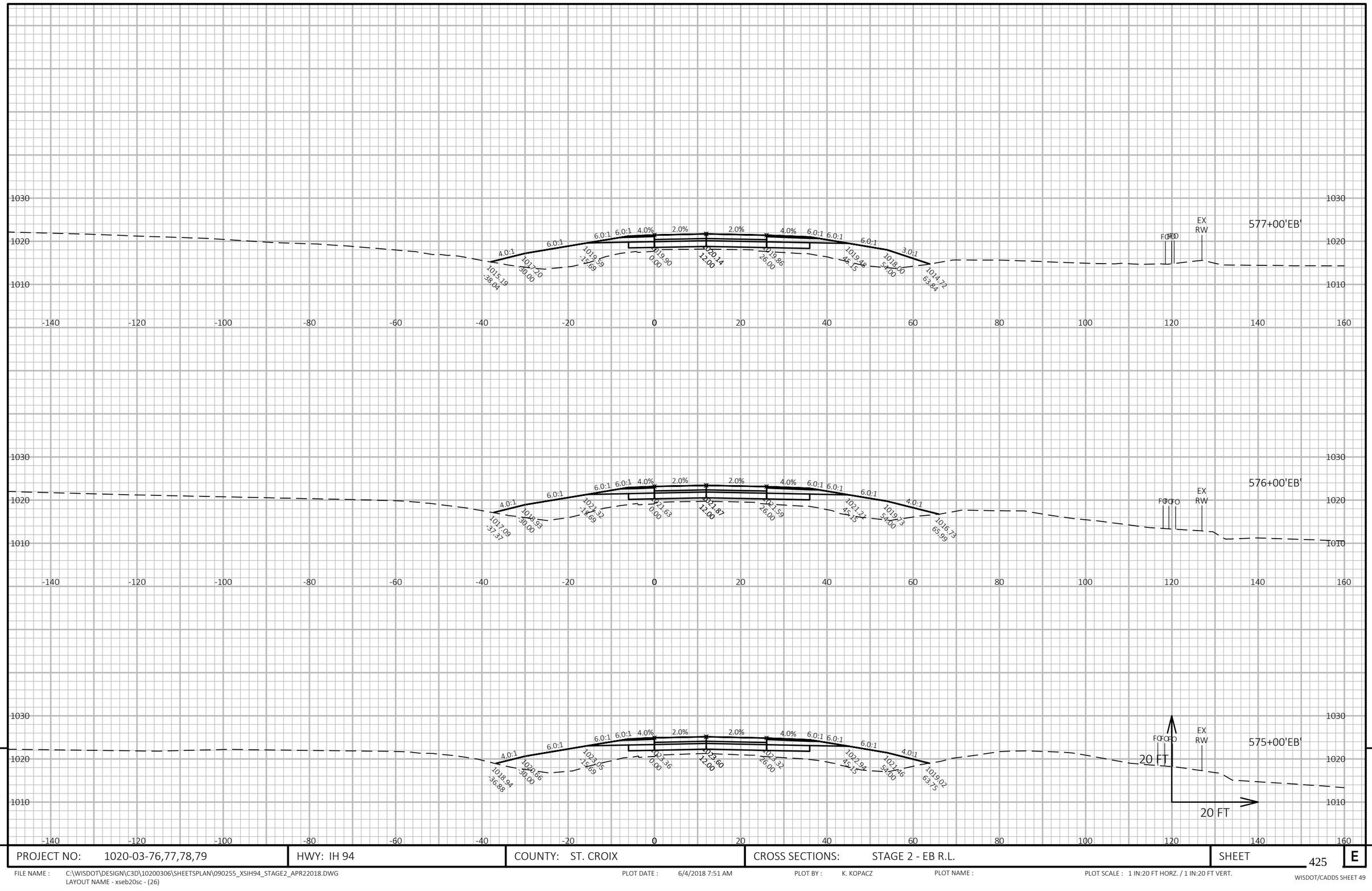


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 424 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (25)

PLOT DATE : 6/4/2018 7:51 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



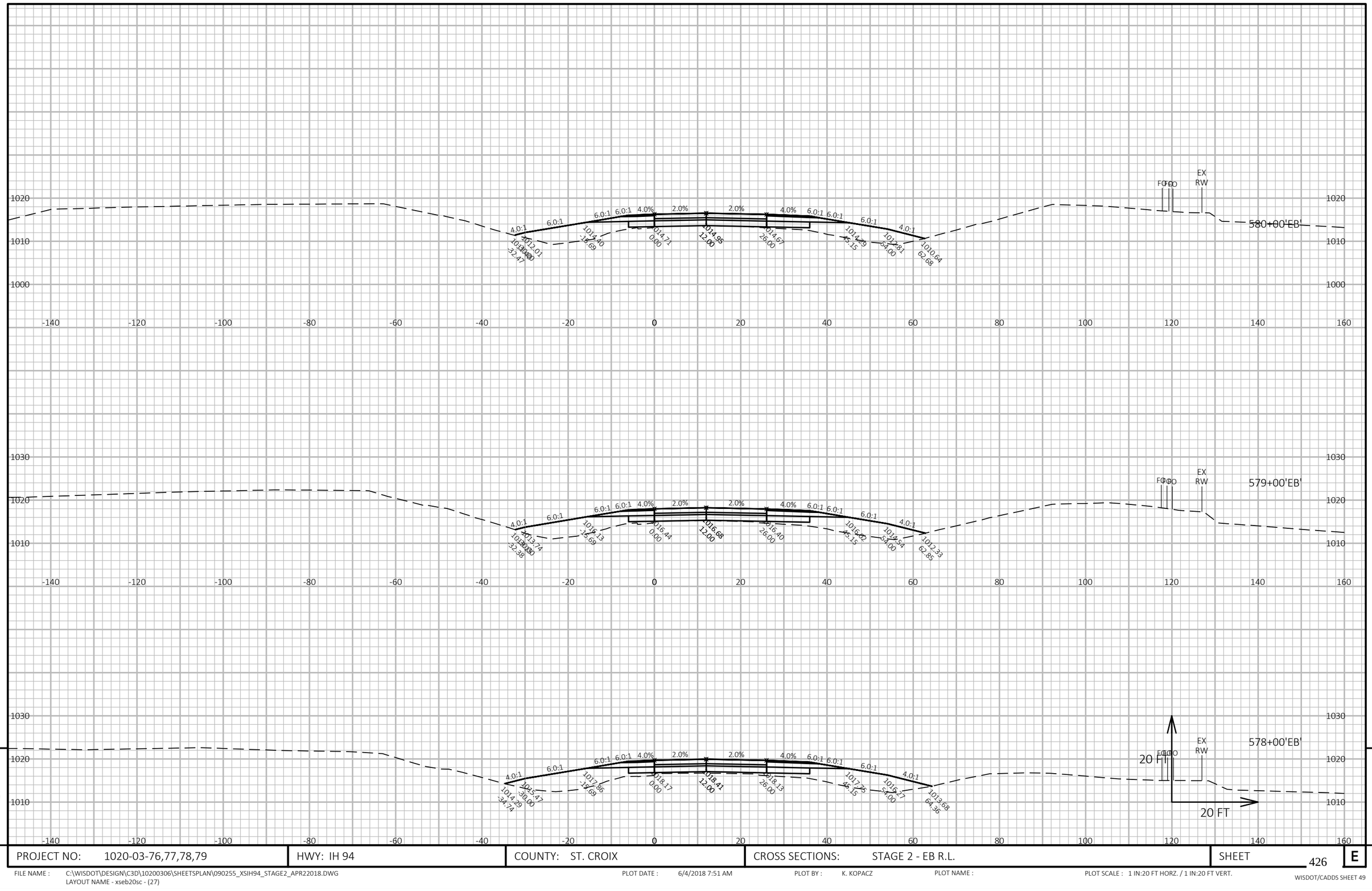
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 425	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (26)

PLOT DATE : 6/4/2018 7:51 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9 9

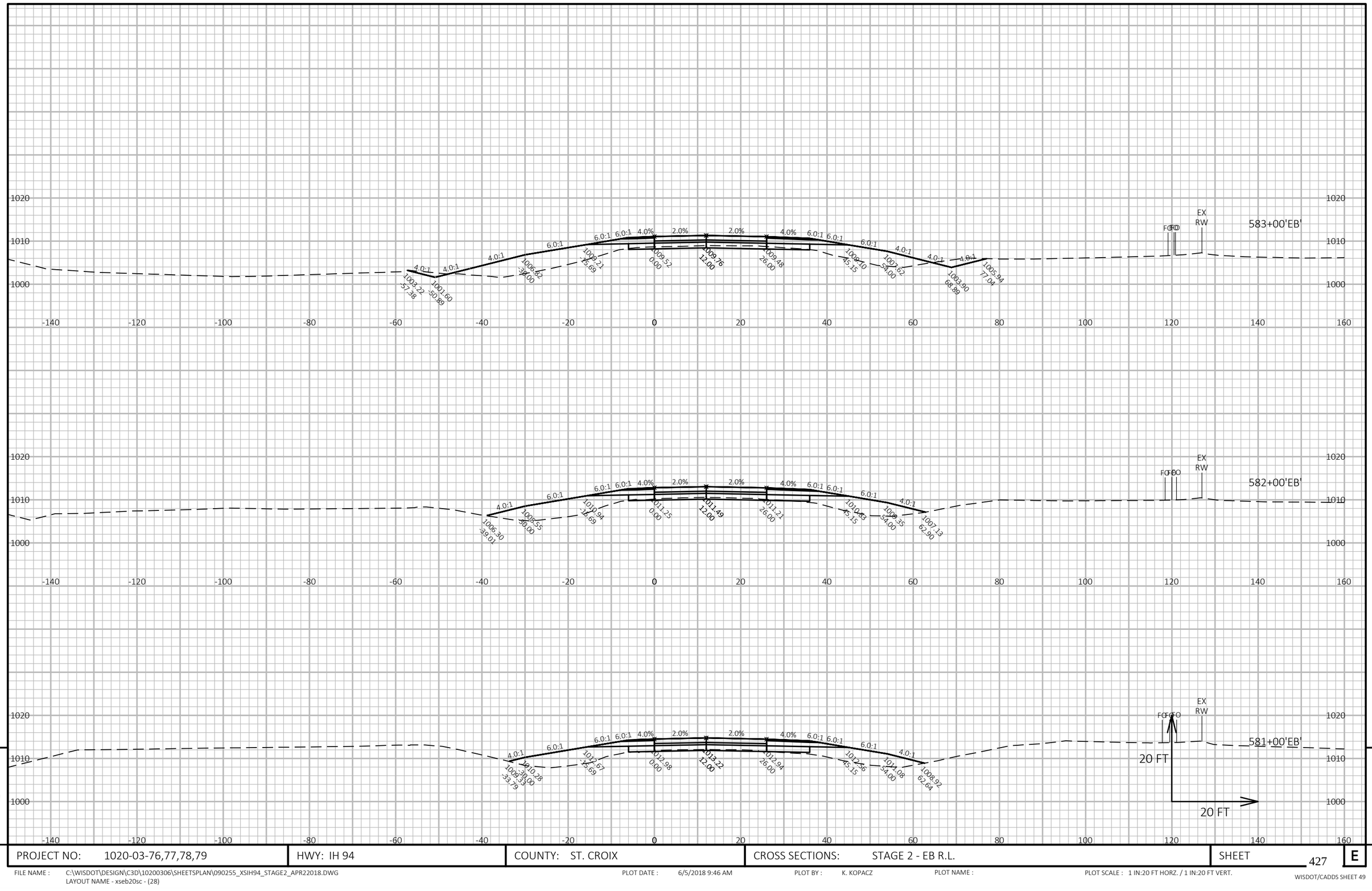


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 426 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (27)

PLOT DATE : 6/4/2018 7:51 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

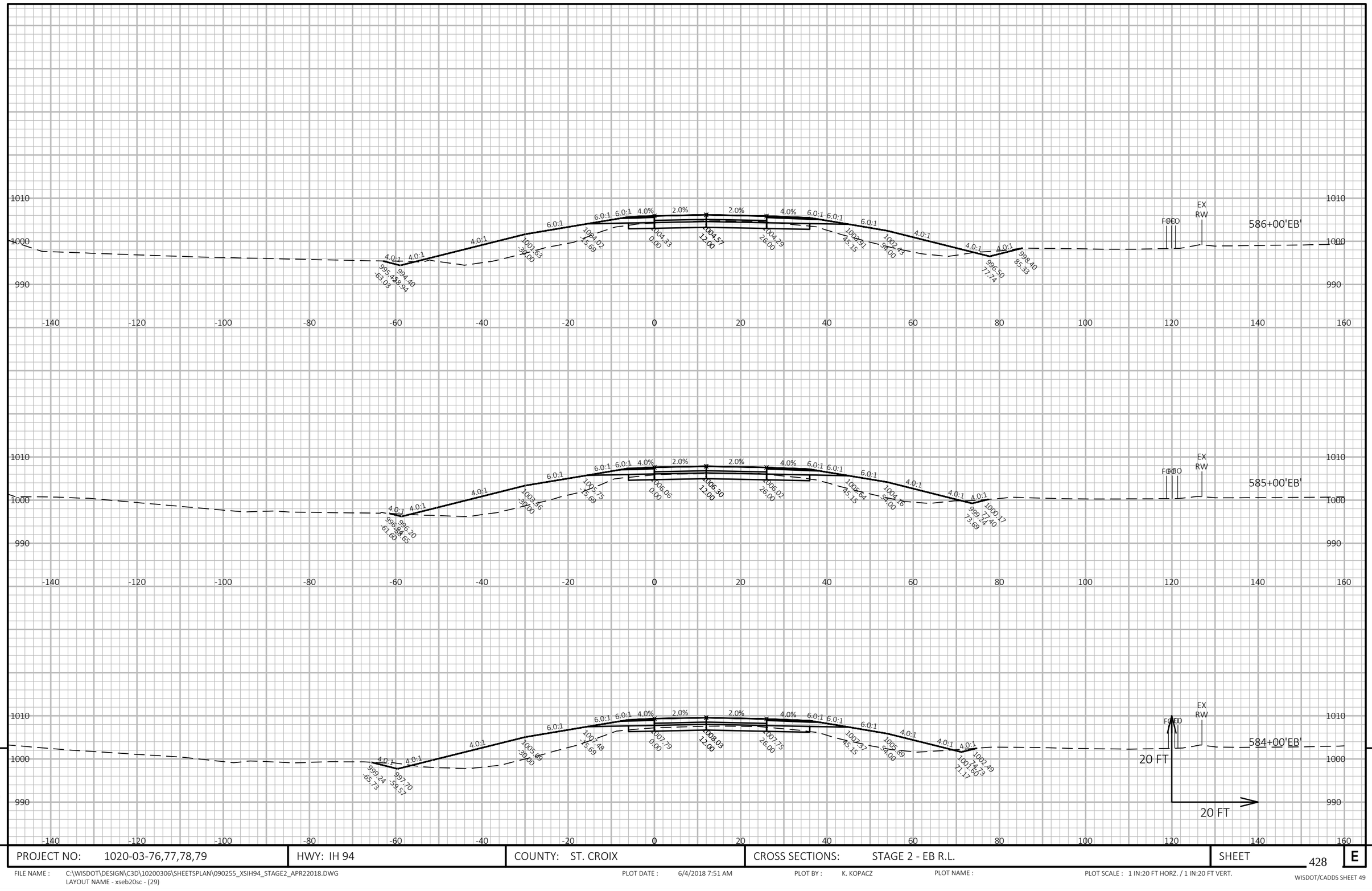
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 427	E

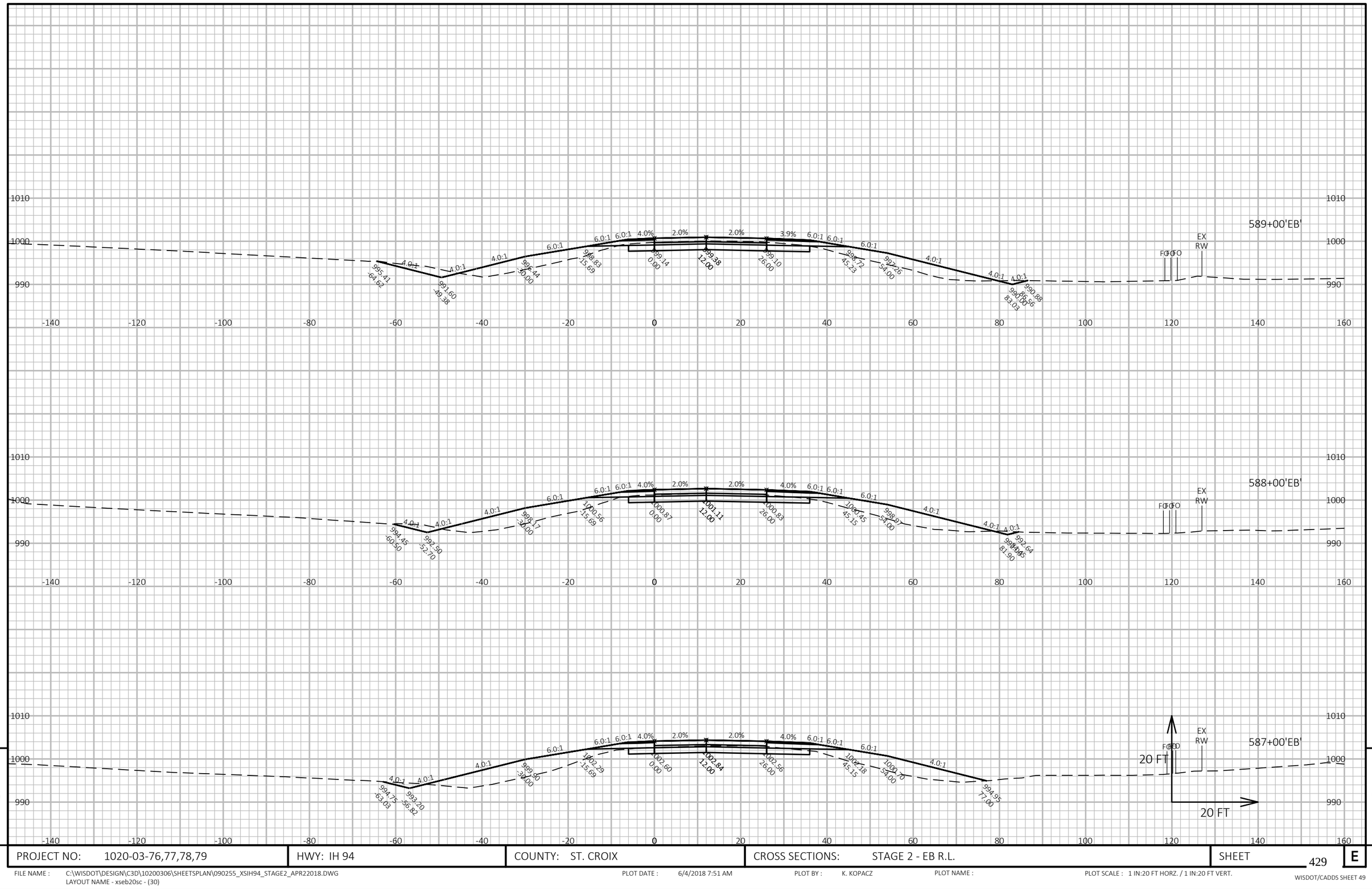
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (28)

PLOT DATE : 6/5/2018 9:46 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 428	E



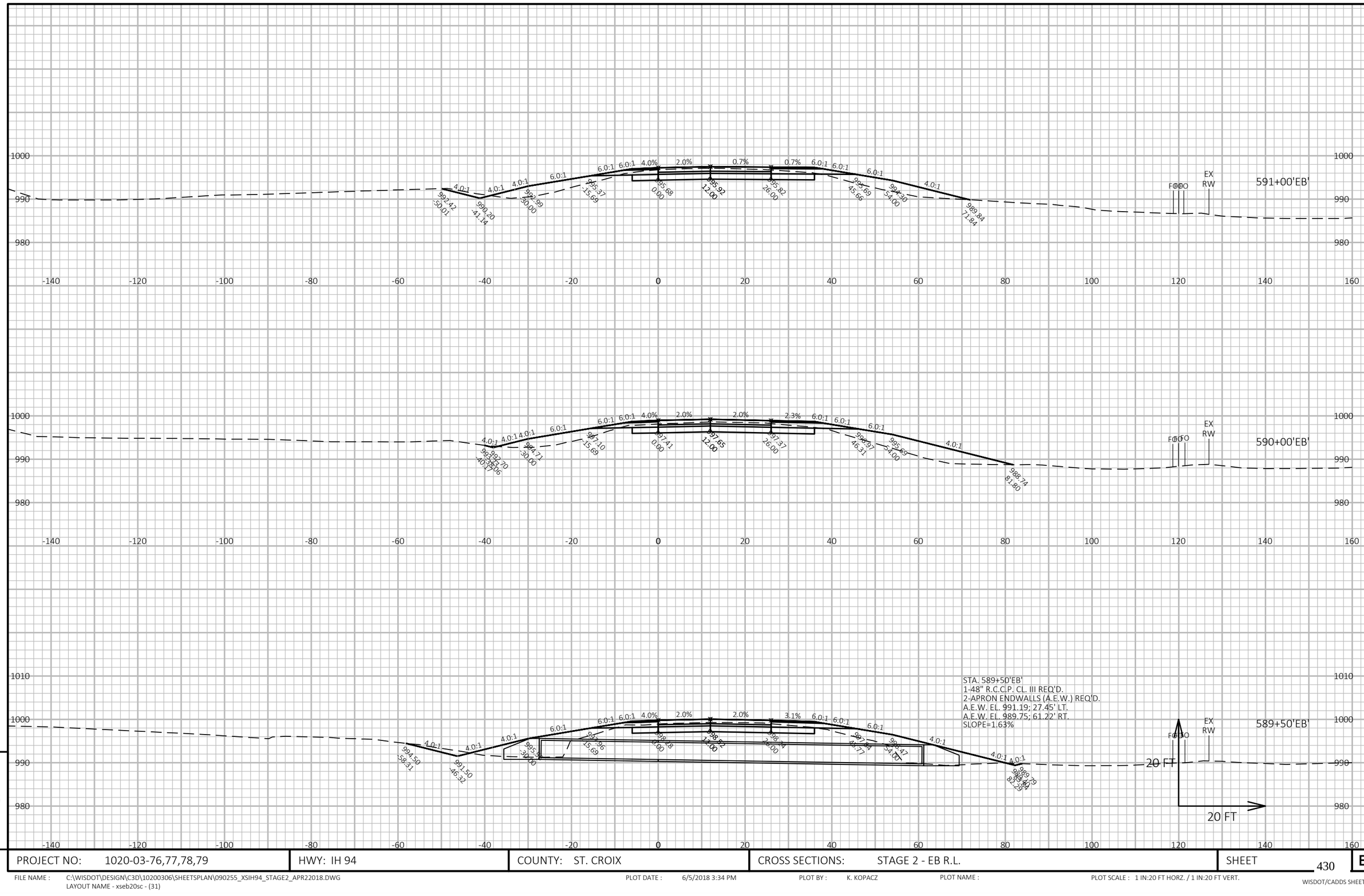
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 429	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (30)

PLOT DATE : 6/4/2018 7:51 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

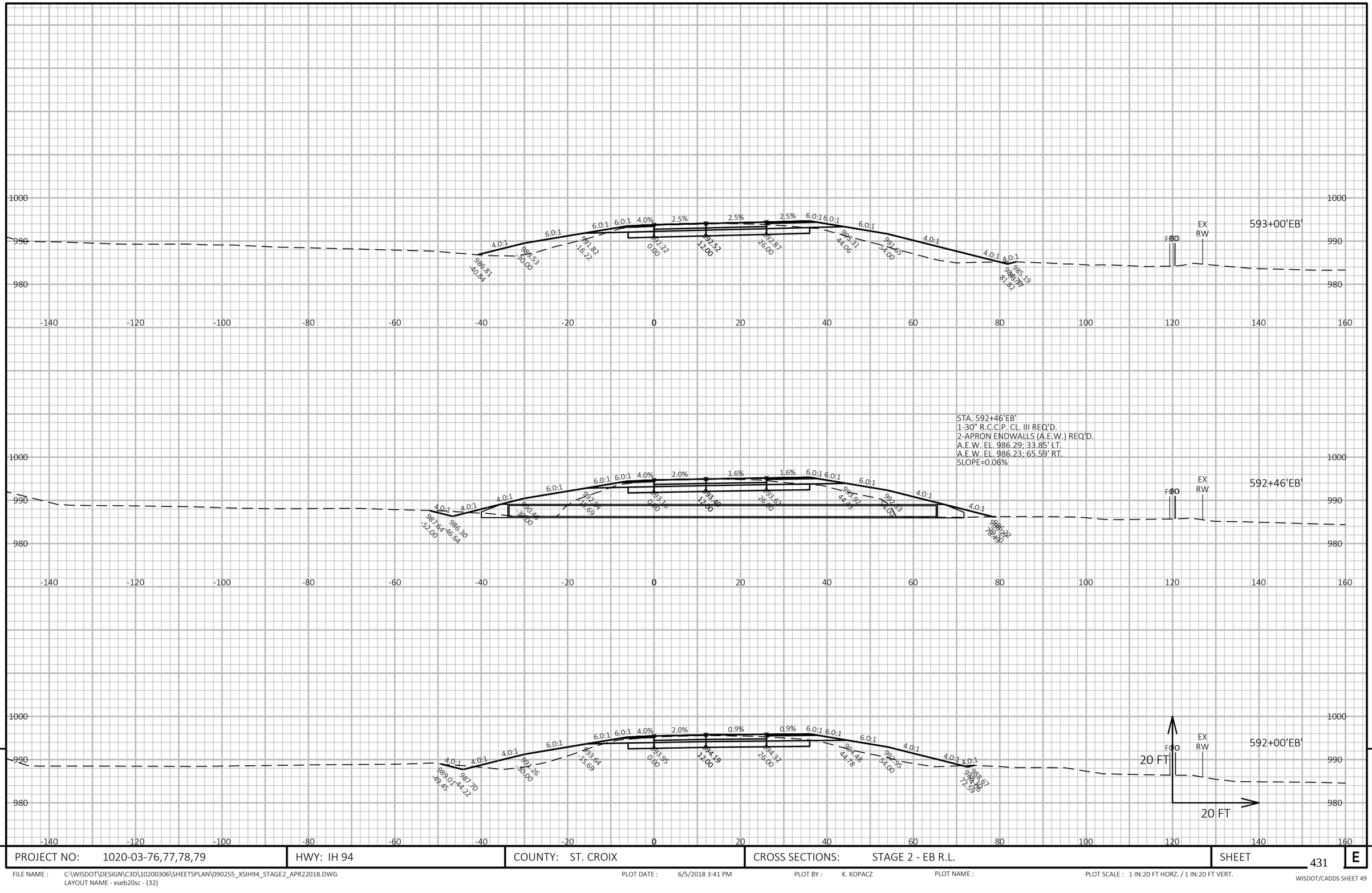


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 430 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (31)

PLOT DATE : 6/5/2018 3:34 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 431	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (32)

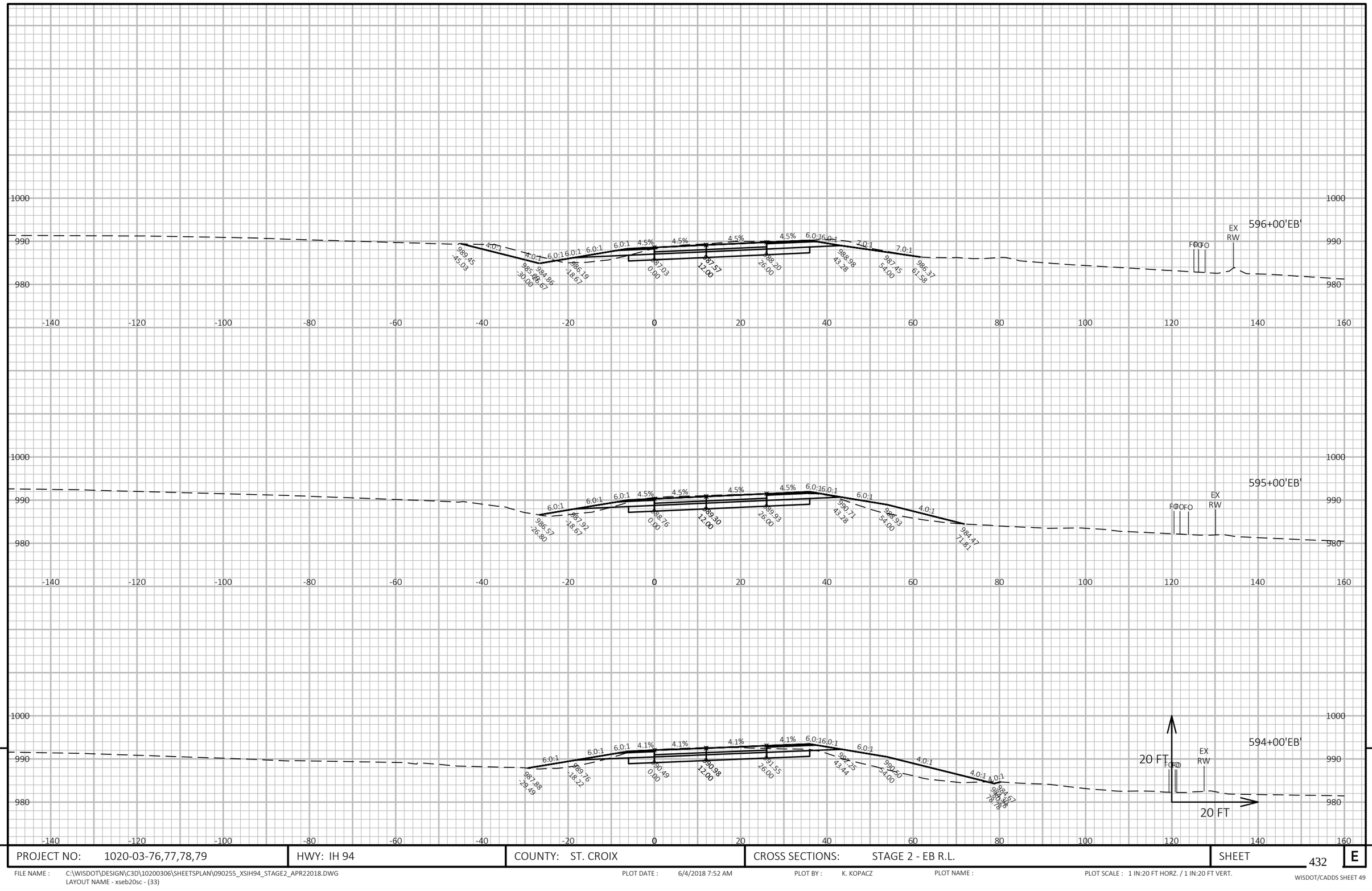
PLOT DATE : 6/5/2018 3:41 PM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



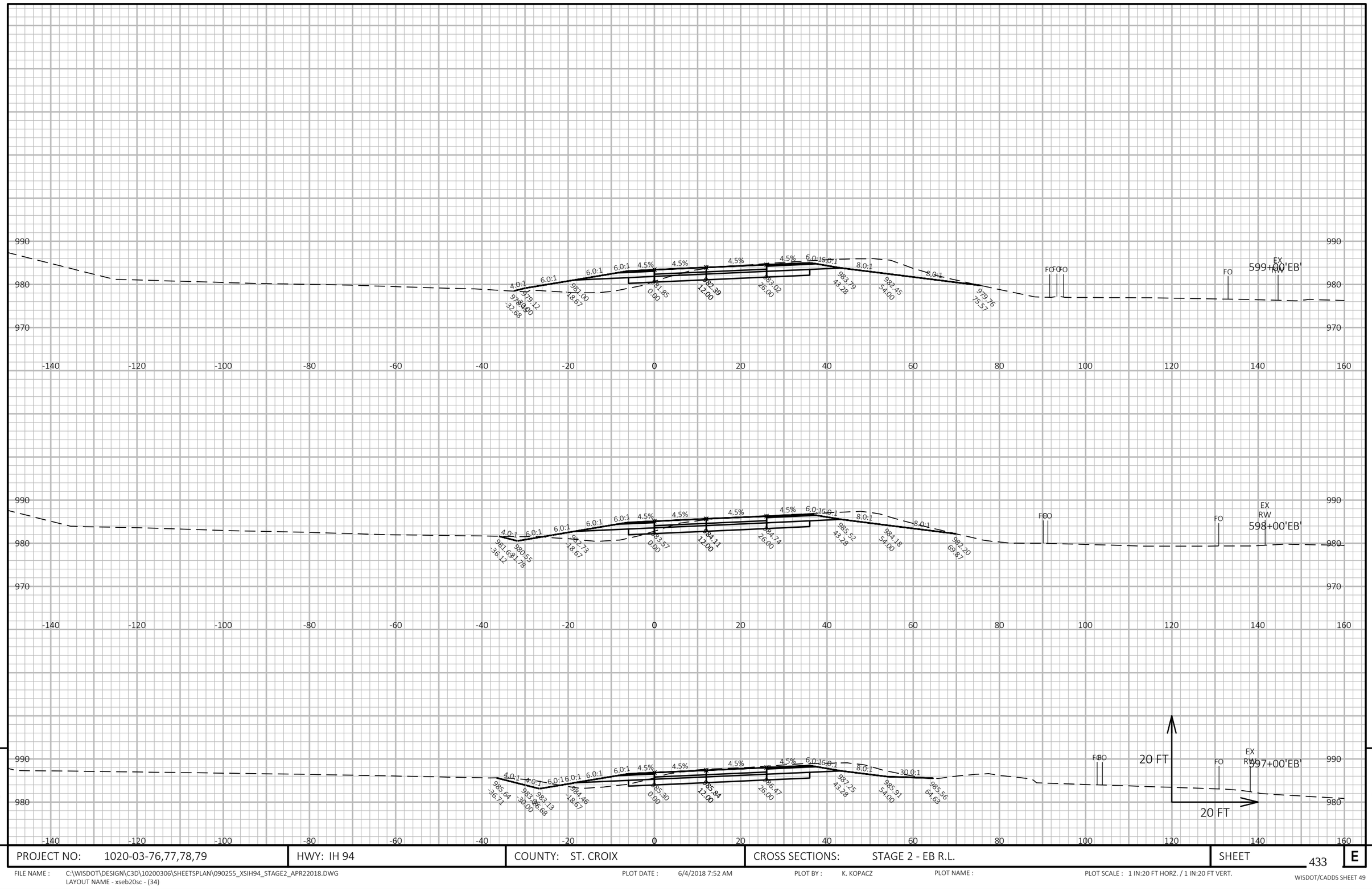
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 432	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (33)

PLOT DATE : 6/4/2018 7:52 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 433	E

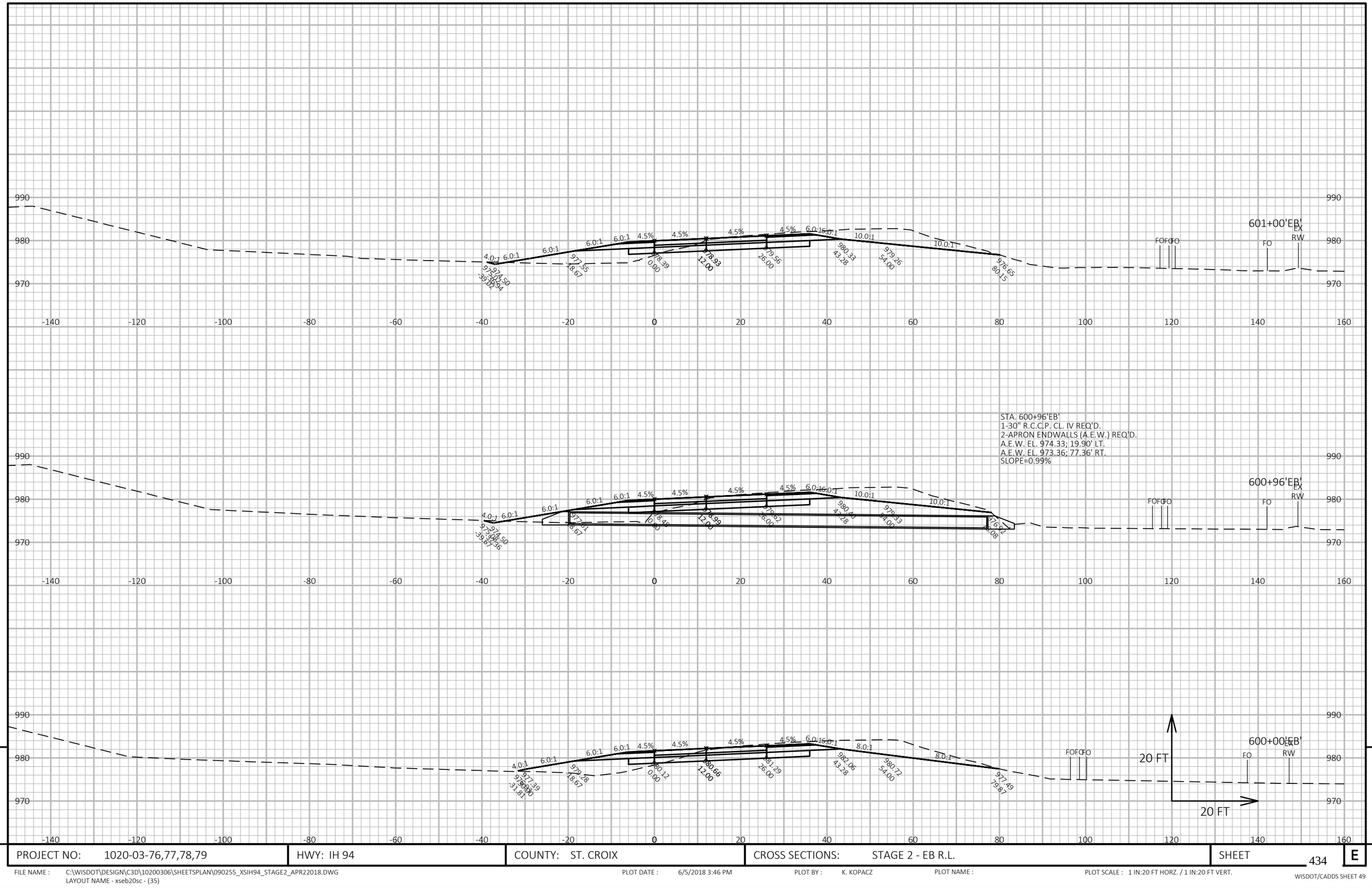
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (34)

PLOT DATE : 6/4/2018 7:52 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 434	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (35)

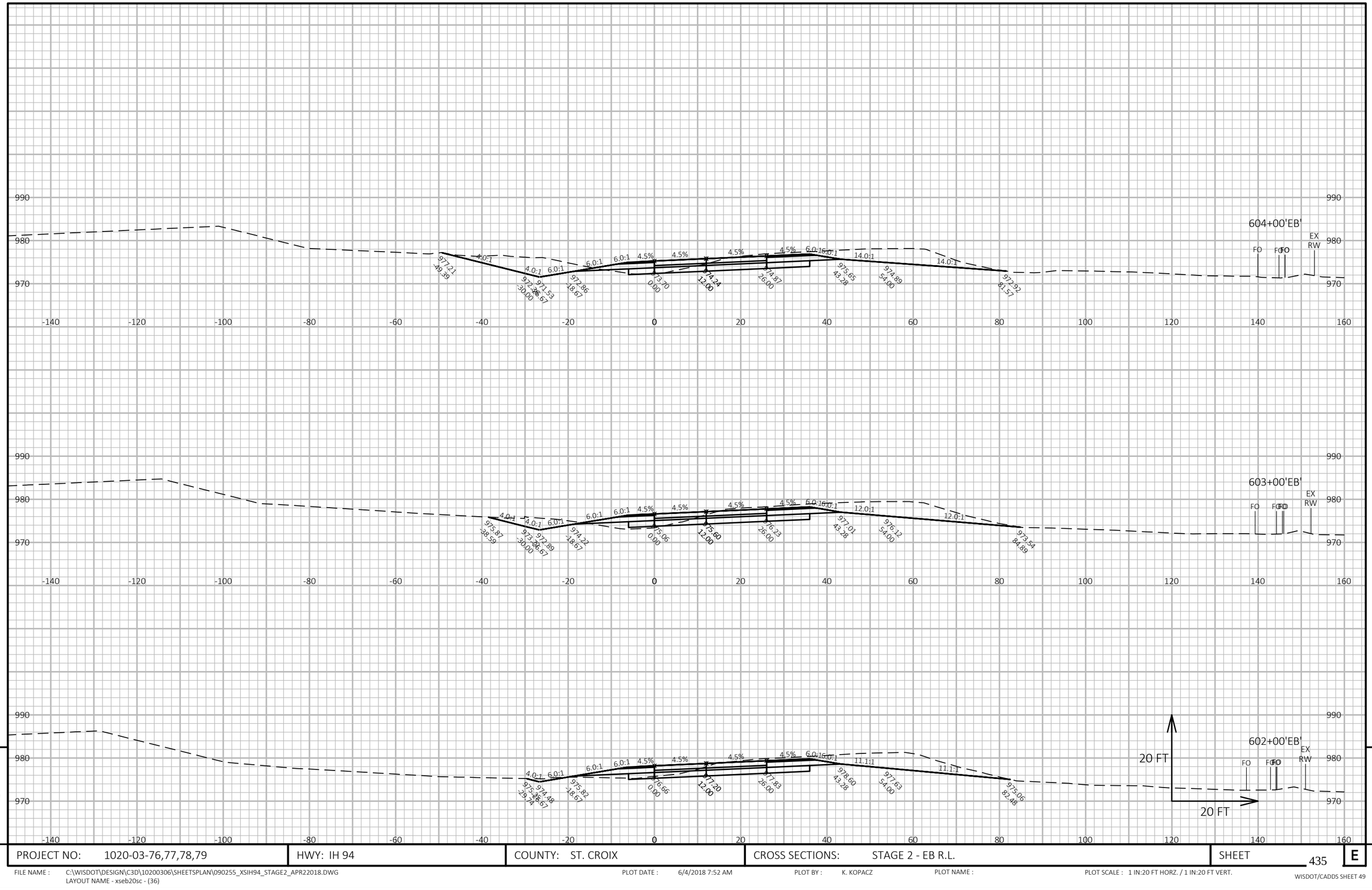
PLOT DATE : 6/5/2018 3:46 PM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

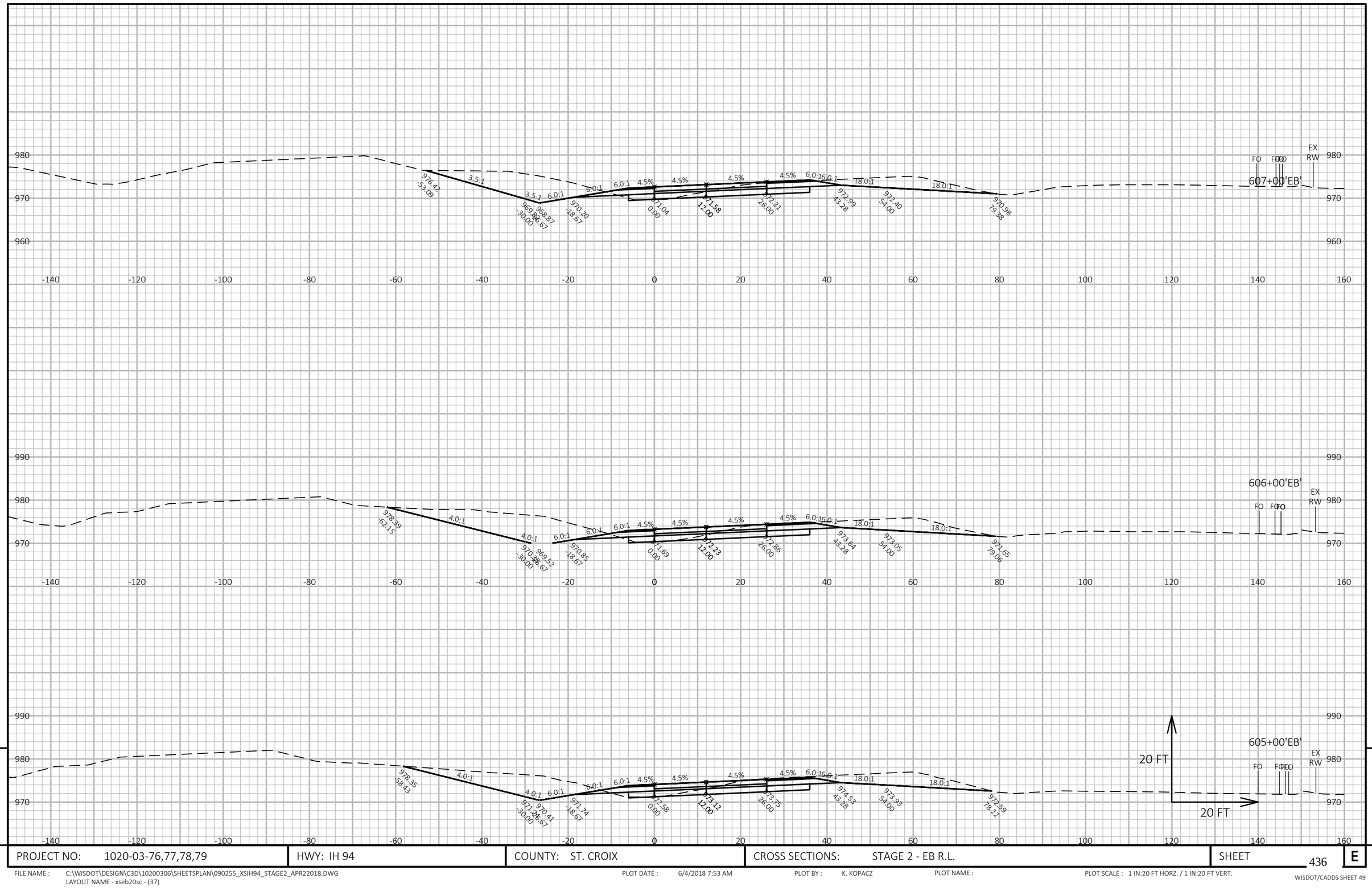
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 435	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (36)

PLOT DATE : 6/4/2018 7:52 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

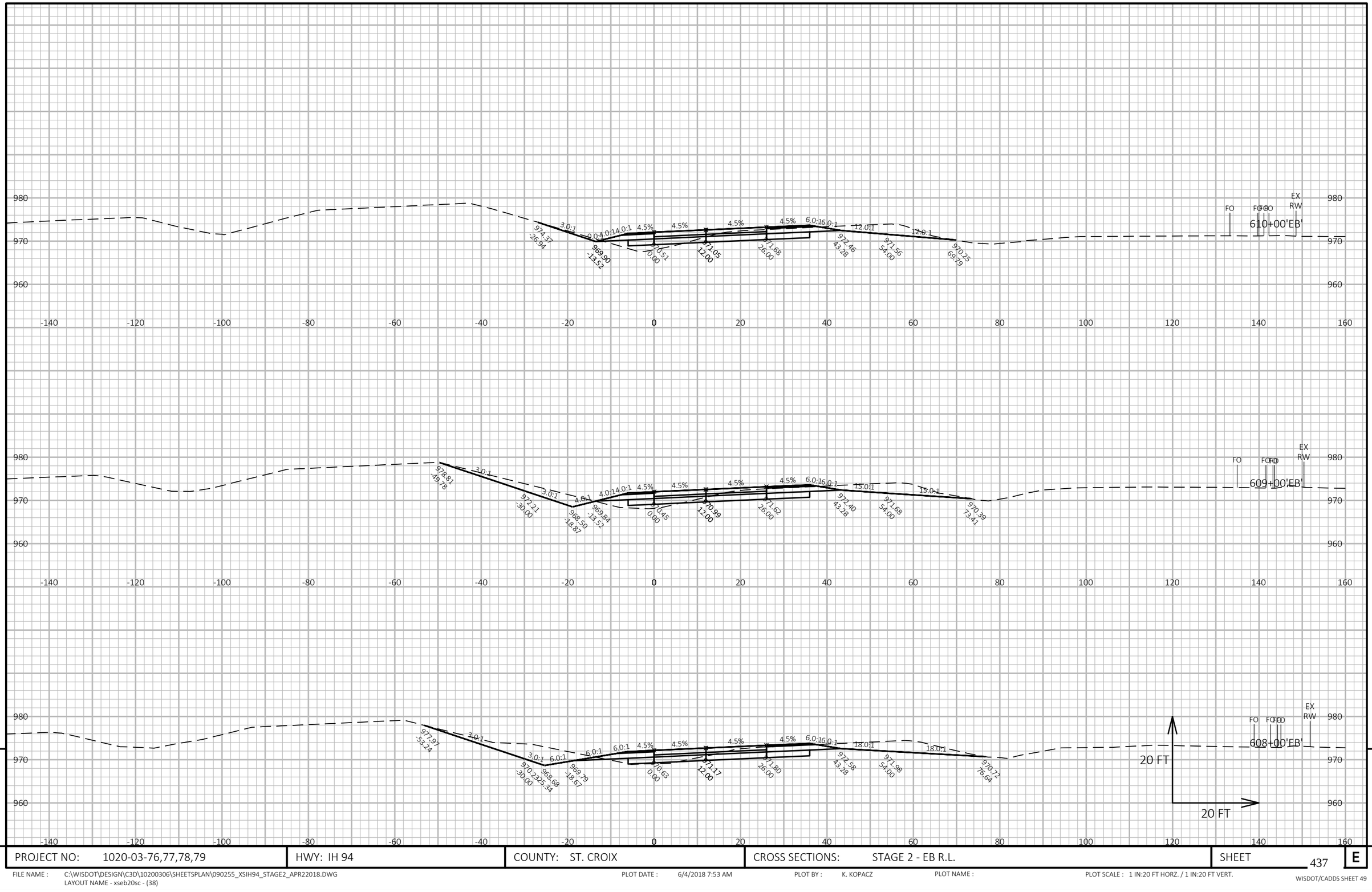


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 436 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (37)

PLOT DATE : 6/4/2018 7:53 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



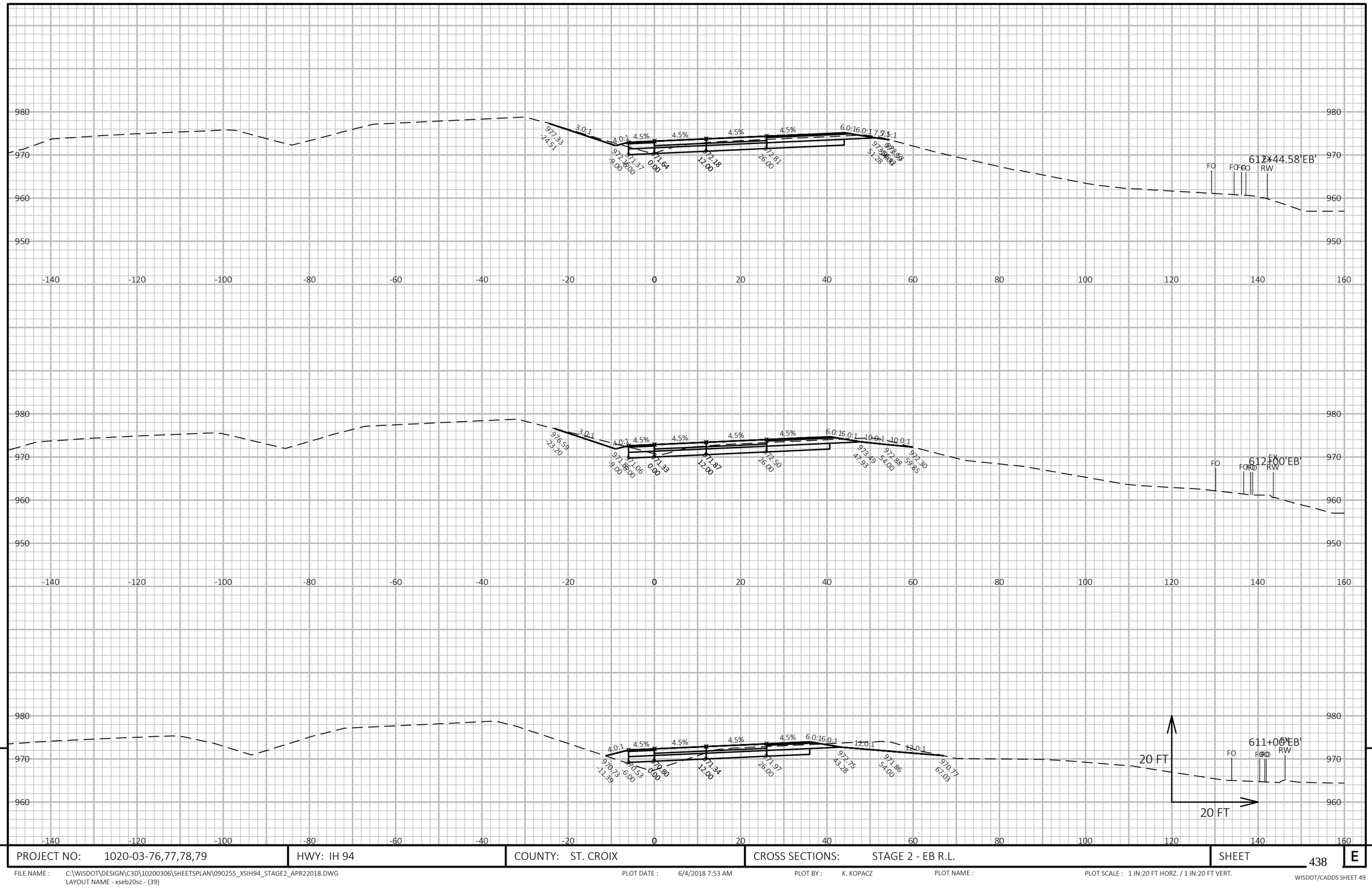
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 437	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (38)

PLOT DATE : 6/4/2018 7:53 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

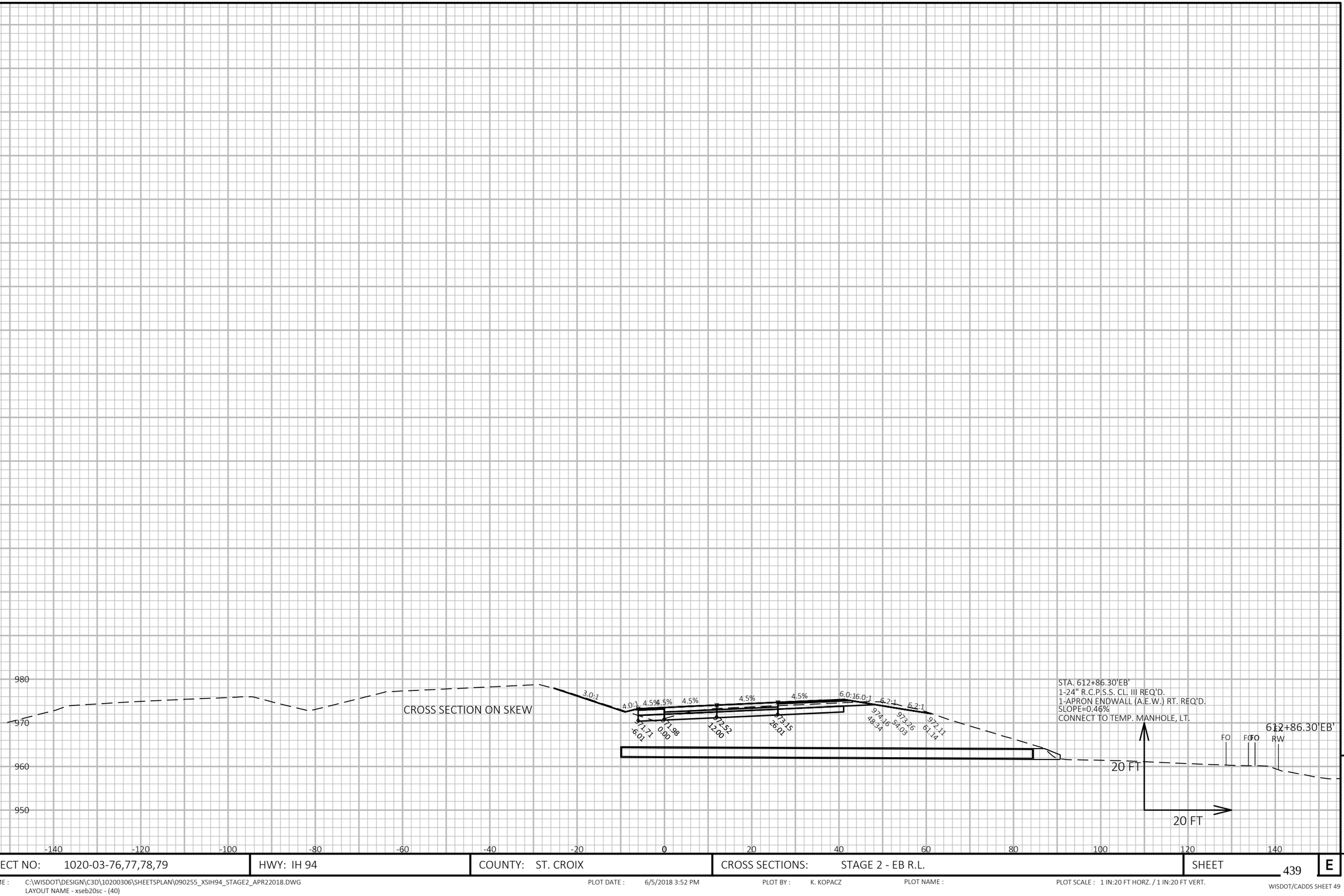


9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 438 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (39)

PLOT DATE : 6/4/2018 7:53 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

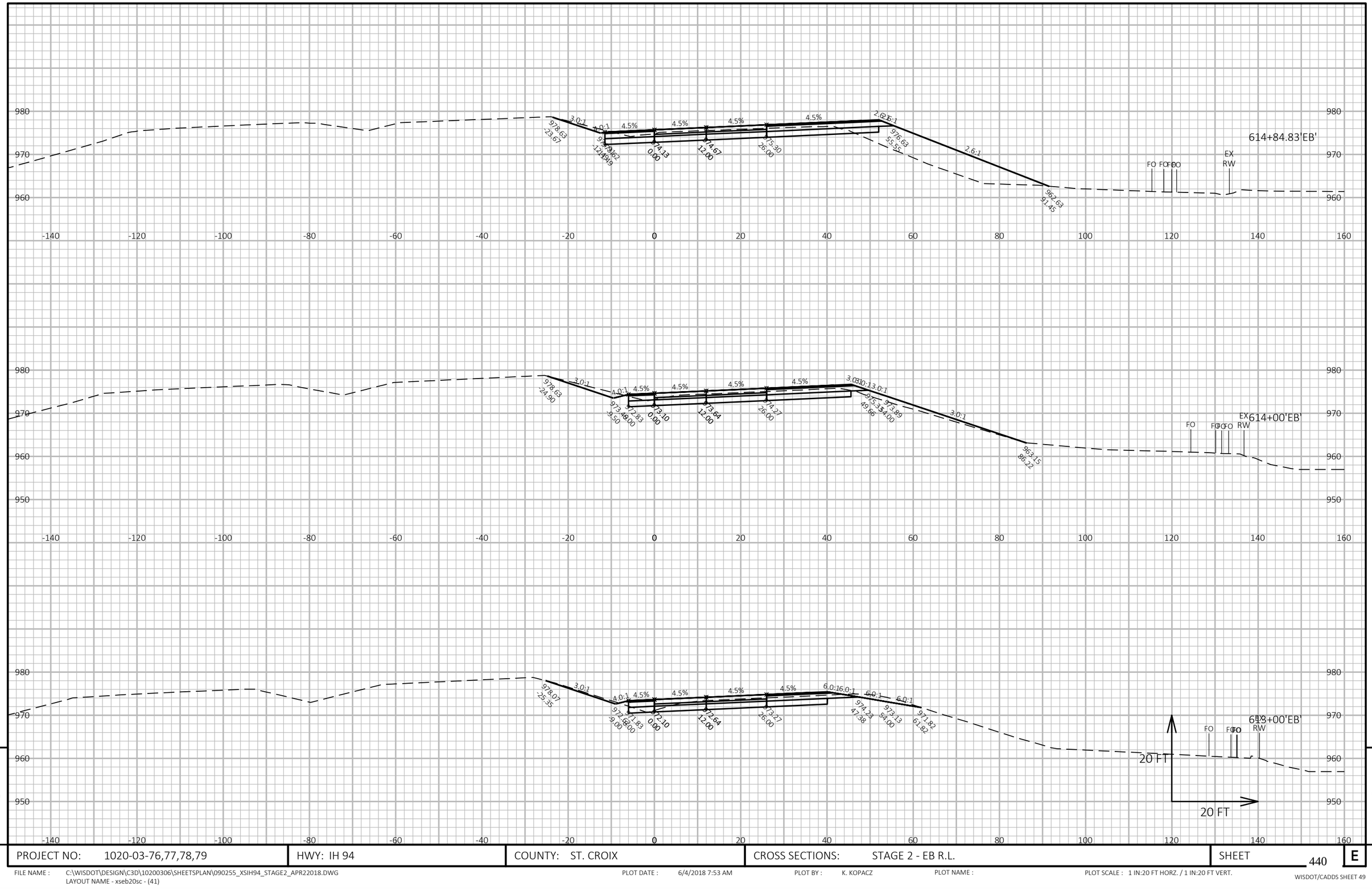


9 9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 439	E

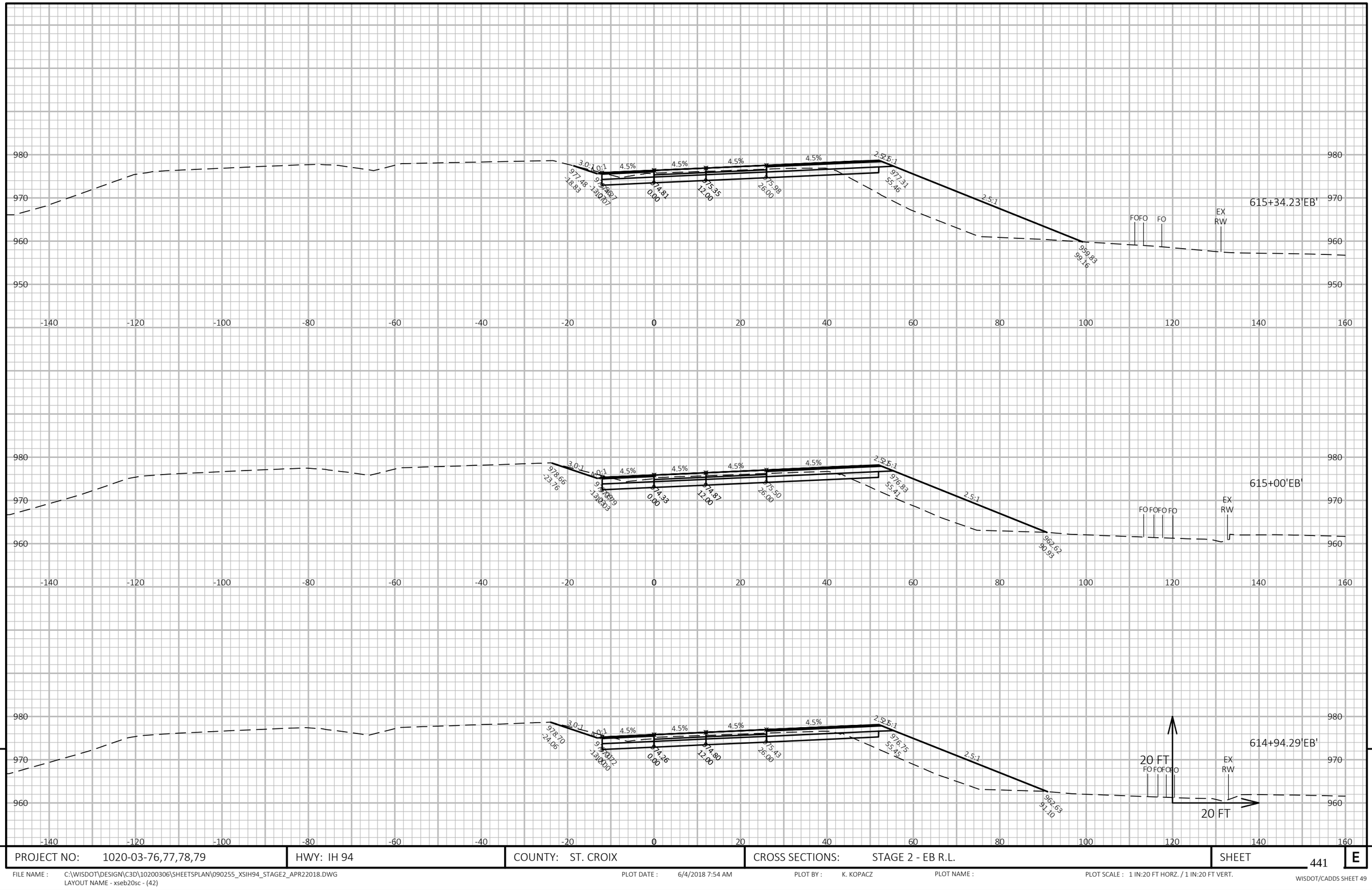
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (40)

PLOT DATE : 6/5/2018 3:52 PM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9 9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 440	E



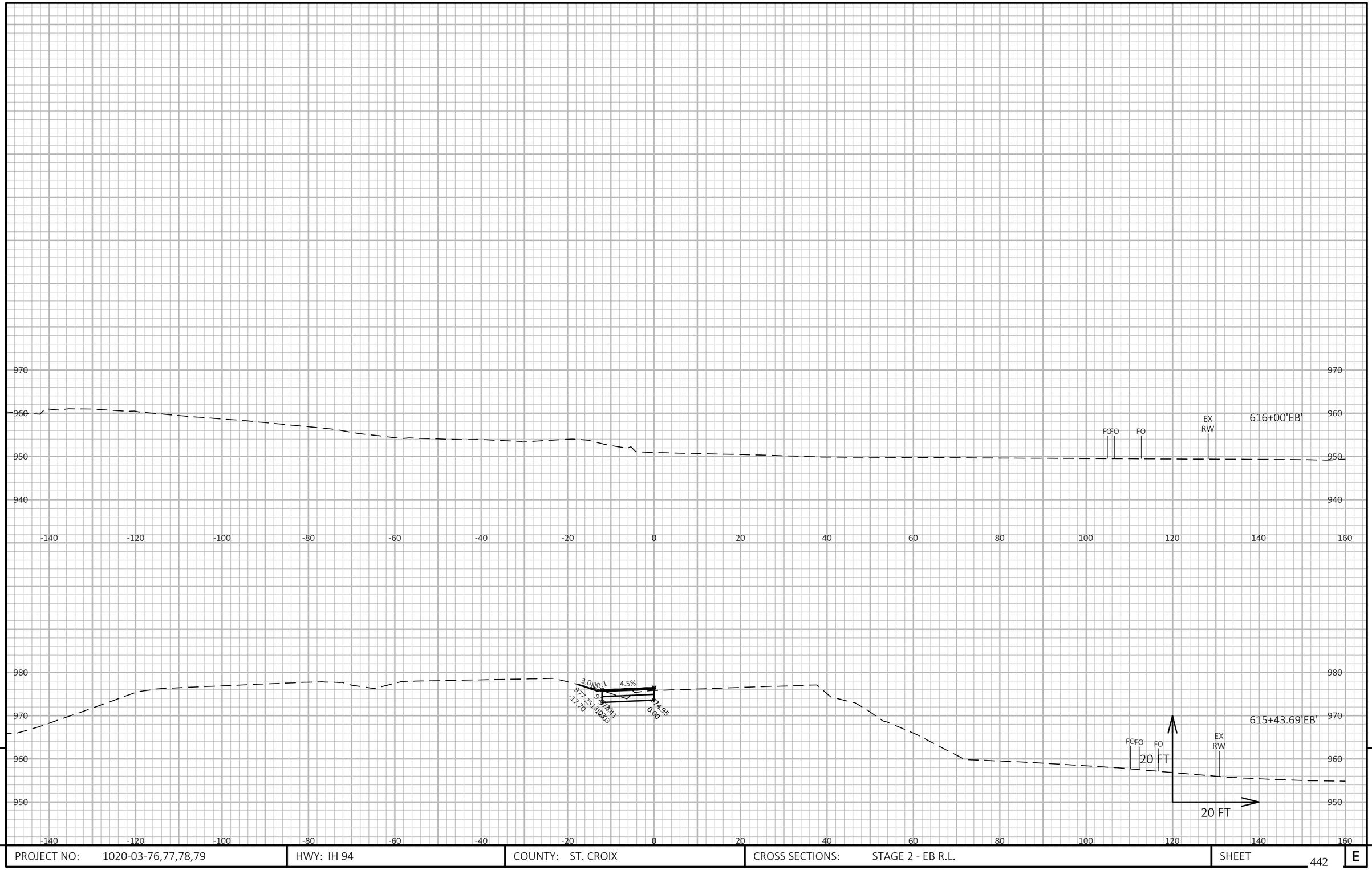
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 441	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (42)

PLOT DATE : 6/4/2018 7:54 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



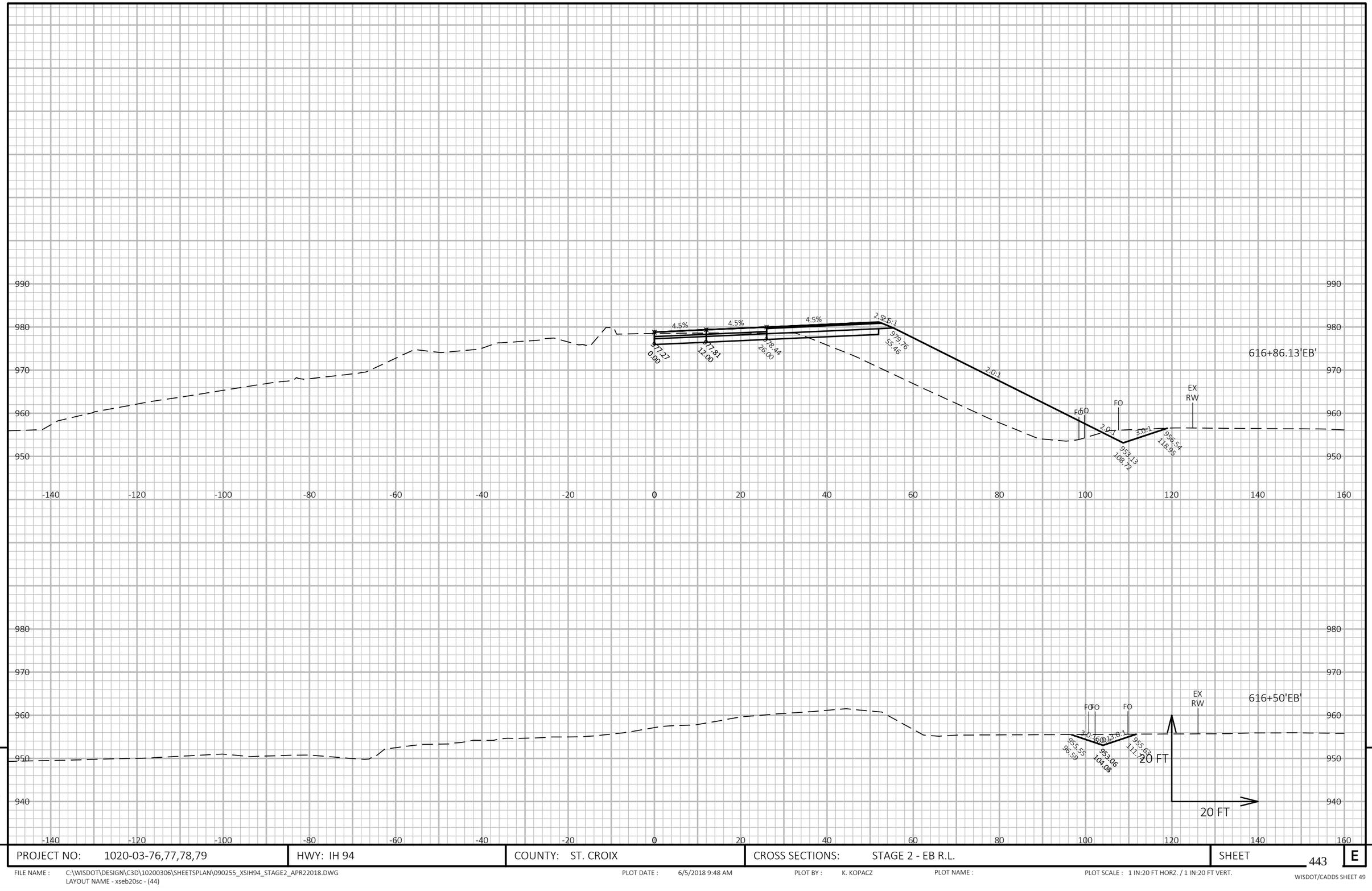
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 442	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (43)

PLOT DATE : 6/4/2018 7:54 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



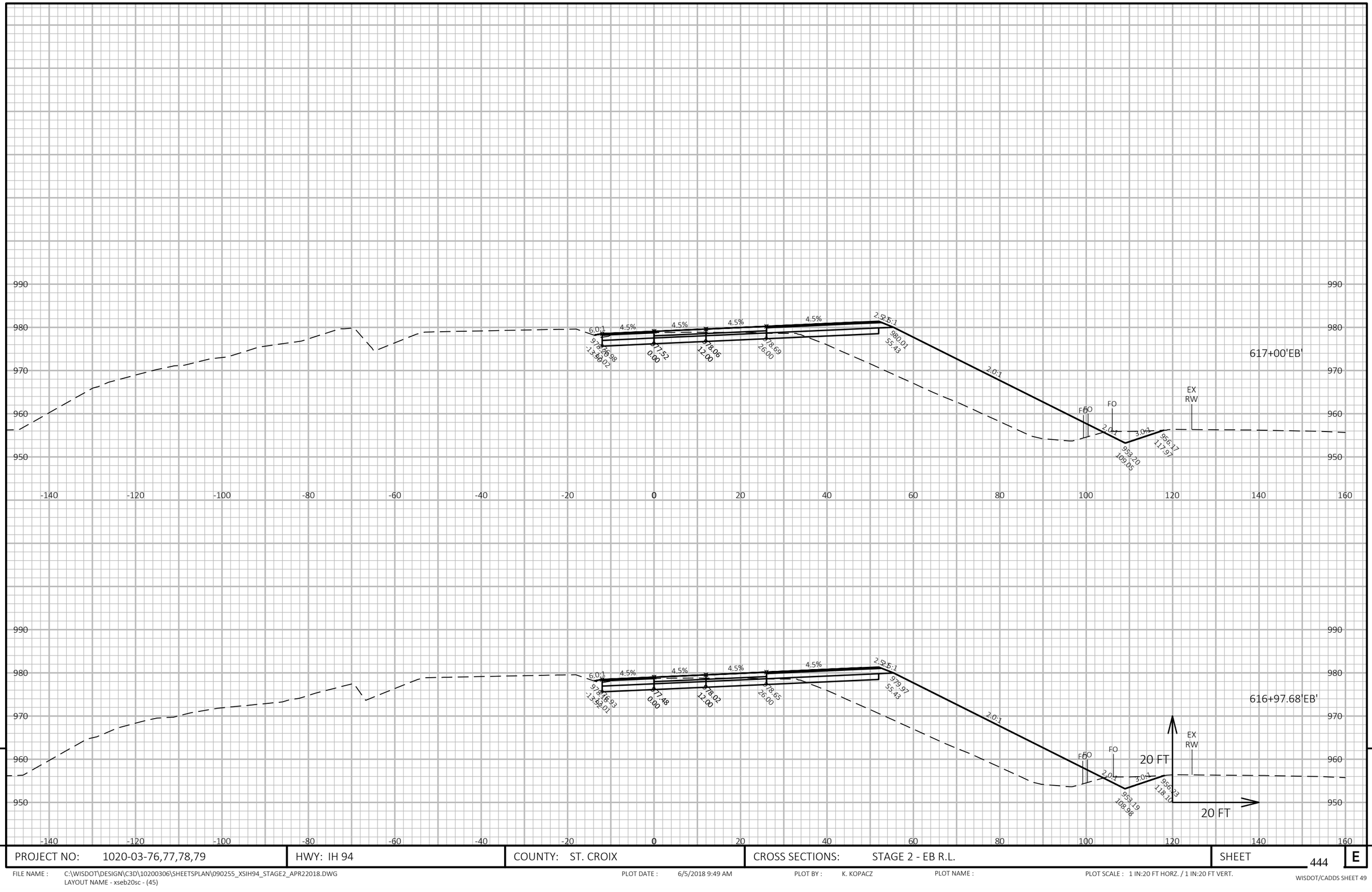
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 443	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (44)

PLOT DATE : 6/5/2018 9:48 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

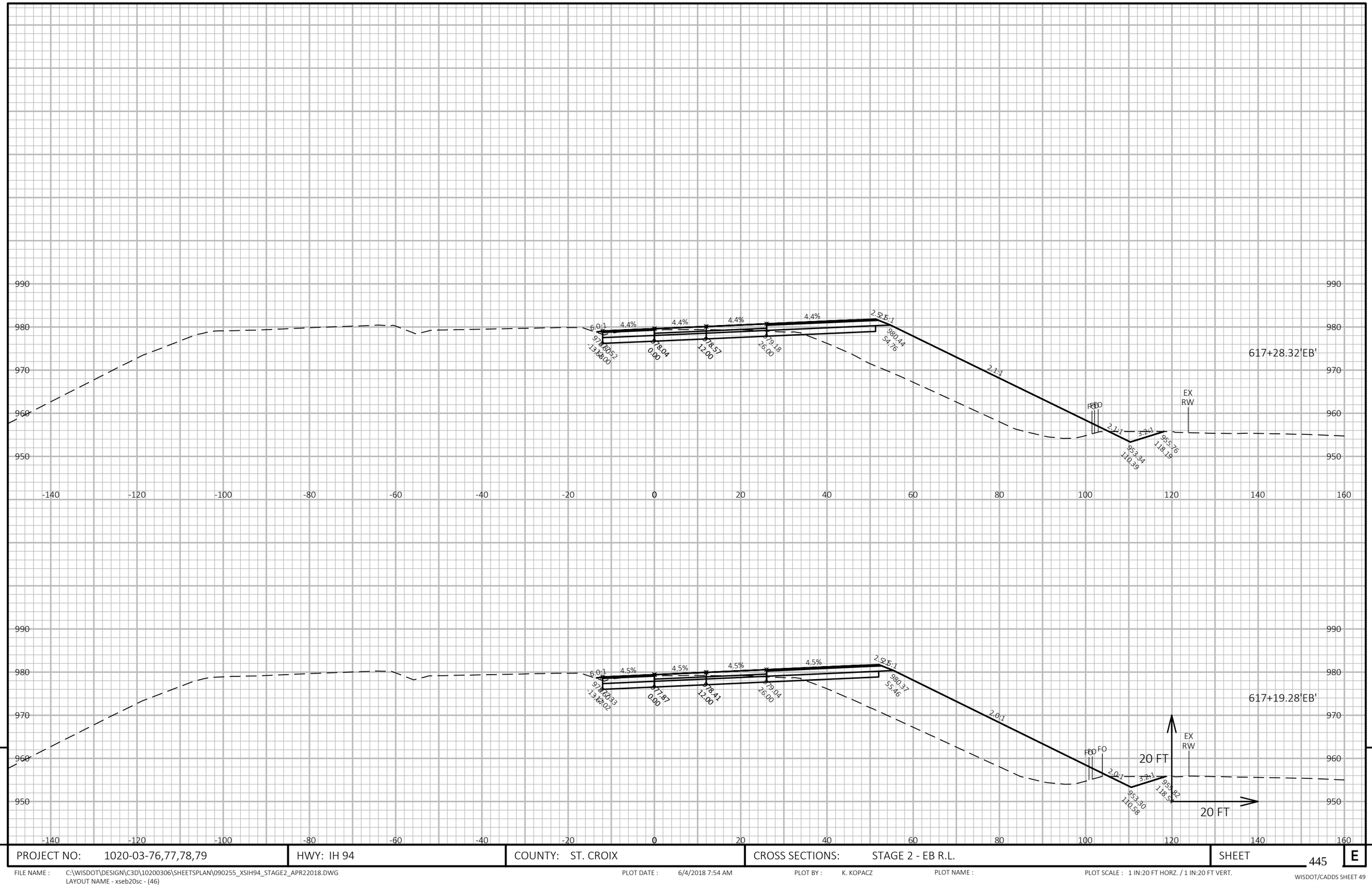


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 444	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (45)

PLOT DATE : 6/5/2018 9:49 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



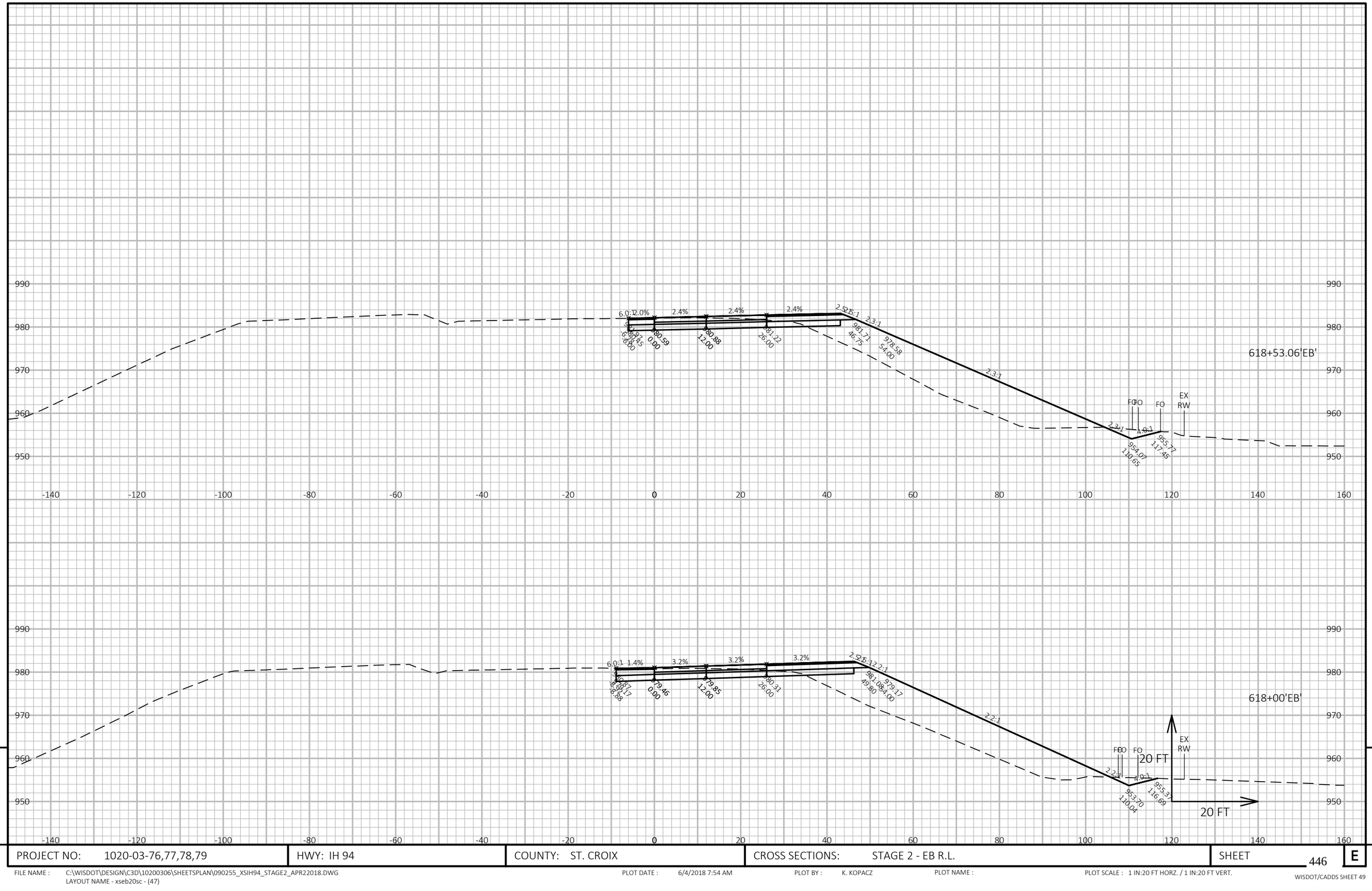
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 445	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (46)

PLOT DATE : 6/4/2018 7:54 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 446	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (47)

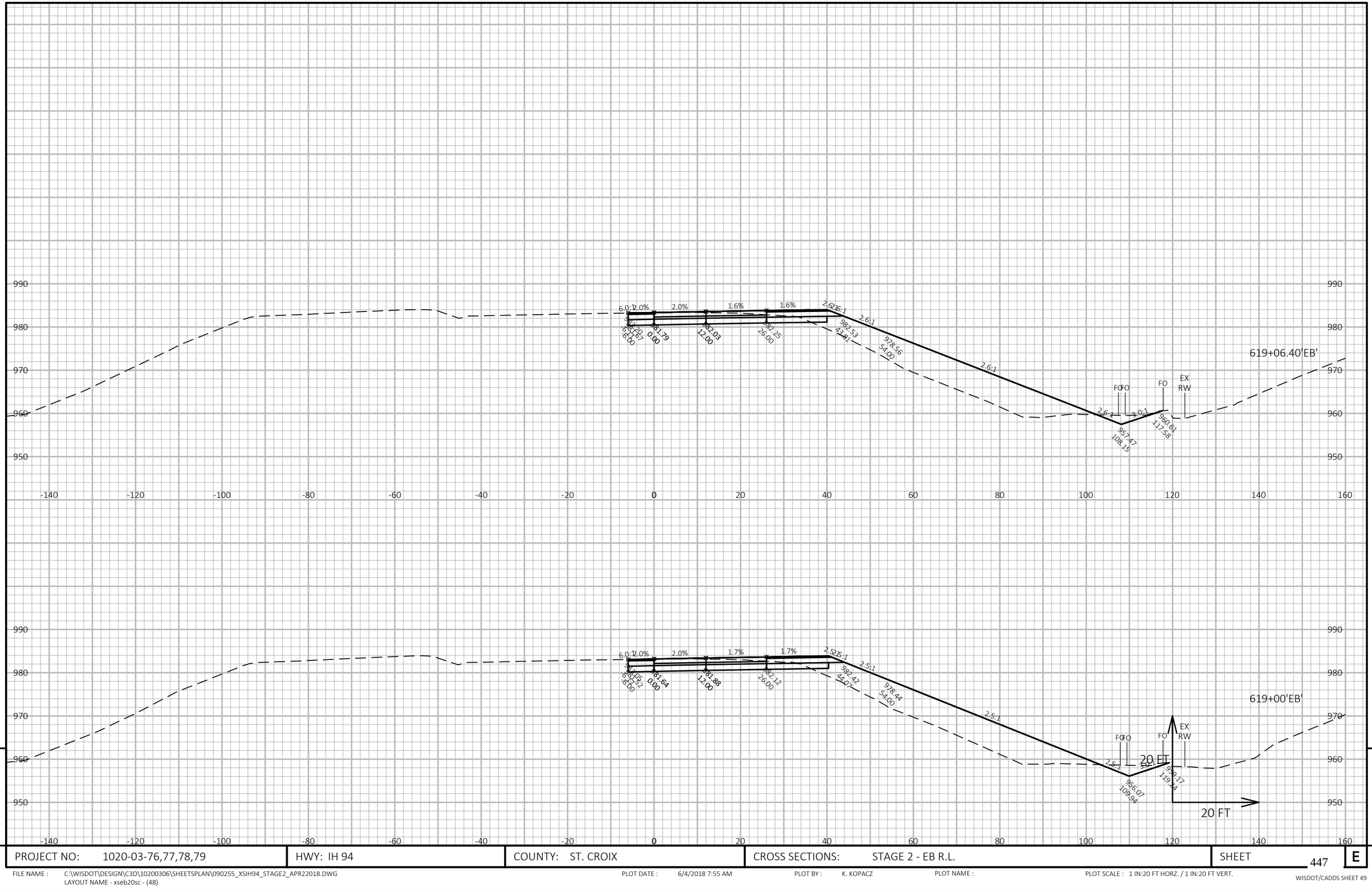
PLOT DATE : 6/4/2018 7:54 AM

PLOT BY : K. KOPACZ

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

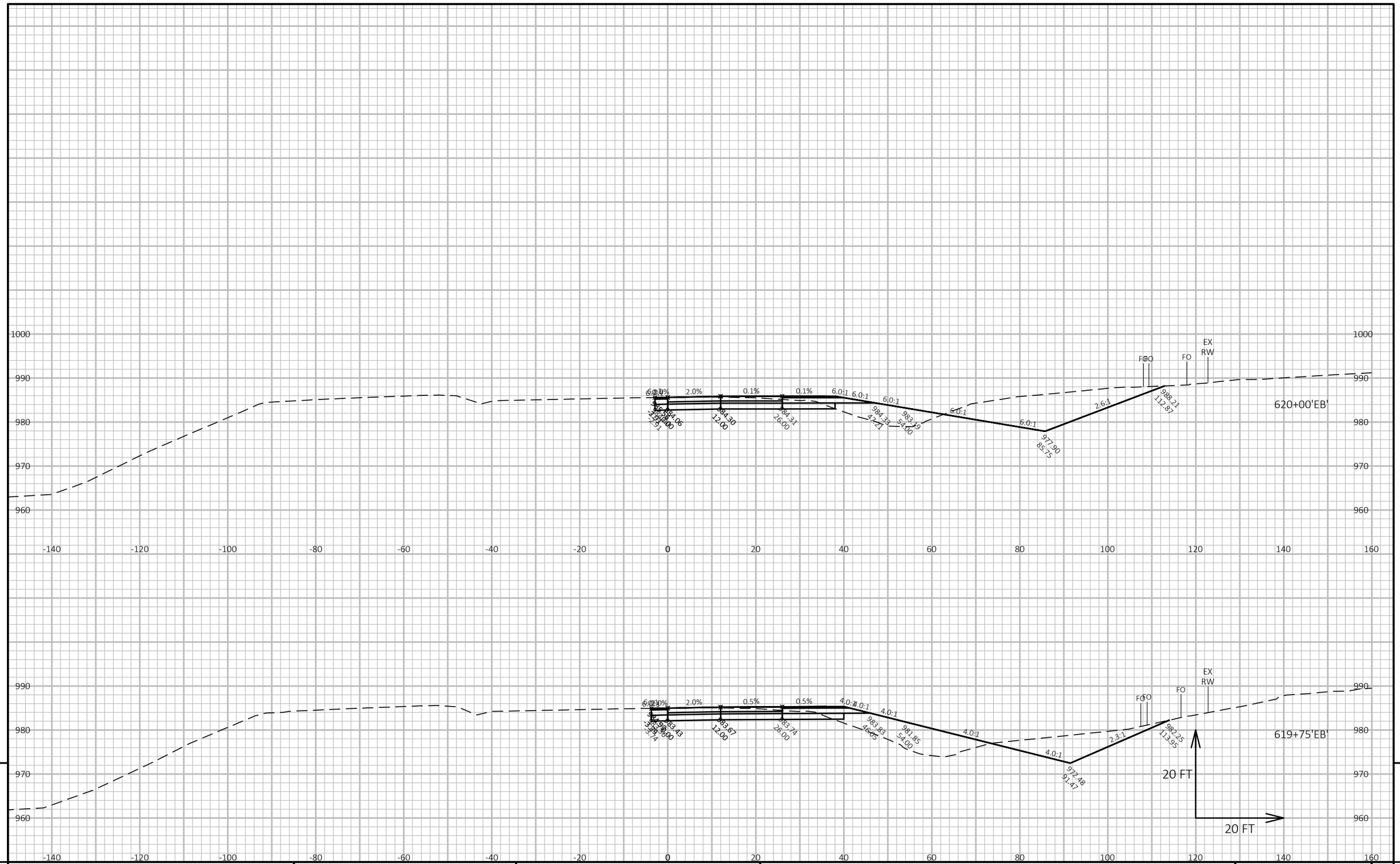
WISDOT/CADDS SHEET 49



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 447	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (48)

PLOT DATE : 6/4/2018 7:55 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



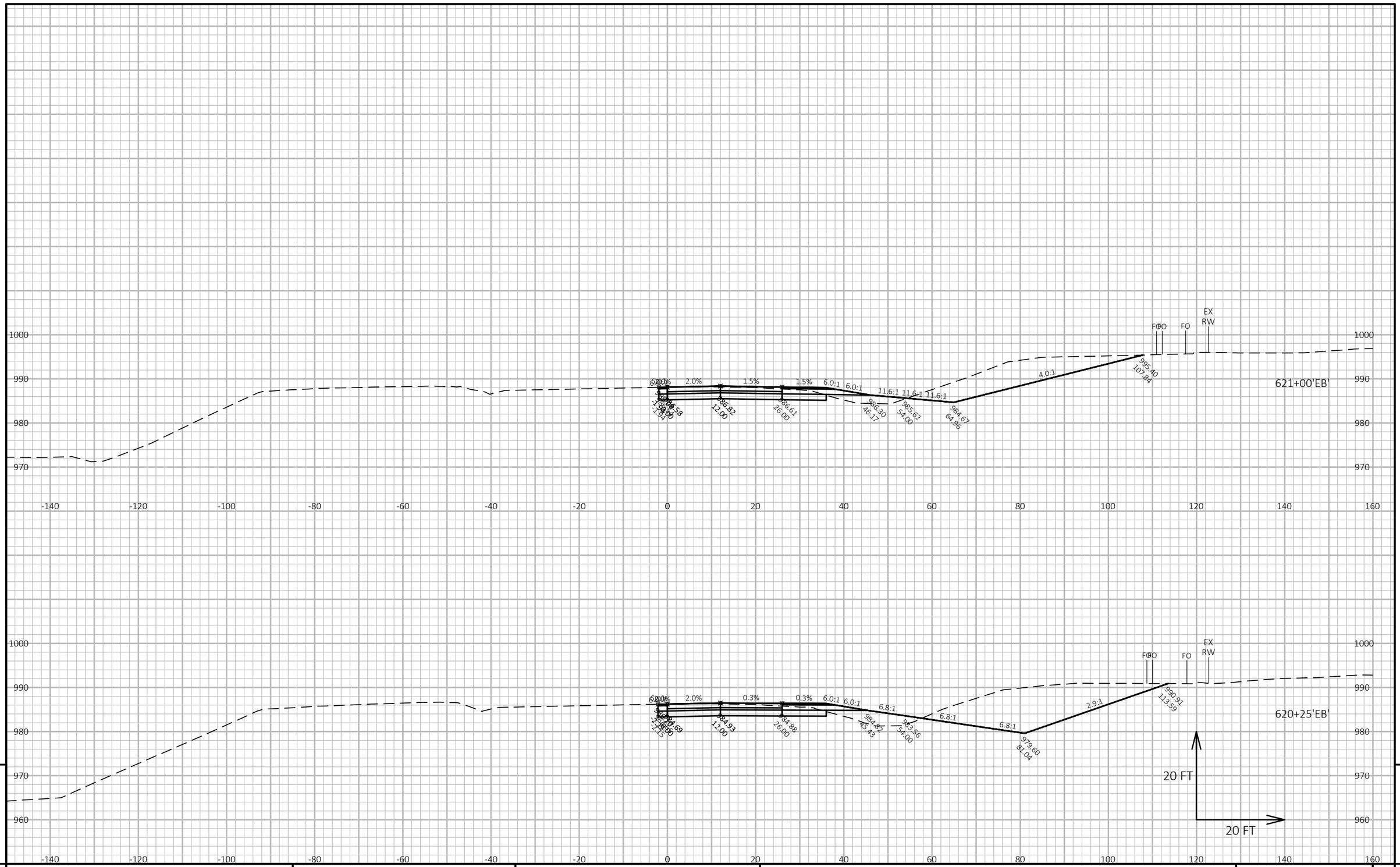
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 448 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (49)

PLOT DATE : 6/4/2018 7:55 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

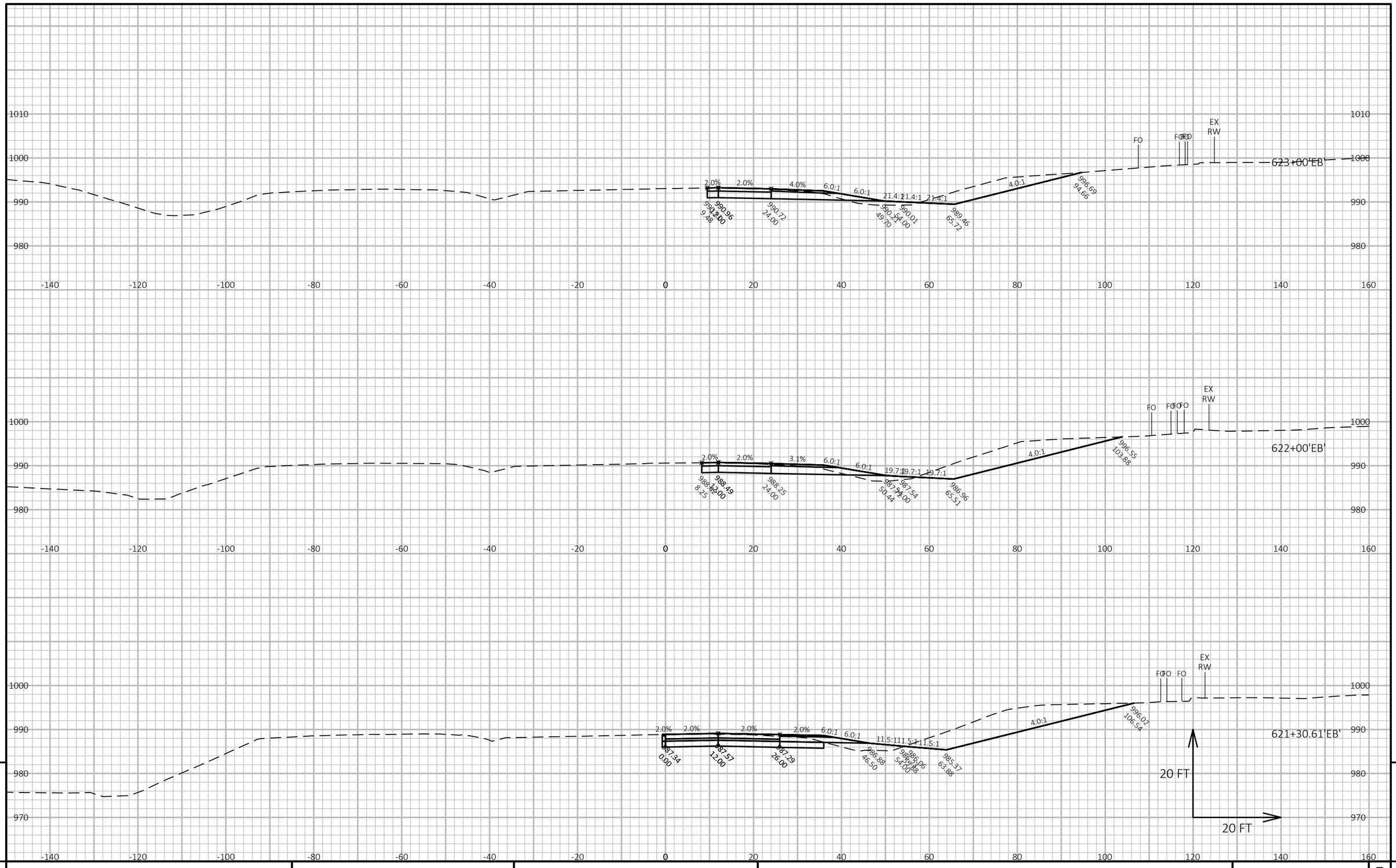


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 449	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (50)

PLOT DATE : 6/4/2018 7:55 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



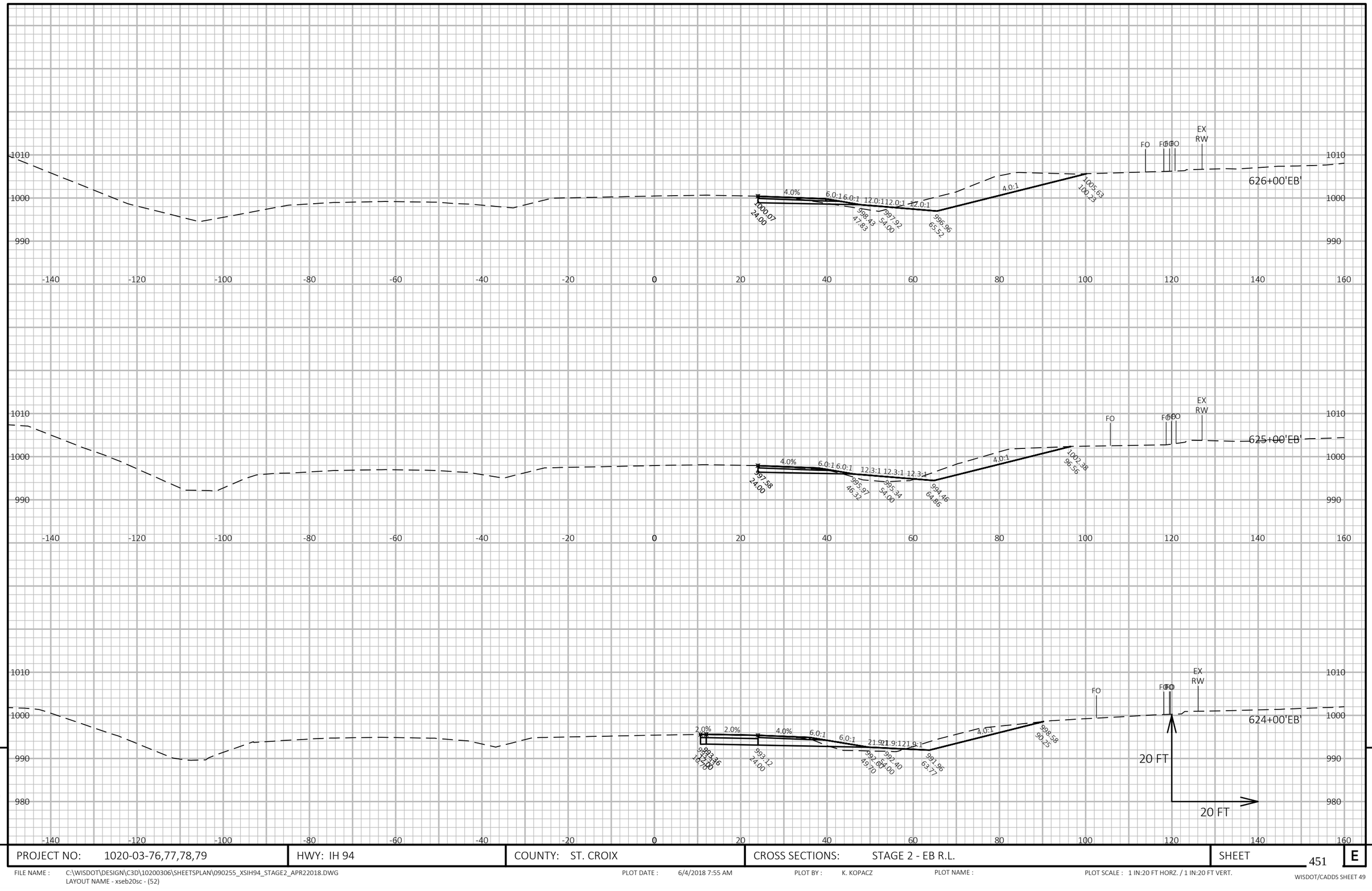
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 450	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (51)

PLOT DATE : 6/4/2018 7:55 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



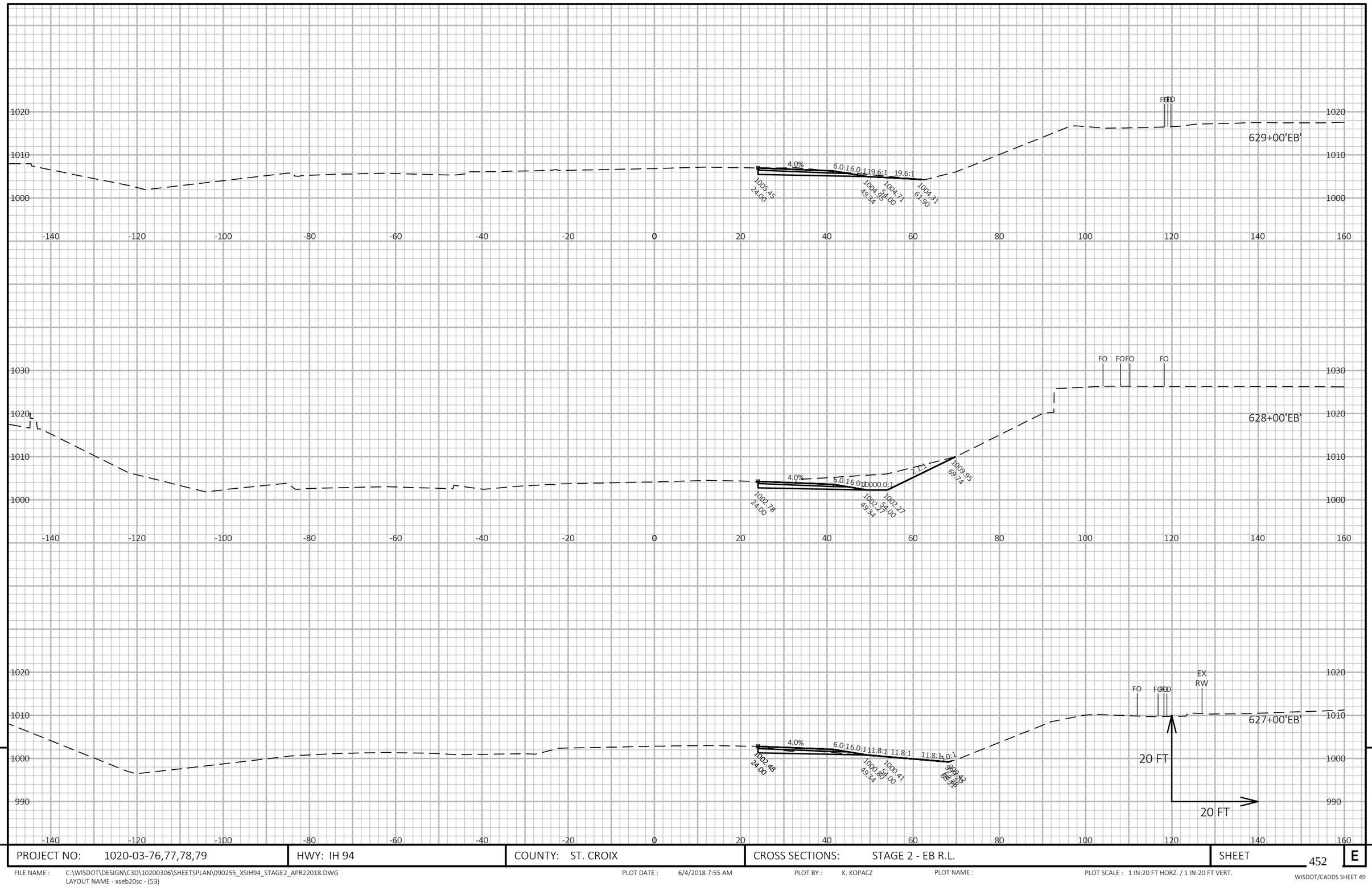
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 451	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (52)

PLOT DATE : 6/4/2018 7:55 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

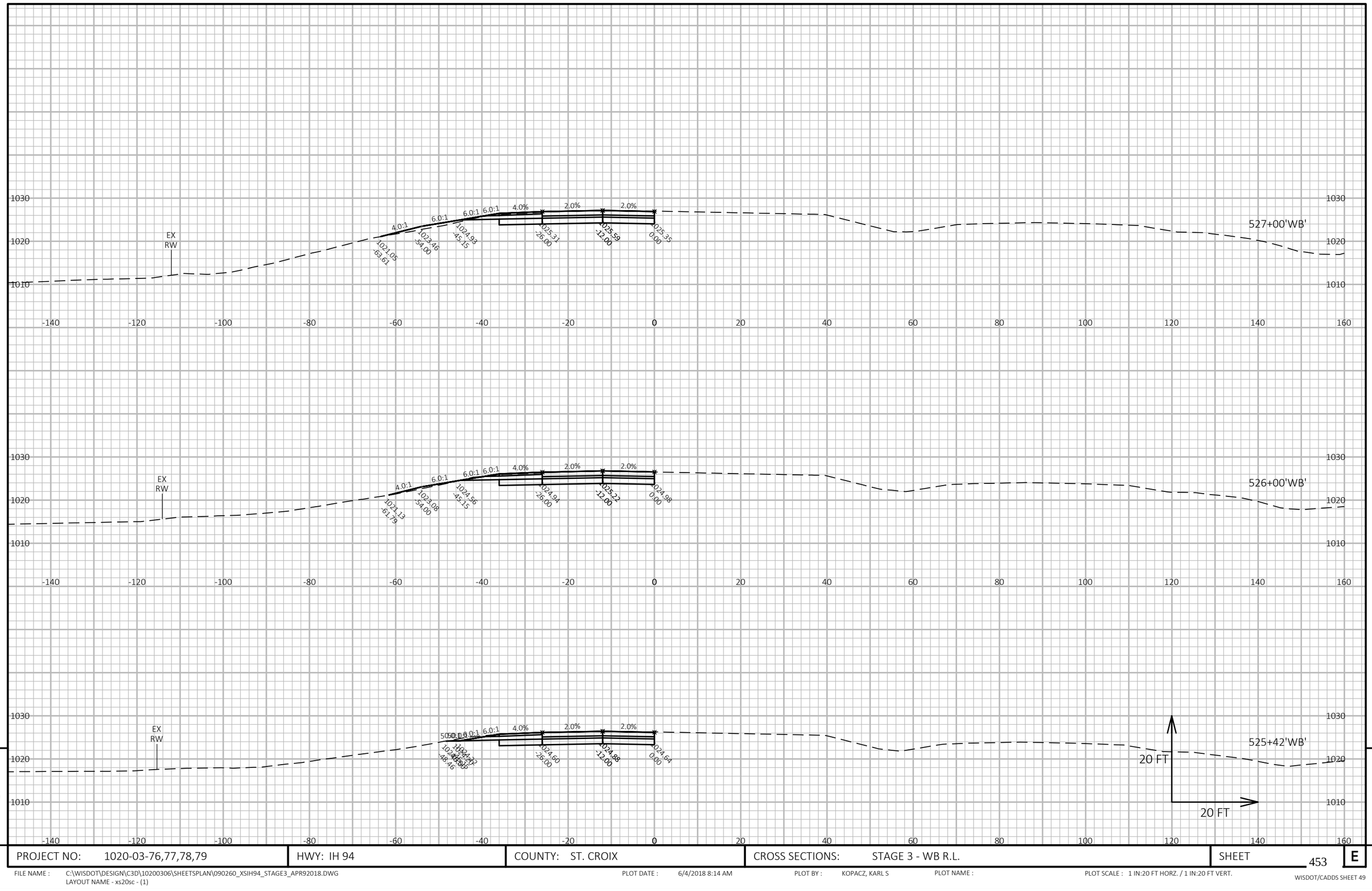


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 2 - EB R.L.	SHEET 452 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090255_XSIH94_STAGE2_APR22018.DWG
LAYOUT NAME - xseb20sc - (53)

PLOT DATE : 6/4/2018 7:55 AM PLOT BY : K. KOPACZ PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



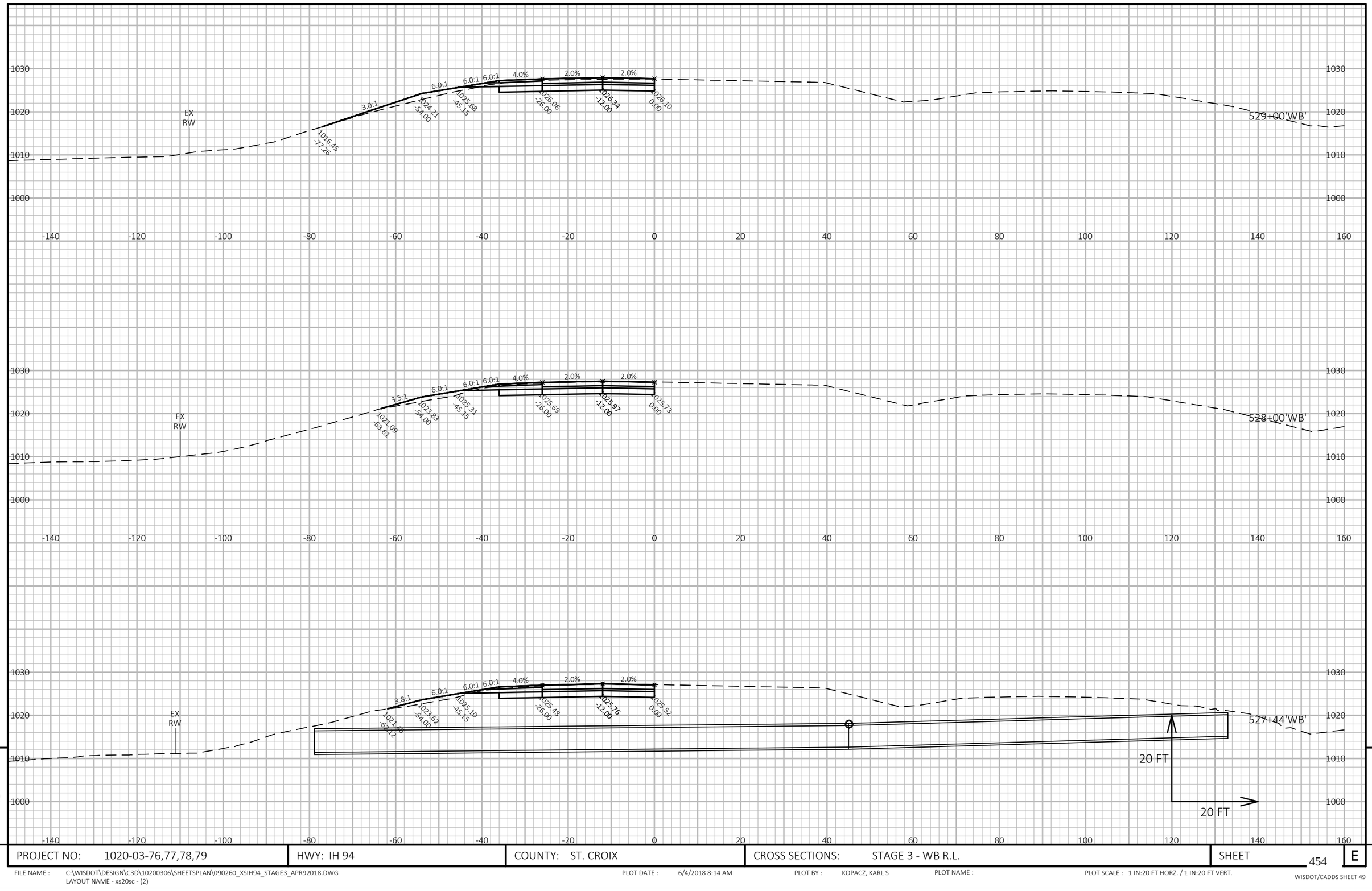
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 453	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (1)

PLOT DATE : 6/4/2018 8:14 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



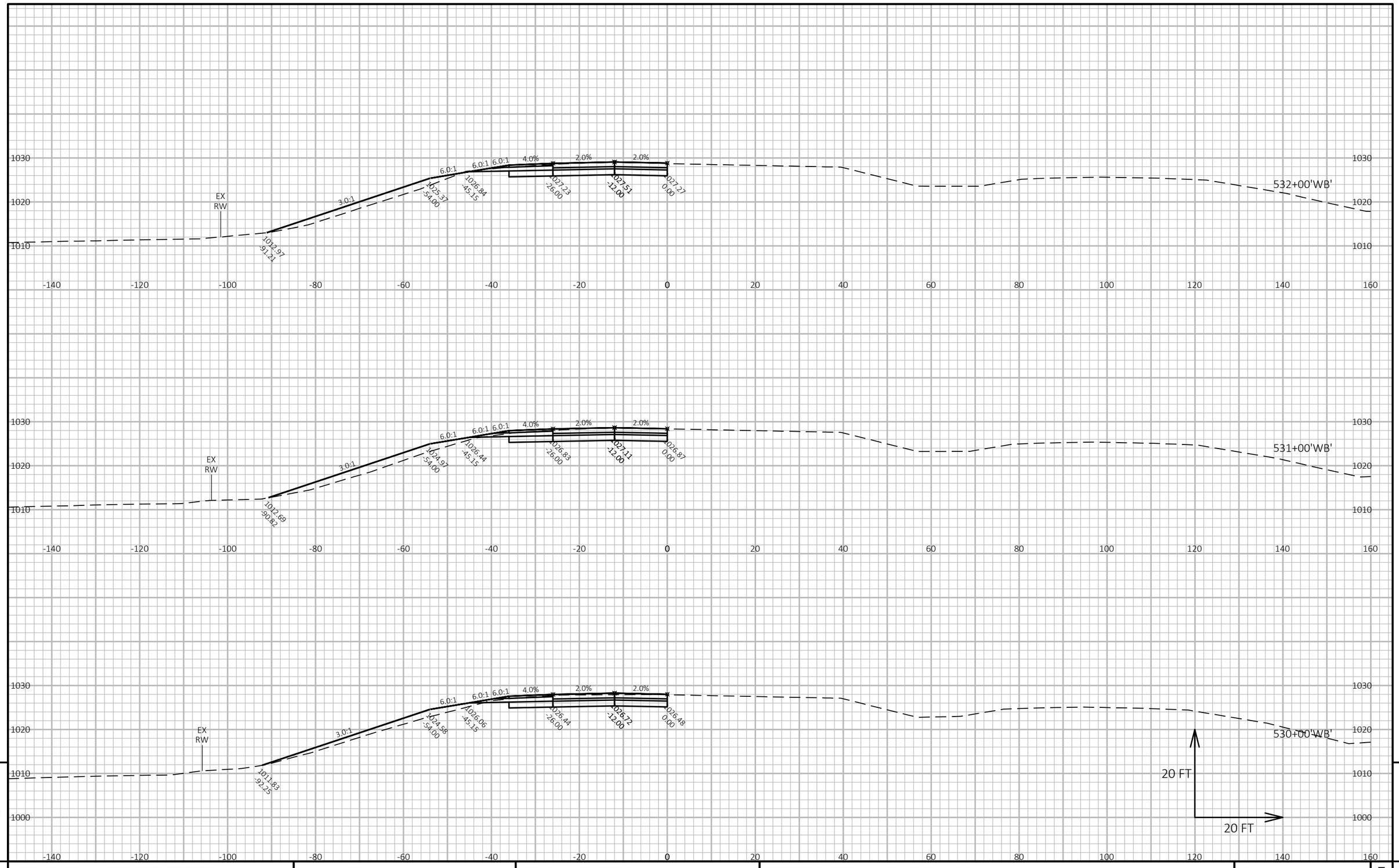
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 454	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (2)

PLOT DATE : 6/4/2018 8:14 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



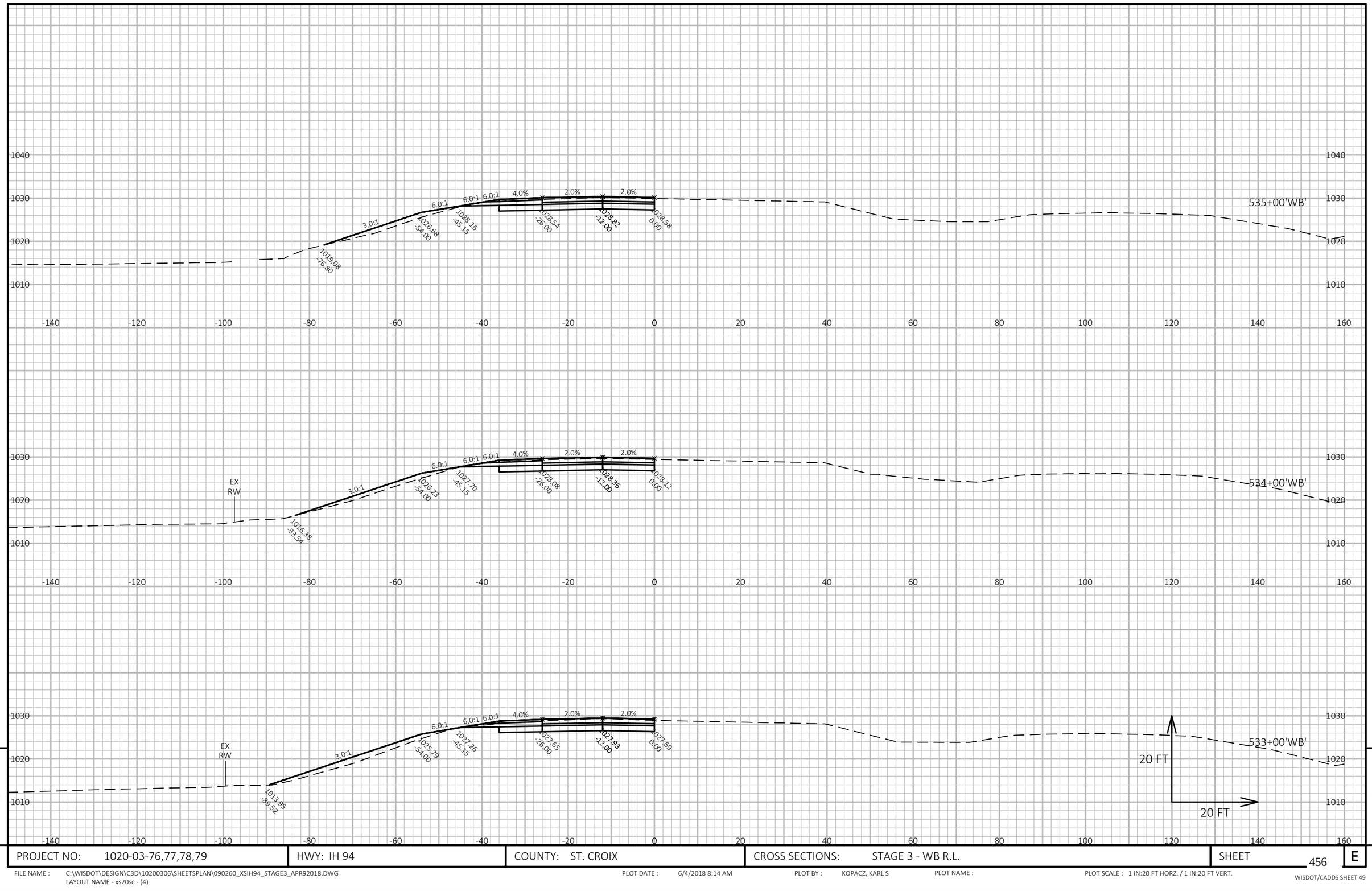
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 455	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (3)

PLOT DATE : 6/4/2018 8:14 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 456 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (4)

PLOT DATE : 6/4/2018 8:14 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 457	E

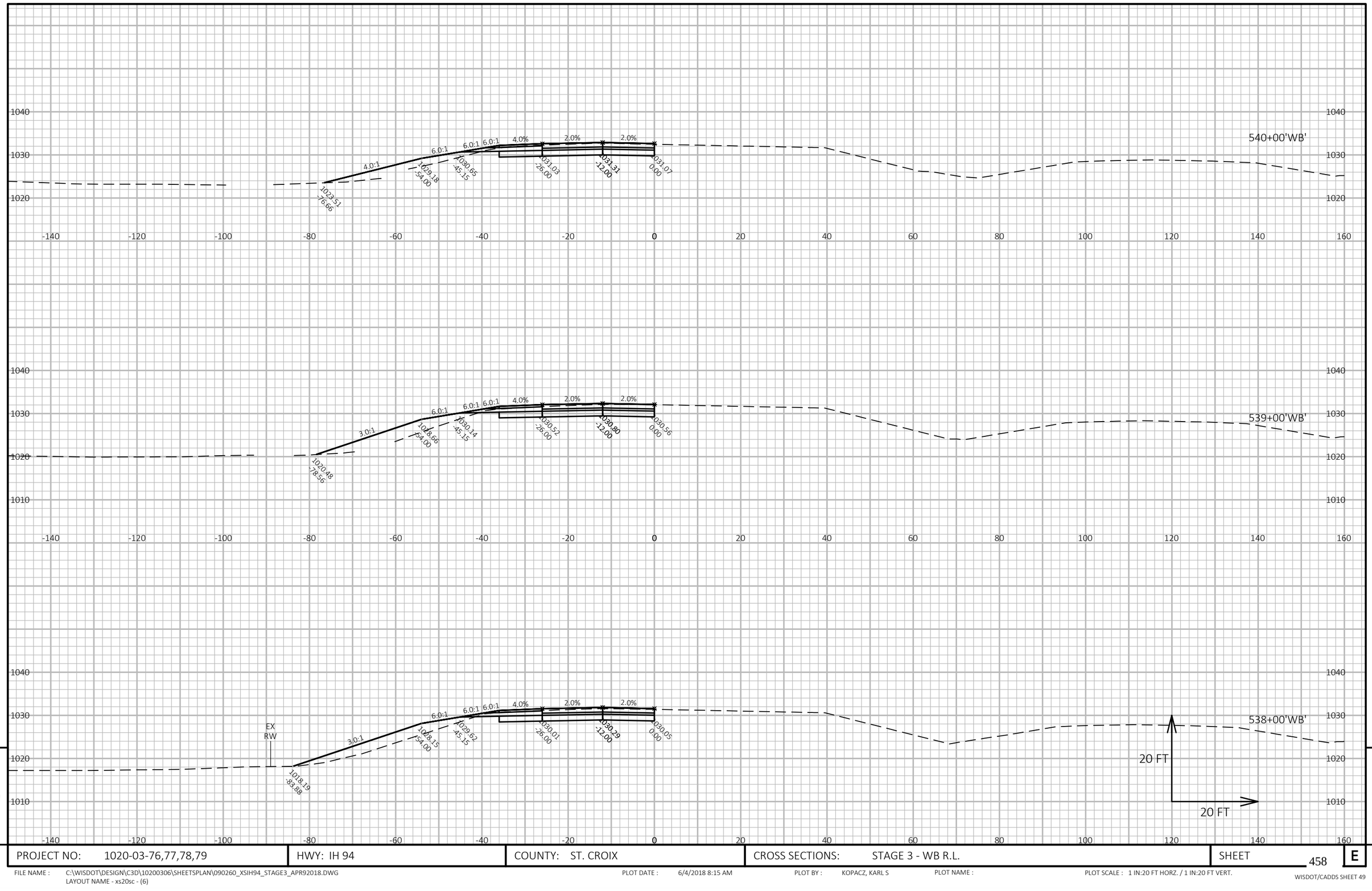
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (5)

PLOT DATE : 6/4/2018 8:14 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



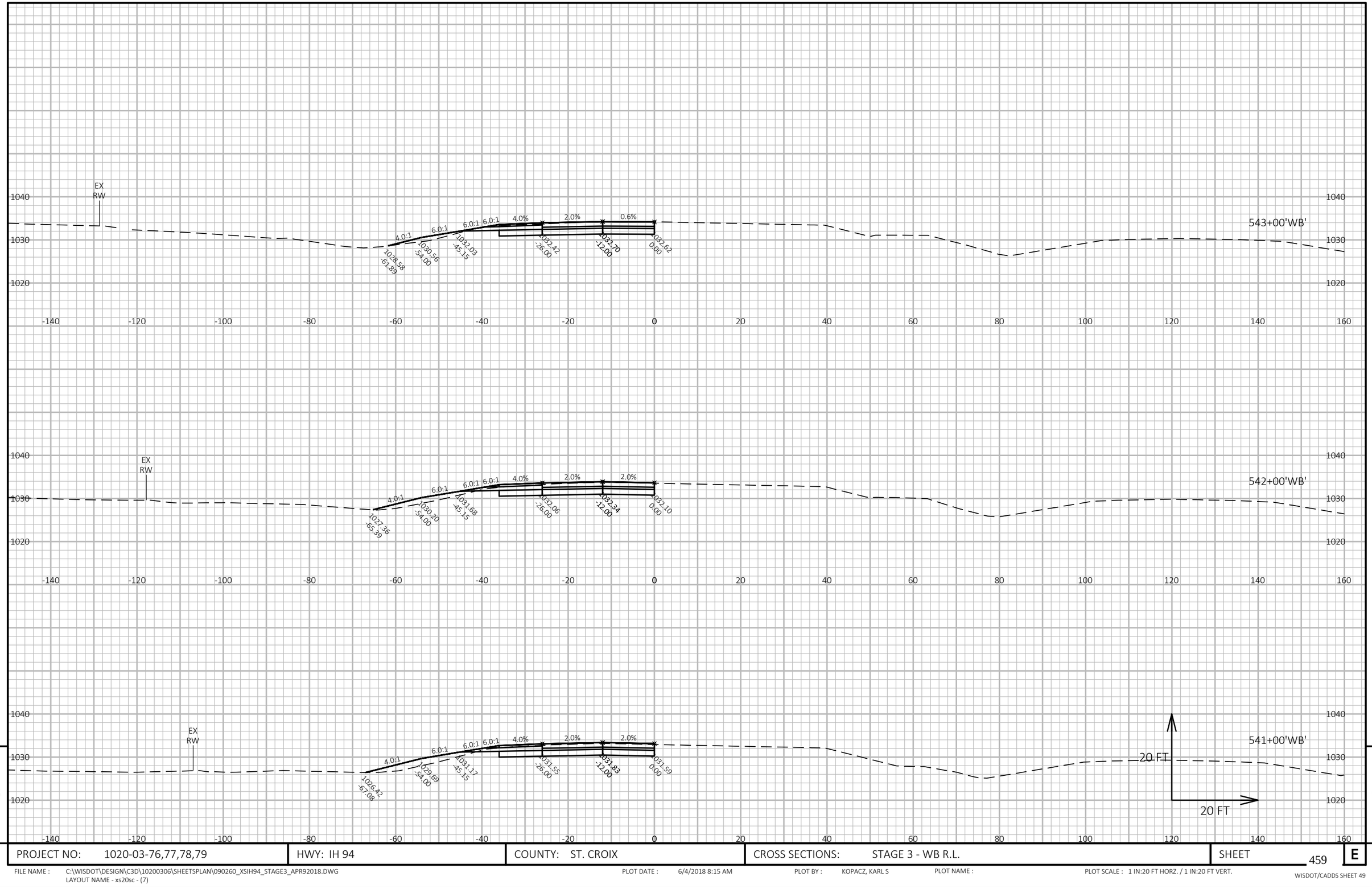
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 458	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (6)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



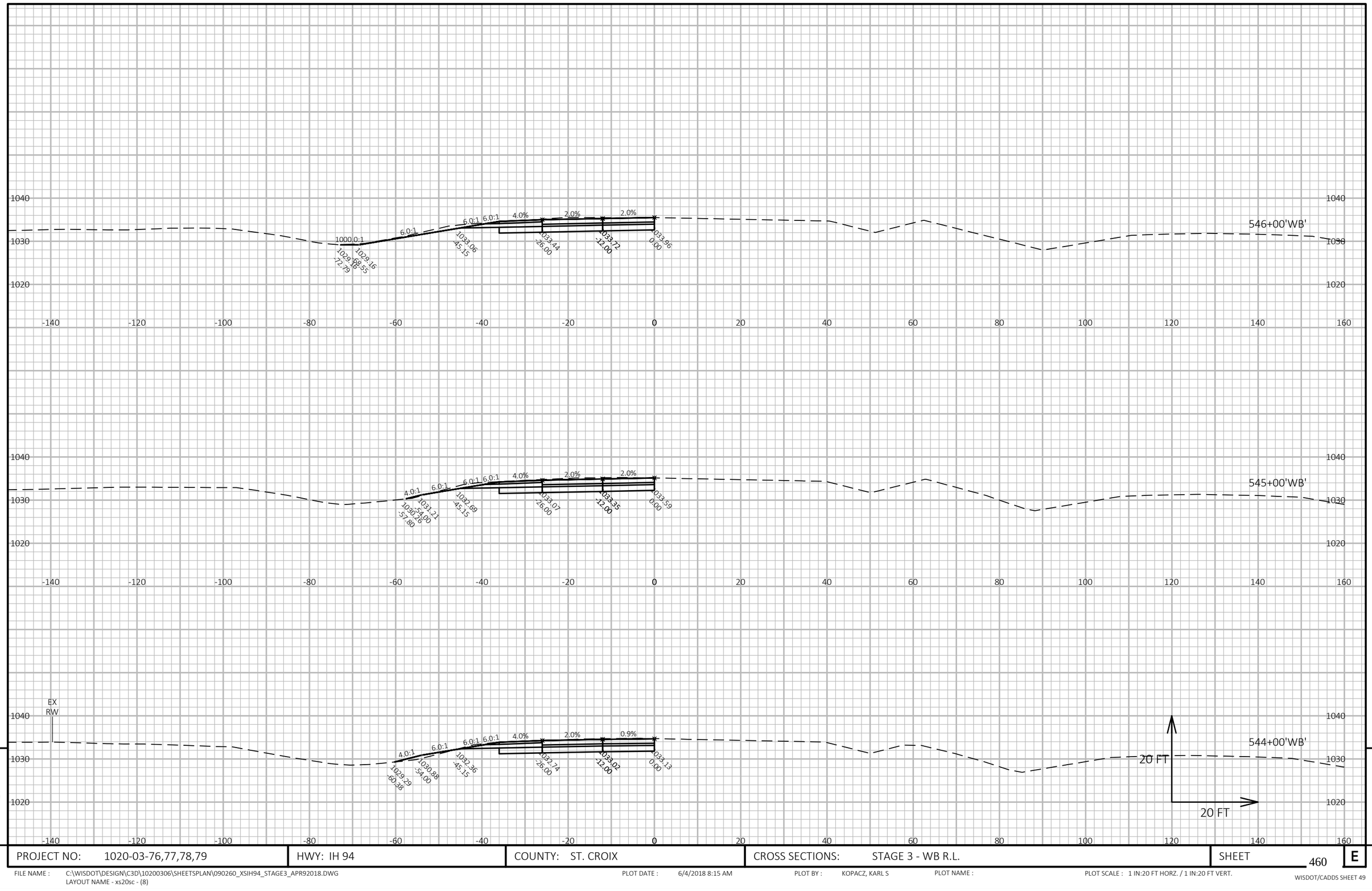
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 459	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (7)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



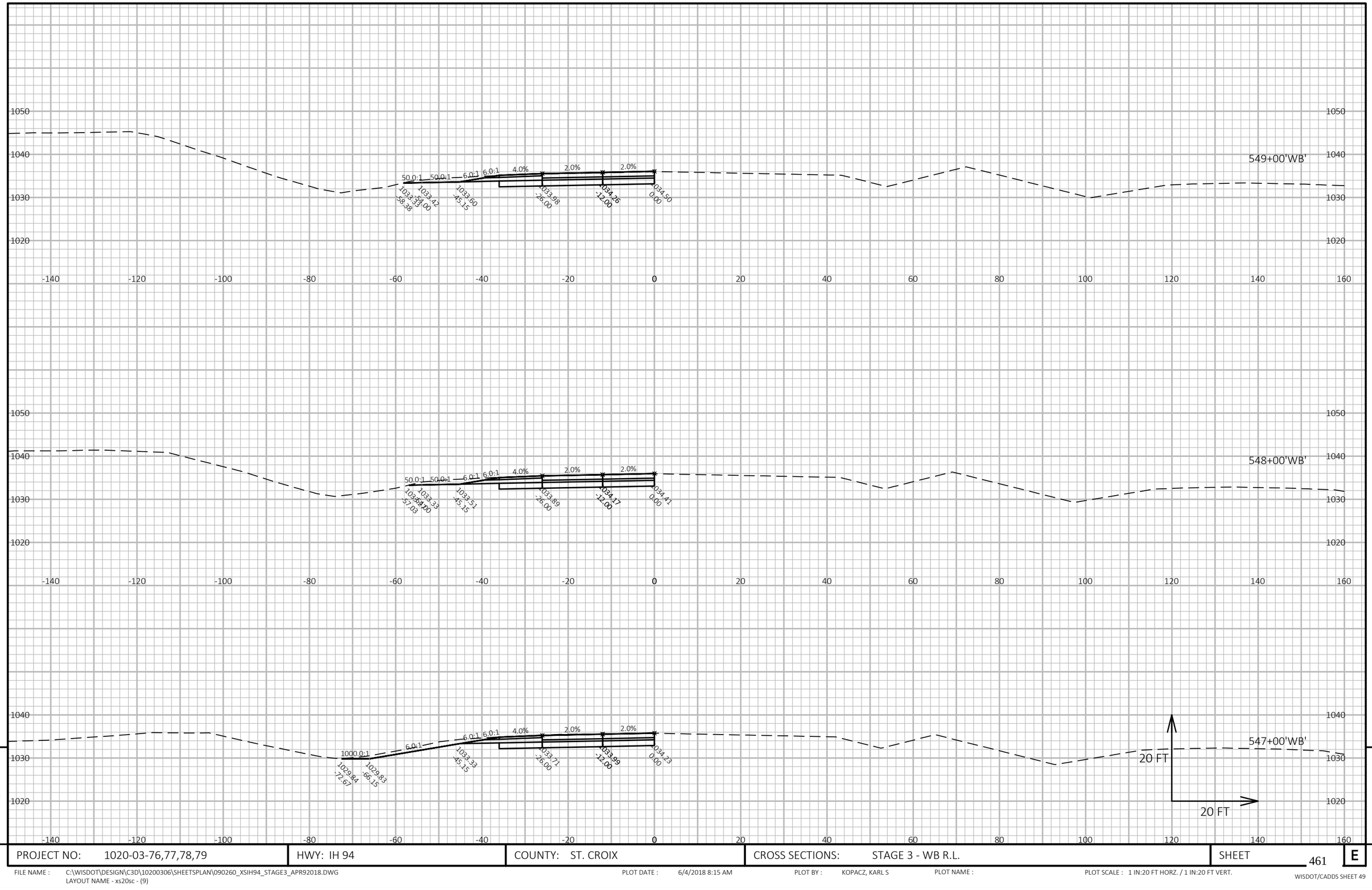
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 460	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (8)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

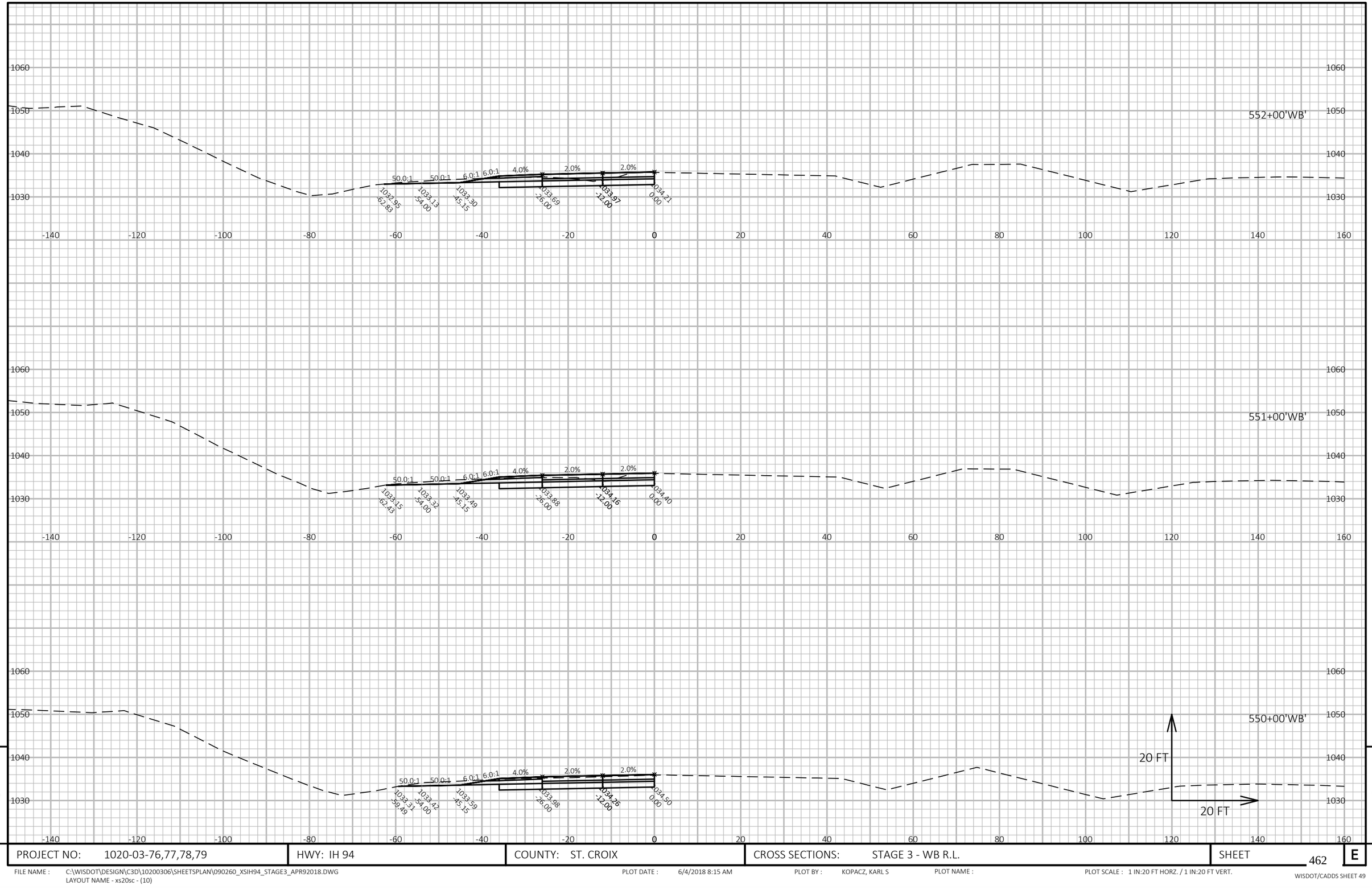


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 461	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (9)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

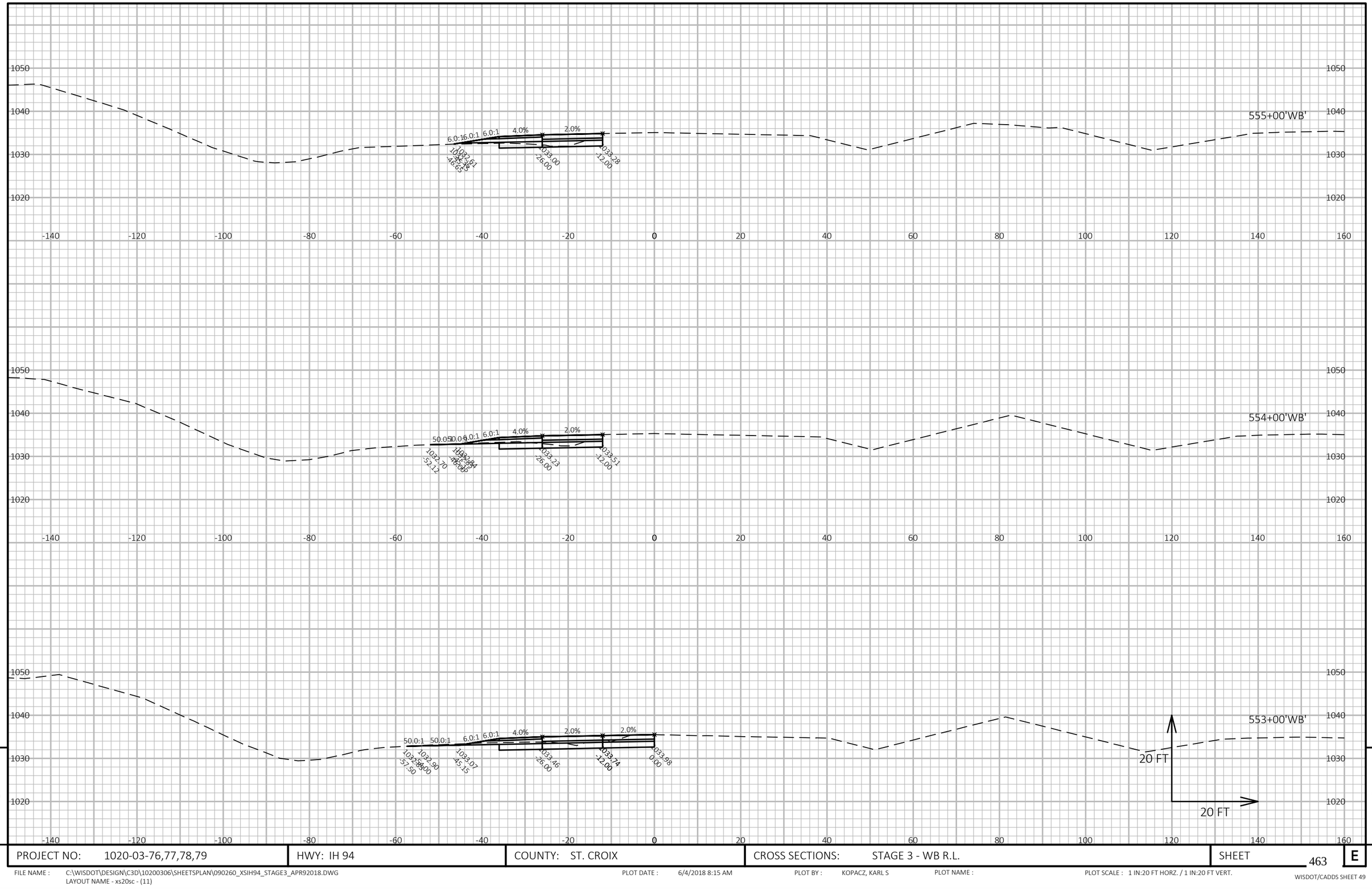


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 462 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (10)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

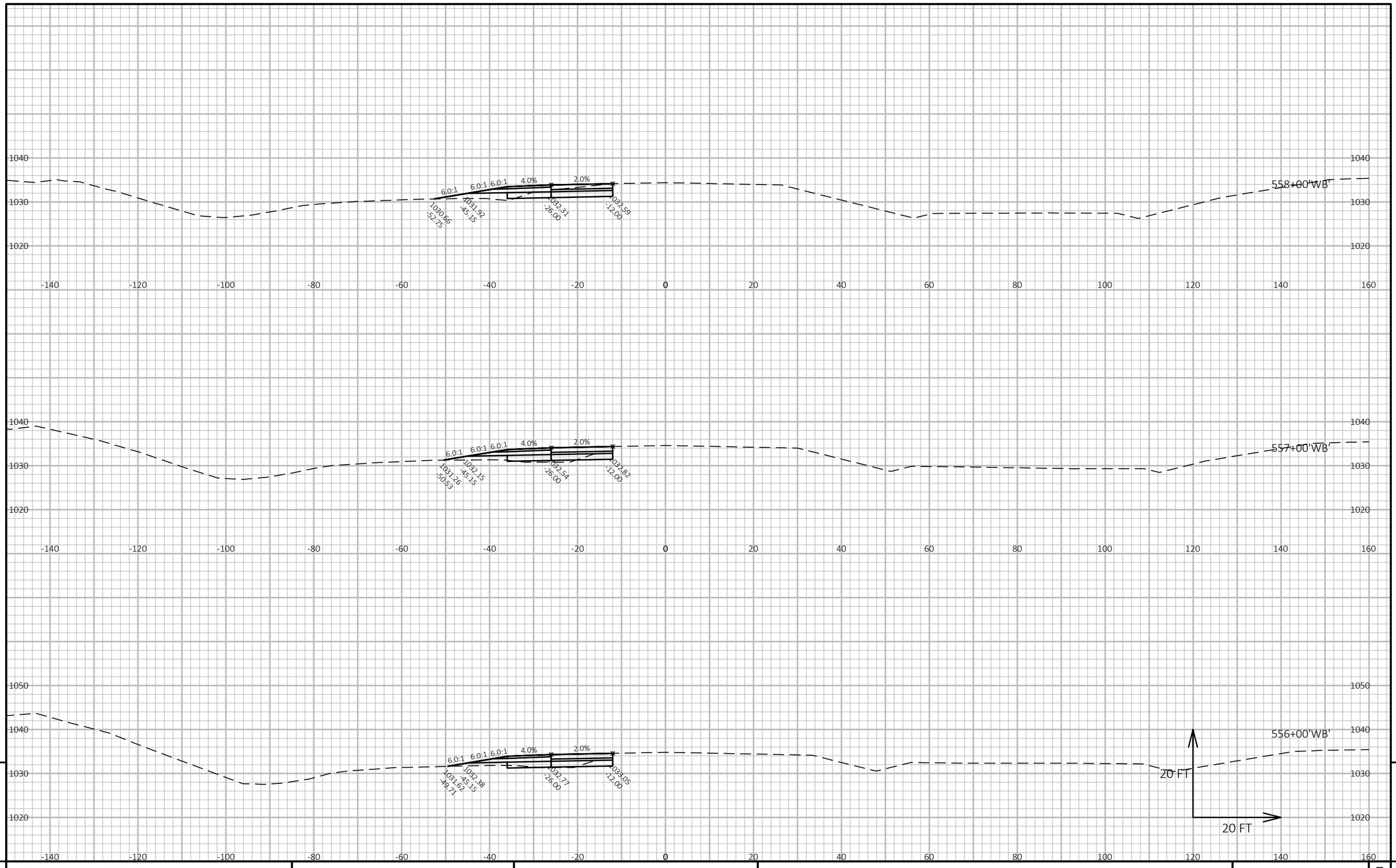
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 463	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (11)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



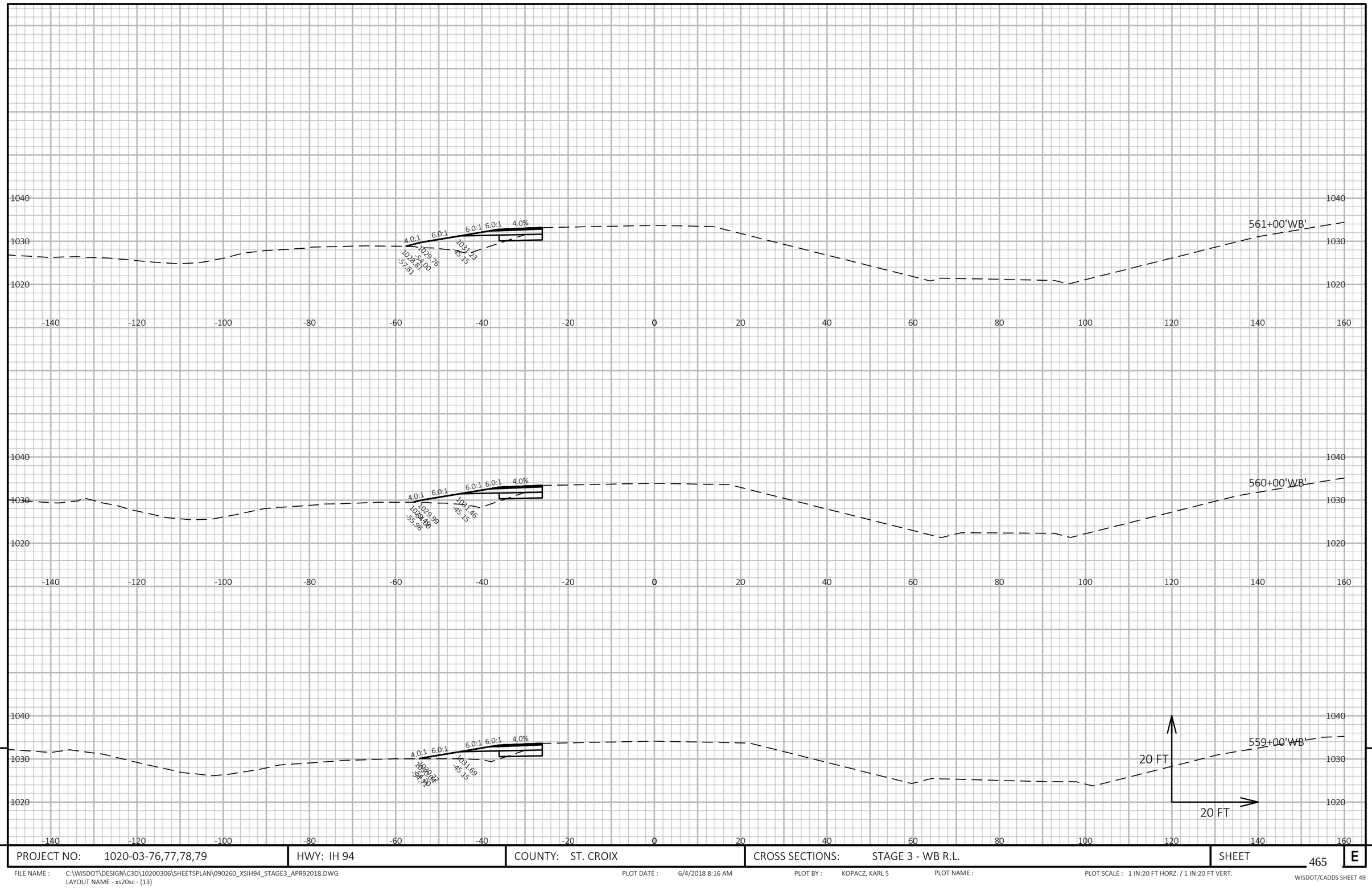
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 464	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (12)

PLOT DATE : 6/4/2018 8:15 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



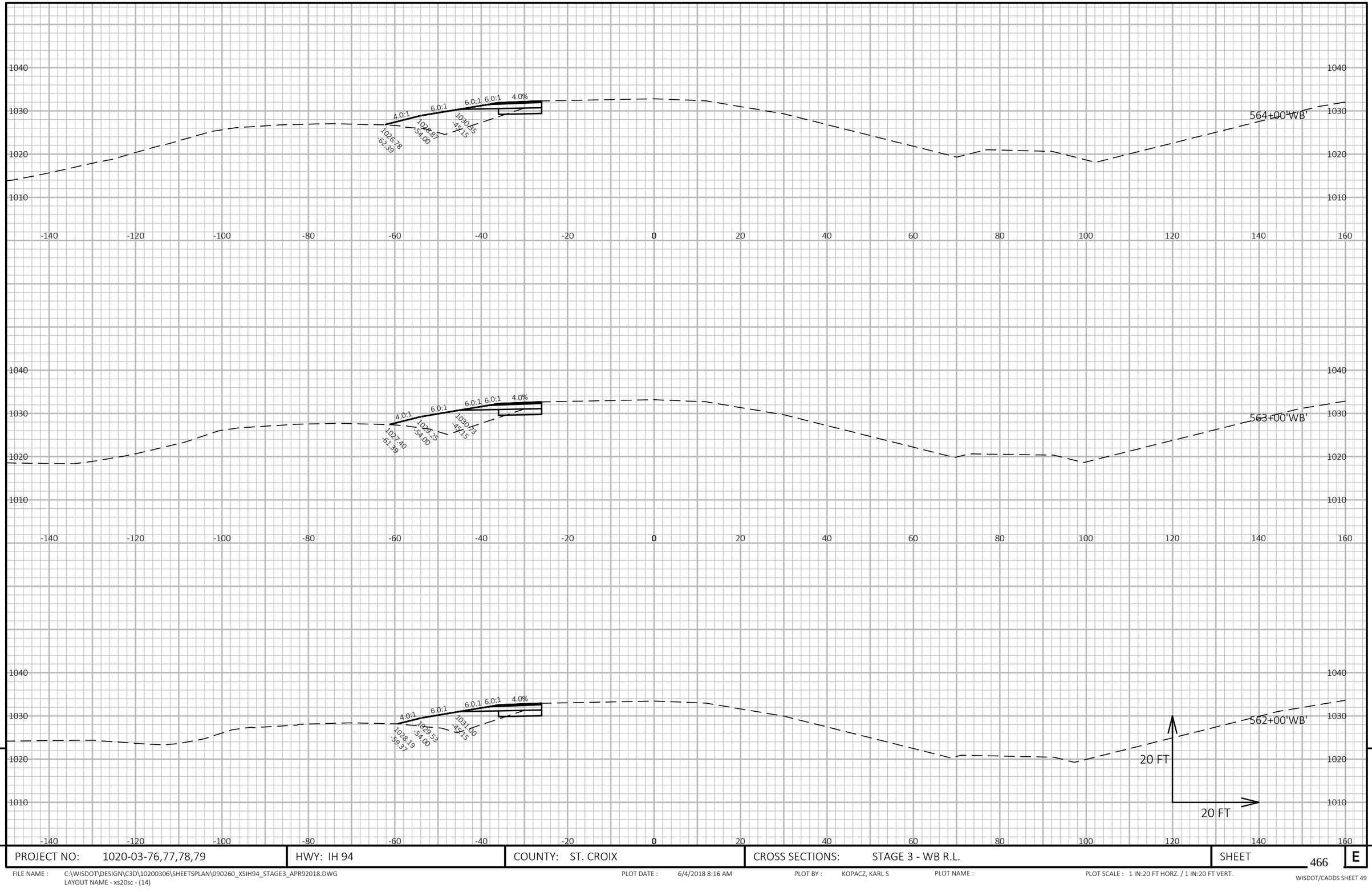
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 465	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (13)

PLOT DATE : 6/4/2018 8:16 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



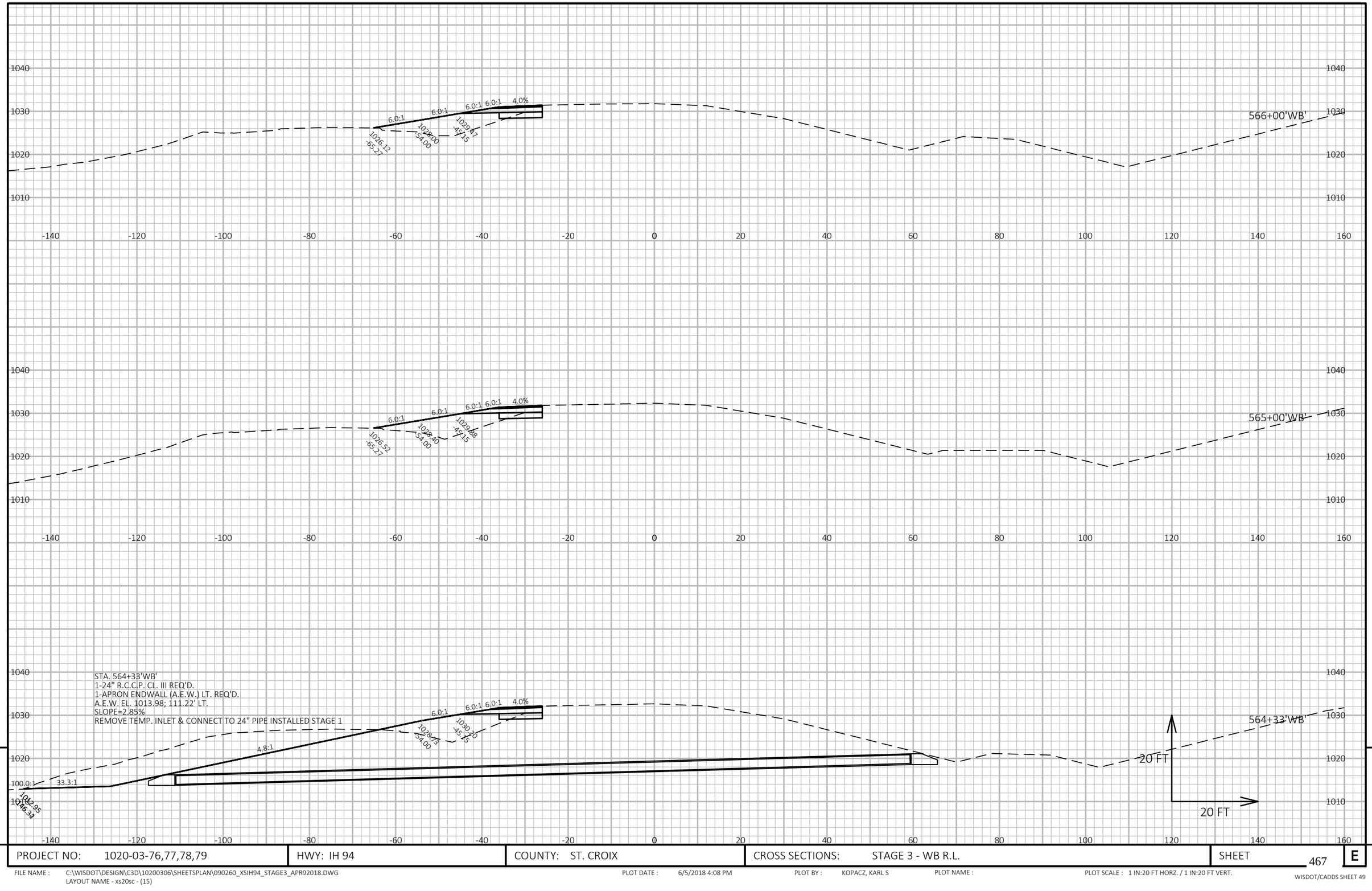
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 466	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (14)

PLOT DATE : 6/4/2018 8:16 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

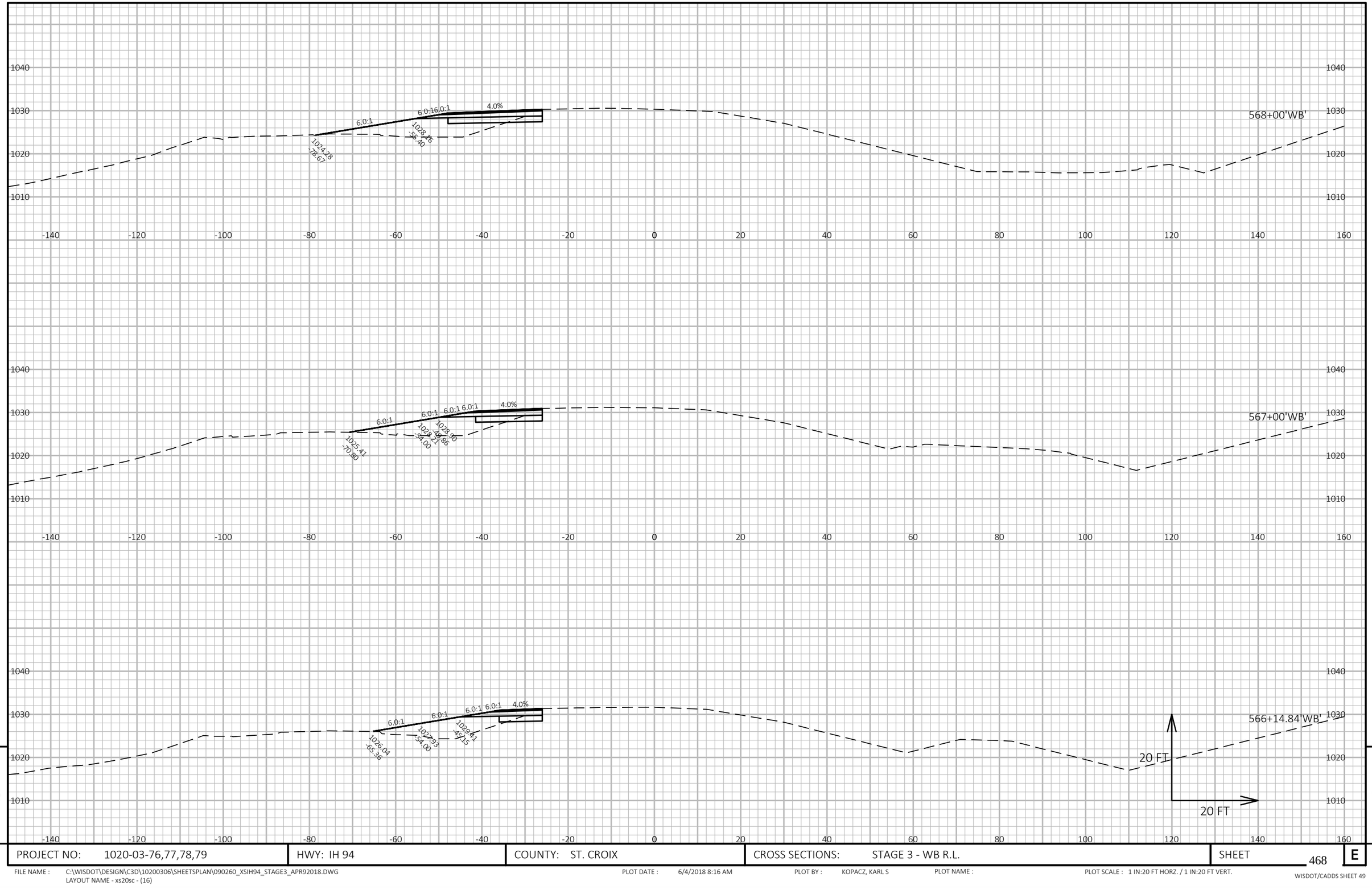
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 467	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (15)

PLOT DATE : 6/5/2018 4:08 PM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



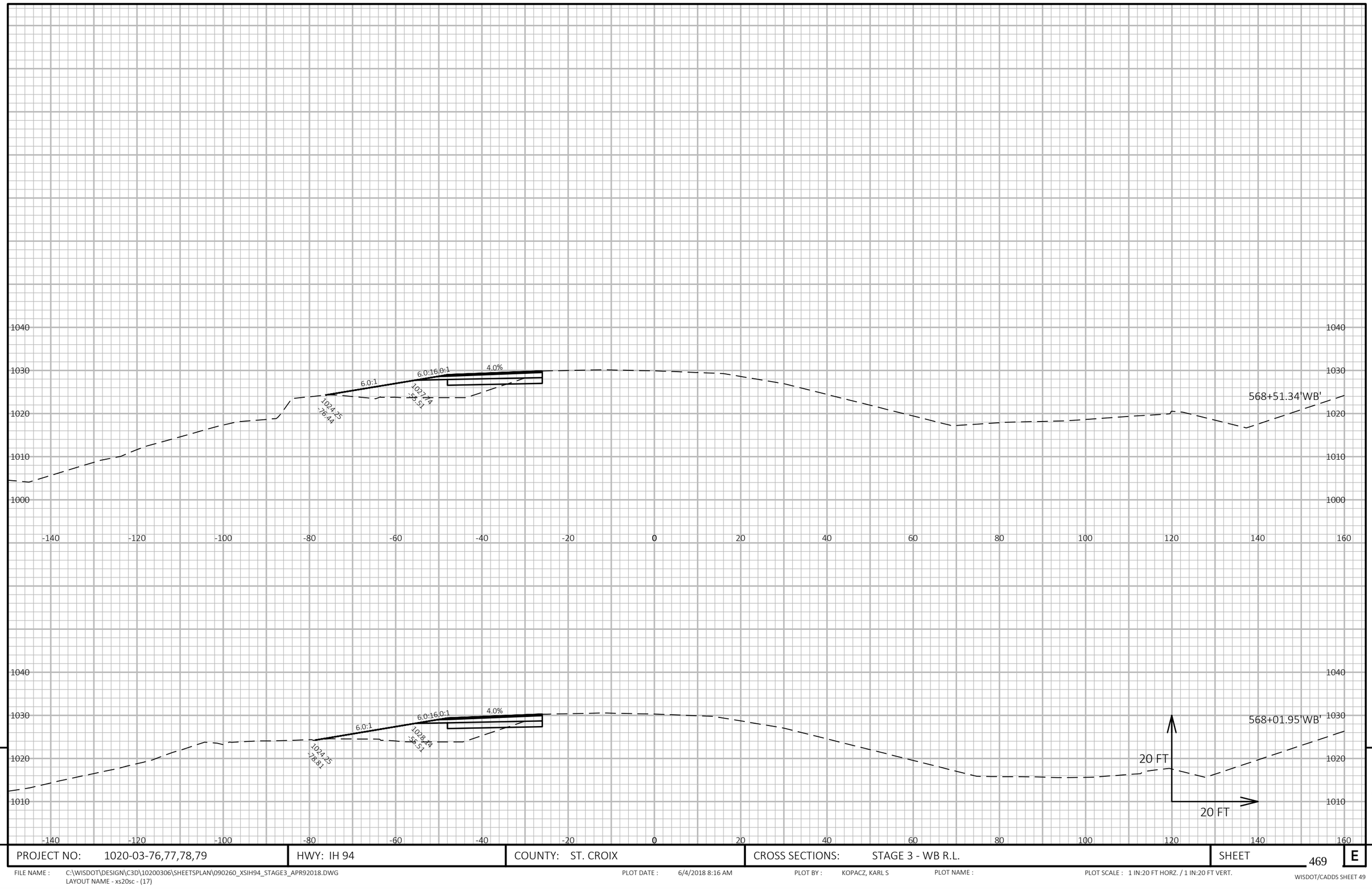
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 468	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (16)

PLOT DATE : 6/4/2018 8:16 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



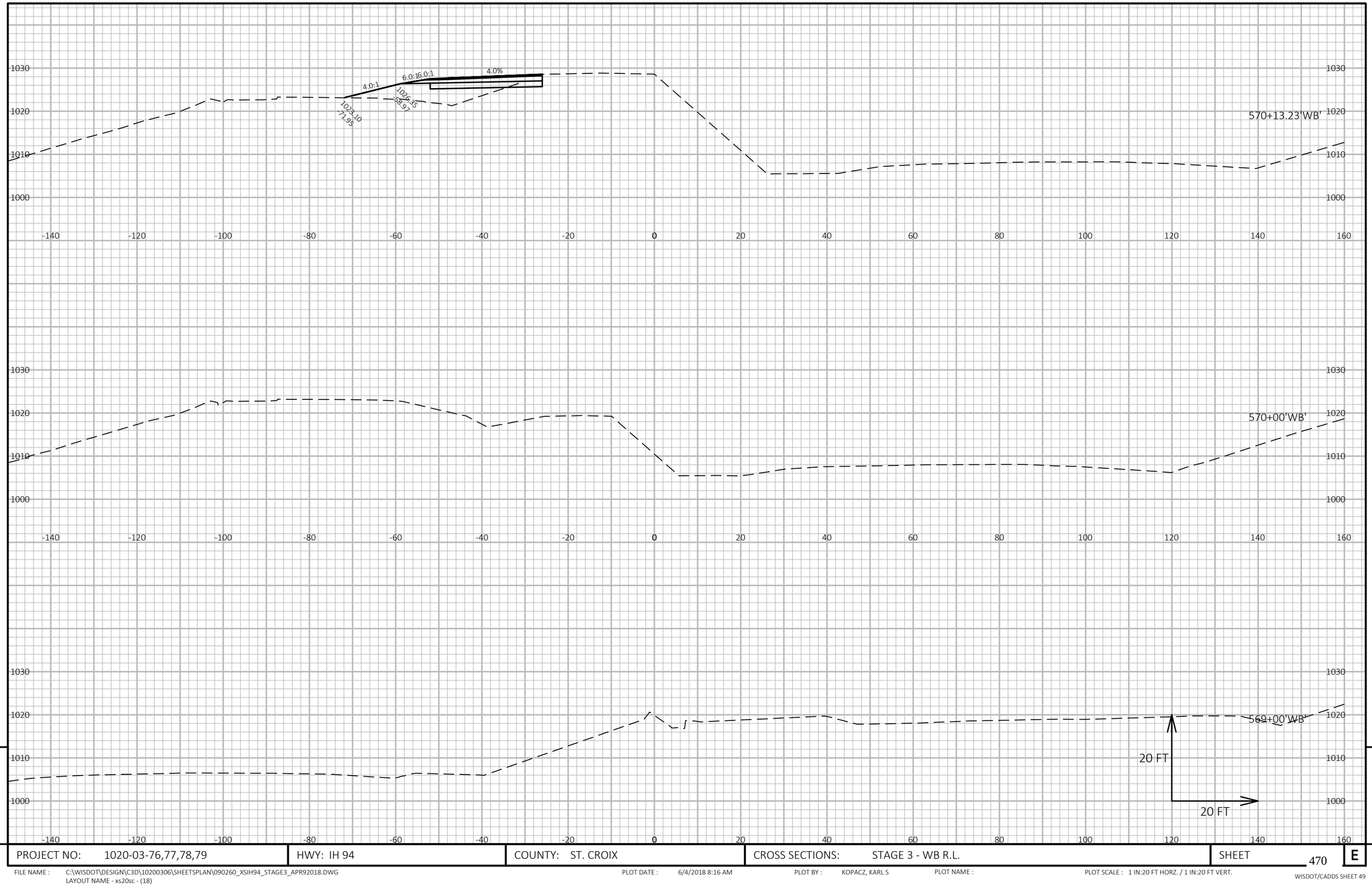
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 469	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (17)

PLOT DATE : 6/4/2018 8:16 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



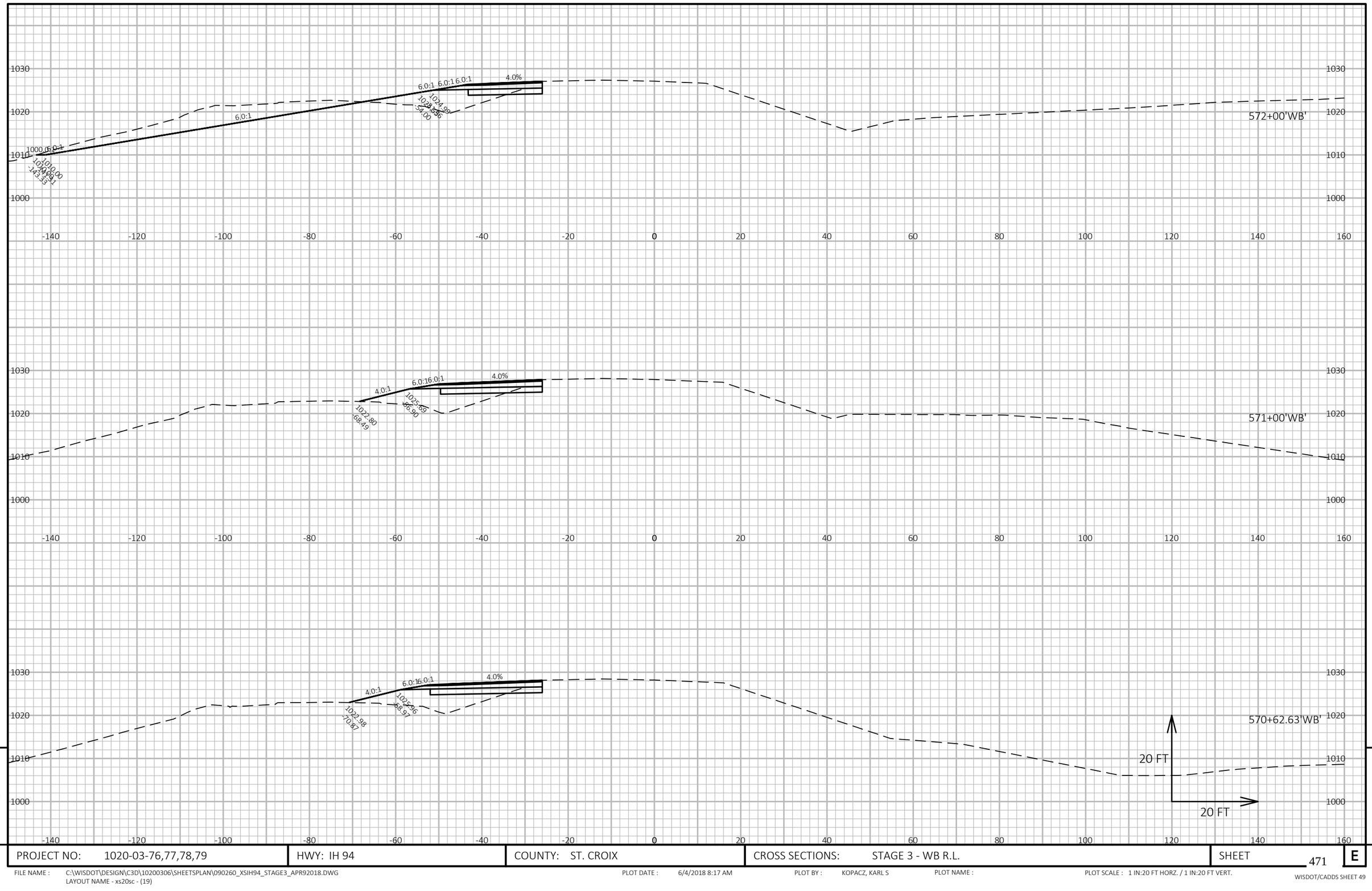
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 470	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (18)

PLOT DATE : 6/4/2018 8:16 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

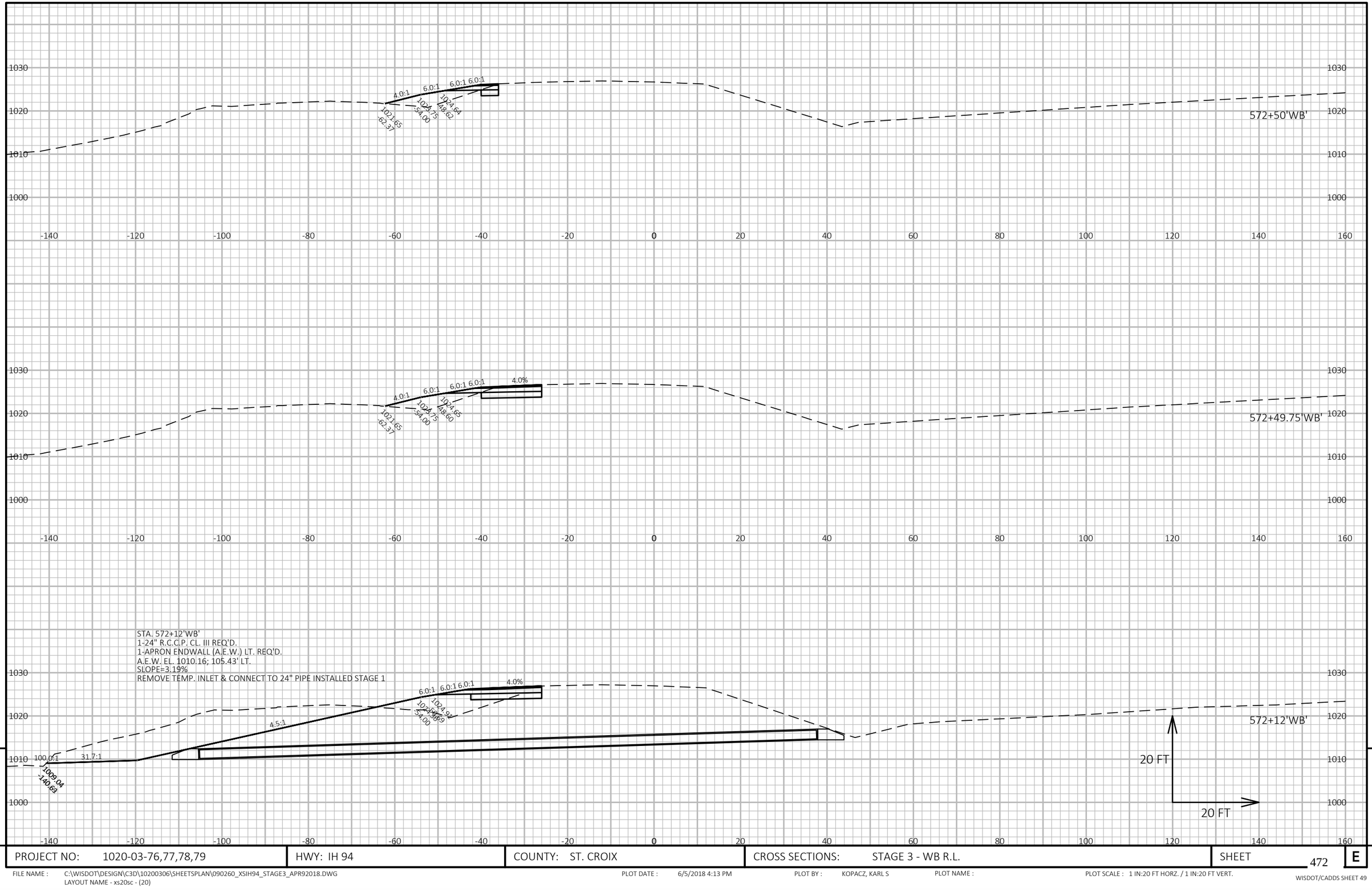
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 471	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (19)

PLOT DATE : 6/4/2018 8:17 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

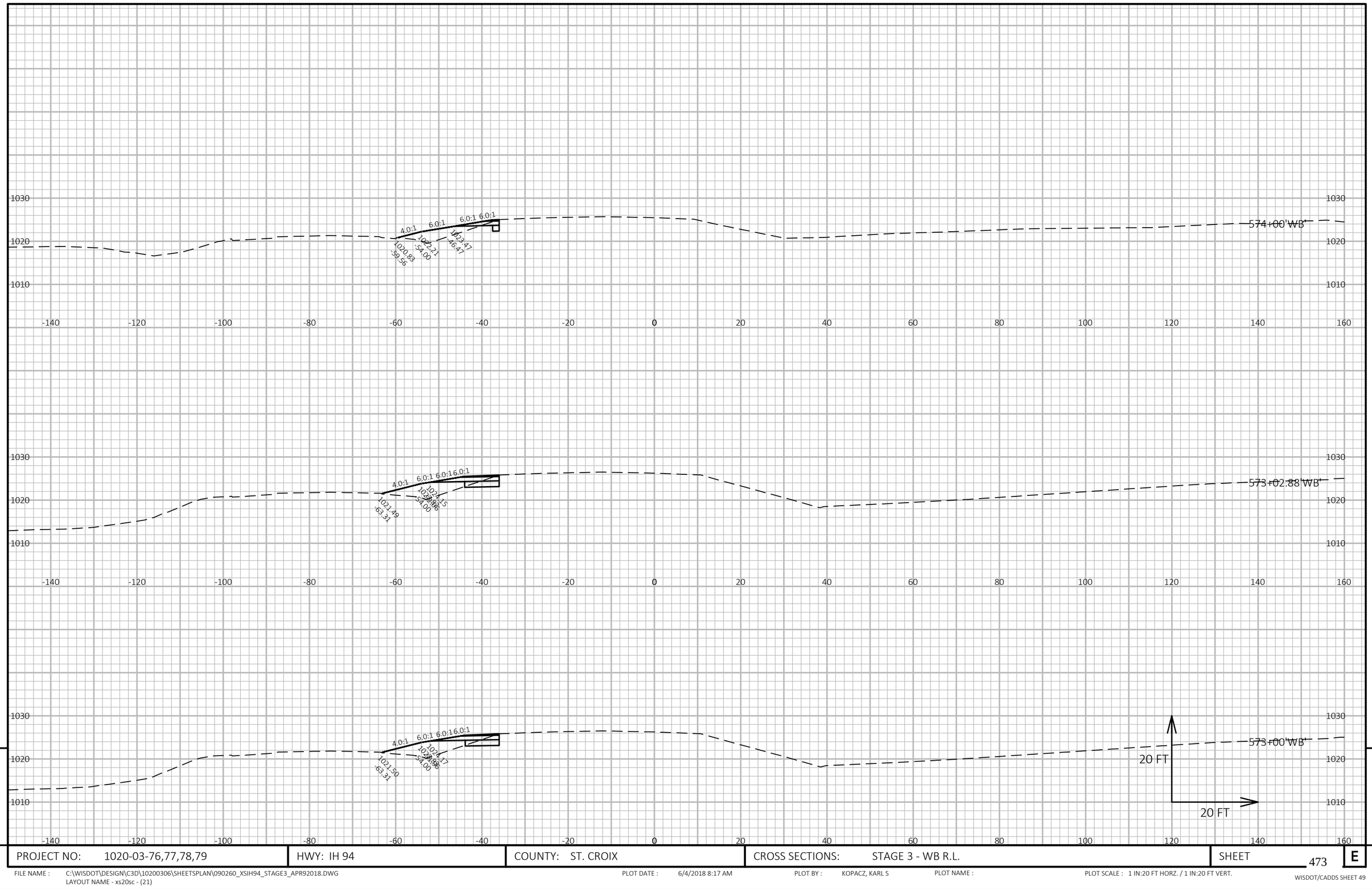


9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 472	E

9

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (20)
PLOT DATE : 6/5/2018 4:13 PM
PLOT BY : KOPACZ, KARL S
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

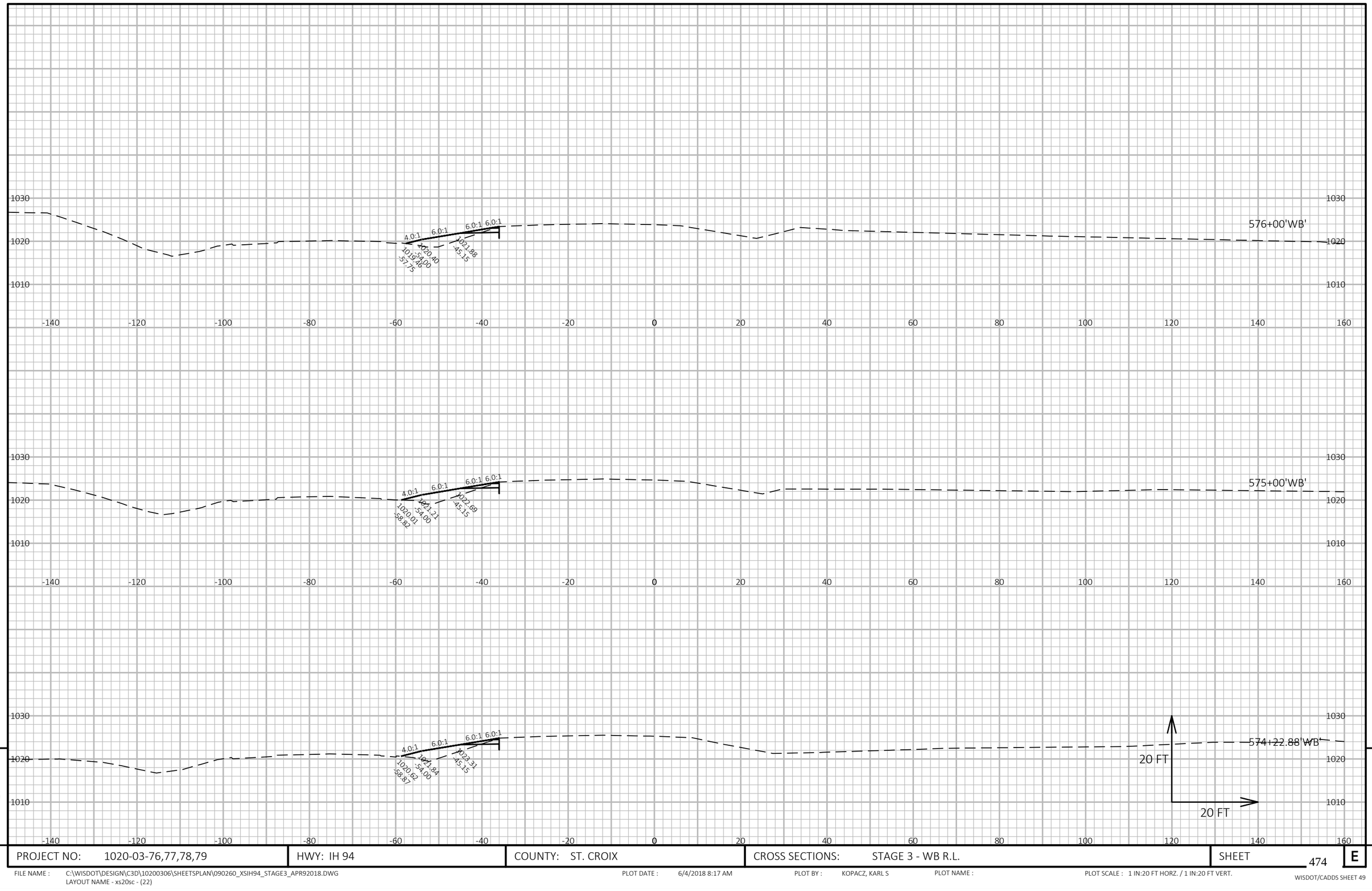


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 473	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (21)

PLOT DATE : 6/4/2018 8:17 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

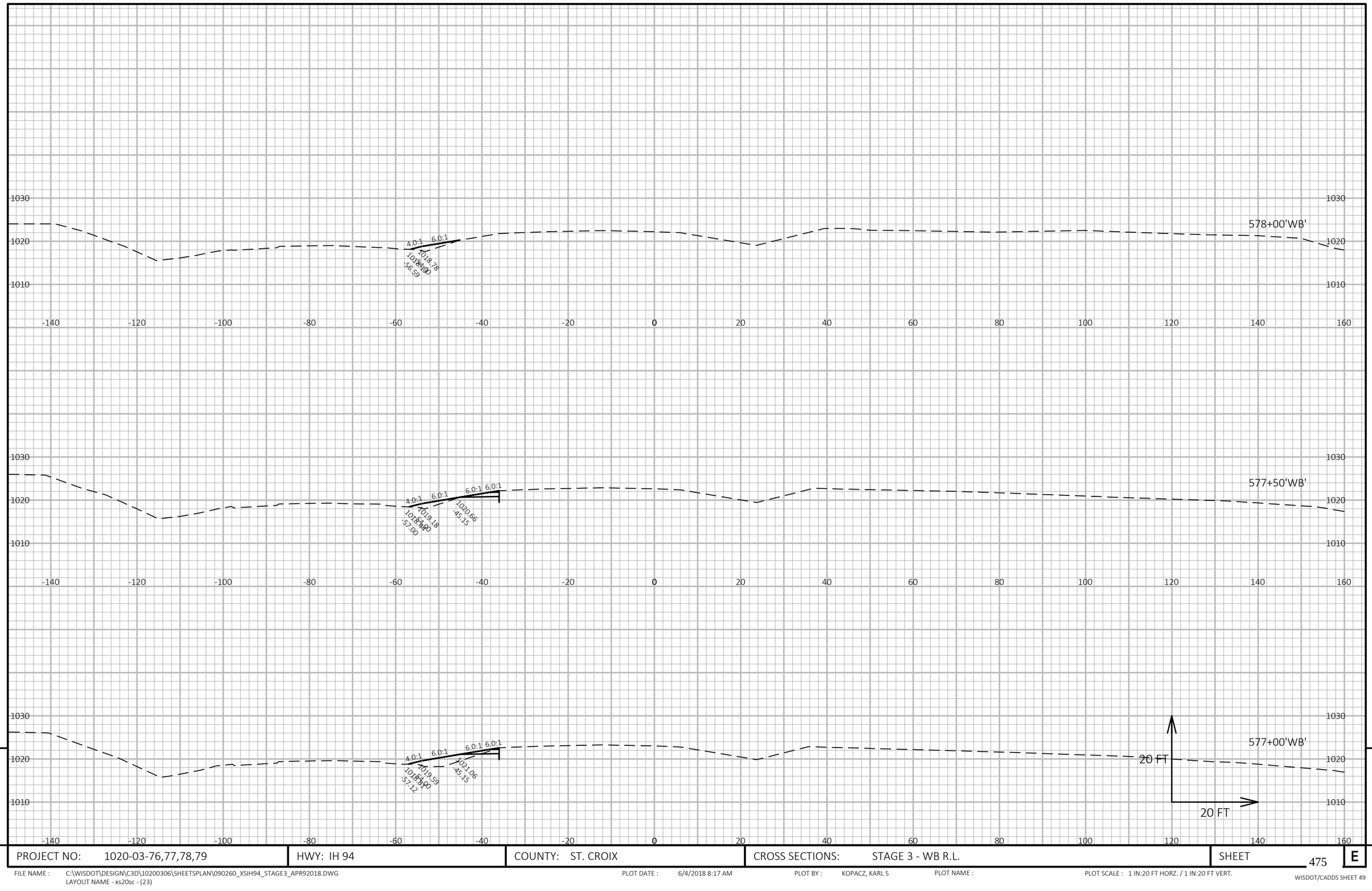
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 474	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (22)

PLOT DATE : 6/4/2018 8:17 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

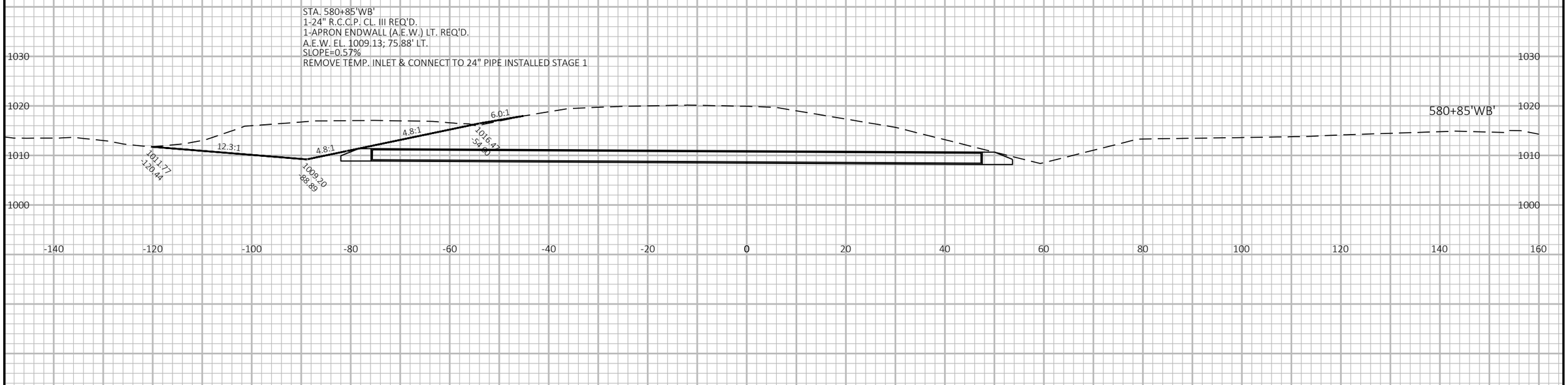
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 475	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (23)

PLOT DATE : 6/4/2018 8:17 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

STA. 580+85'WB'
1-24" R.C.C.P. CL. III REQ'D.
1-APRON ENDWALL (A.E.W.) LT. REQ'D.
A.E.W. EL. 1009.13; 75.88' LT.
SLOPE=0.57%
REMOVE TEMP. INLET & CONNECT TO 24" PIPE INSTALLED STAGE 1





9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 476	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (24)

PLOT DATE : 6/5/2018 4:20 PM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

583+00'WB'

0.0:1 6.0:1
1014.72
-54.00

582+00'WB'

4.0:1 6.0:1
1015.54
-54.00

581+00'WB'

1000.0:1
1012.13
-118.67
8.0:1
1012.10
-87.97
8.0:1
6.0:1
1016.35
-54.00

20 FT
20 FT

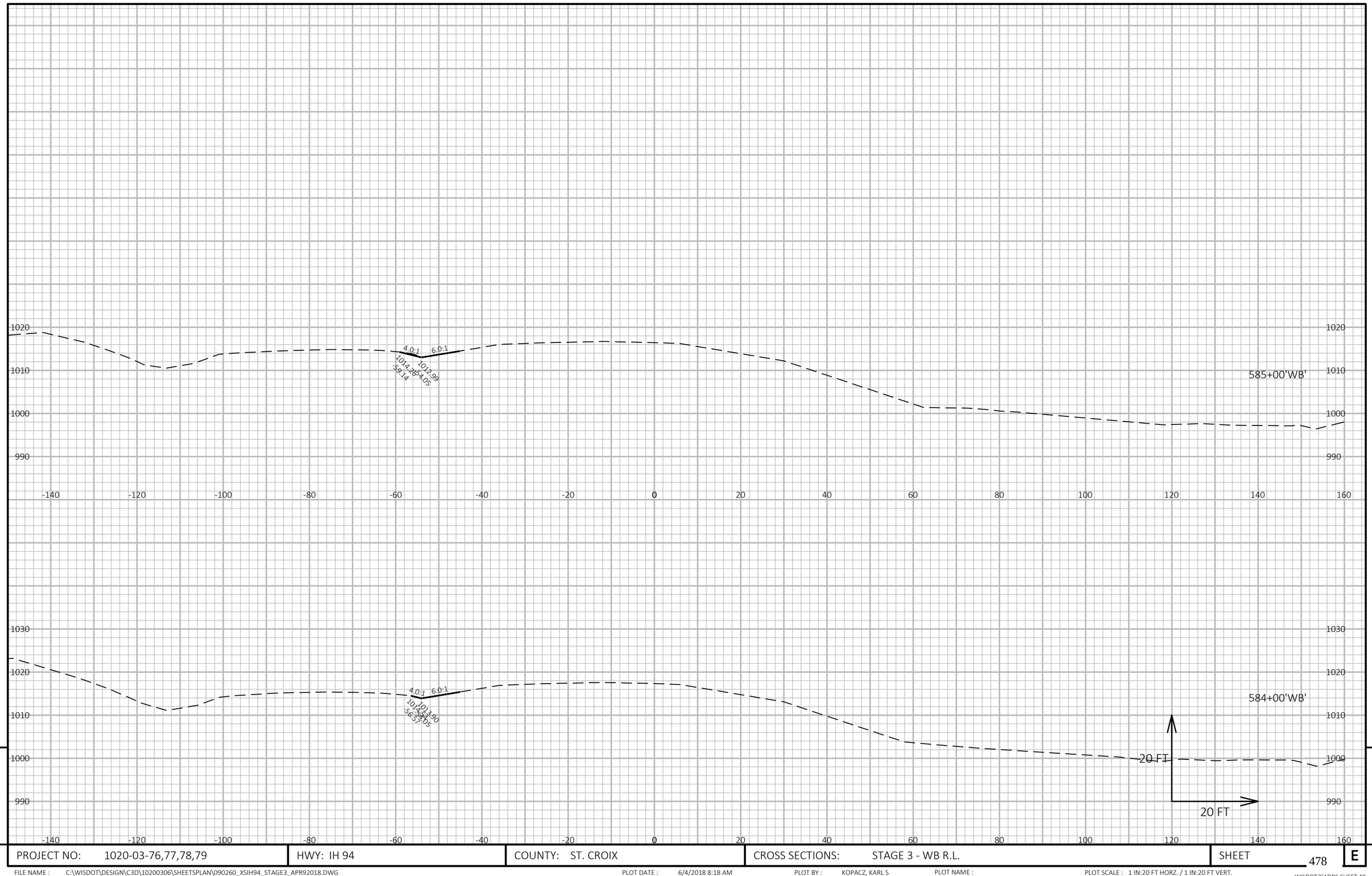
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 477	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (25)

PLOT DATE : 6/4/2018 8:17 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 478	E

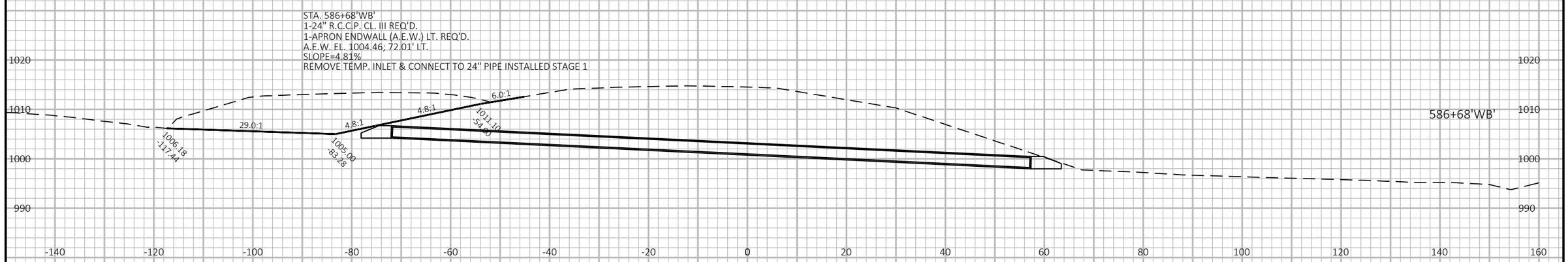
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (26)

PLOT DATE : 6/4/2018 8:18 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



STA. 586+68'WB'
1-24" R.C.C.P. CL. III REQ'D.
1-APRON ENDWALL (A.E.W.) LT. REQ'D.
A.E.W. EL. 1004.46; 72.01' LT.
SLOPE=4.81%
REMOVE TEMP. INLET & CONNECT TO 24" PIPE INSTALLED STAGE 1





9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 479	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (27)
PLOT DATE : 6/5/2018 4:25 PM
PLOT BY : KOPACZ, KARL S
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49







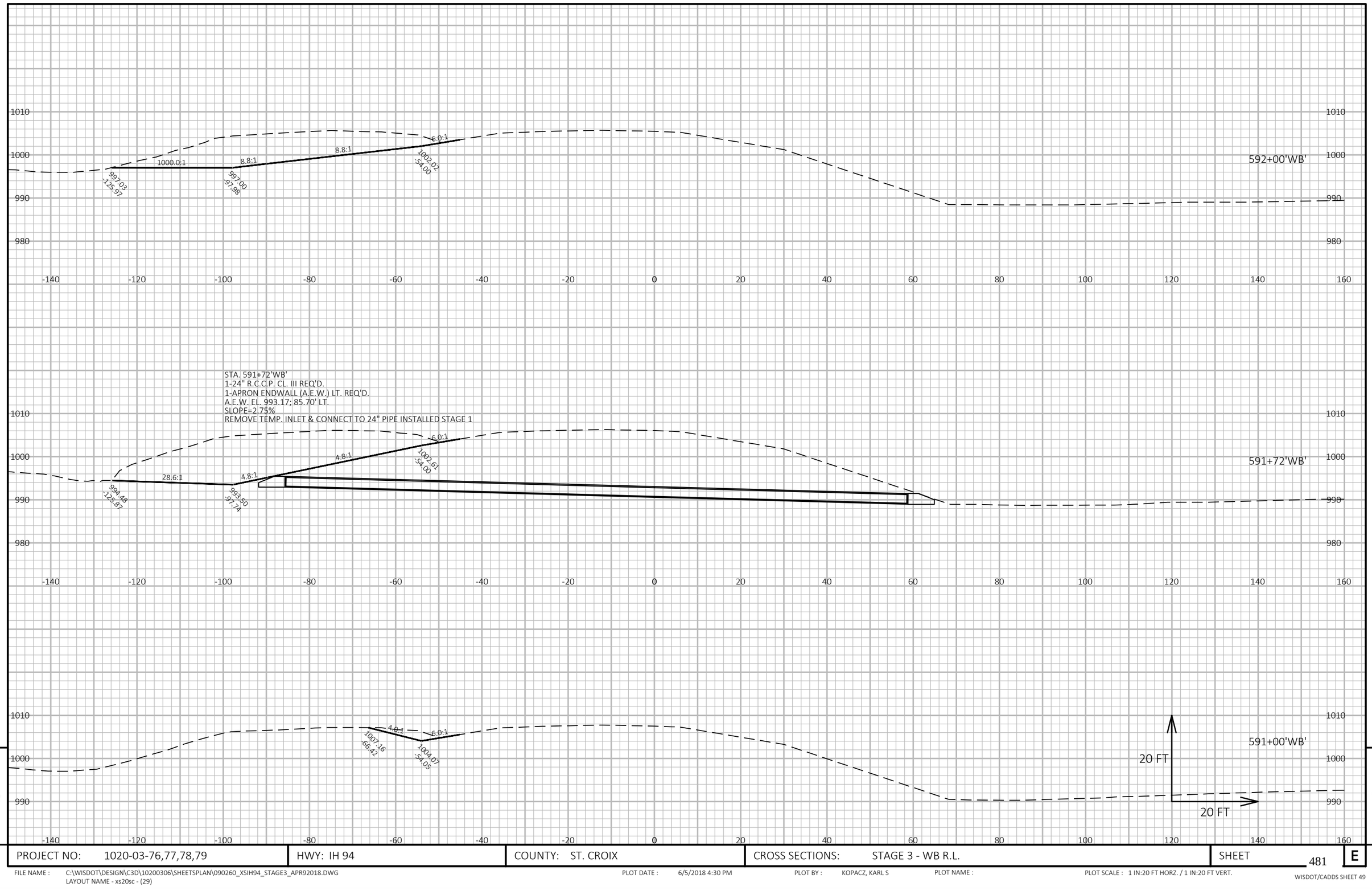
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 480	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (28)

PLOT DATE : 6/4/2018 8:18 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

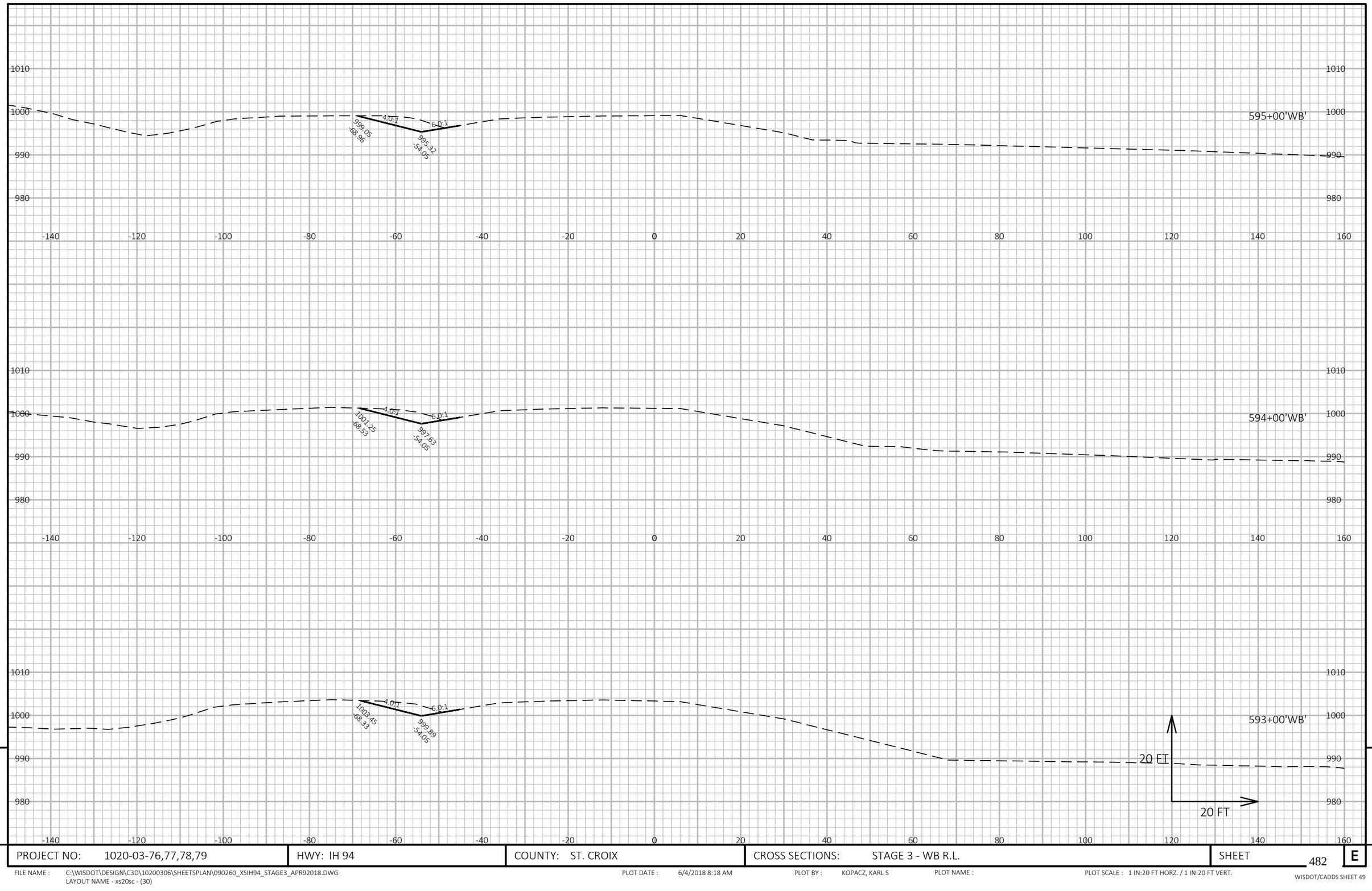


9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 481	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (29)
PLOT DATE : 6/5/2018 4:30 PM
PLOT BY : KOPACZ, KARL S
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



9

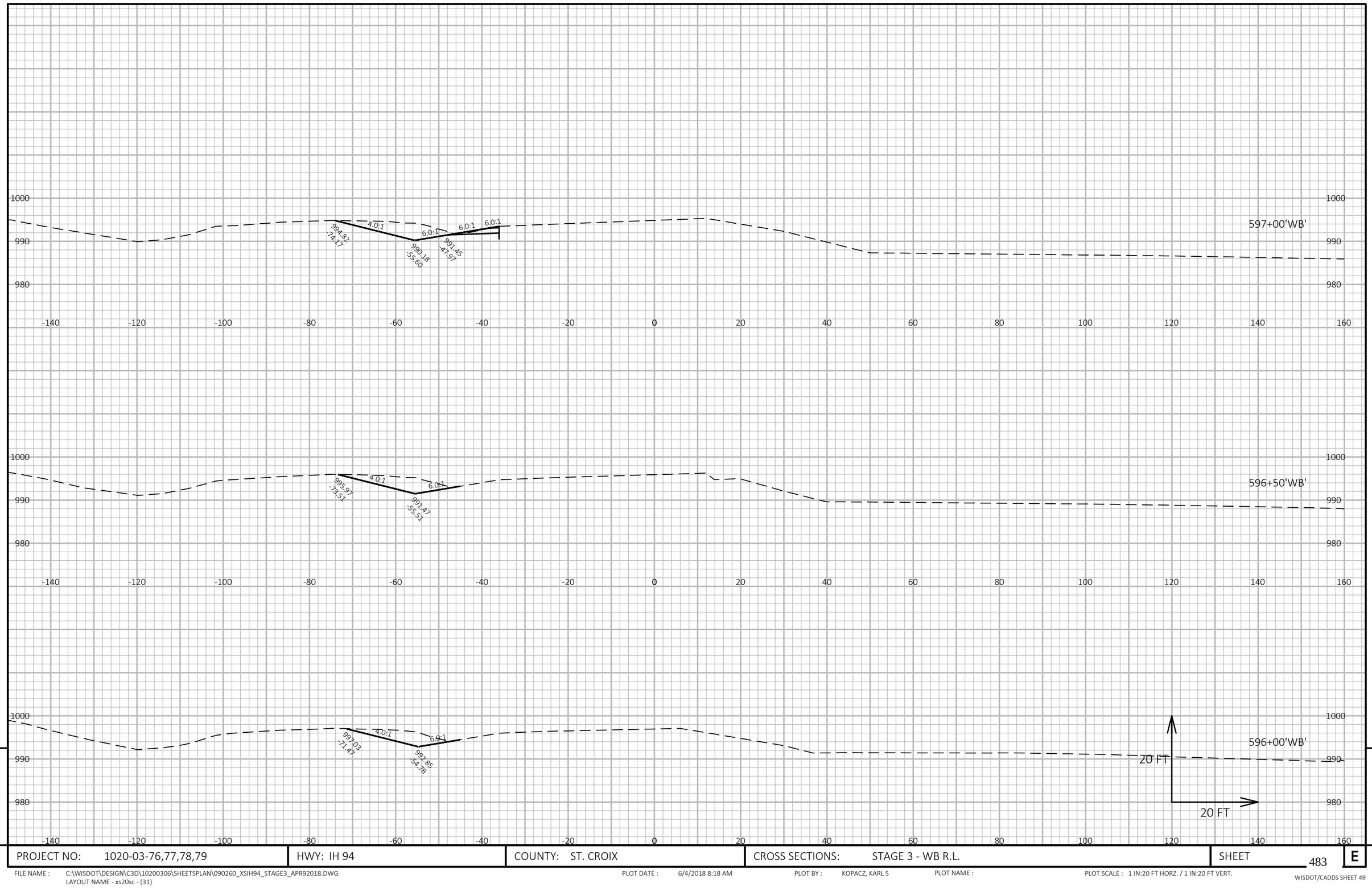
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 482	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (30)

PLOT DATE : 6/4/2018 8:18 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



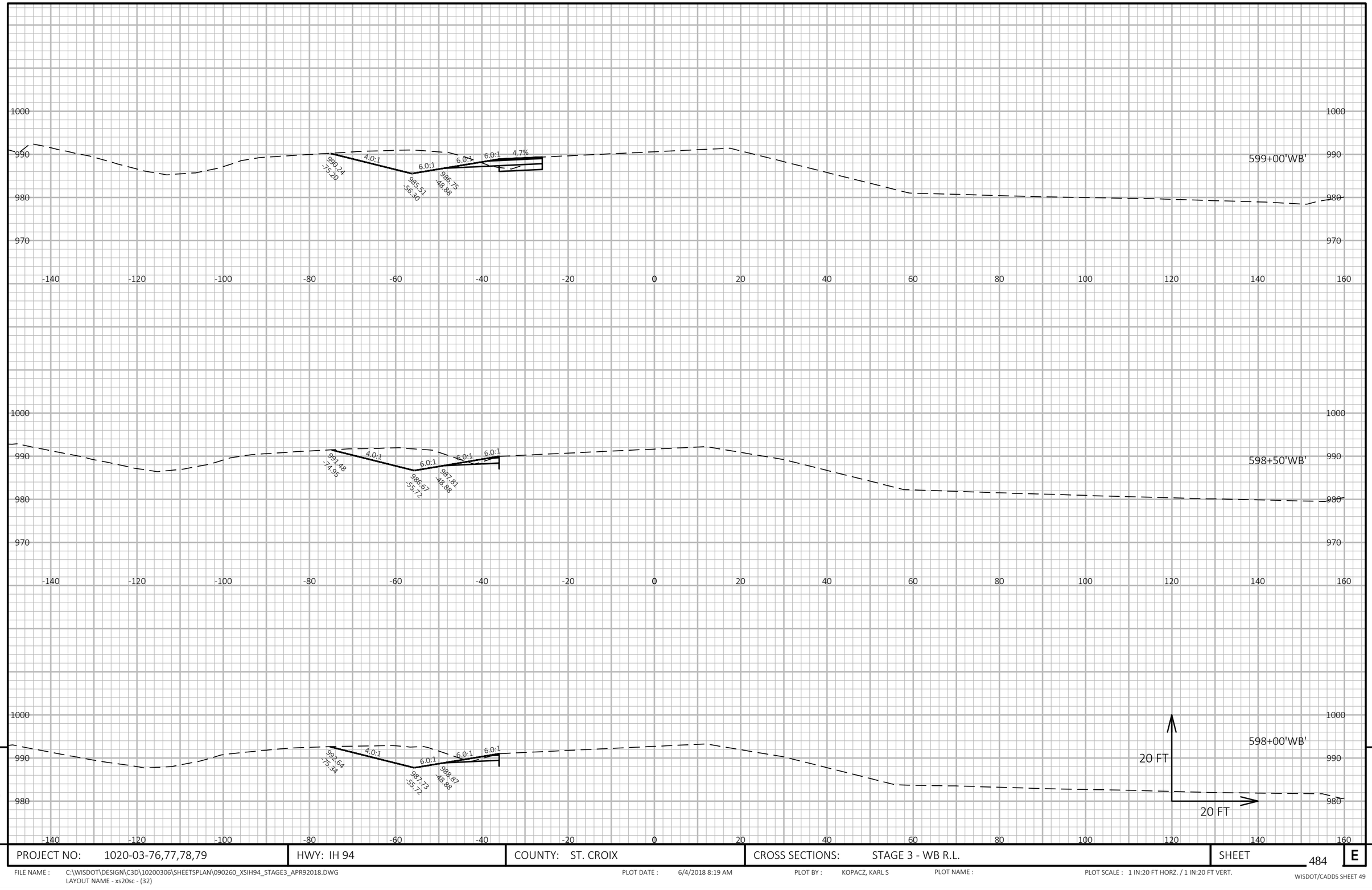
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 483	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (31)

PLOT DATE : 6/4/2018 8:18 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

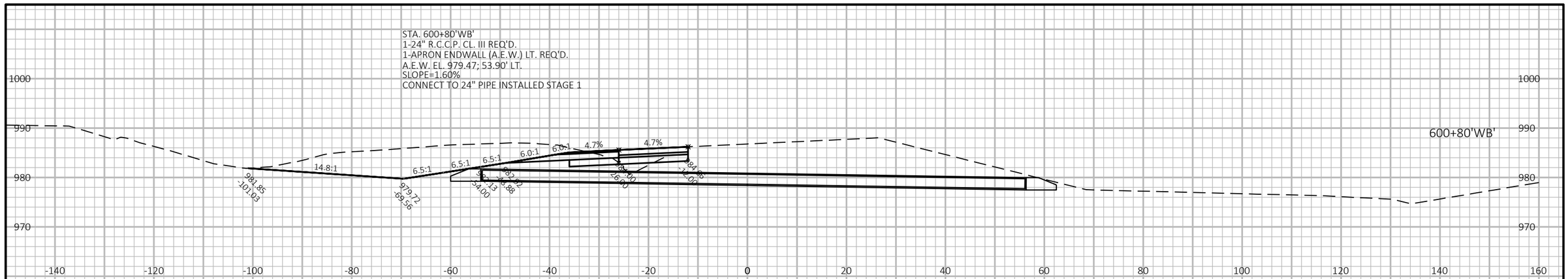
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 484	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (32)

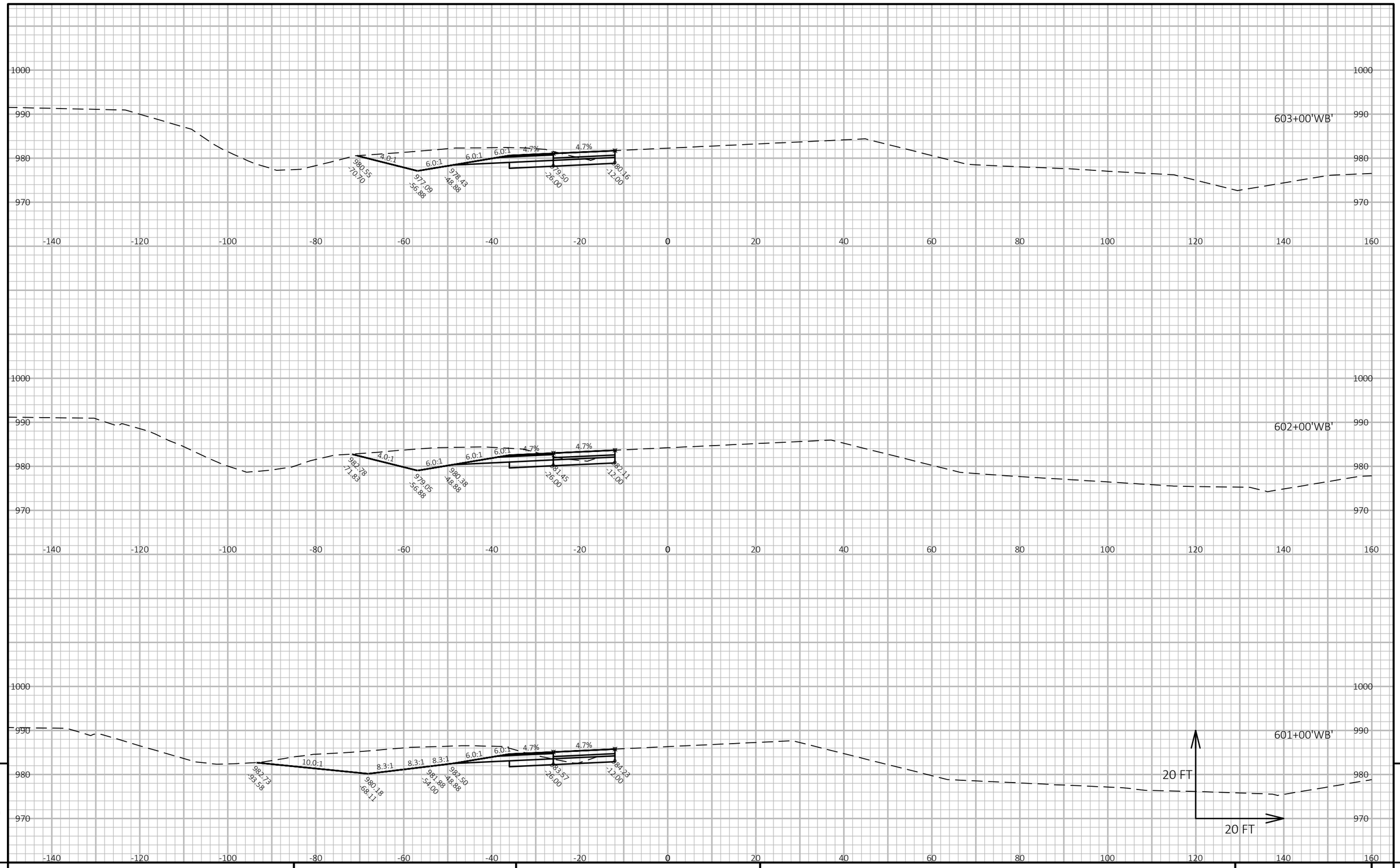
PLOT DATE : 6/4/2018 8:19 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

STA. 600+80'WB'
1-24" R.C.C.P. CL. III REQ'D.
1-APRON ENDWALL (A.E.W.) LT. REQ'D.
A.E.W. EL. 979.47; 53.90' LT.
SLOPE=1.60%
CONNECT TO 24" PIPE INSTALLED STAGE 1



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 485 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (33)
PLOT DATE : 6/5/2018 4:36 PM
PLOT BY : KOPACZ, KARL S
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

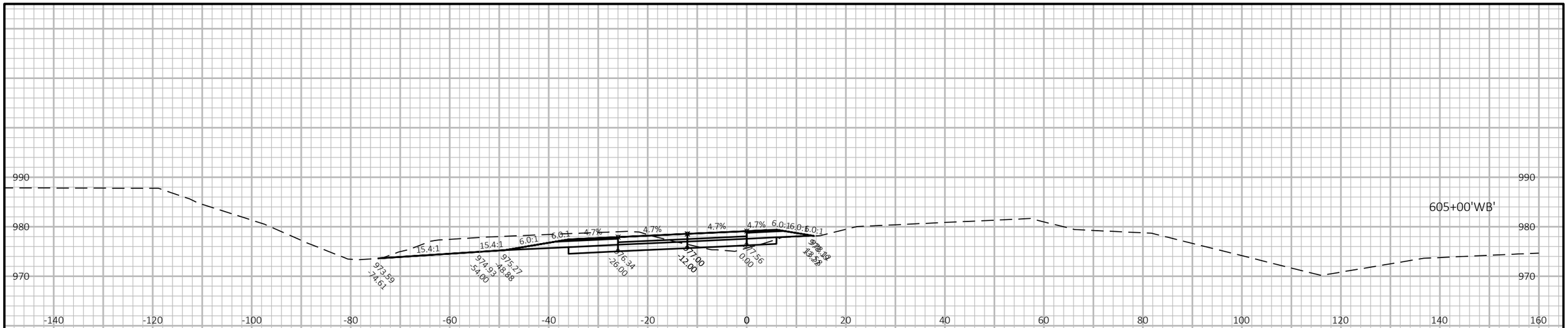


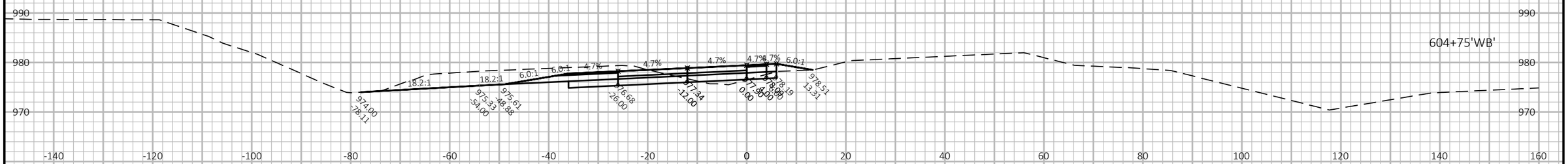
9	PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 486 E

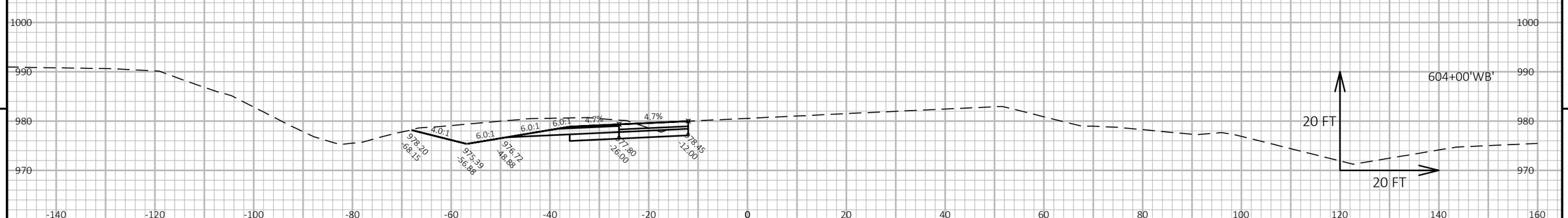
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (34)

PLOT DATE : 6/4/2018 8:19 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 487 E

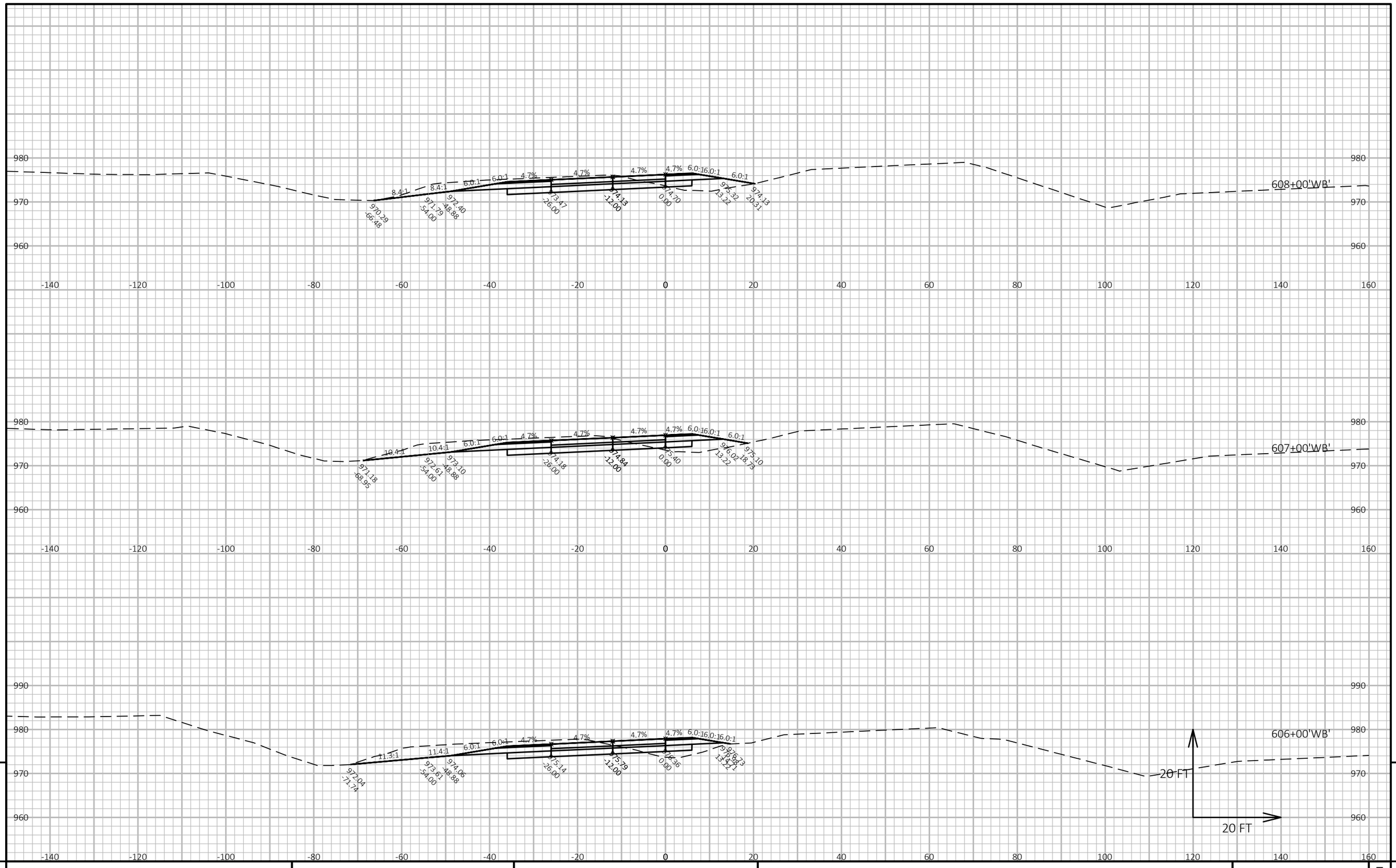
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (35)

PLOT DATE : 6/4/2018 8:19 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

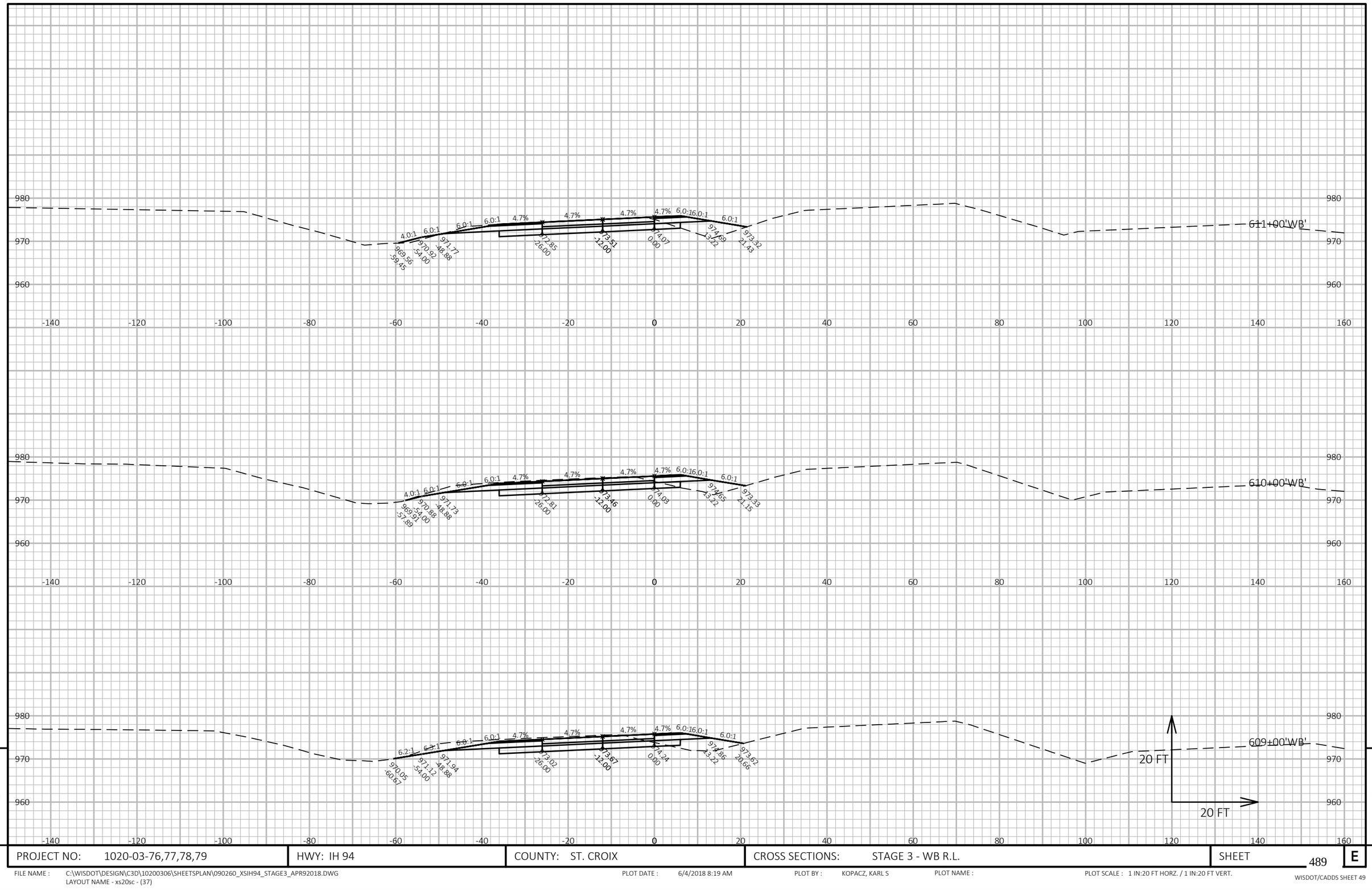


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 488 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (36)

PLOT DATE : 6/4/2018 8:19 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

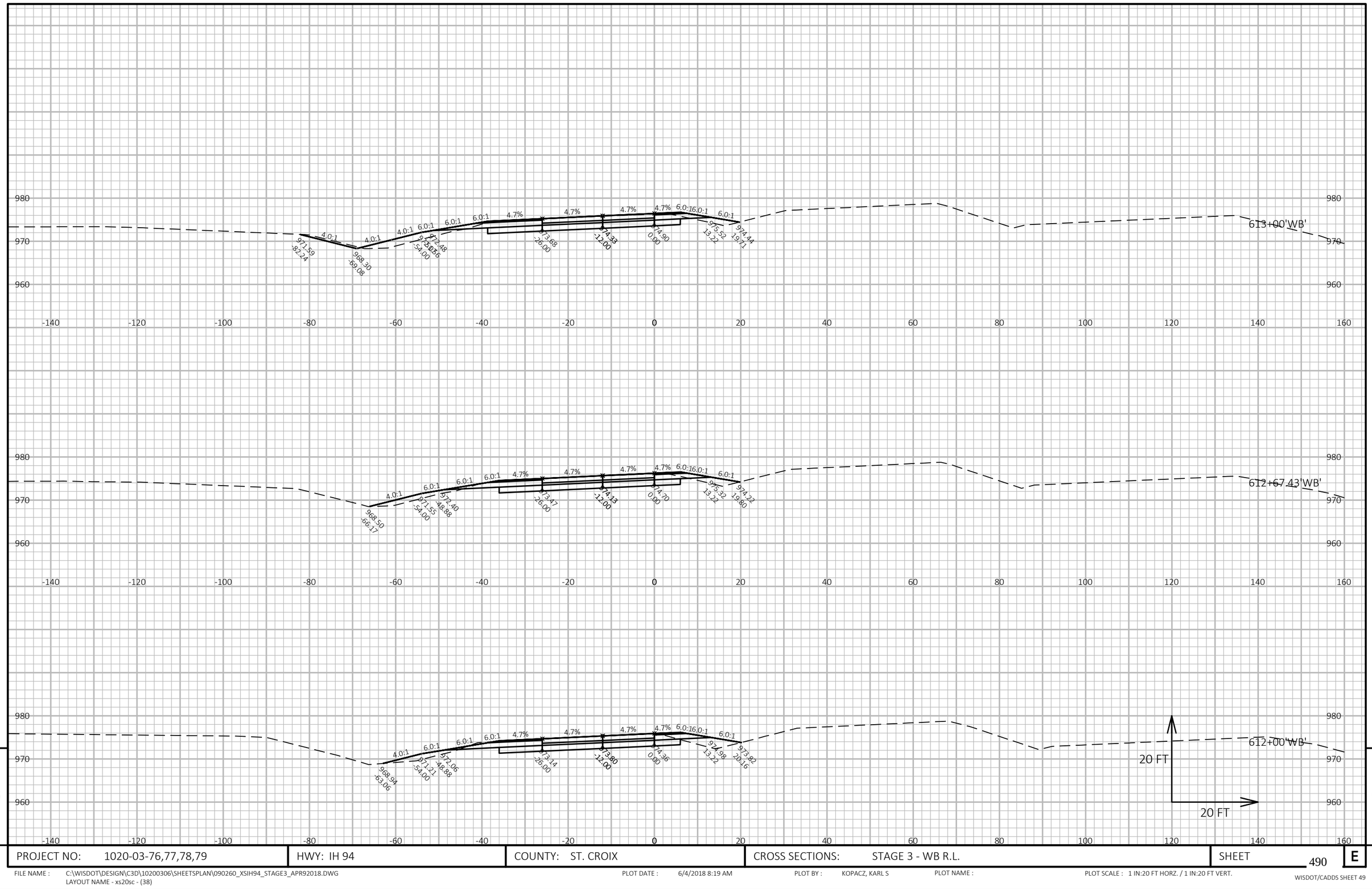
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 489	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (37)

PLOT DATE : 6/4/2018 8:19 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



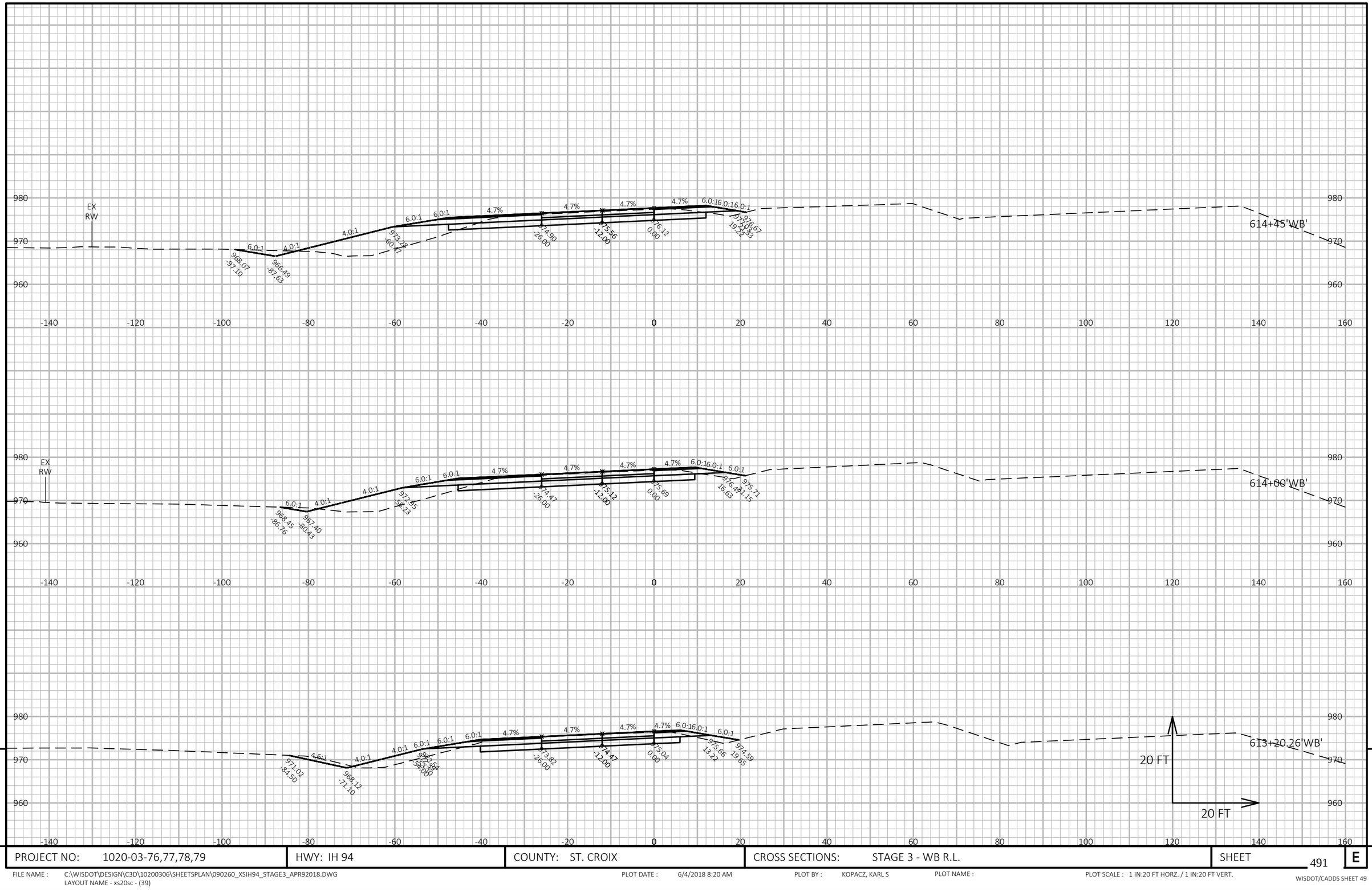
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 490	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (38)

PLOT DATE : 6/4/2018 8:19 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

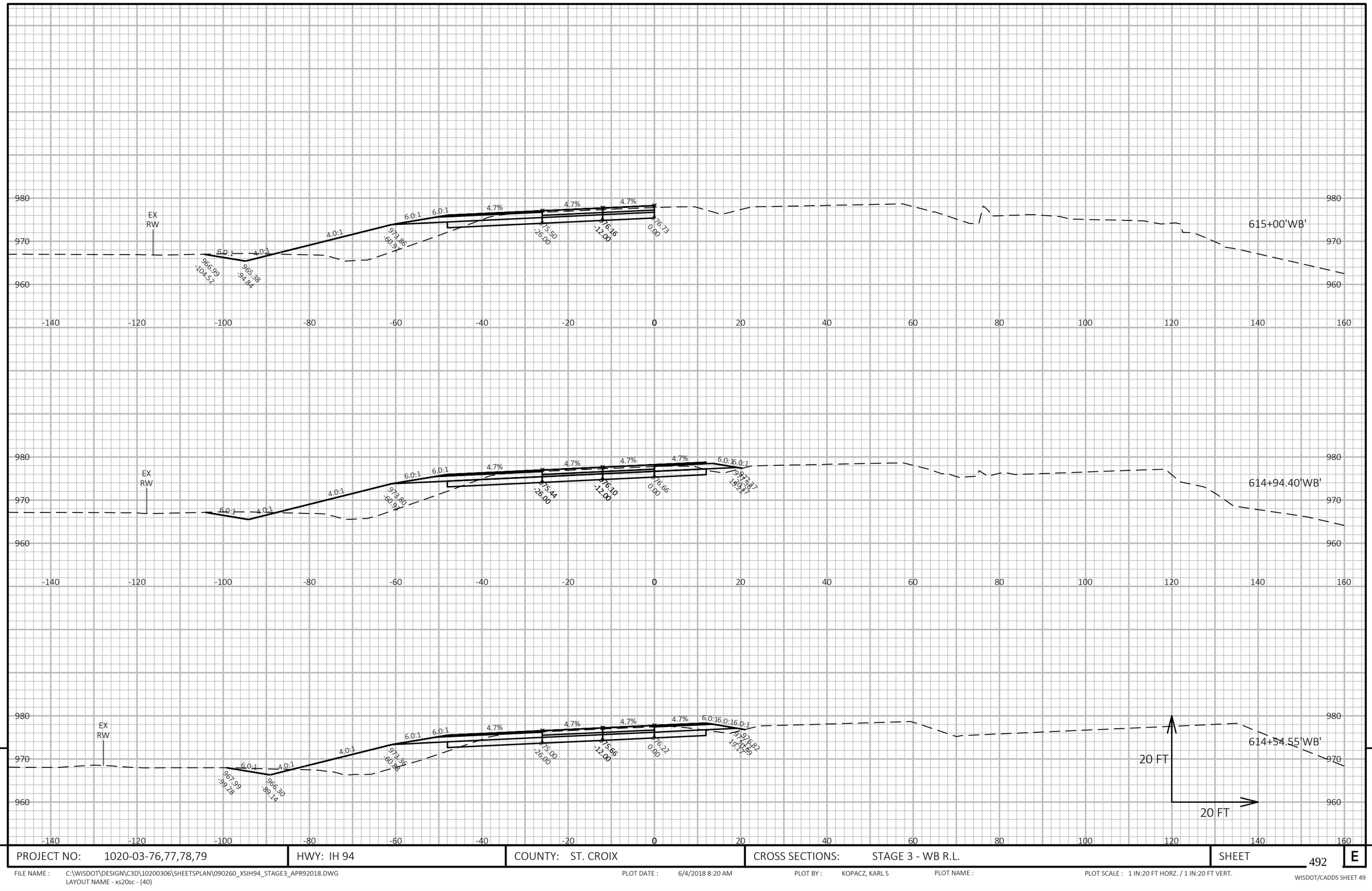
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 491	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (39)

PLOT DATE : 6/4/2018 8:20 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 492	E

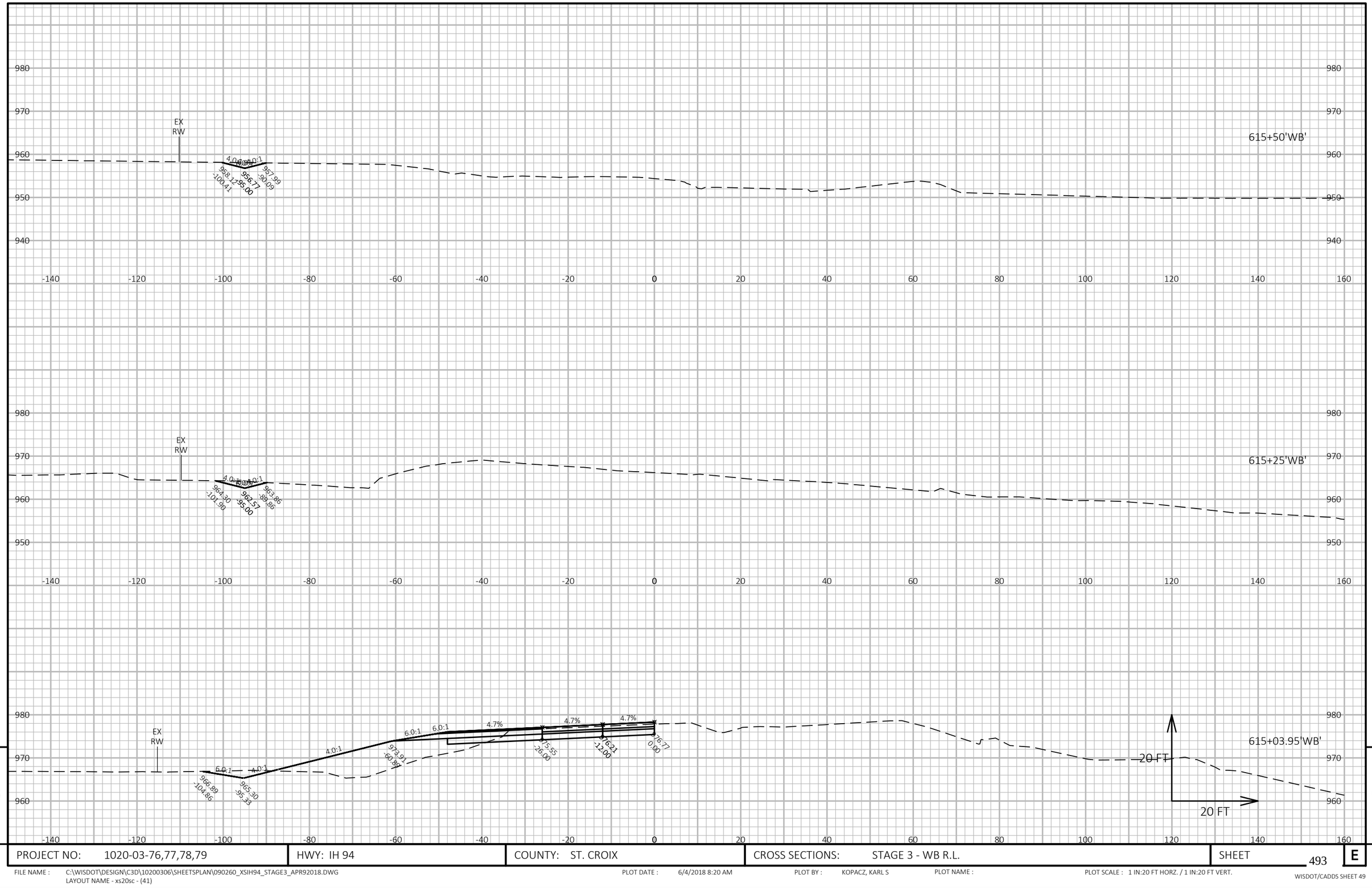
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (40)

PLOT DATE : 6/4/2018 8:20 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 493	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (41)

PLOT DATE : 6/4/2018 8:20 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

990
980
970
960
950
940

EX
RW

616+25'WB'

616+00'WB'

20 FT

20 FT

-140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160

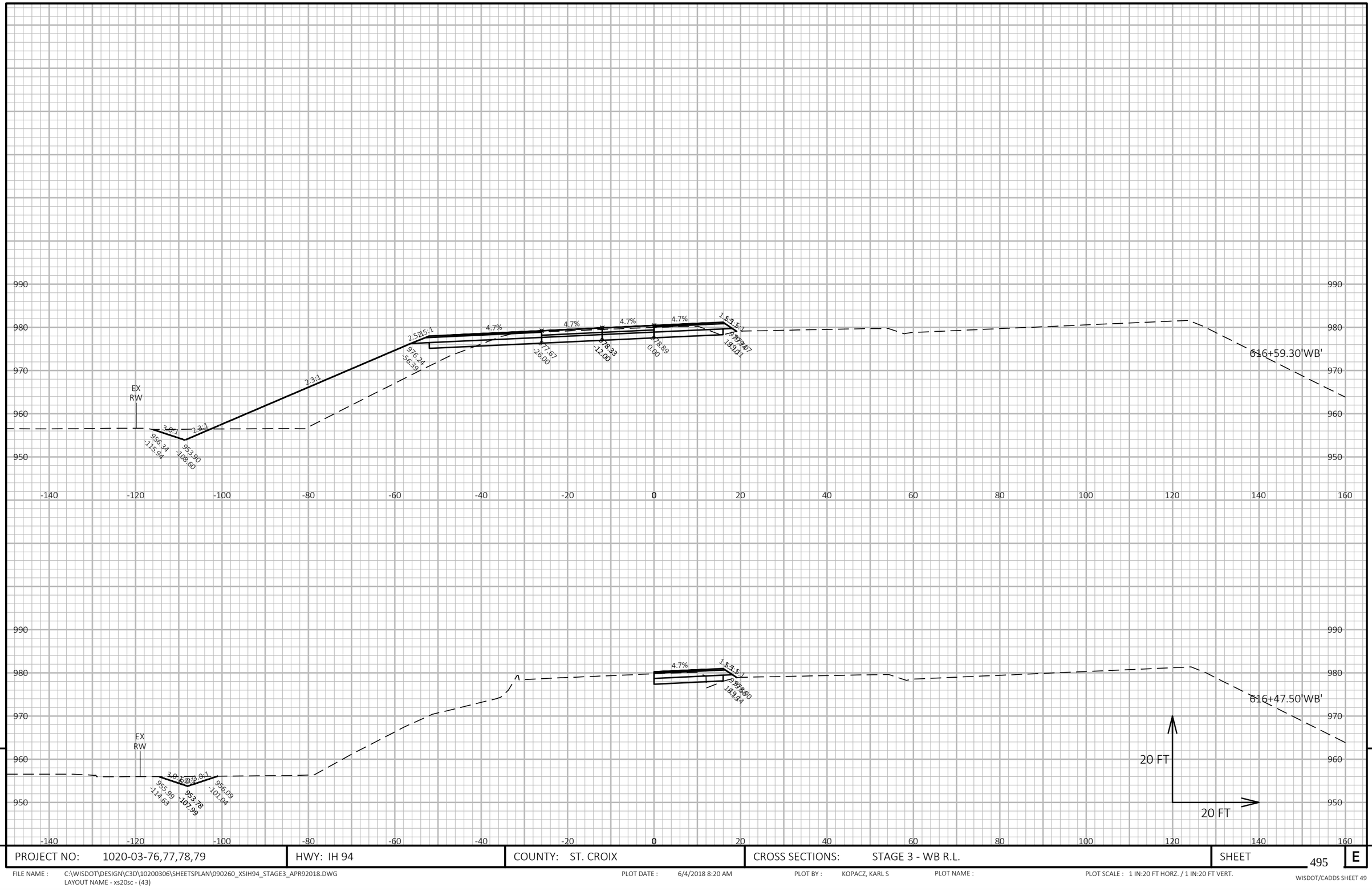
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 494	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (42)

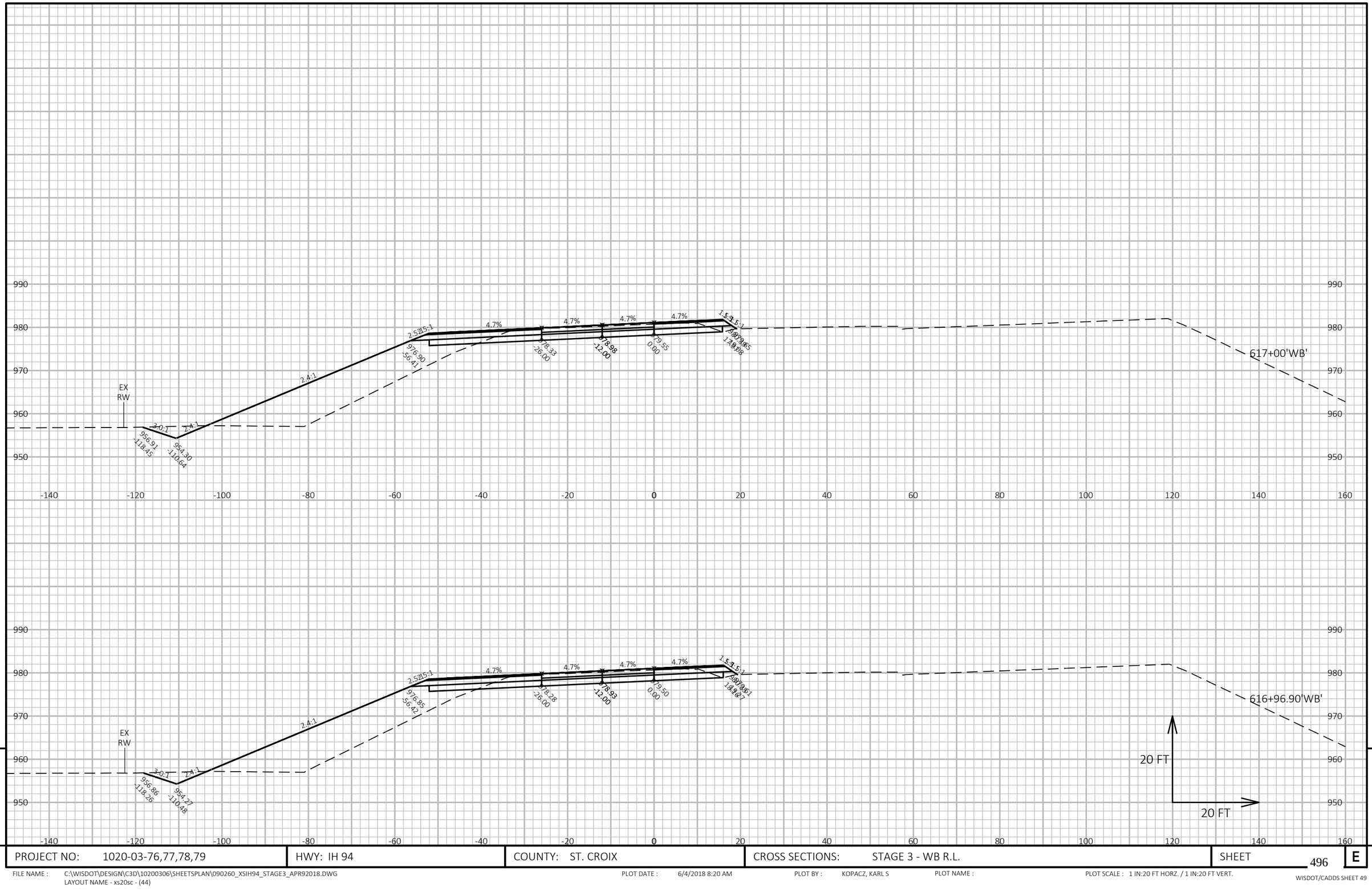
PLOT DATE : 6/4/2018 8:20 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 495	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (43)

PLOT DATE : 6/4/2018 8:20 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 496	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (44)

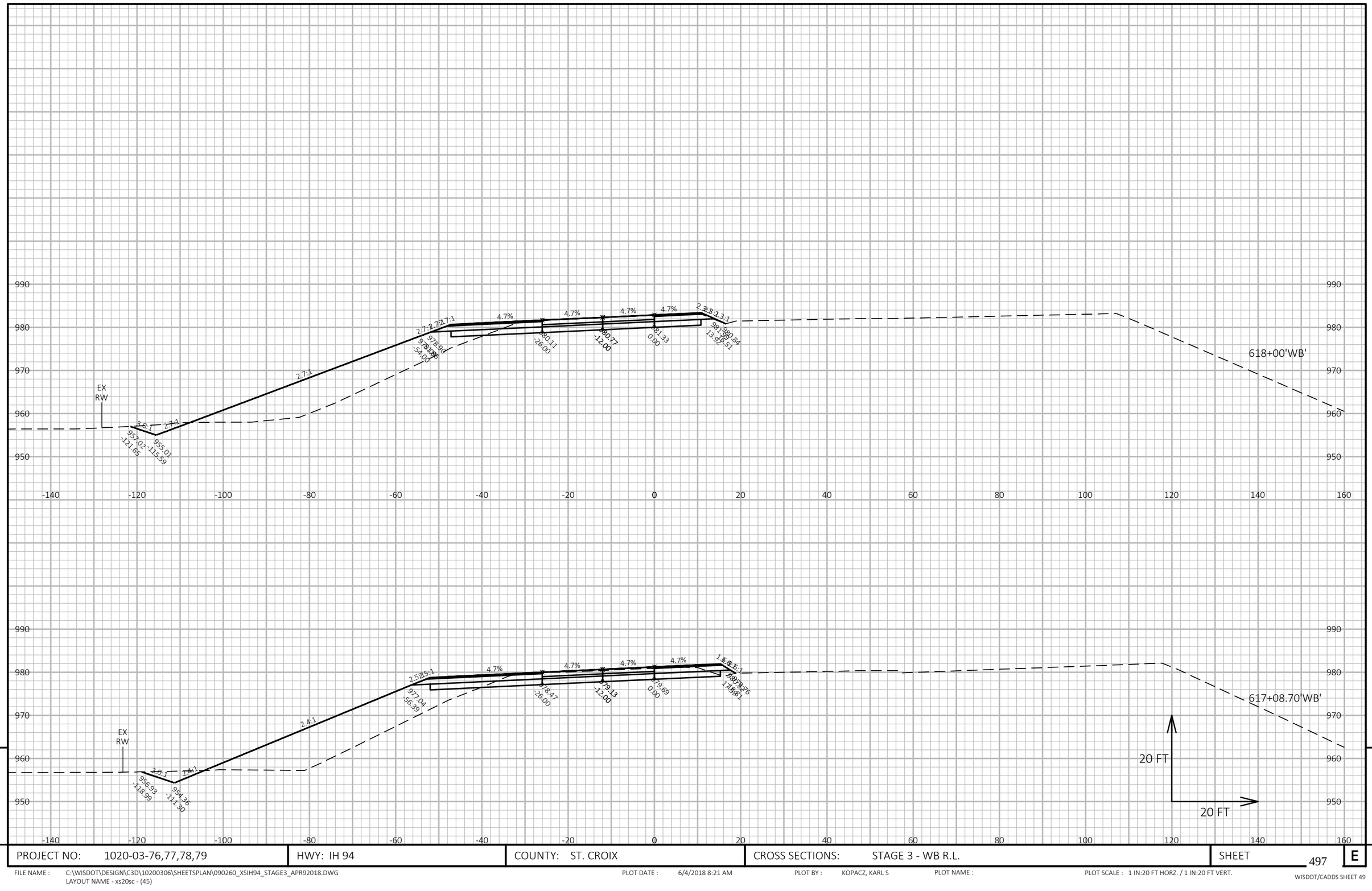
PLOT DATE : 6/4/2018 8:20 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

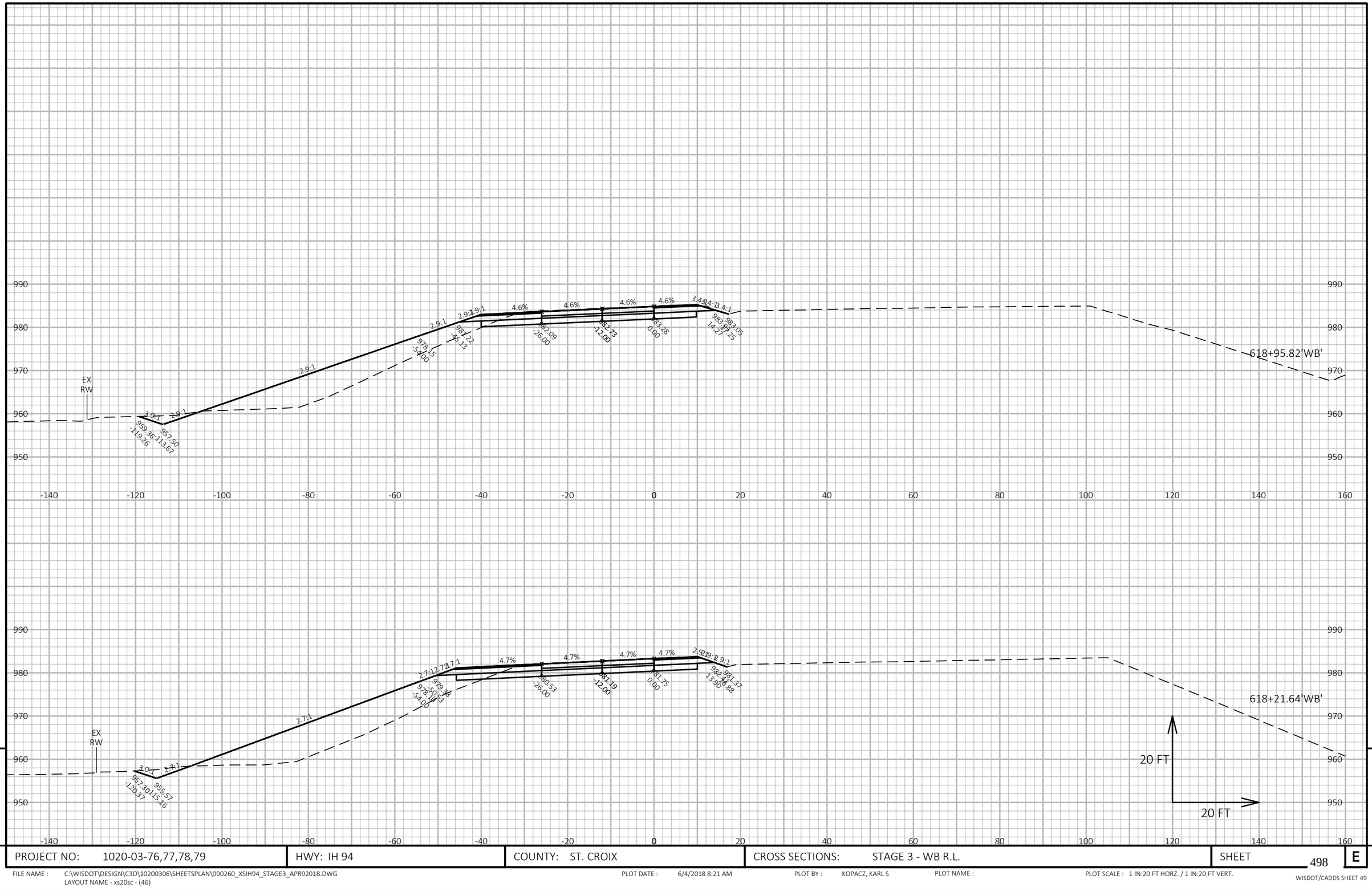
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 497	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (45)

PLOT DATE : 6/4/2018 8:21 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



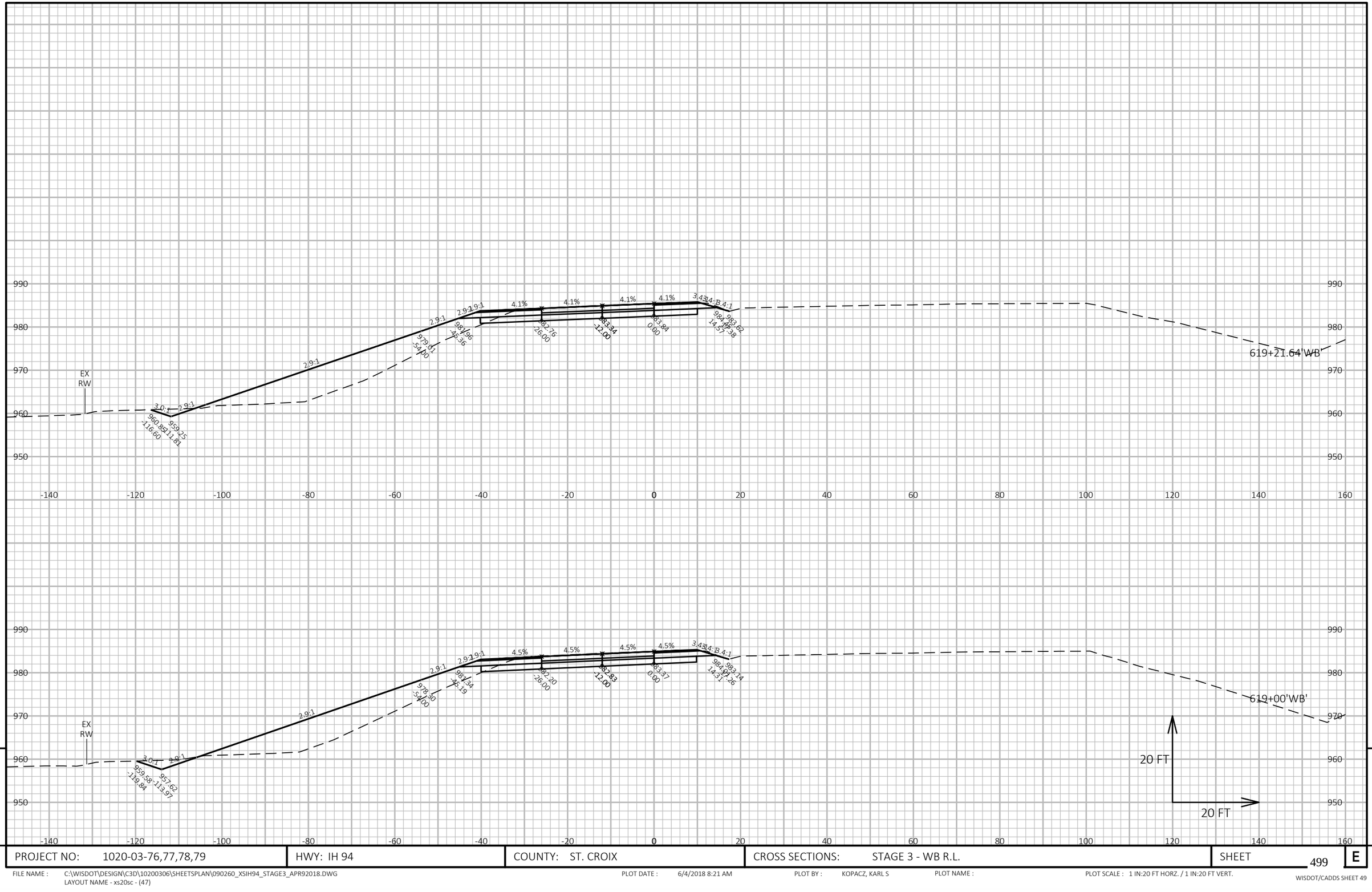
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 498	E

9

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (46)

PLOT DATE : 6/4/2018 8:21 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

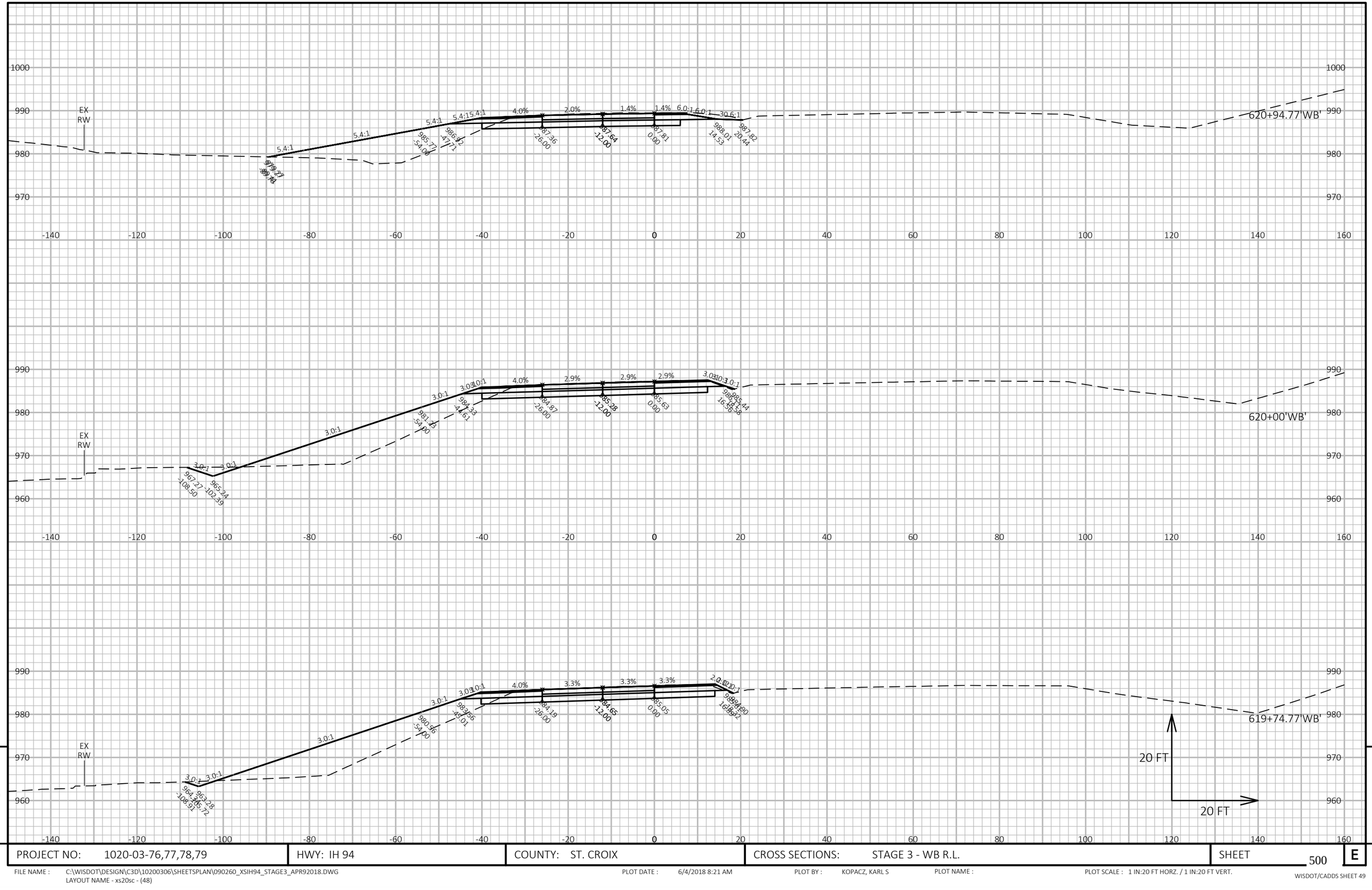
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 499	E

9

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (47)

PLOT DATE : 6/4/2018 8:21 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

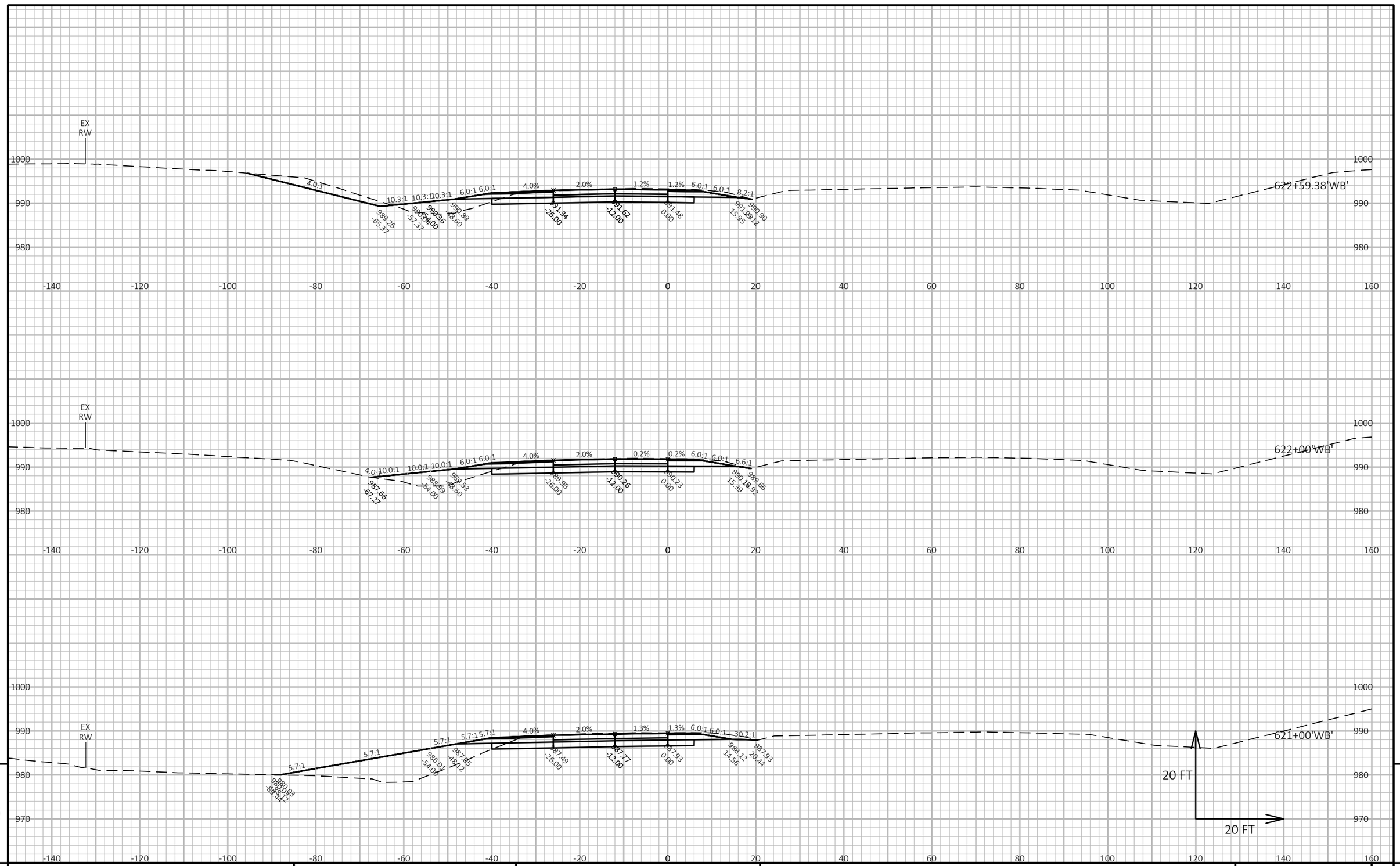


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 500	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (48)

PLOT DATE : 6/4/2018 8:21 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



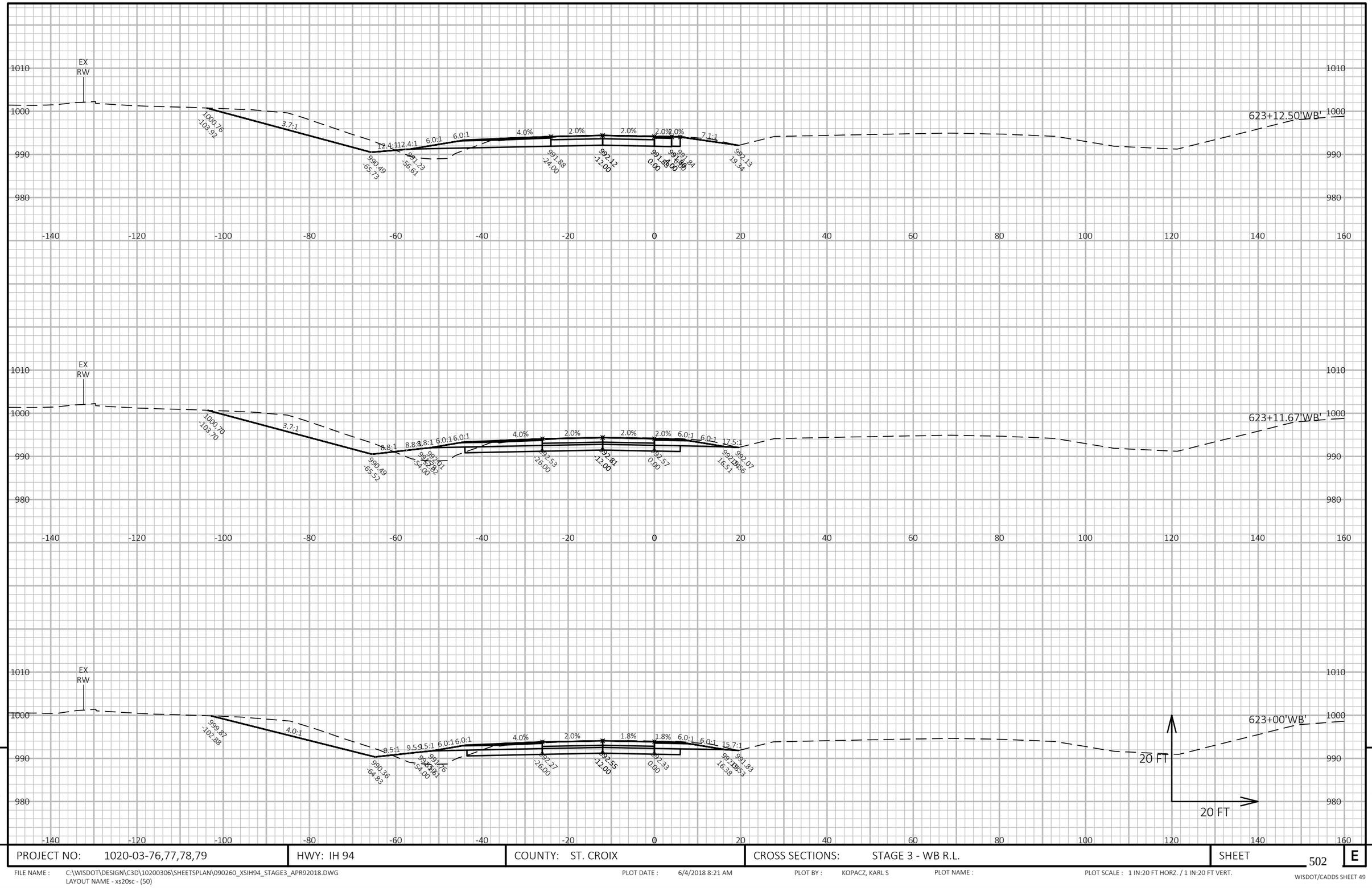
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 501	E

9

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (49)

PLOT DATE : 6/4/2018 8:21 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 502	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (50)

PLOT DATE : 6/4/2018 8:21 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

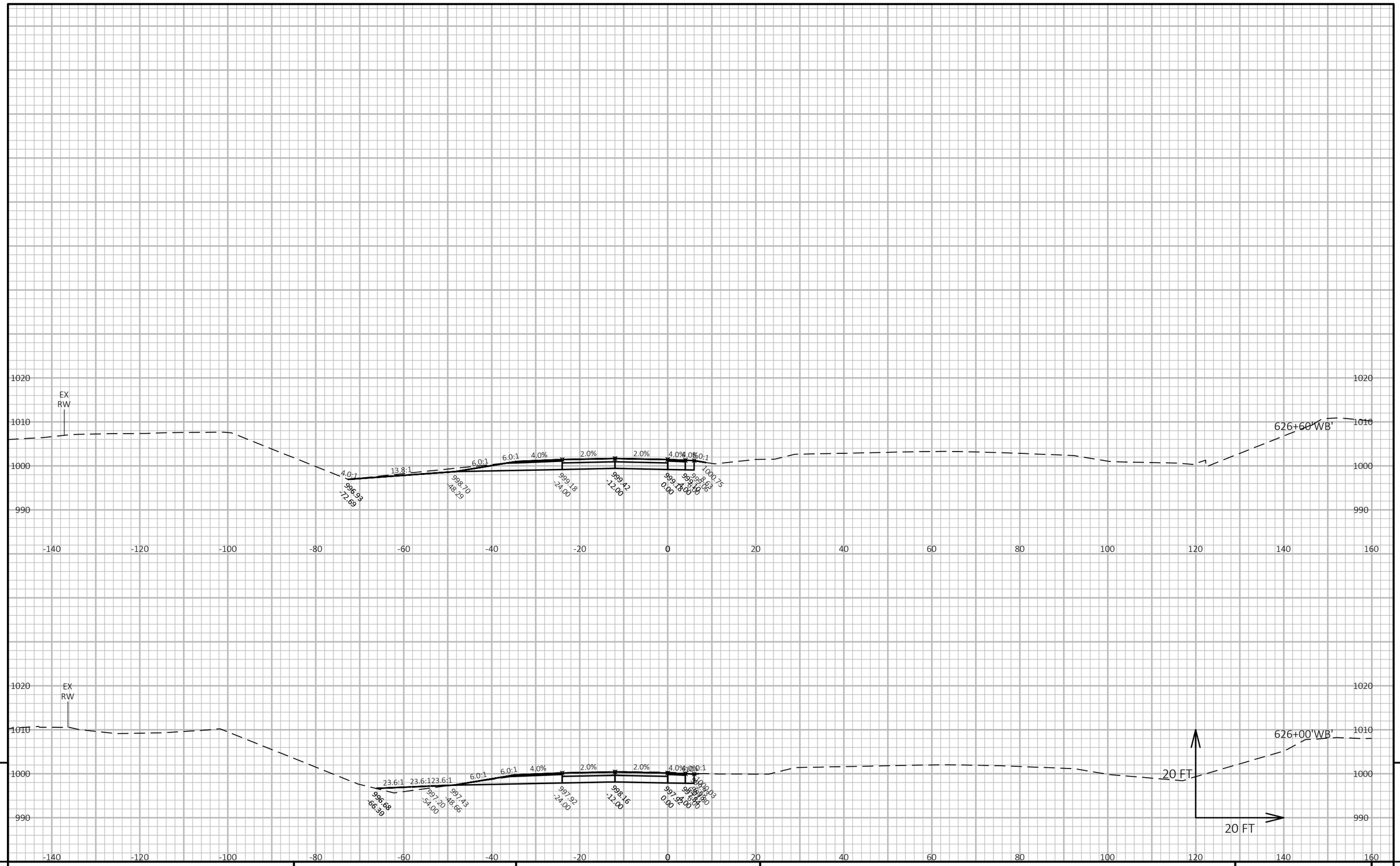
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 503 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (51)

PLOT DATE : 6/4/2018 8:22 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

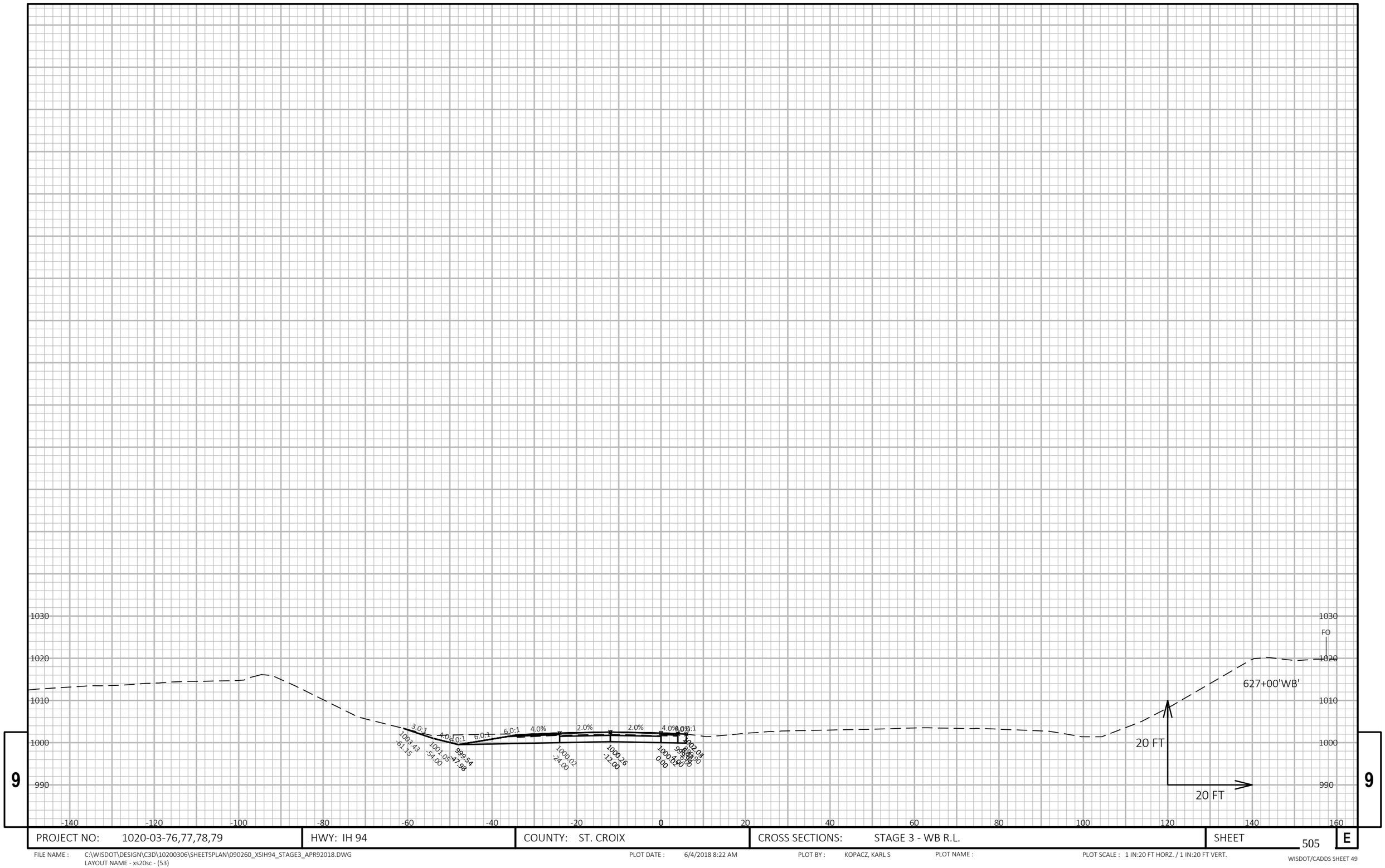


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 504 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (52)

PLOT DATE : 6/4/2018 8:22 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



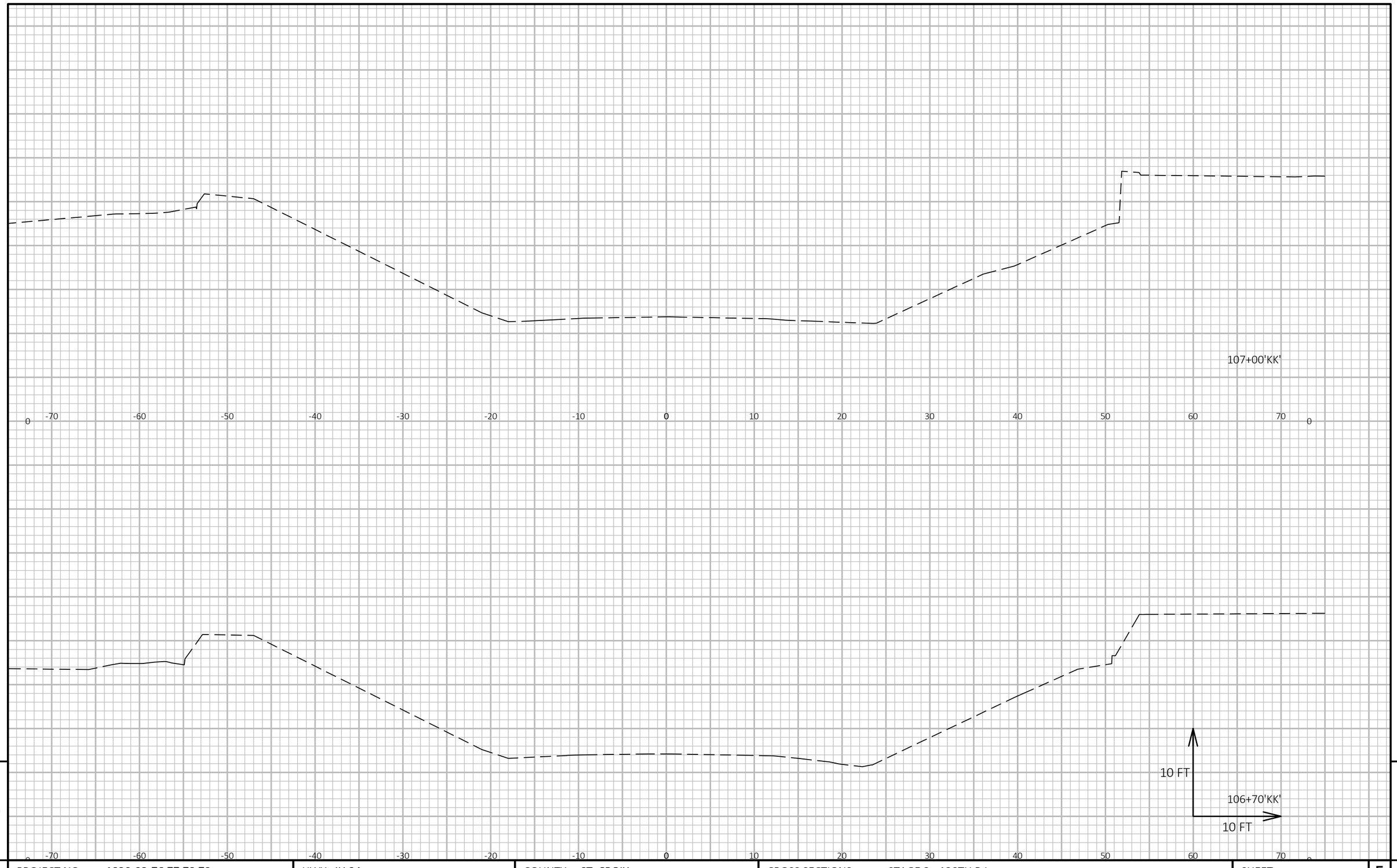
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - WB R.L.	SHEET 505	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090260_XSIH94_STAGE3_APR92018.DWG
LAYOUT NAME - xs20sc - (53)

PLOT DATE : 6/4/2018 8:22 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



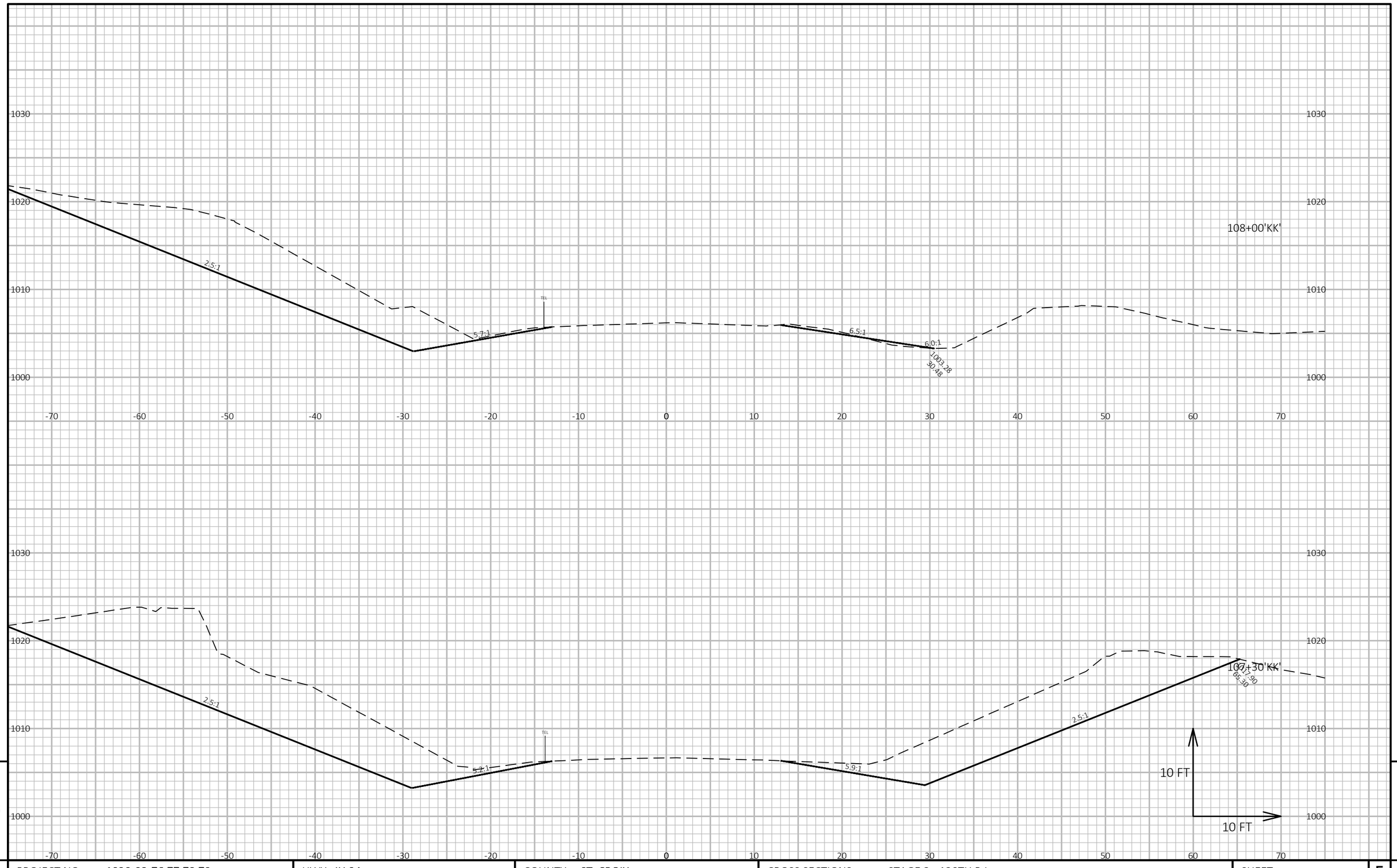
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - 130TH R.L.	SHEET 506	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage3 - (1)

PLOT DATE : 6/4/2018 8:59 AM PLOT BY : KOPACZ, KARL S PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - 130TH R.L.	SHEET 507	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage3 - (2)

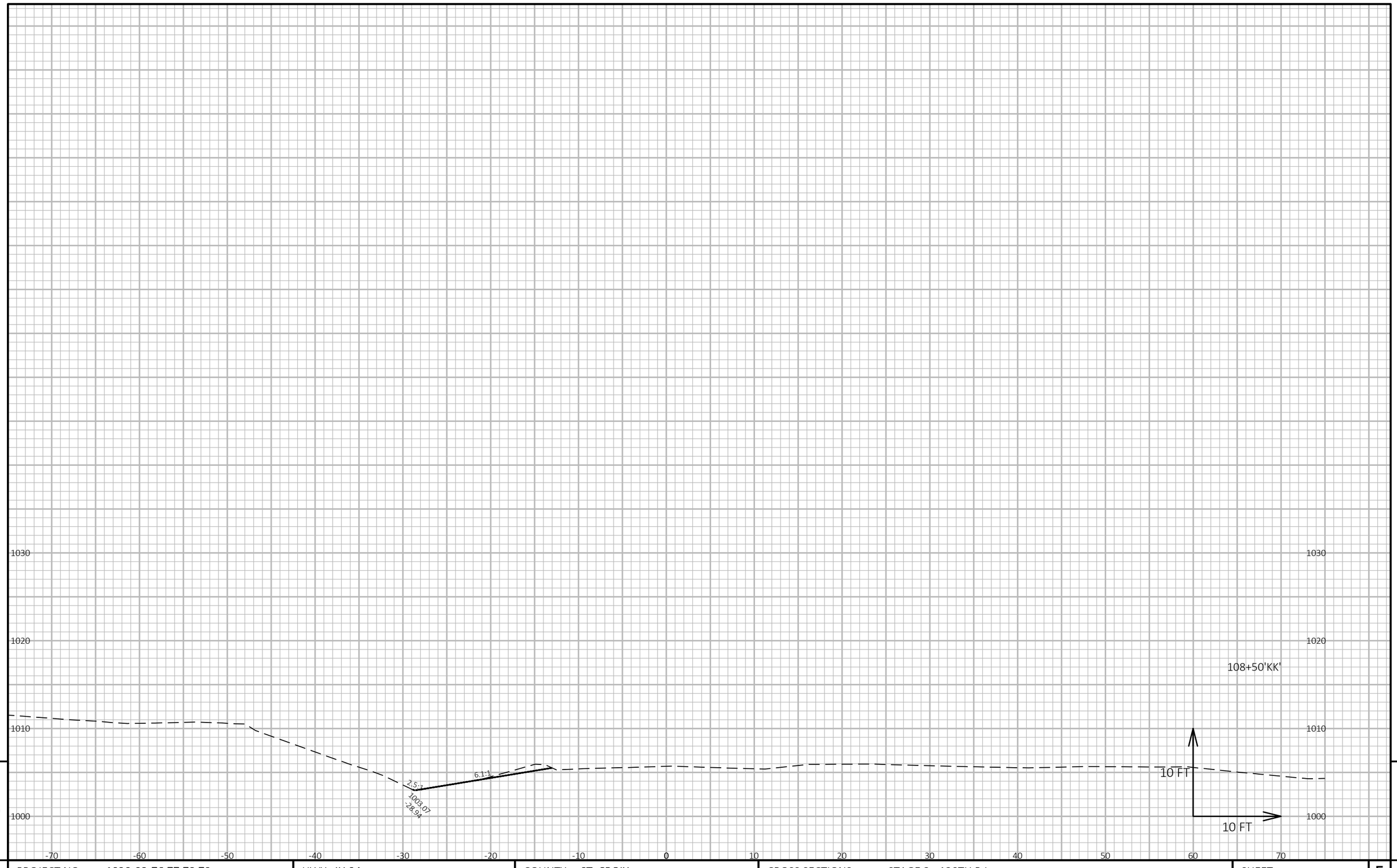
PLOT DATE : 6/4/2018 8:59 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



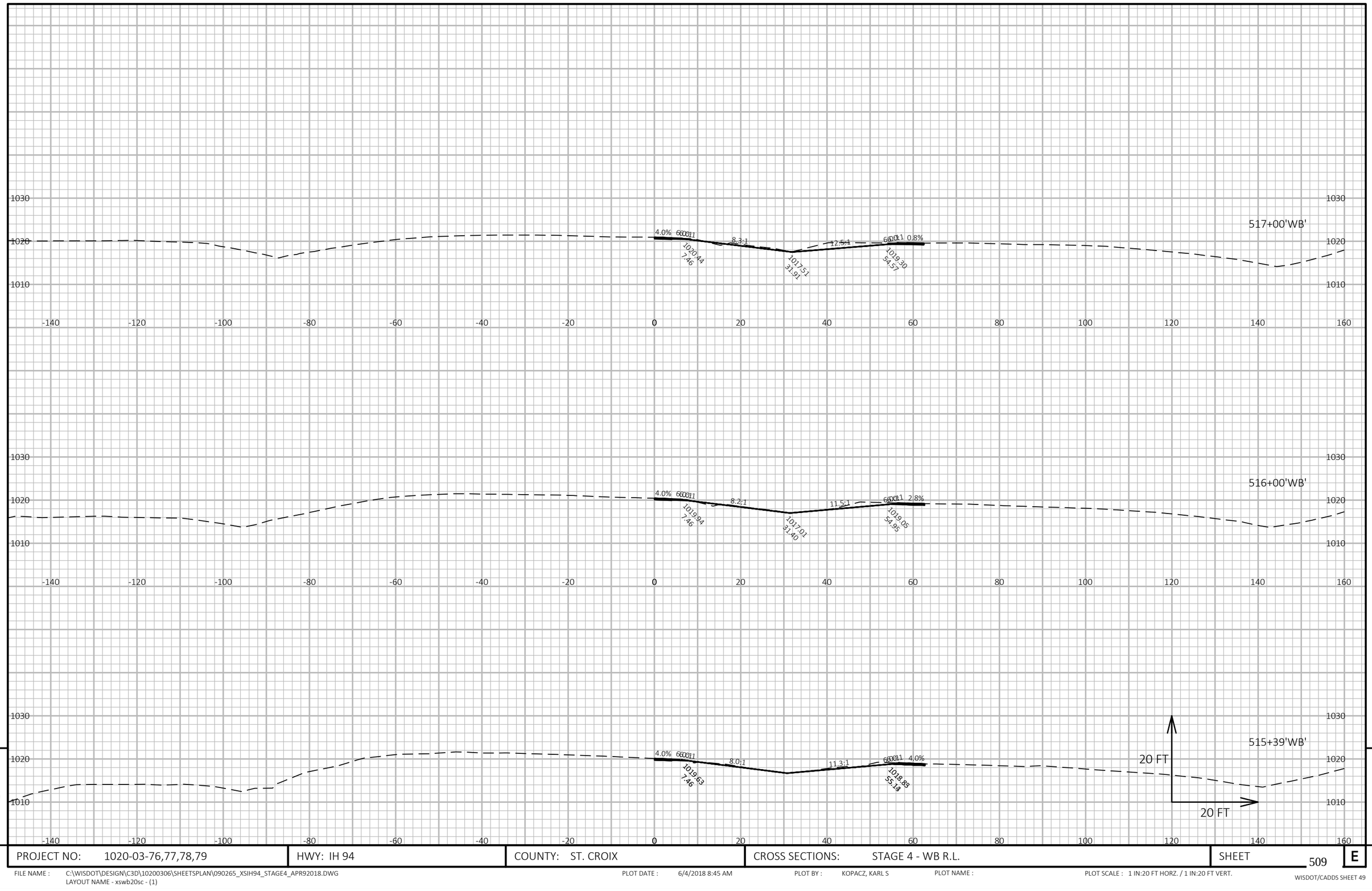
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 3 - 130TH R.L.	SHEET 508	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090251_XS130TH_STAGE1_02202018.DWG
LAYOUT NAME - kkstage3 - (3)

PLOT DATE : 6/4/2018 8:59 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

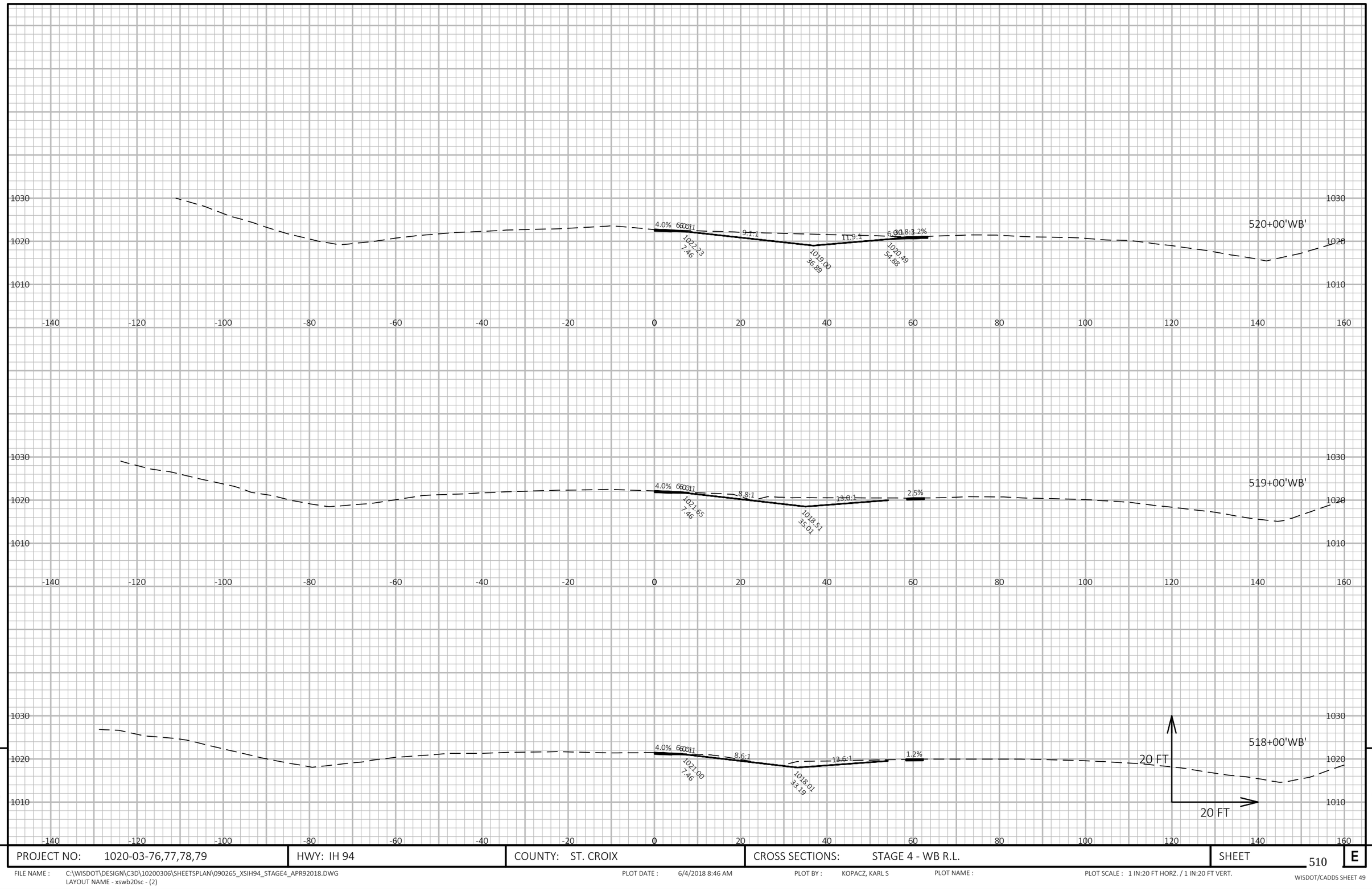


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 509	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (1)

PLOT DATE : 6/4/2018 8:45 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 510	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (2)

PLOT DATE : 6/4/2018 8:46 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

EX
RW

4.0%
6600
1022.99
7.46
8.7:1
12.6:1
1019.50
37.73
20 FT
20 FT
521+00'WB'

1030
1020
1010

-140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160

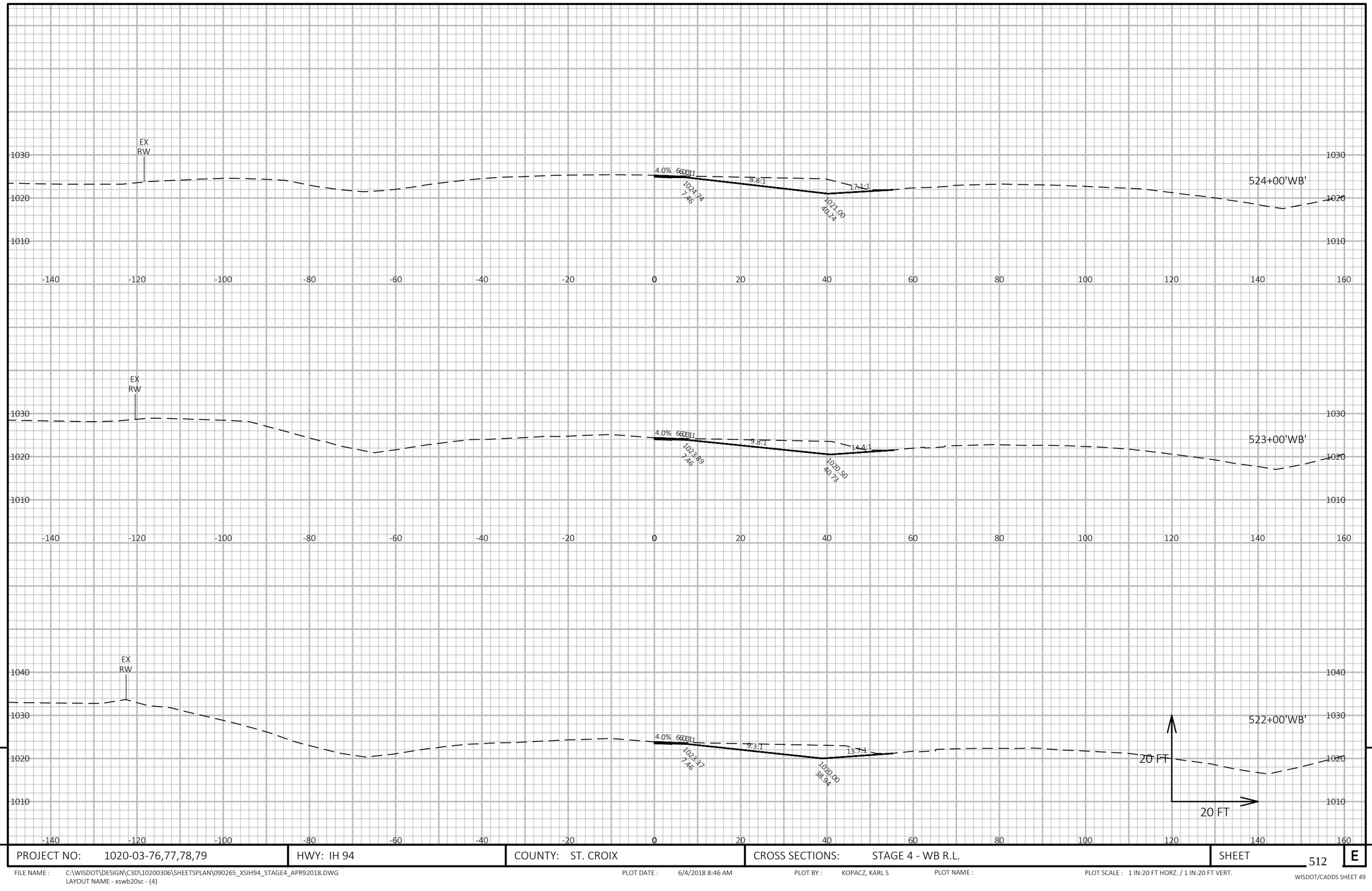
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 511	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (3)

PLOT DATE : 6/4/2018 8:46 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



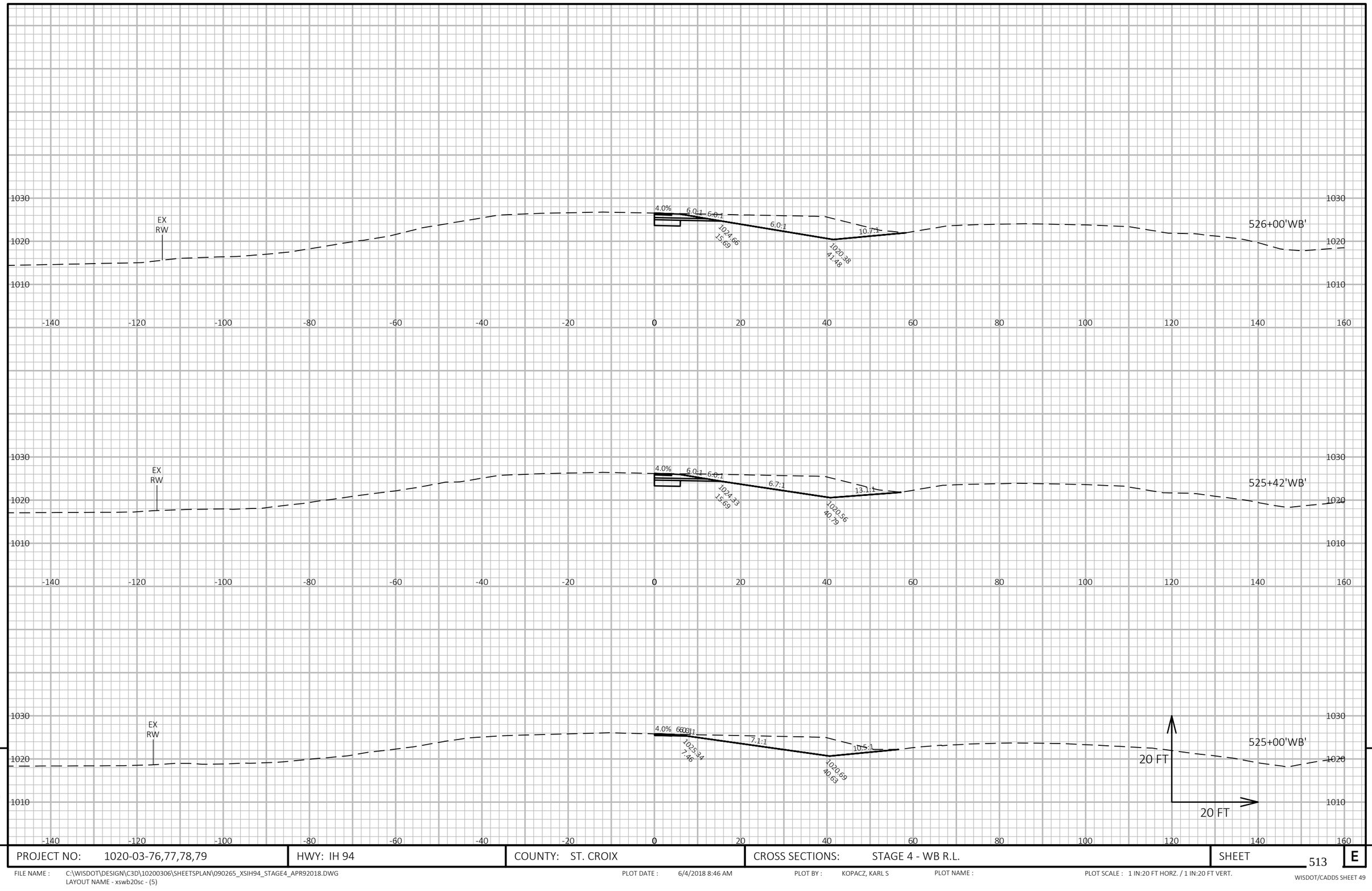
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 512	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (4)

PLOT DATE : 6/4/2018 8:46 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 513	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (5)

PLOT DATE : 6/4/2018 8:46 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

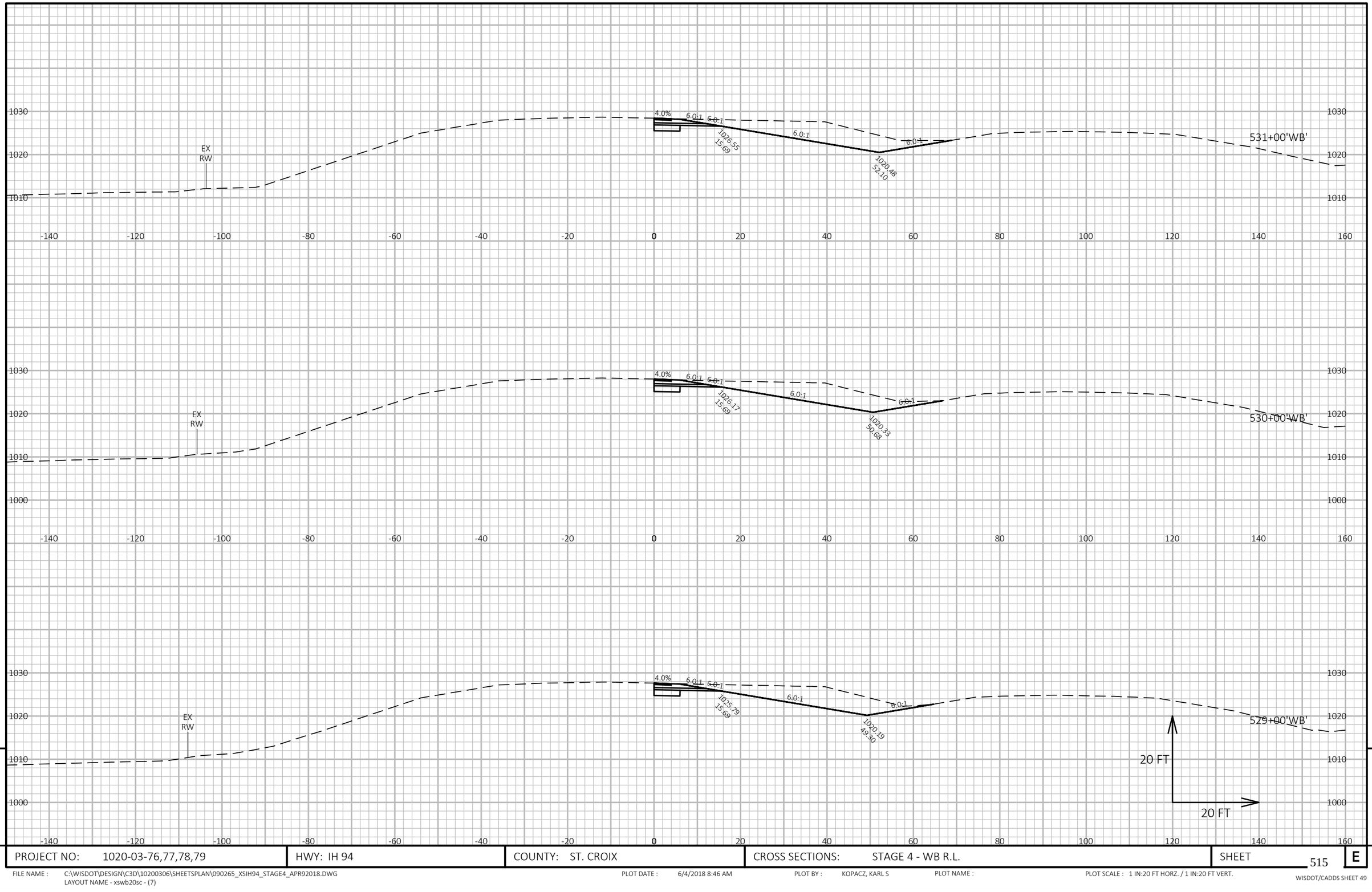
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 514 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (6)

PLOT DATE : 6/4/2018 8:46 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

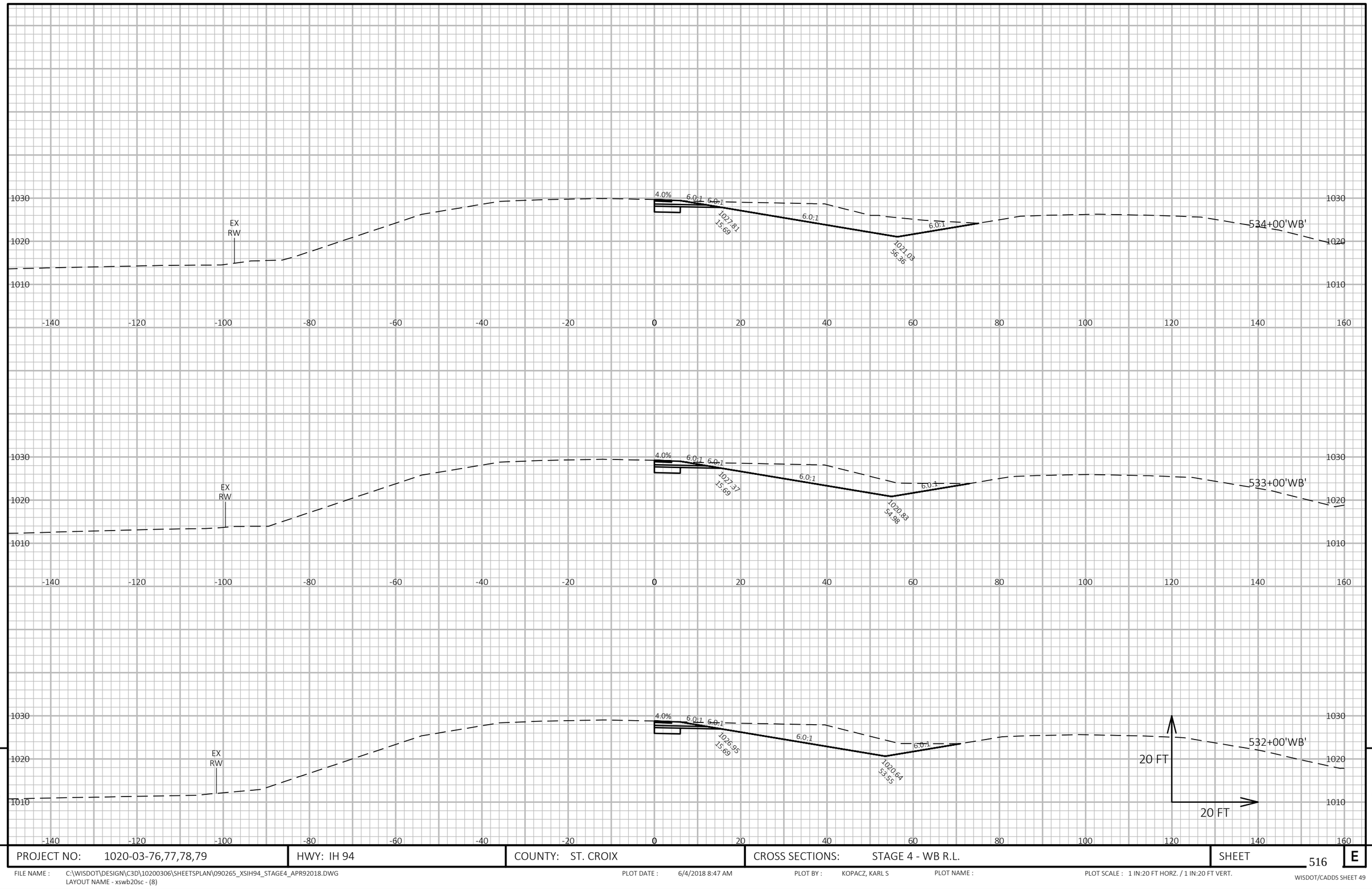
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 515	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (7)

PLOT DATE : 6/4/2018 8:46 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



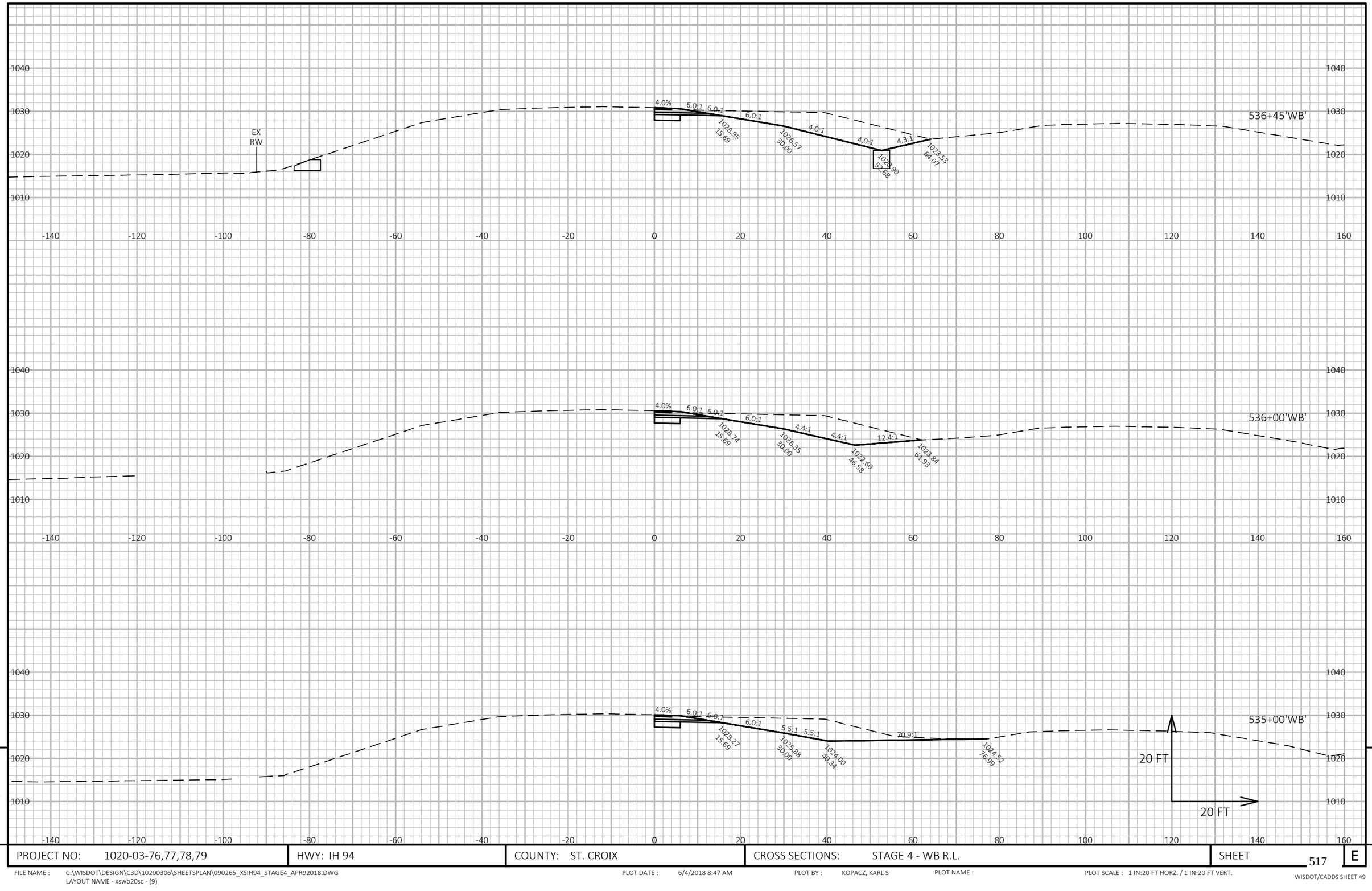
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 516	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (8)

PLOT DATE : 6/4/2018 8:47 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



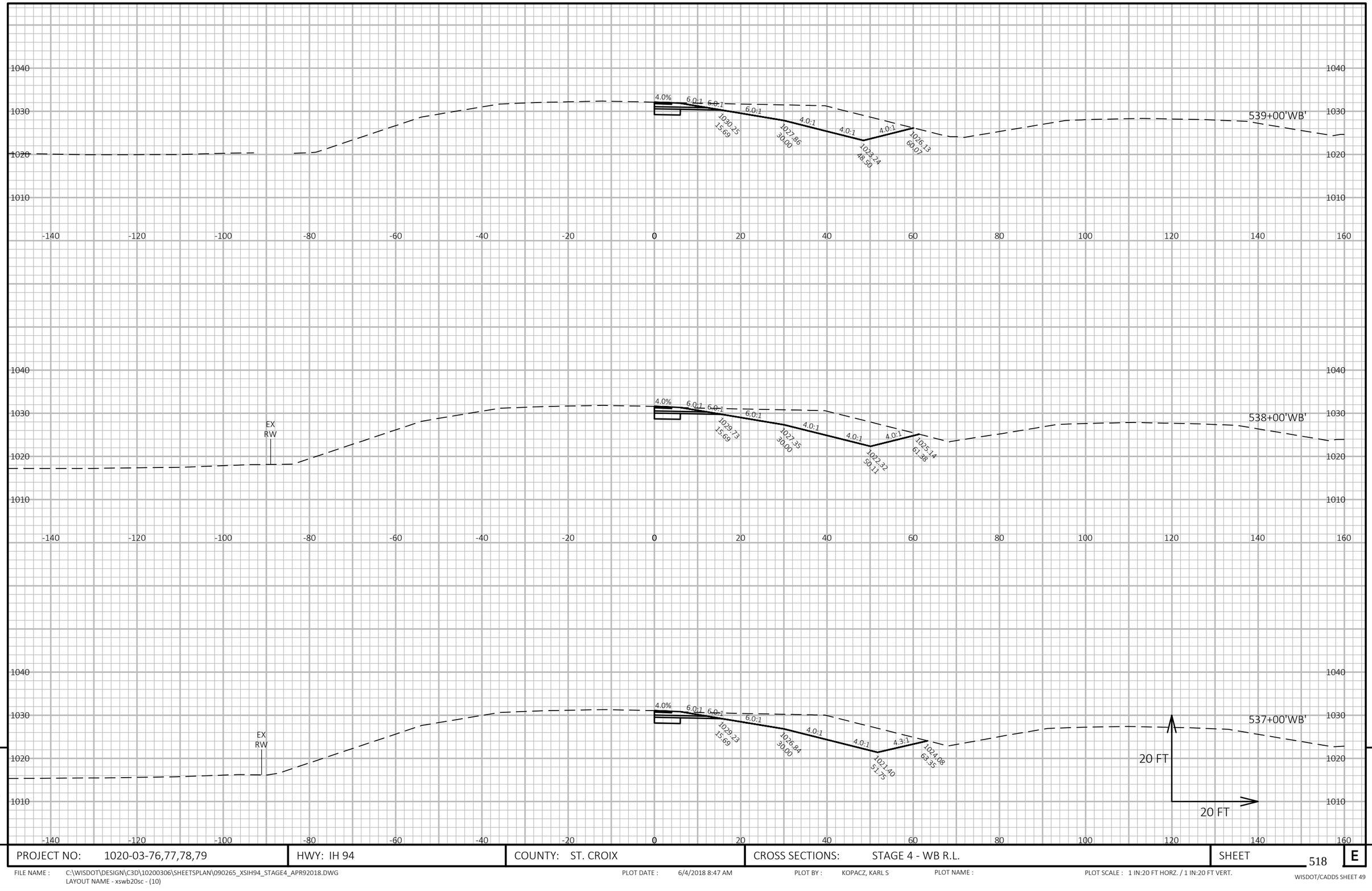
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 517	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (9)

PLOT DATE : 6/4/2018 8:47 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

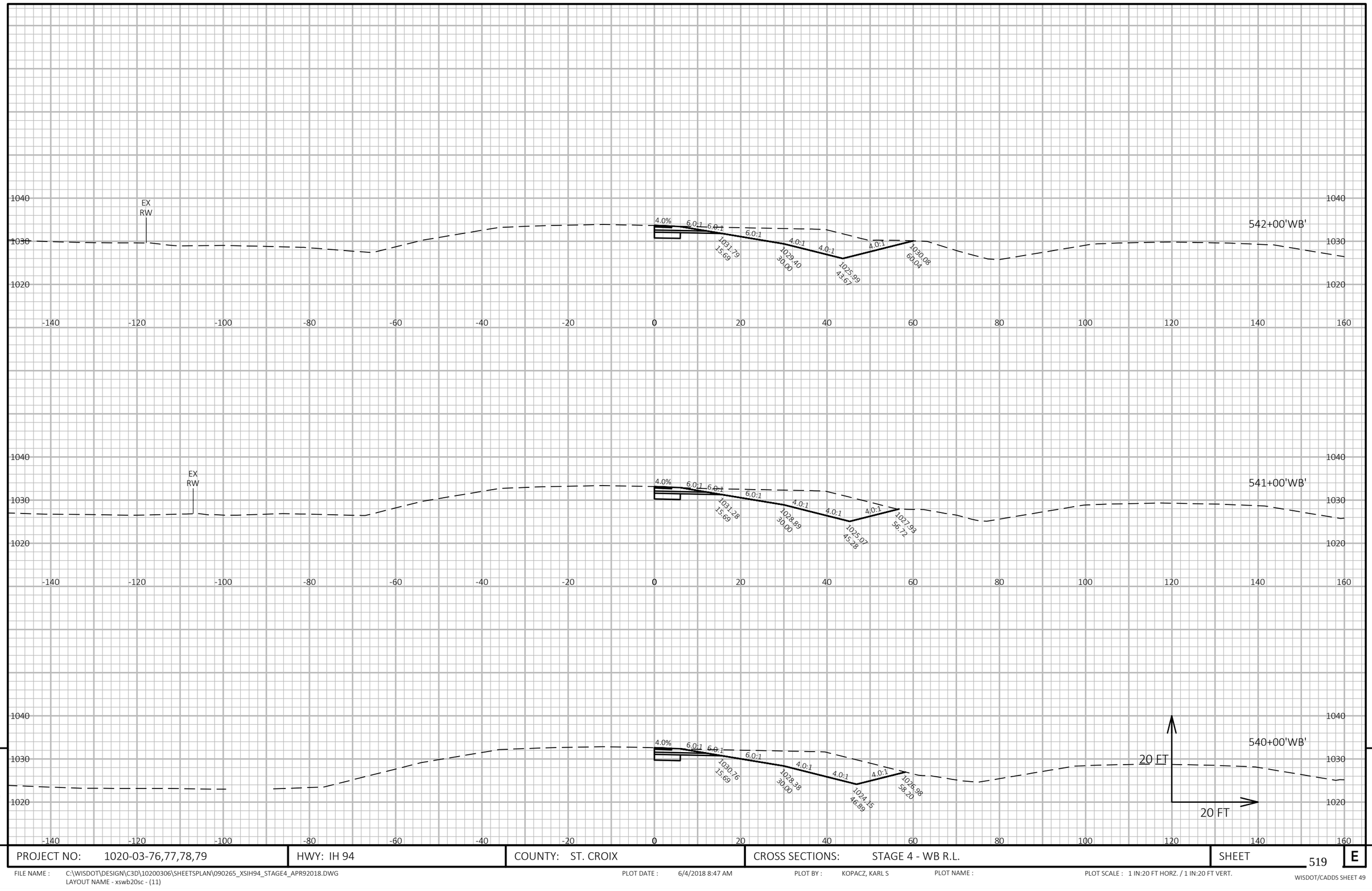


9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 518	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (10)
PLOT DATE : 6/4/2018 8:47 AM
PLOT BY : KOPACZ, KARL S
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49



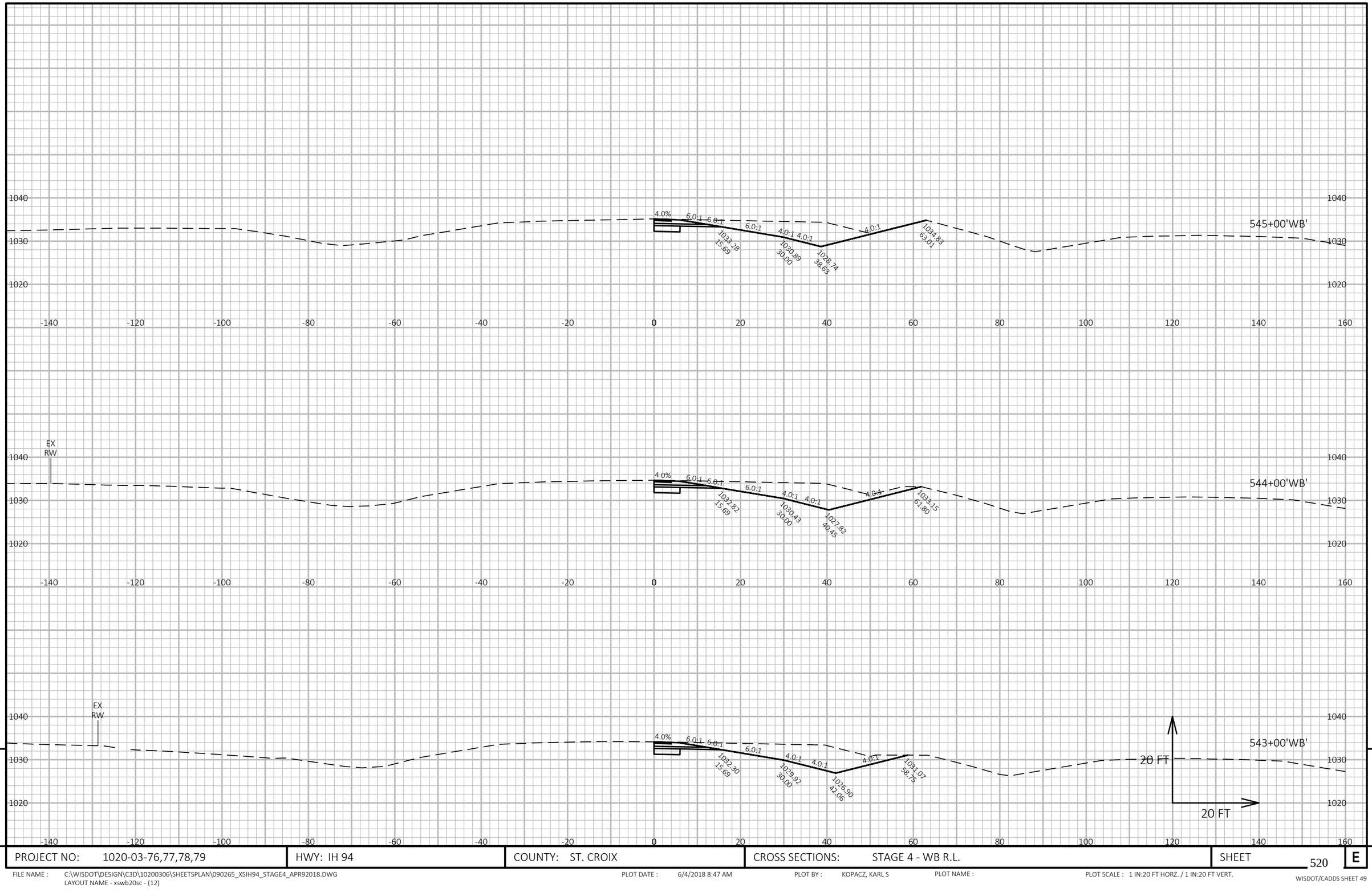
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 519	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (11)

PLOT DATE : 6/4/2018 8:47 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



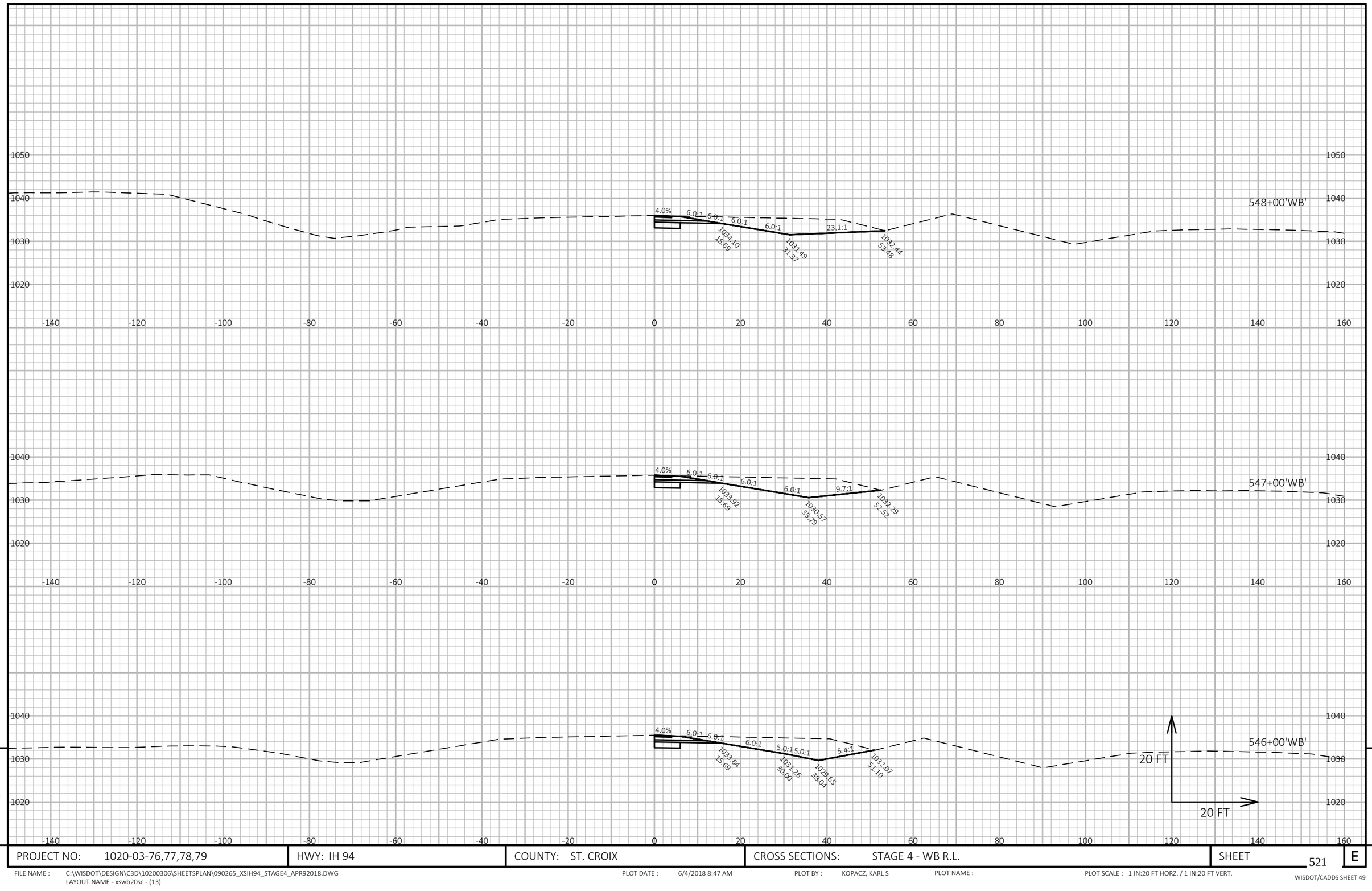
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 520	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (12)

PLOT DATE : 6/4/2018 8:47 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 521	E

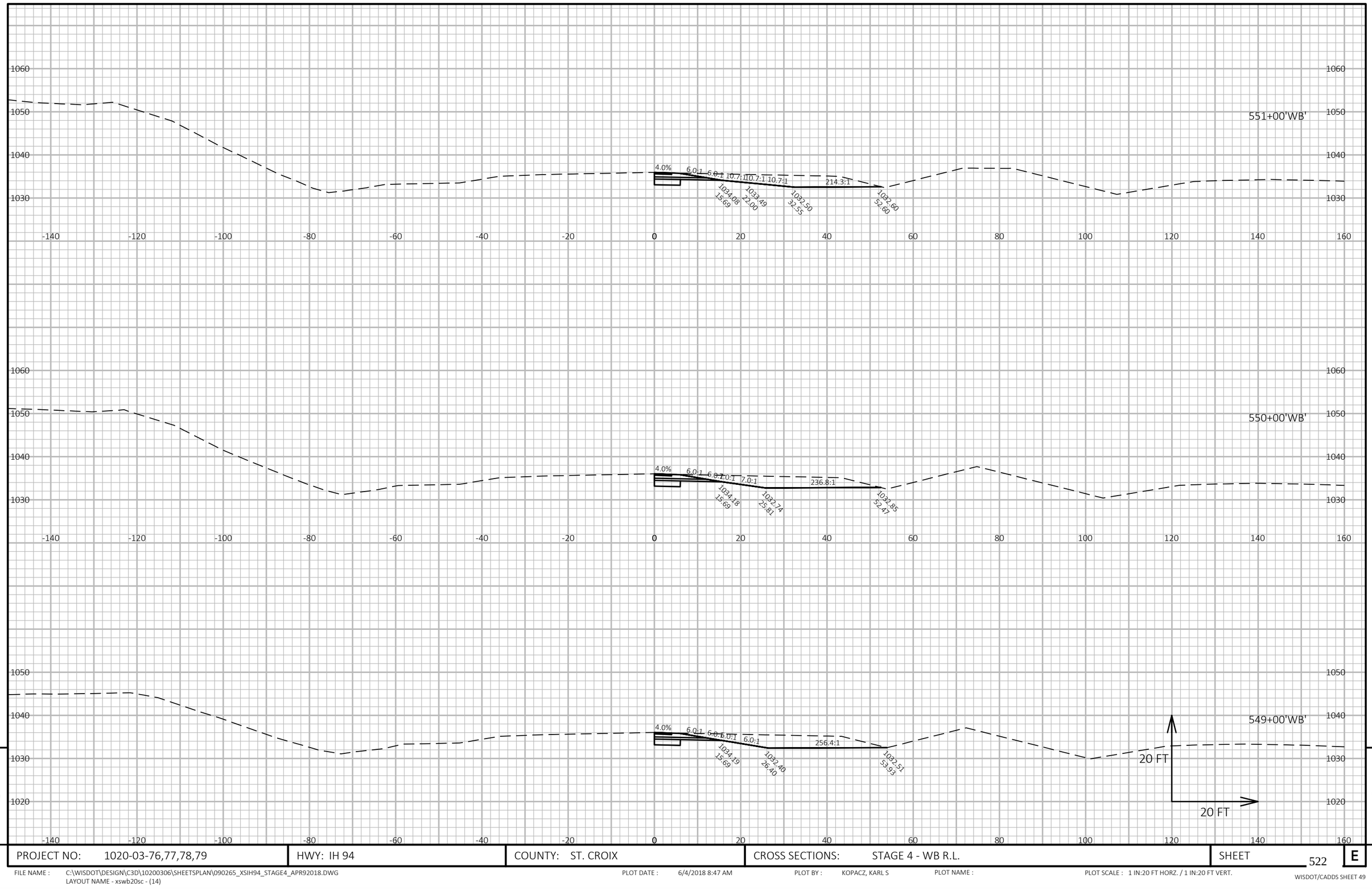
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (13)

PLOT DATE : 6/4/2018 8:47 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



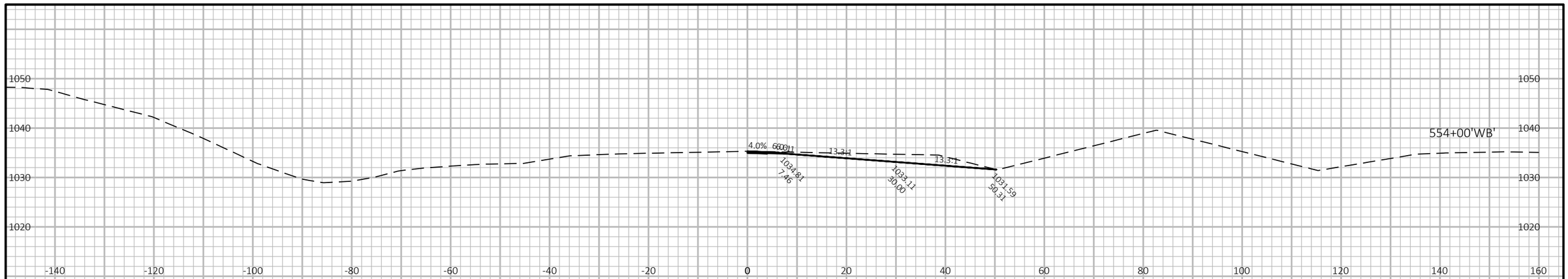
9

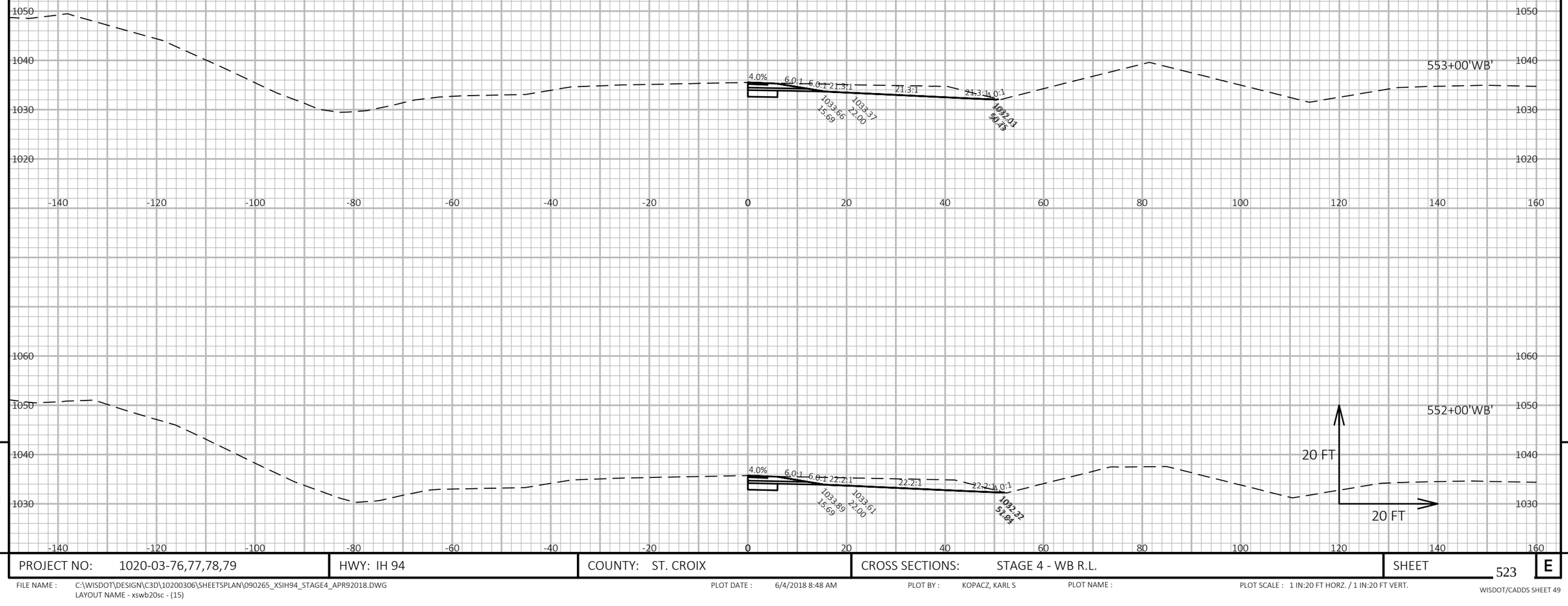
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 522	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (14)

PLOT DATE : 6/4/2018 8:47 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.





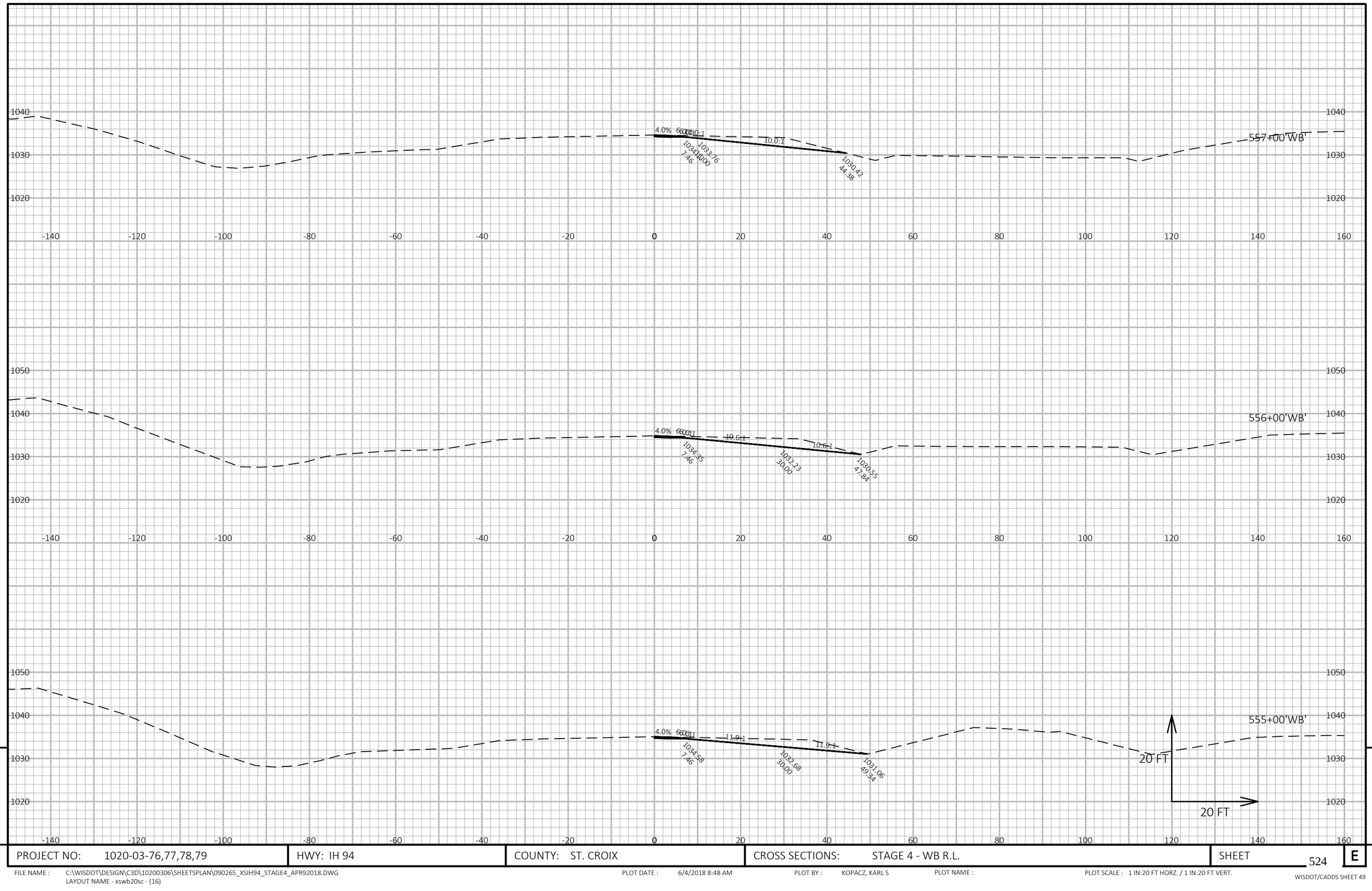
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 523	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (15)

PLOT DATE : 6/4/2018 8:48 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

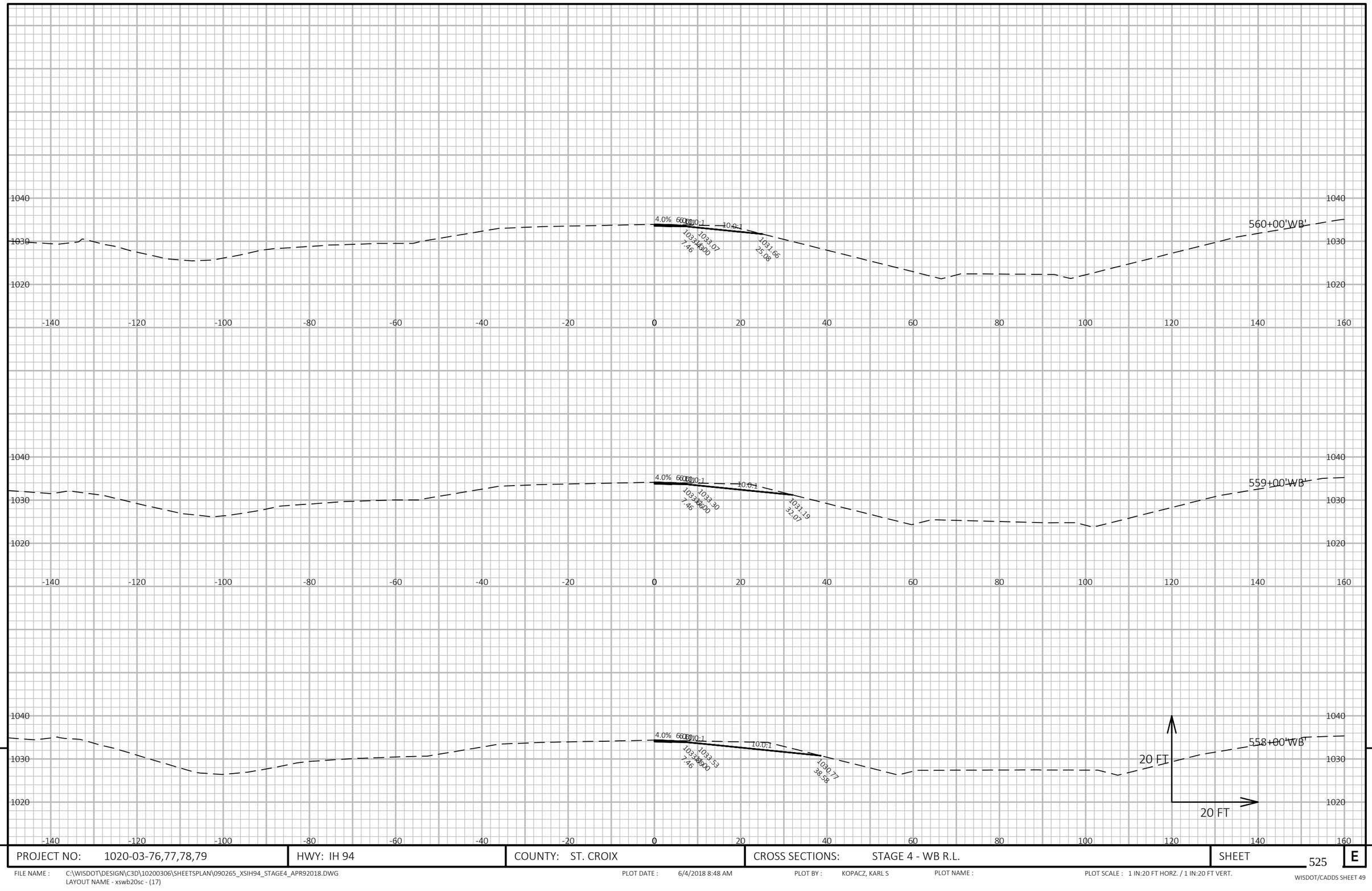


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 524	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (16)

PLOT DATE : 6/4/2018 8:48 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



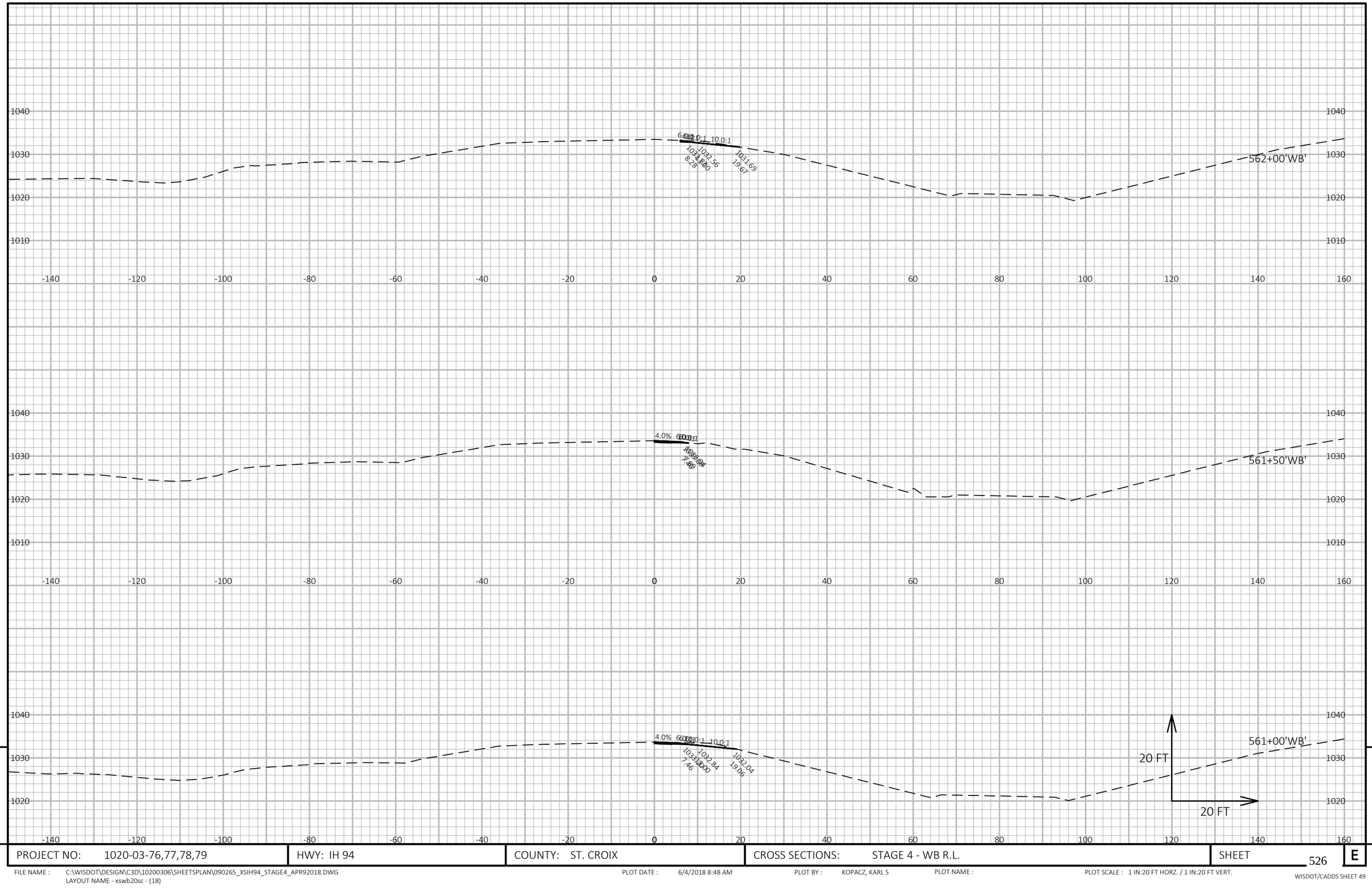
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 525	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (17)

PLOT DATE : 6/4/2018 8:48 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 526 E

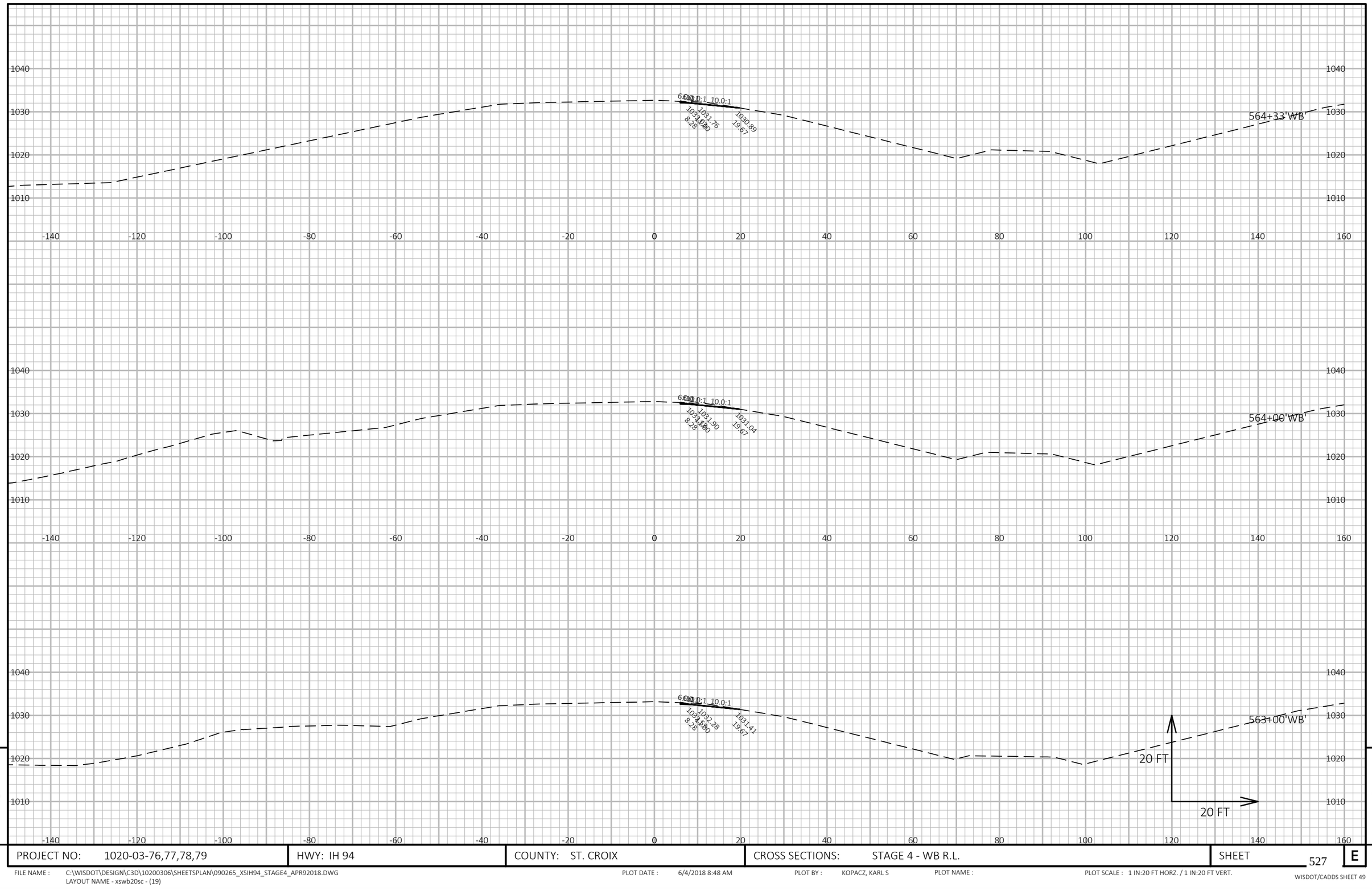
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (18)

PLOT DATE : 6/4/2018 8:48 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

9



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 527	E

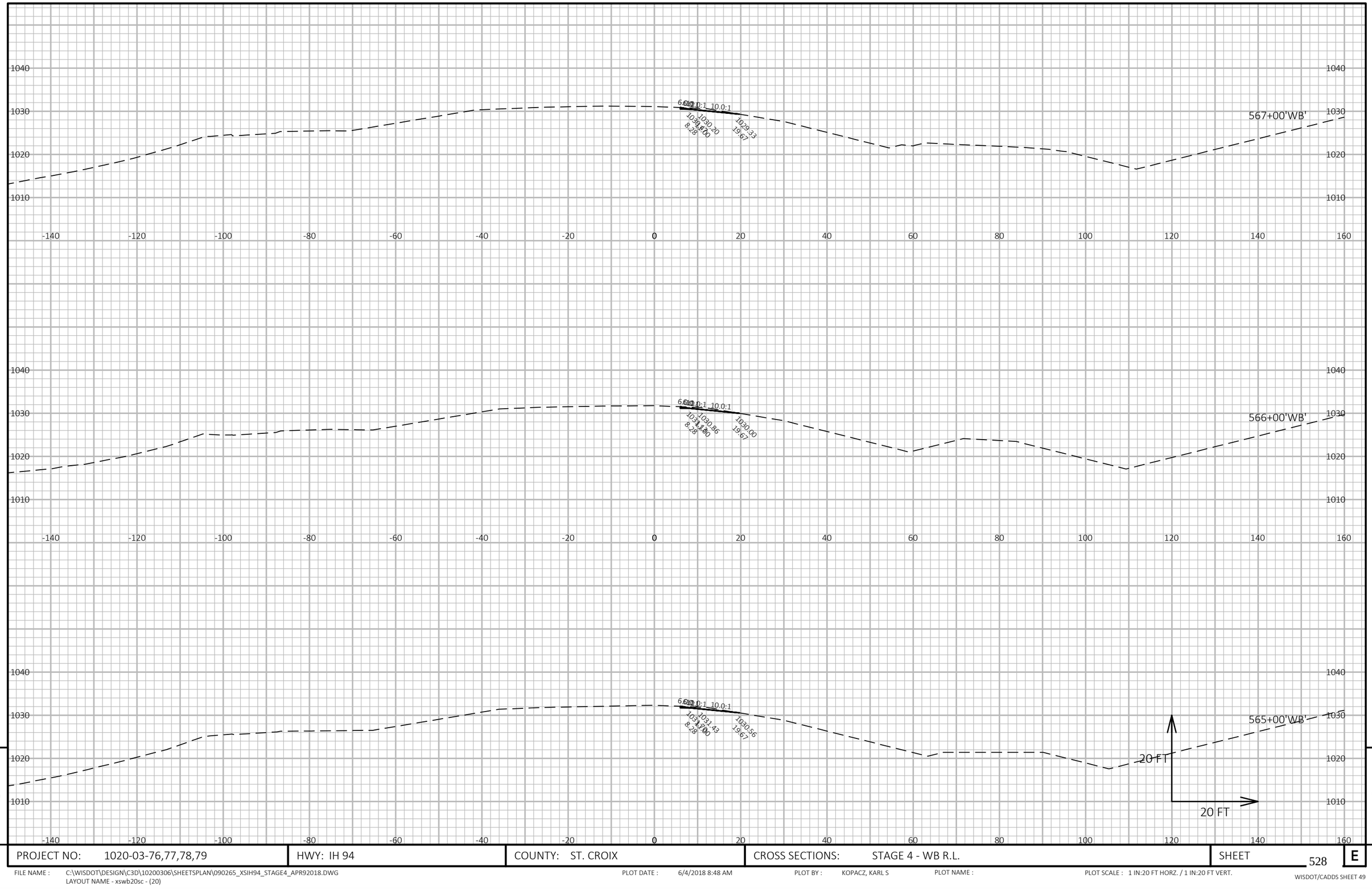
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (19)

PLOT DATE : 6/4/2018 8:48 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



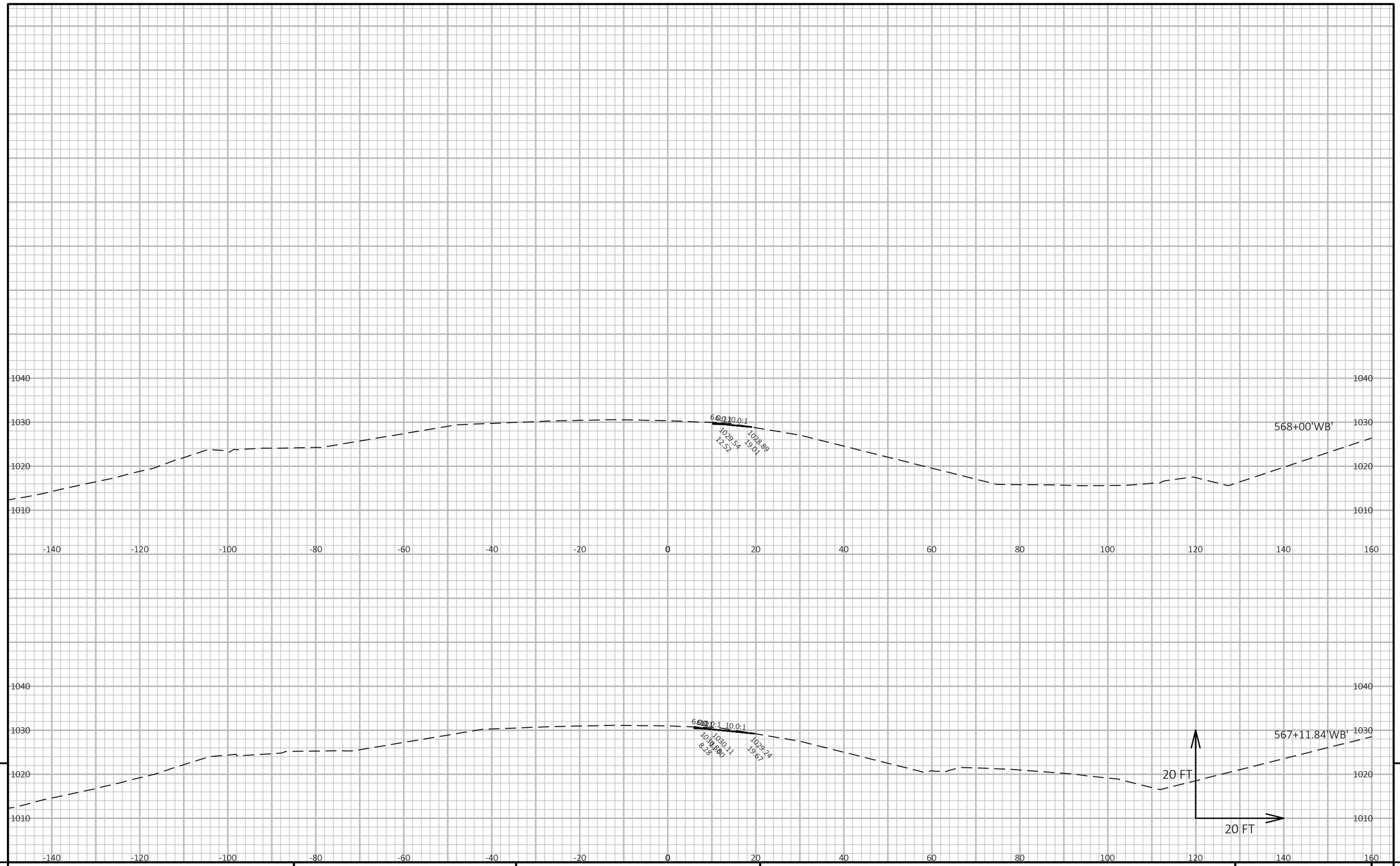
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 528	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (20)

PLOT DATE : 6/4/2018 8:48 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



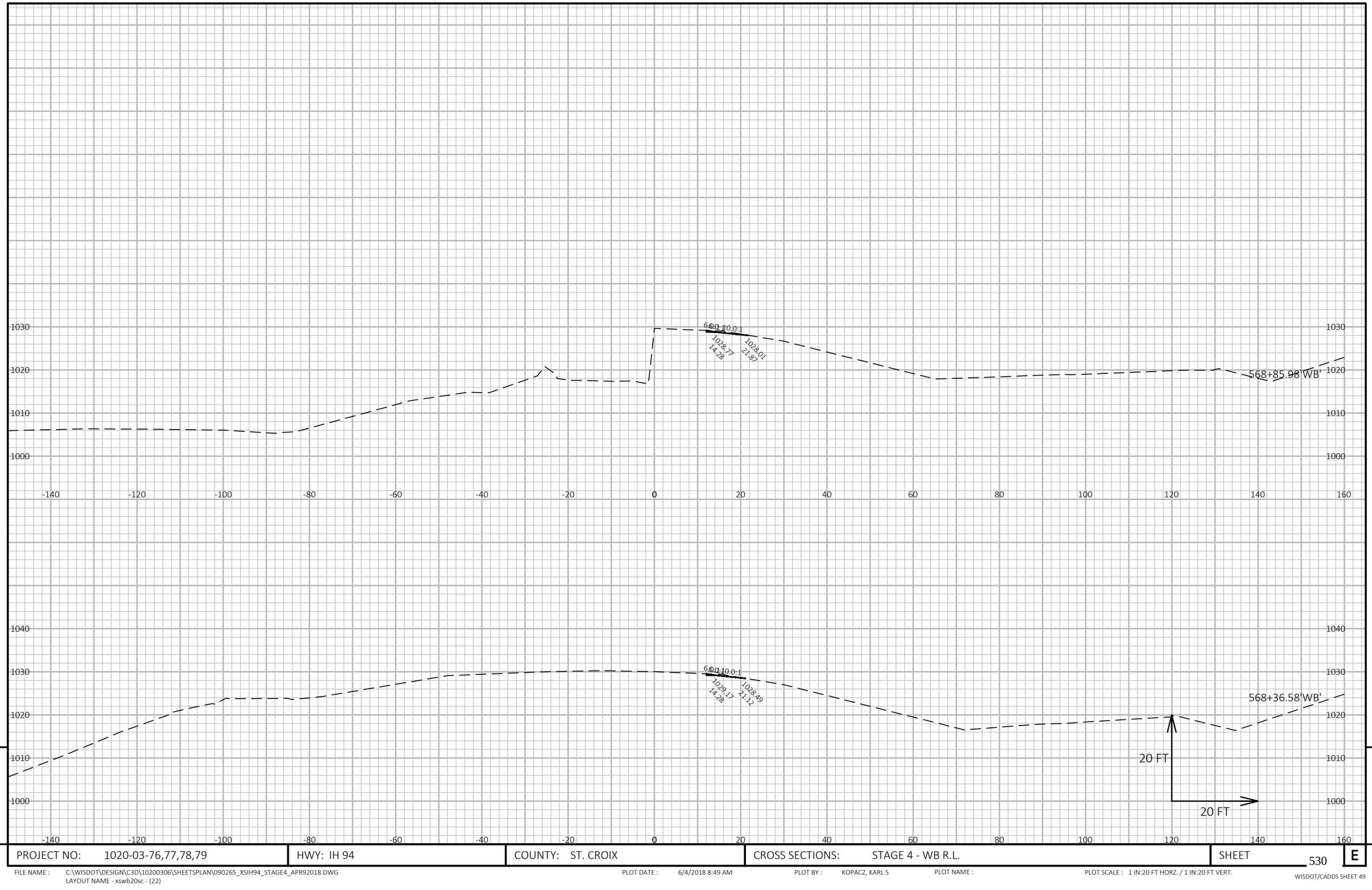
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 529 E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (21)

PLOT DATE : 6/4/2018 8:48 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



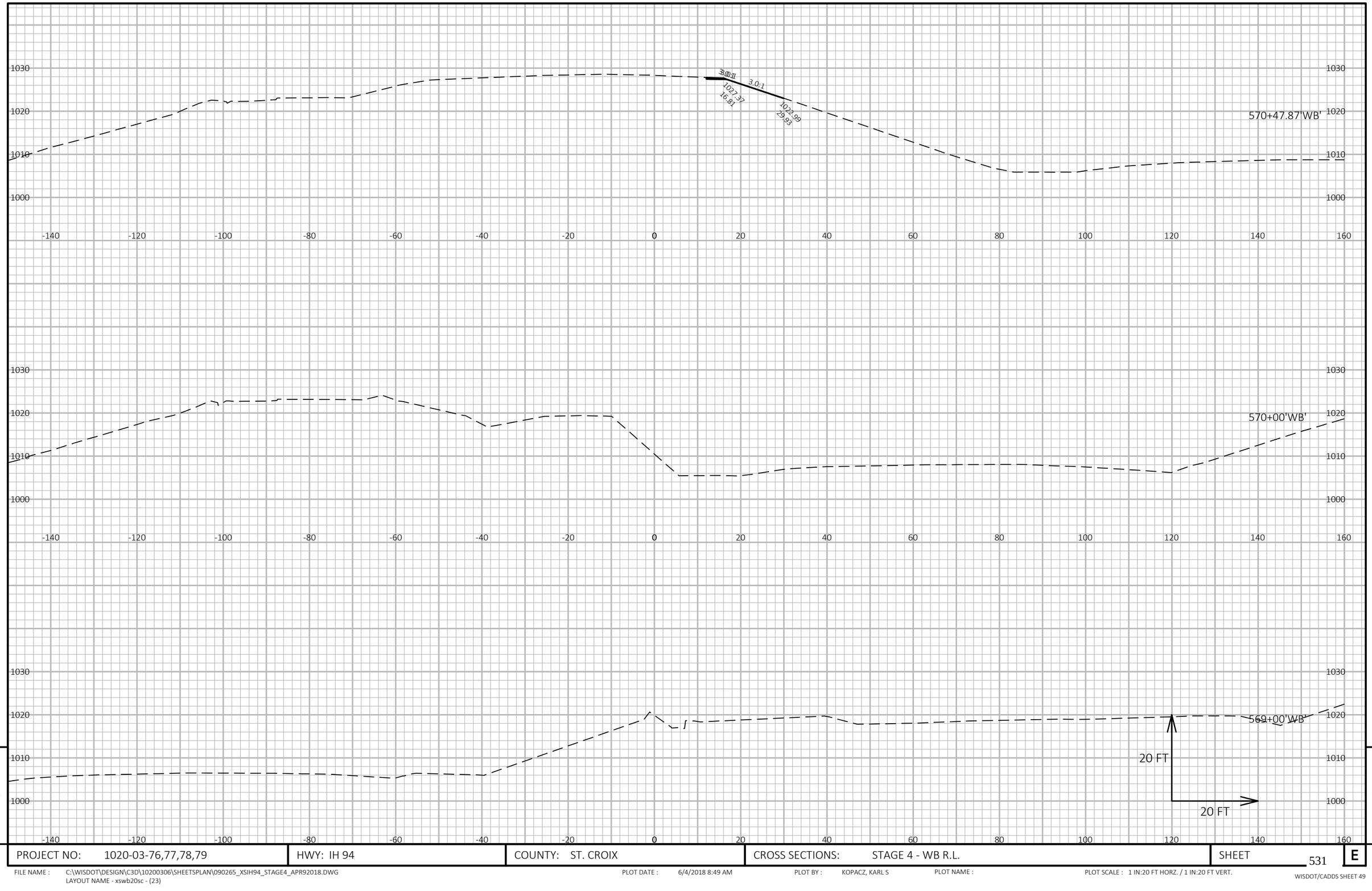
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 530	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (22)

PLOT DATE : 6/4/2018 8:49 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 531	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (23)

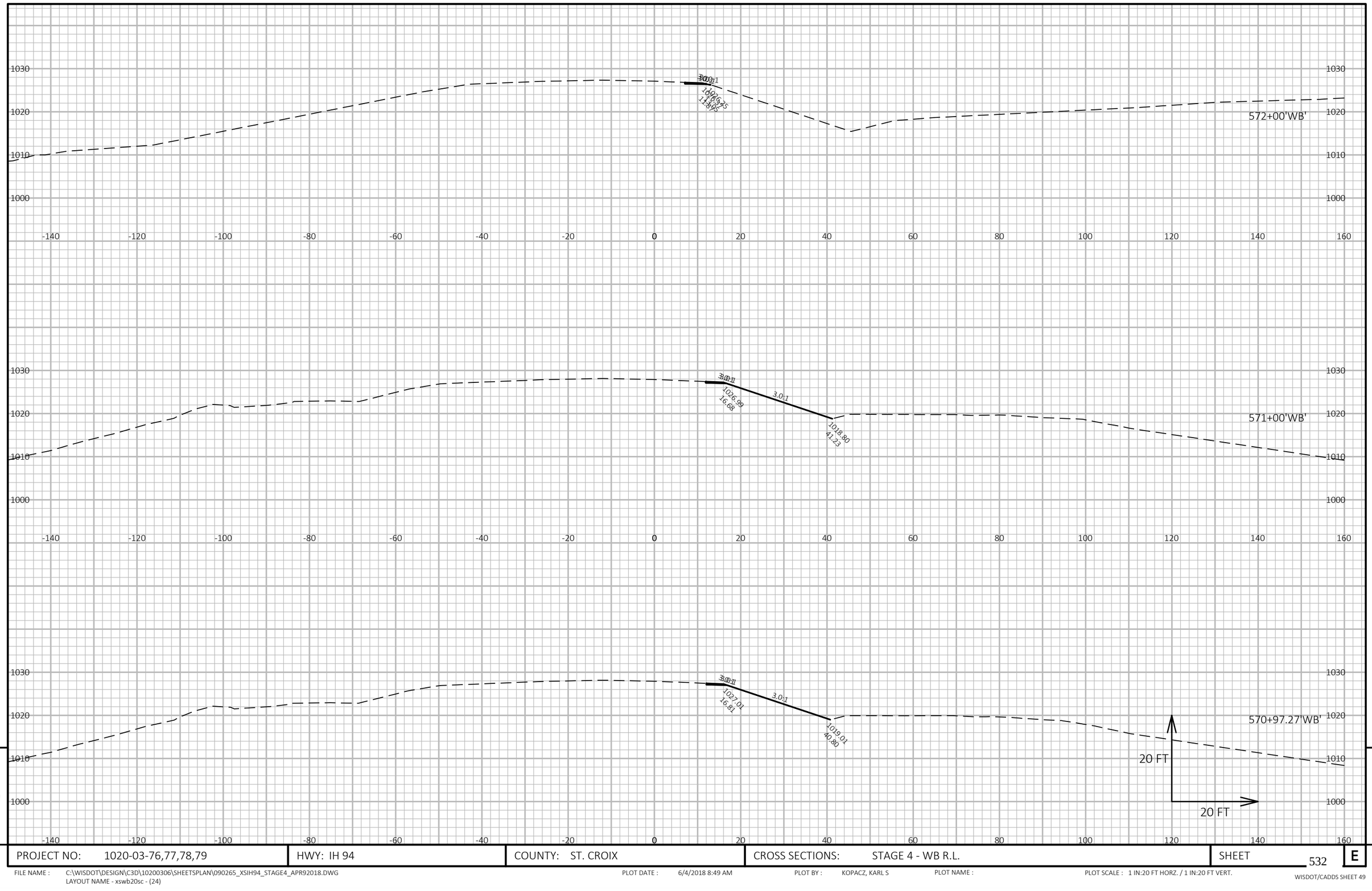
PLOT DATE : 6/4/2018 8:49 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

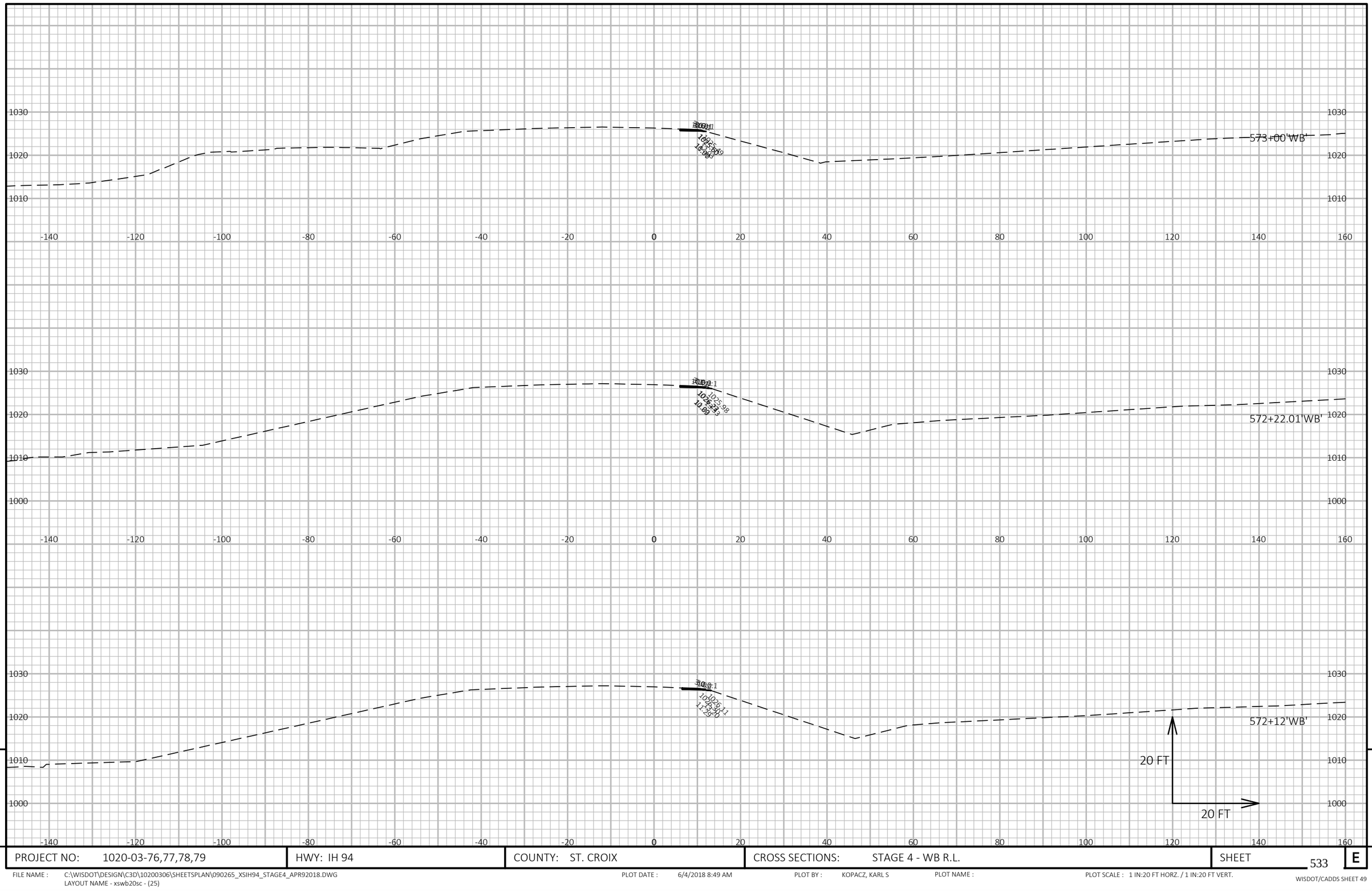
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 532	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (24)

PLOT DATE : 6/4/2018 8:49 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 533	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (25)

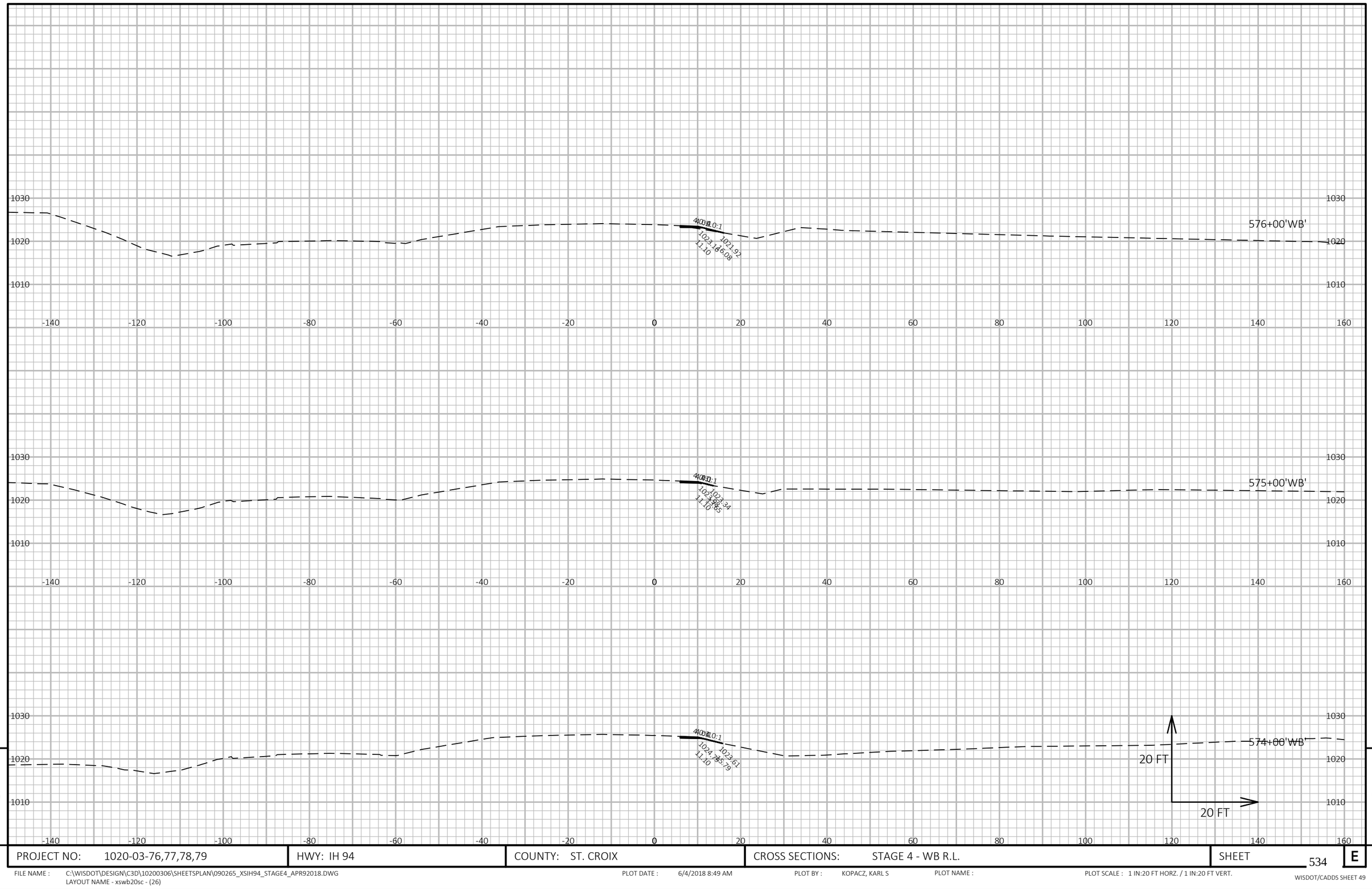
PLOT DATE : 6/4/2018 8:49 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



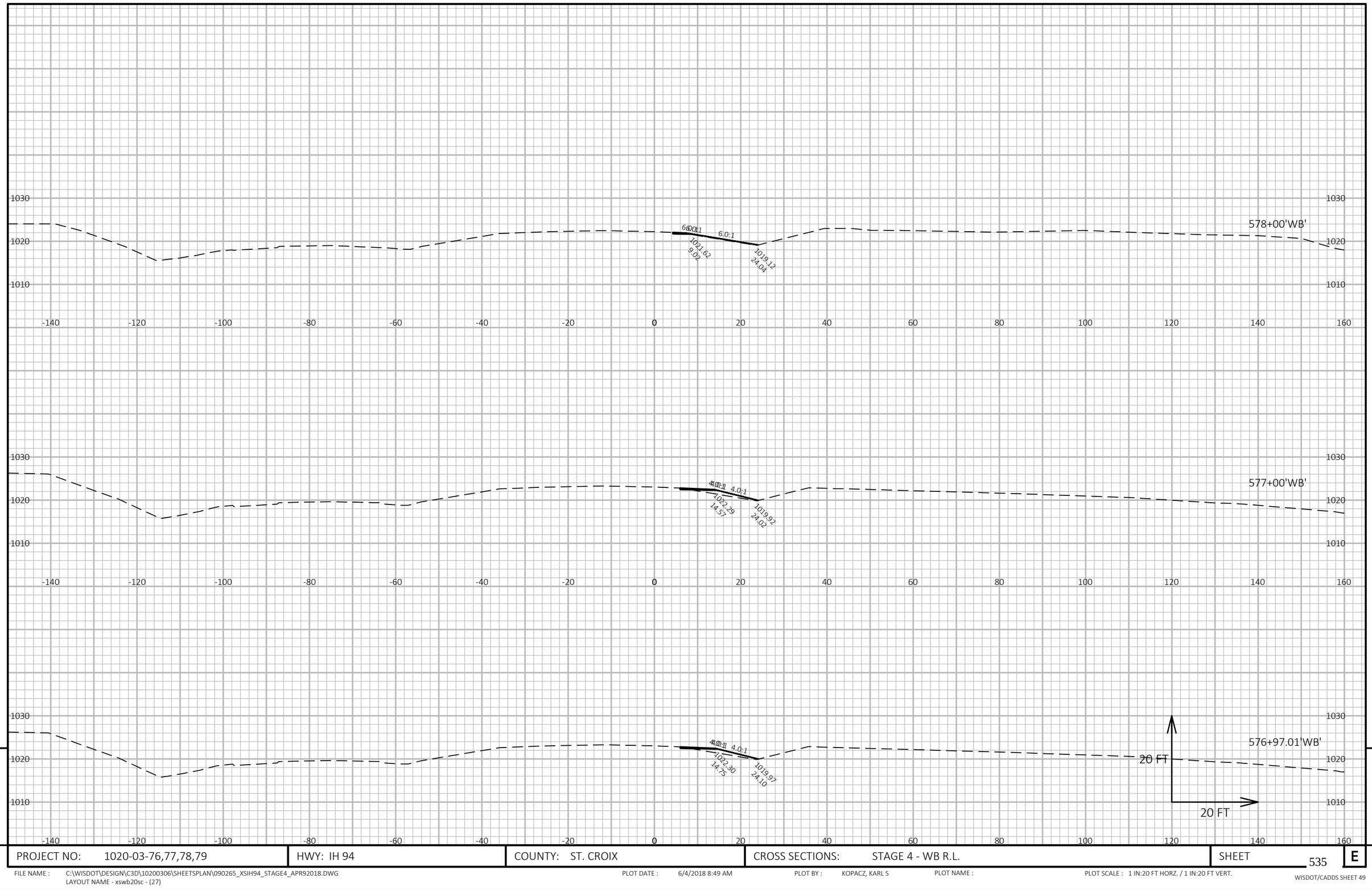
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 534	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (26)

PLOT DATE : 6/4/2018 8:49 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

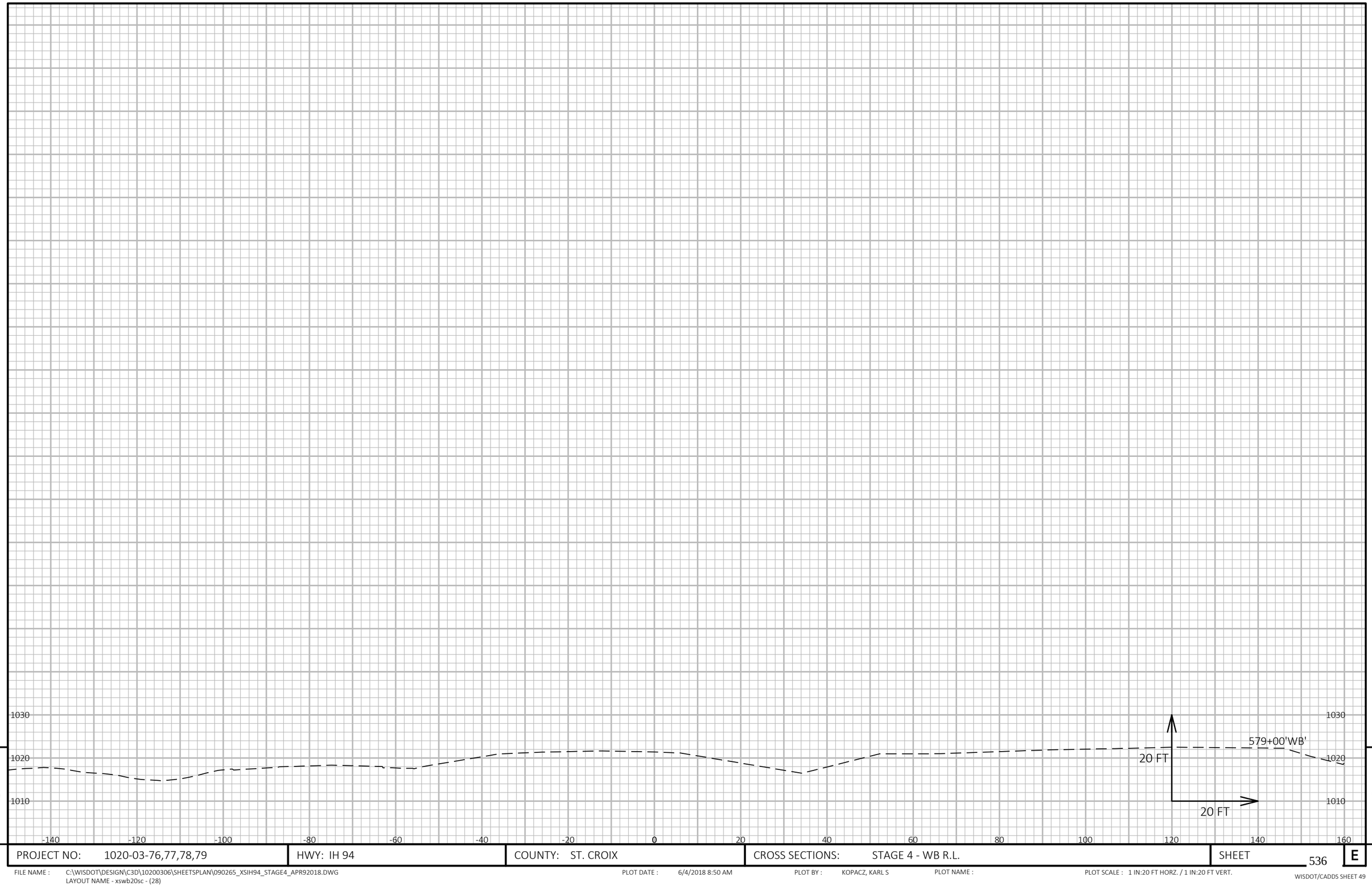
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 535	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (27)

PLOT DATE : 6/4/2018 8:49 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



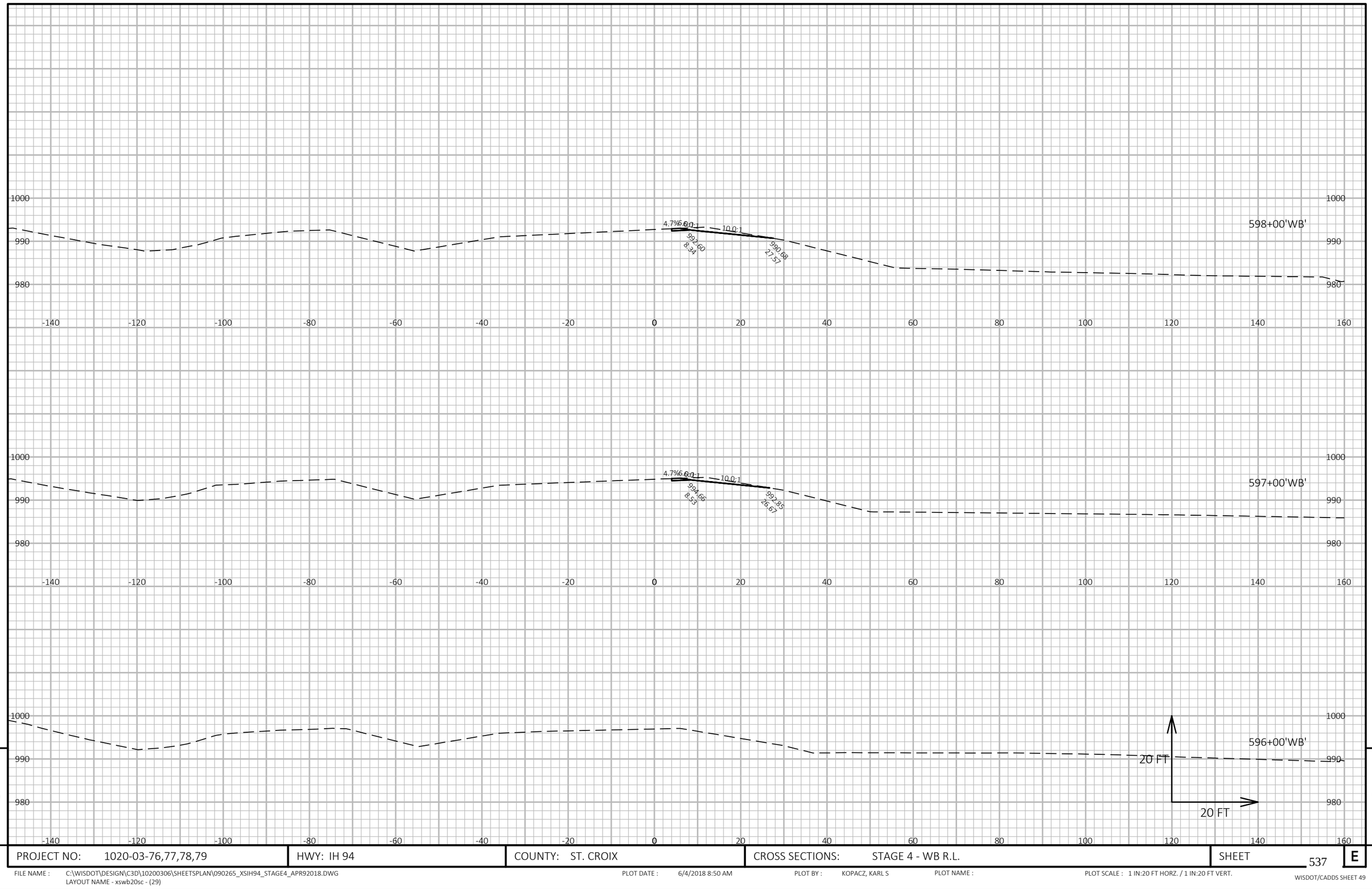
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 536	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (28)

PLOT DATE : 6/4/2018 8:50 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



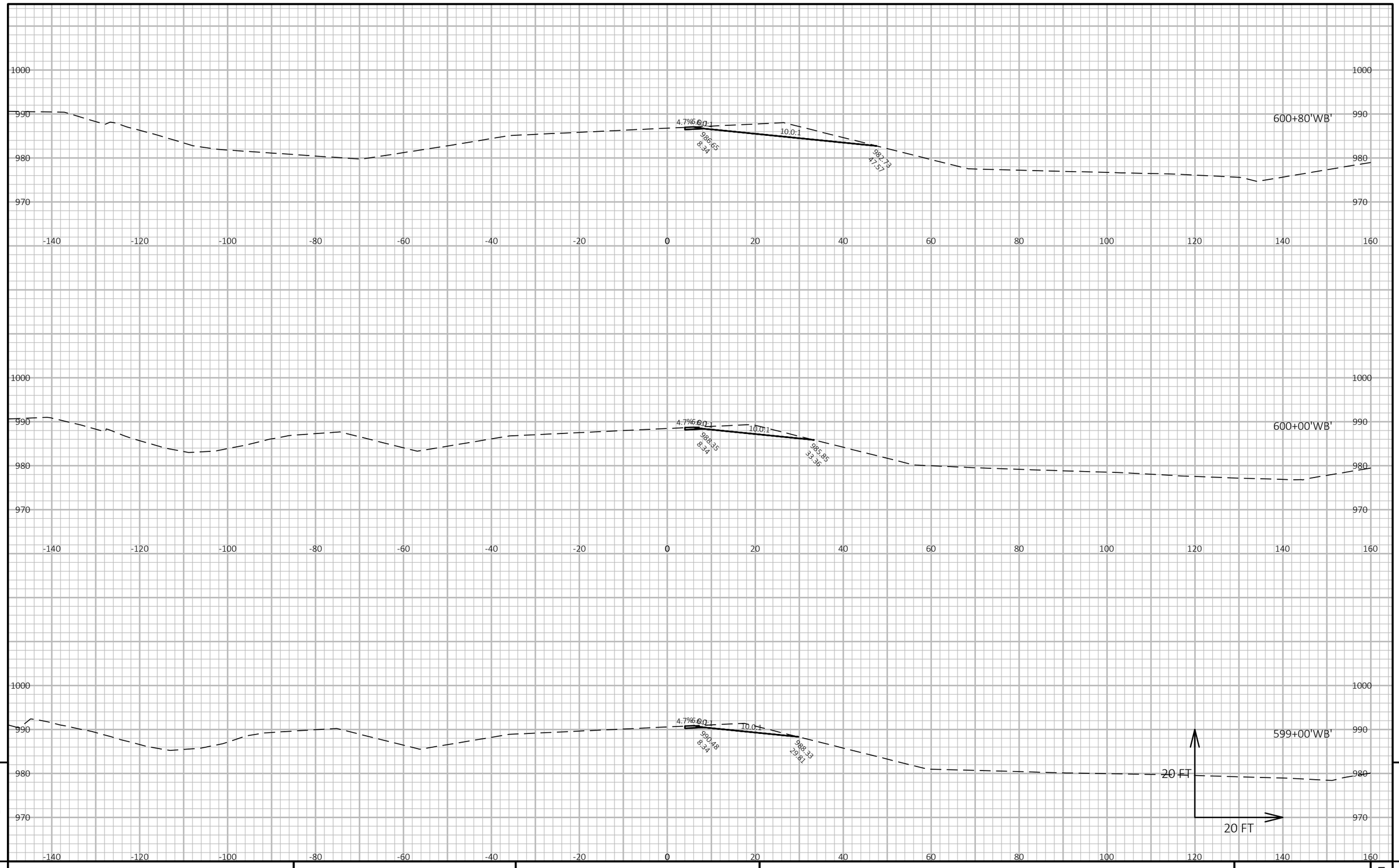
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 537	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (29)

PLOT DATE : 6/4/2018 8:50 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



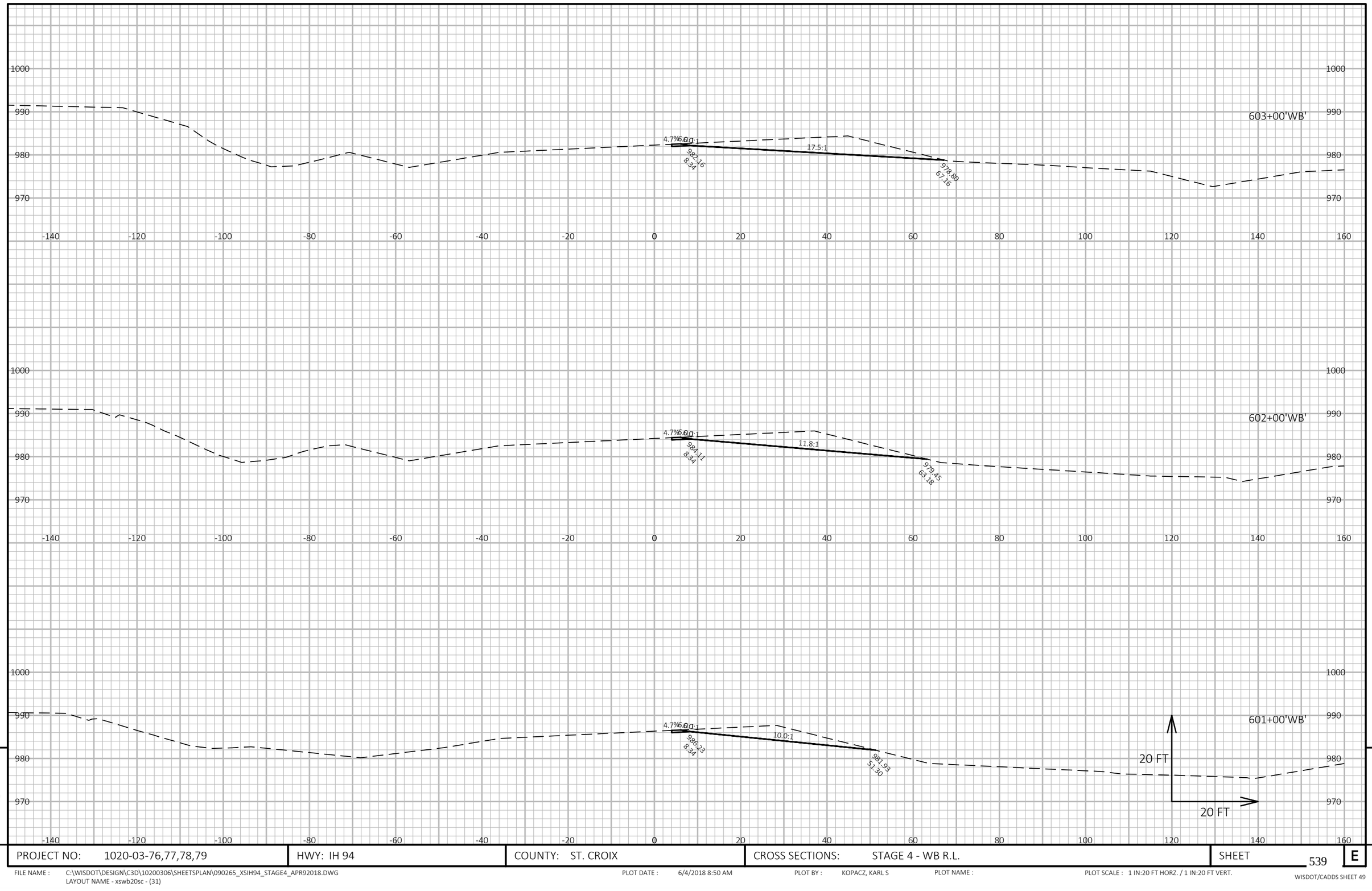
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 538	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (30)

PLOT DATE : 6/4/2018 8:50 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

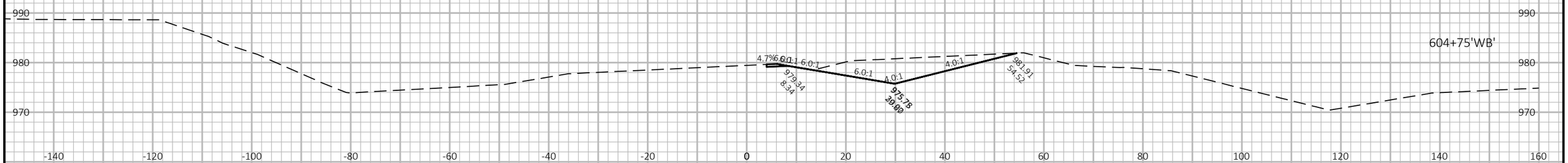
9

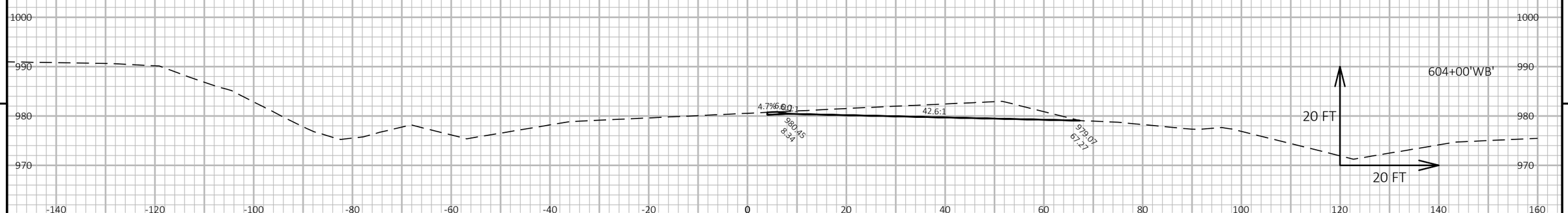
PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 539	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (31)

PLOT DATE : 6/4/2018 8:50 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.







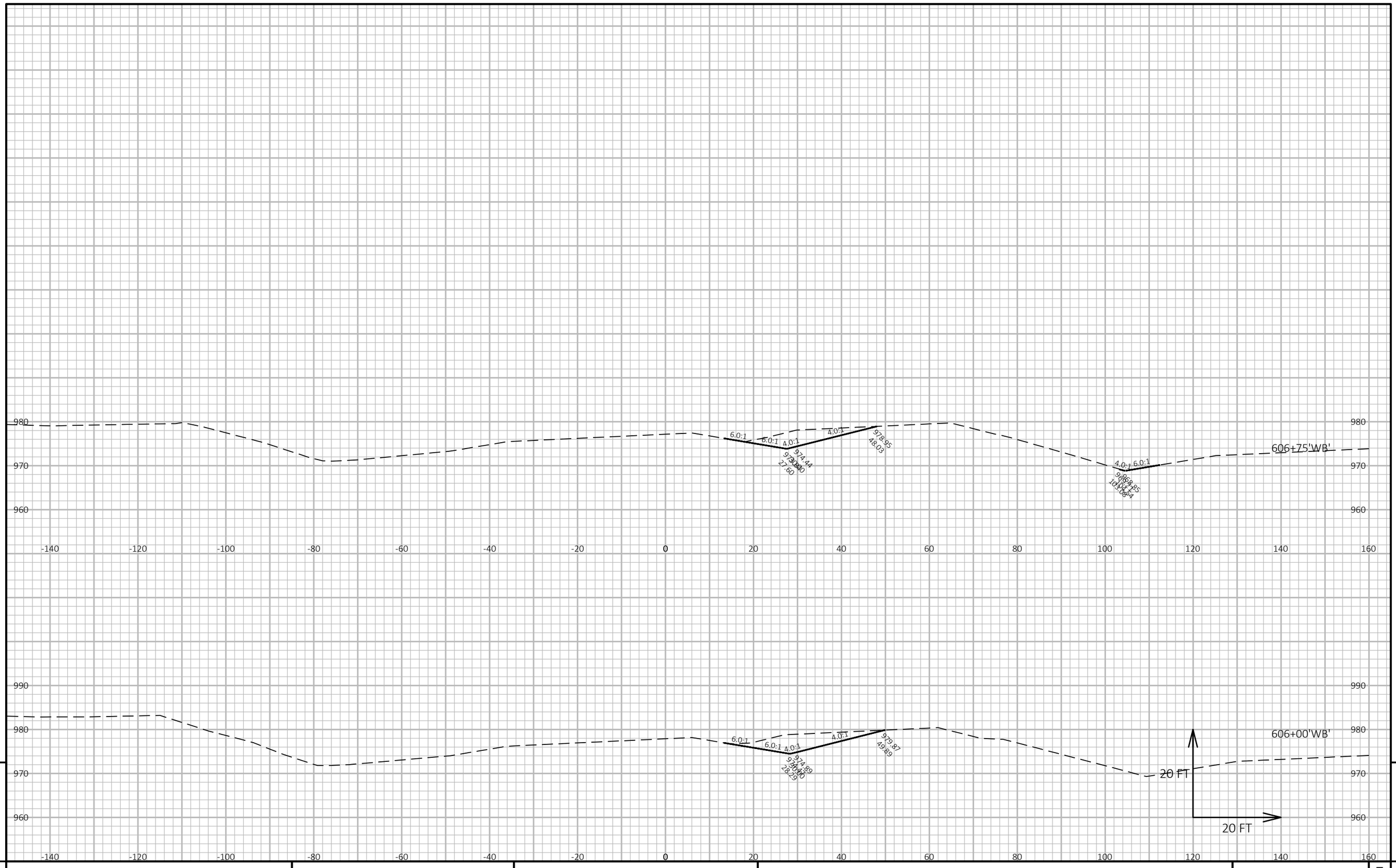
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 540	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (32)

PLOT DATE : 6/4/2018 8:50 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



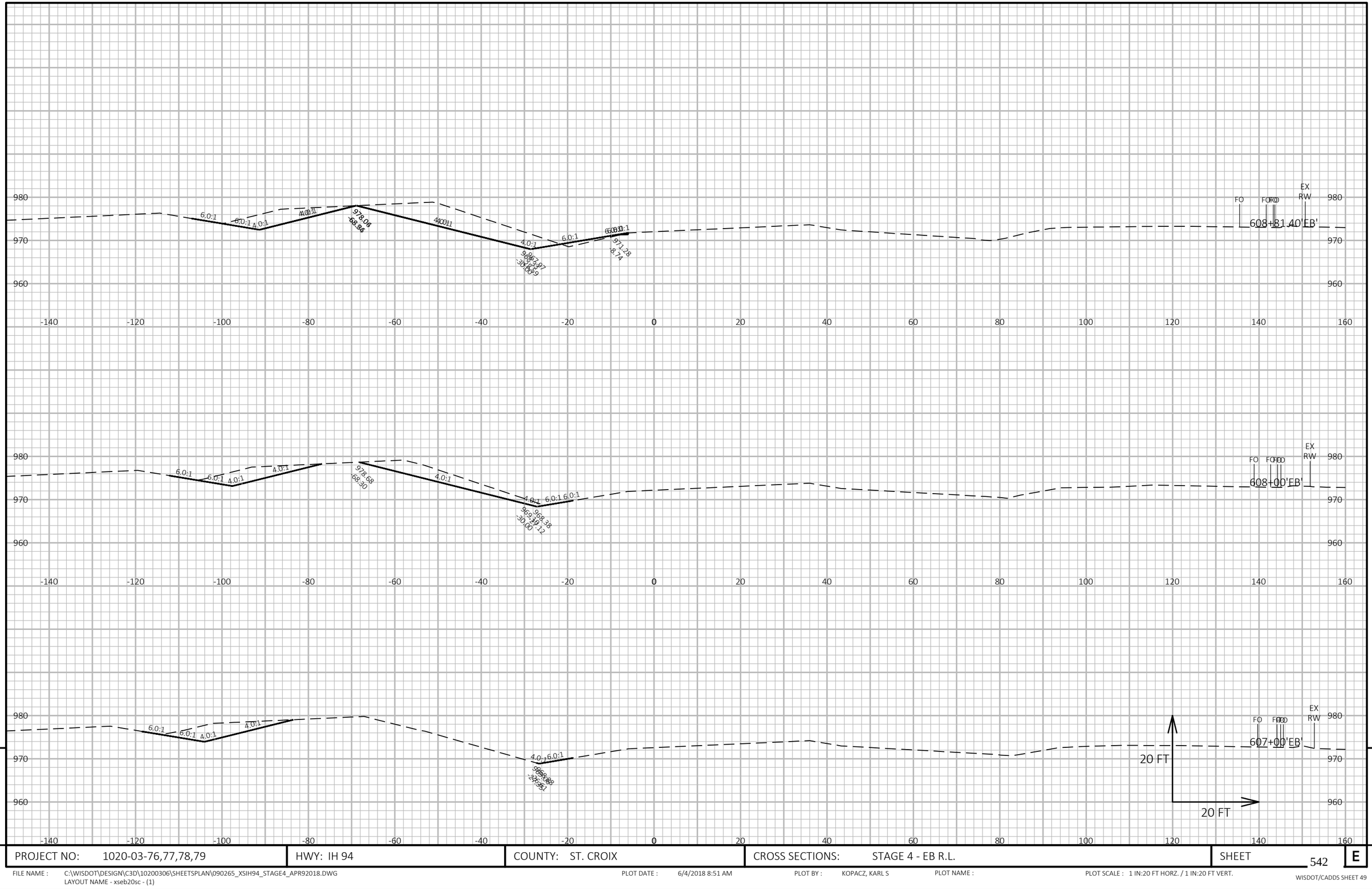
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 541	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (33)

PLOT DATE : 6/4/2018 8:50 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 542	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (1)

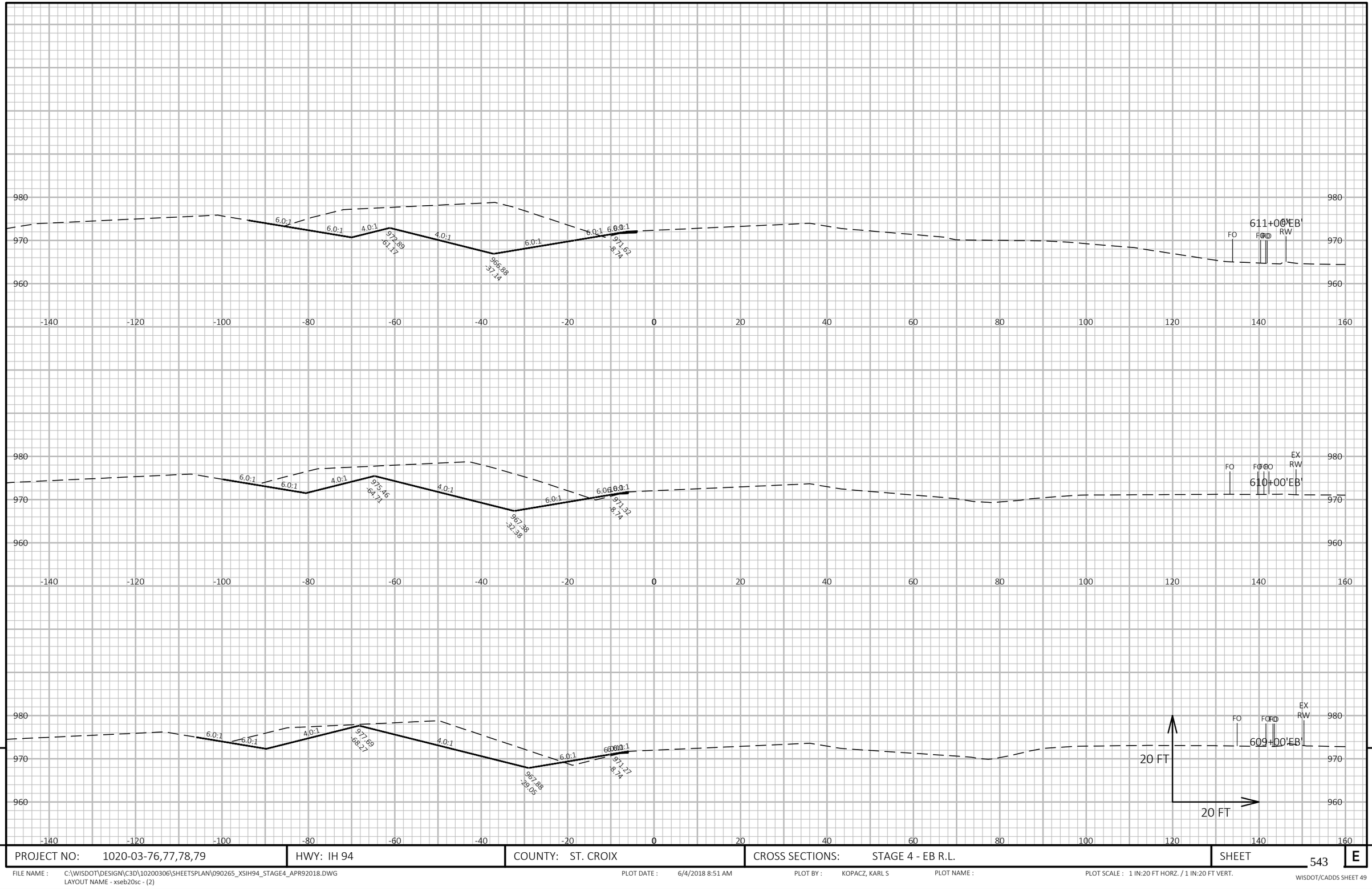
PLOT DATE : 6/4/2018 8:51 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



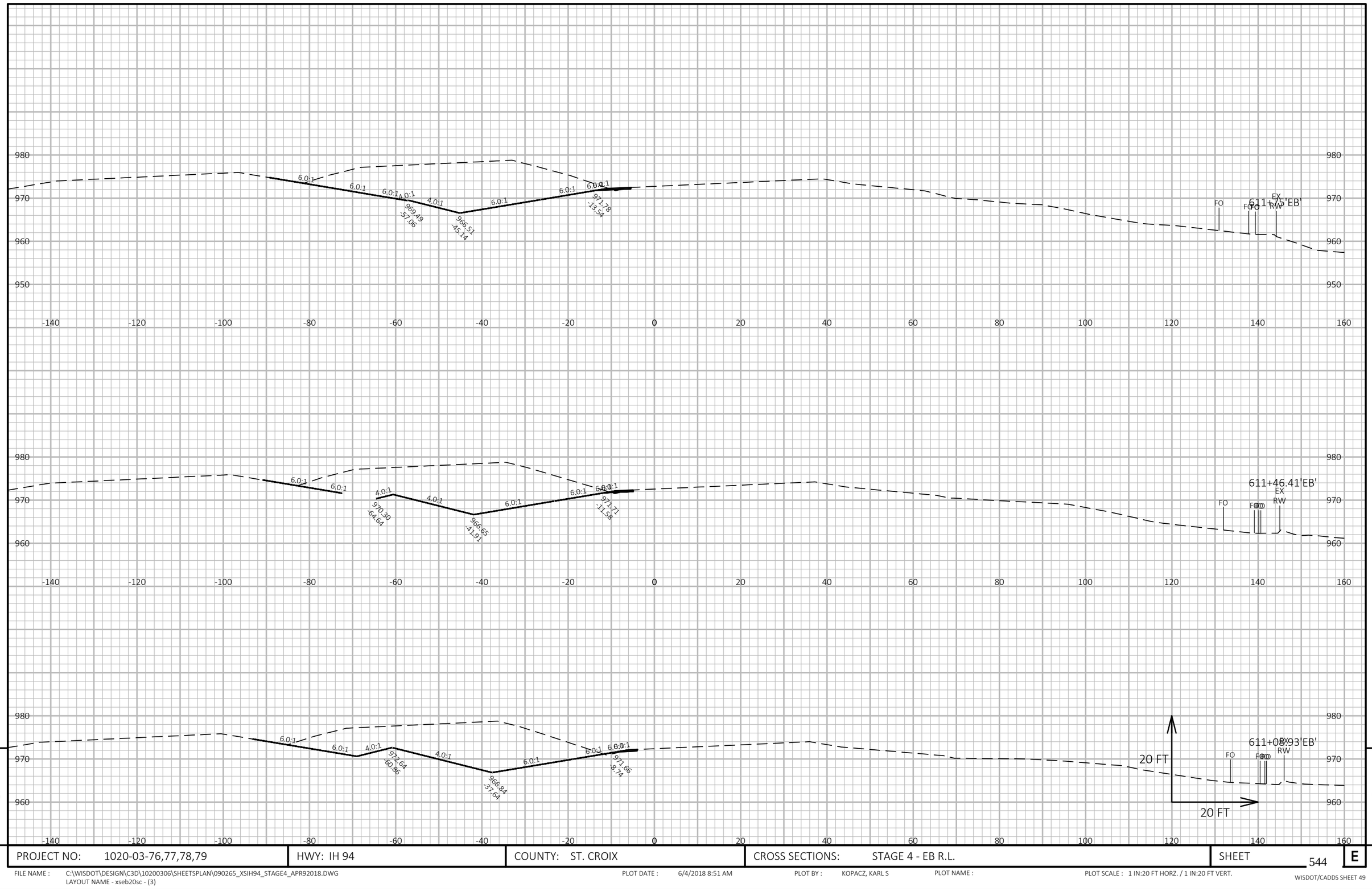
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 543	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (2)

PLOT DATE : 6/4/2018 8:51 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

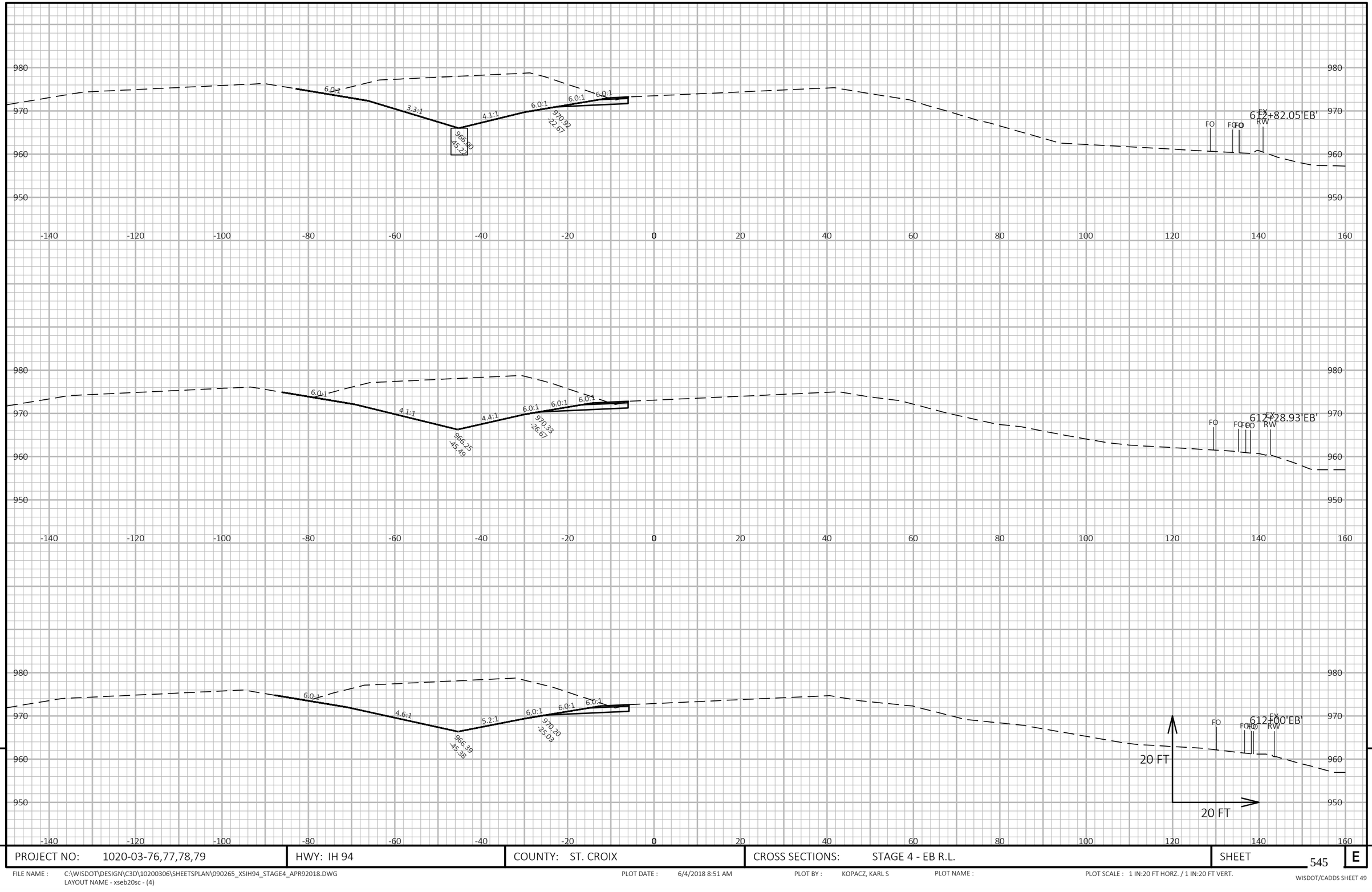
9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 544	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (3)

PLOT DATE : 6/4/2018 8:51 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



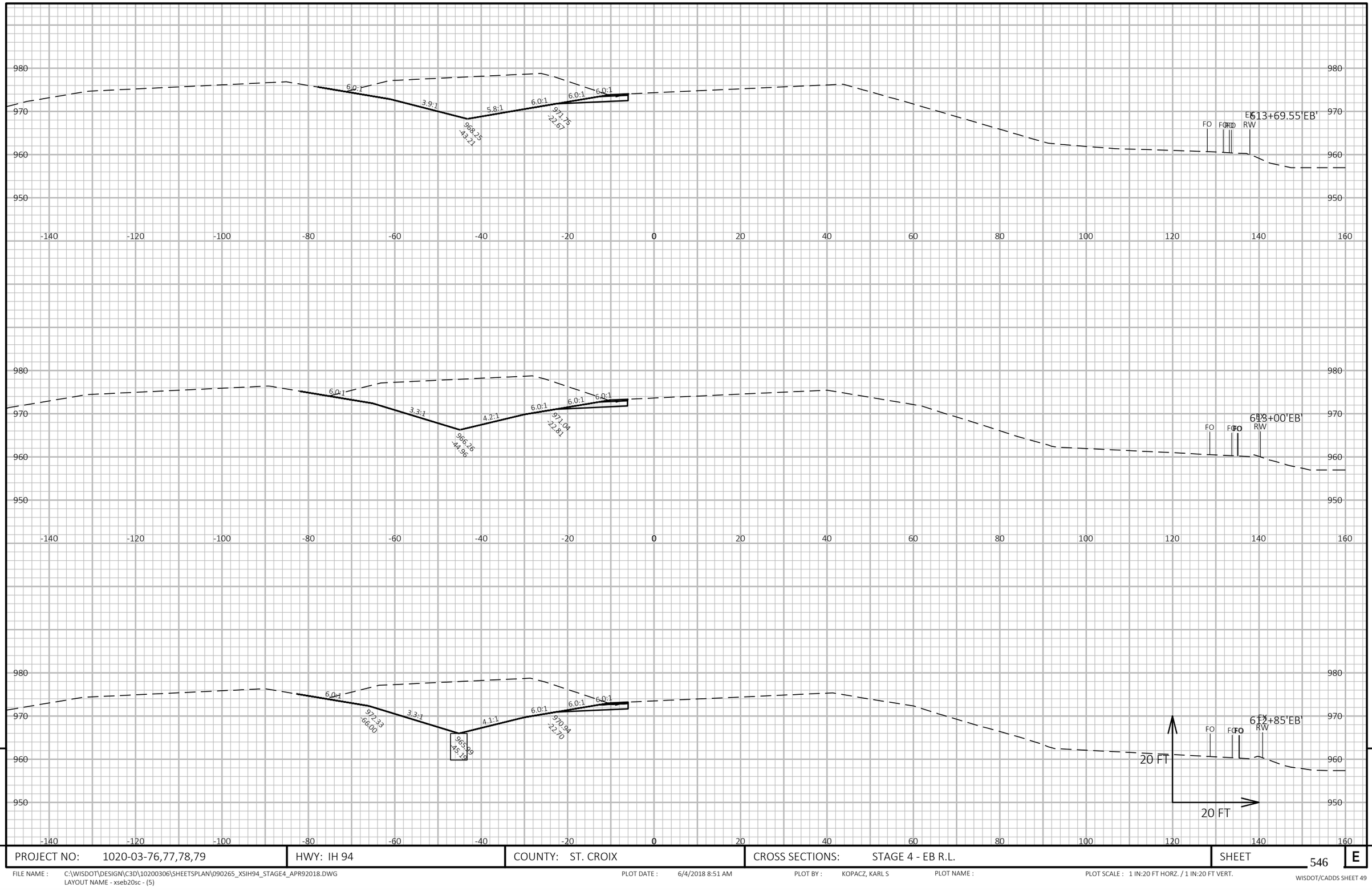
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 545	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (4)

PLOT DATE : 6/4/2018 8:51 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



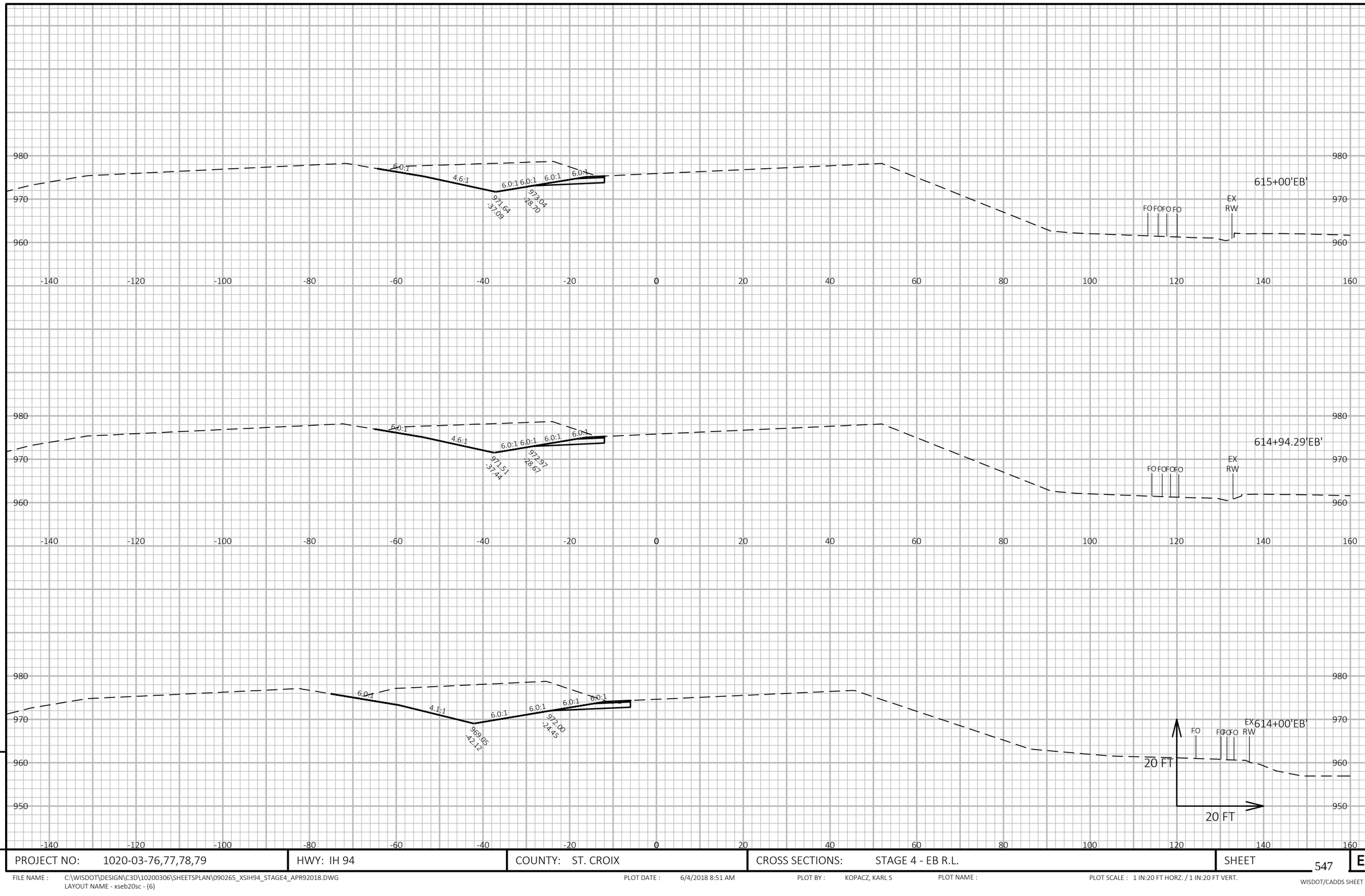
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 546	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (5)

PLOT DATE : 6/4/2018 8:51 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



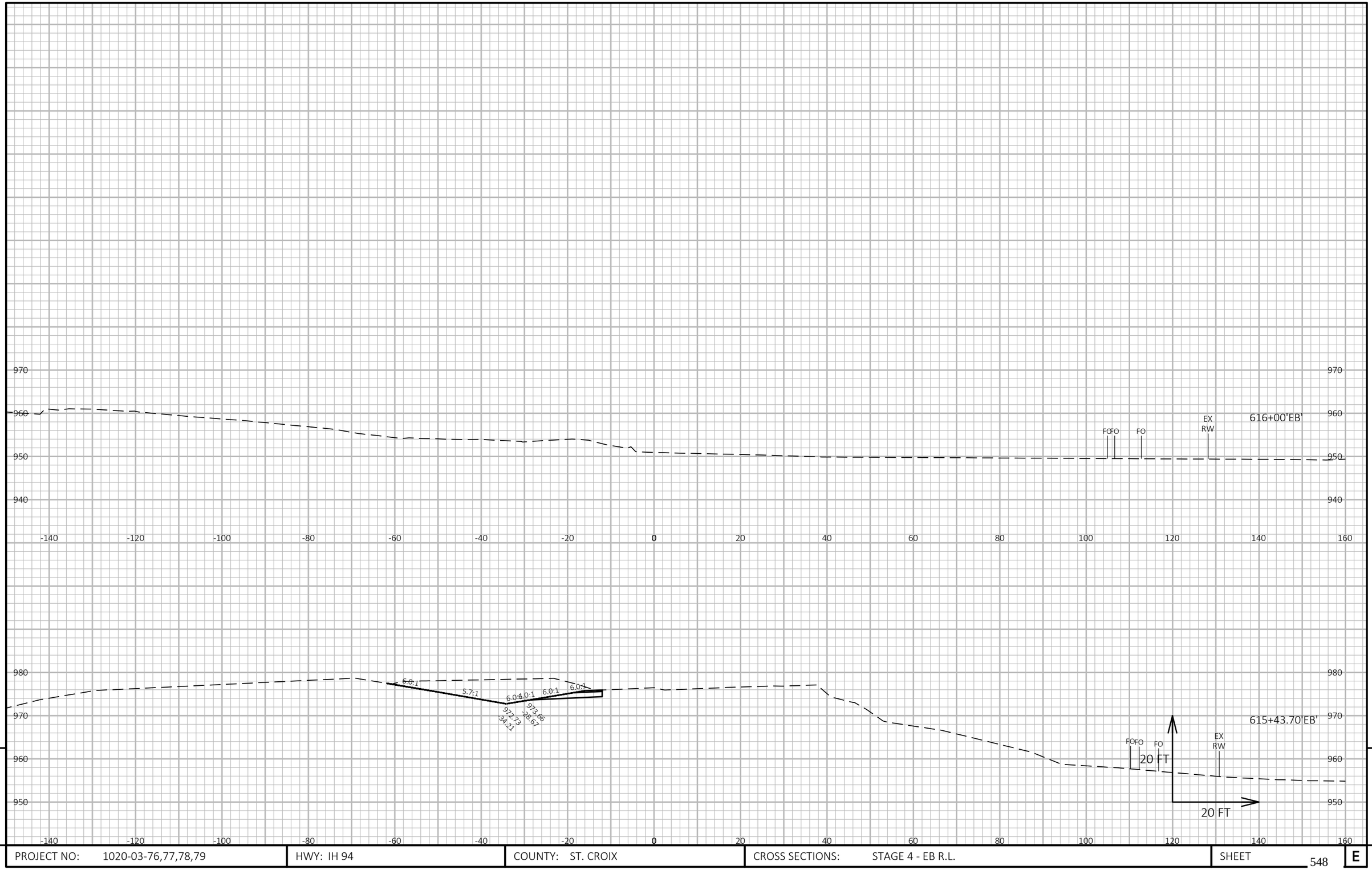
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 547	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (6)

PLOT DATE : 6/4/2018 8:51 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



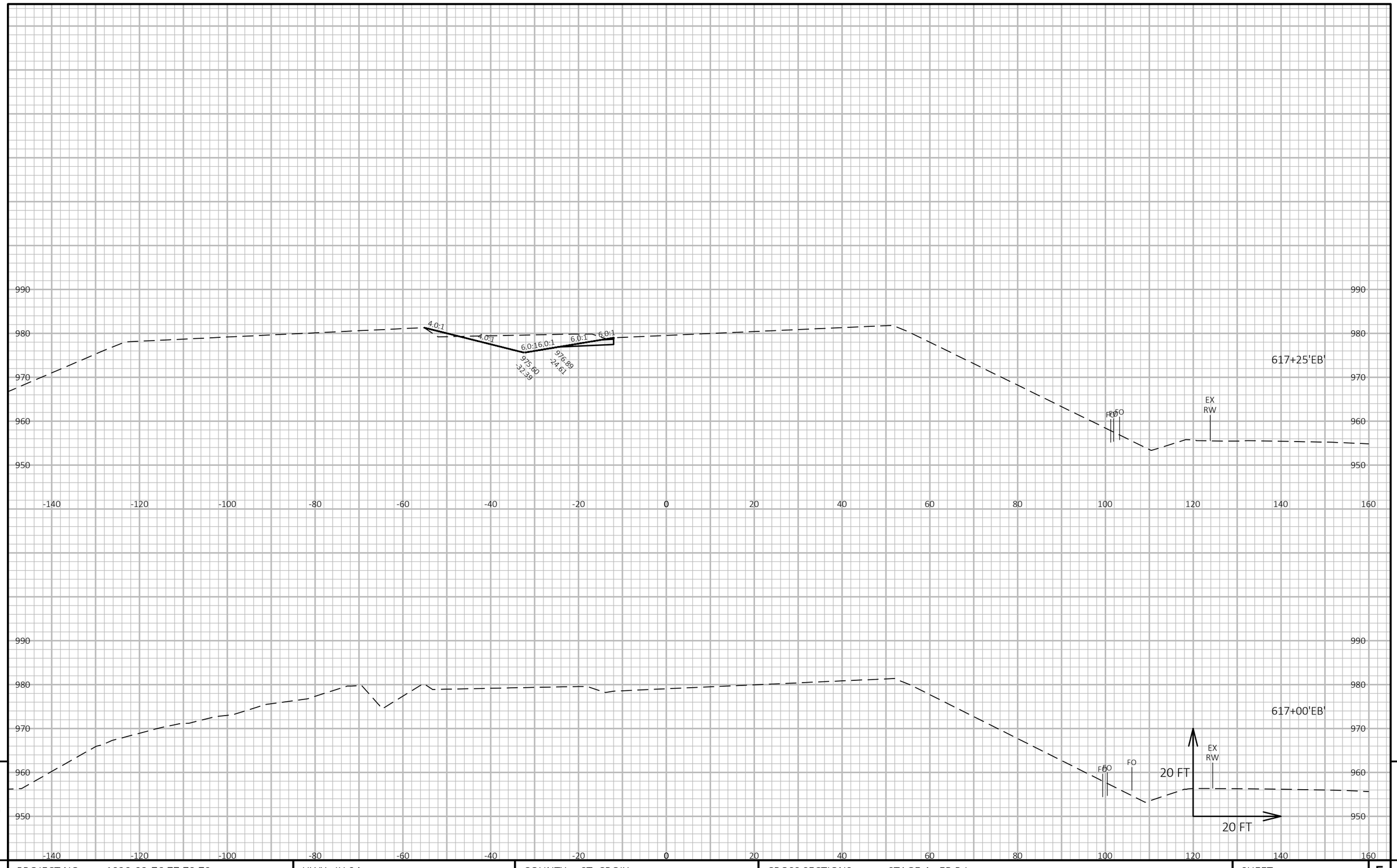
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 548	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (7)

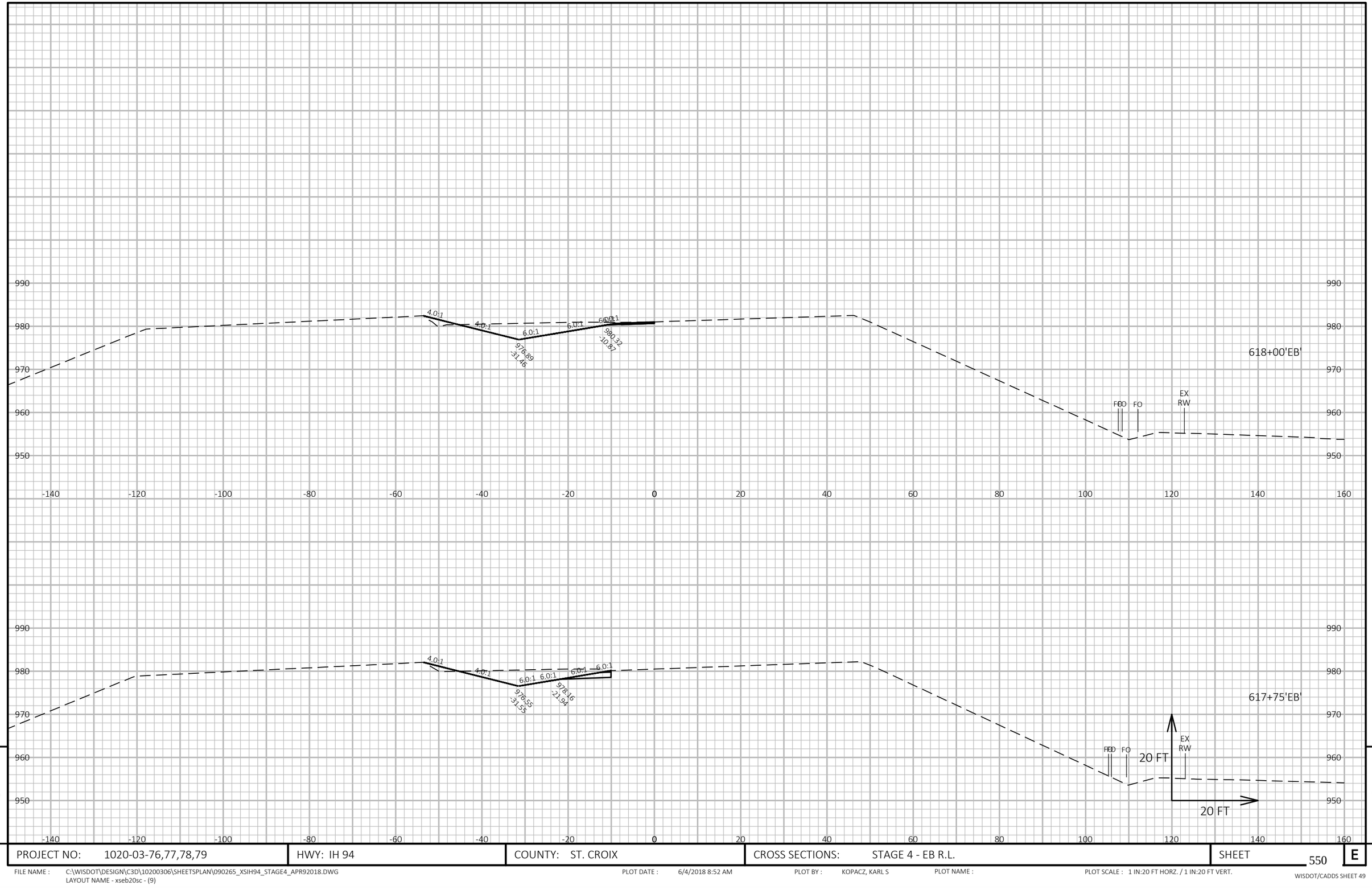
PLOT DATE : 6/4/2018 8:51 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 549	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (8)

PLOT DATE : 6/4/2018 8:52 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

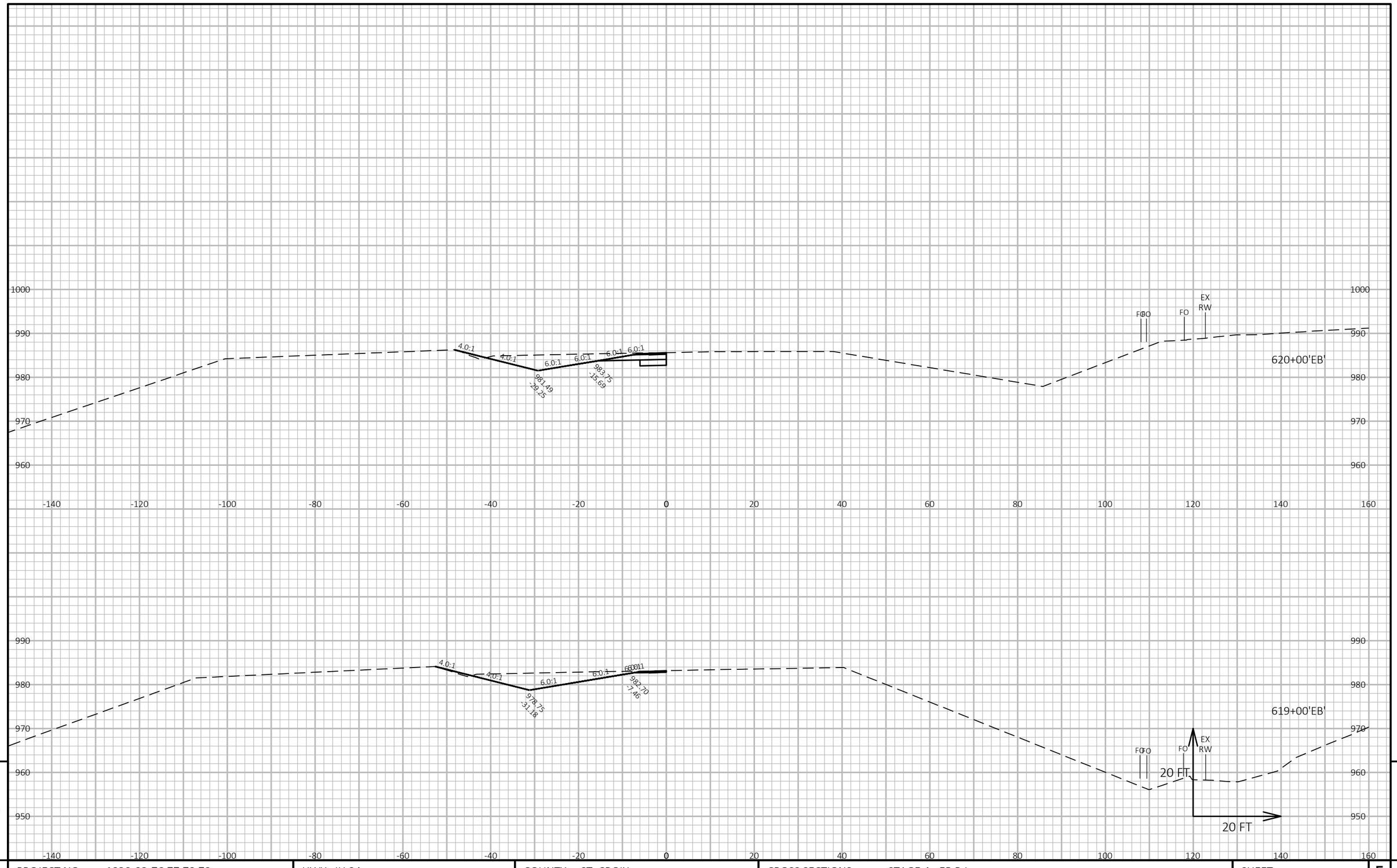


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 550	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (9)

PLOT DATE : 6/4/2018 8:52 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

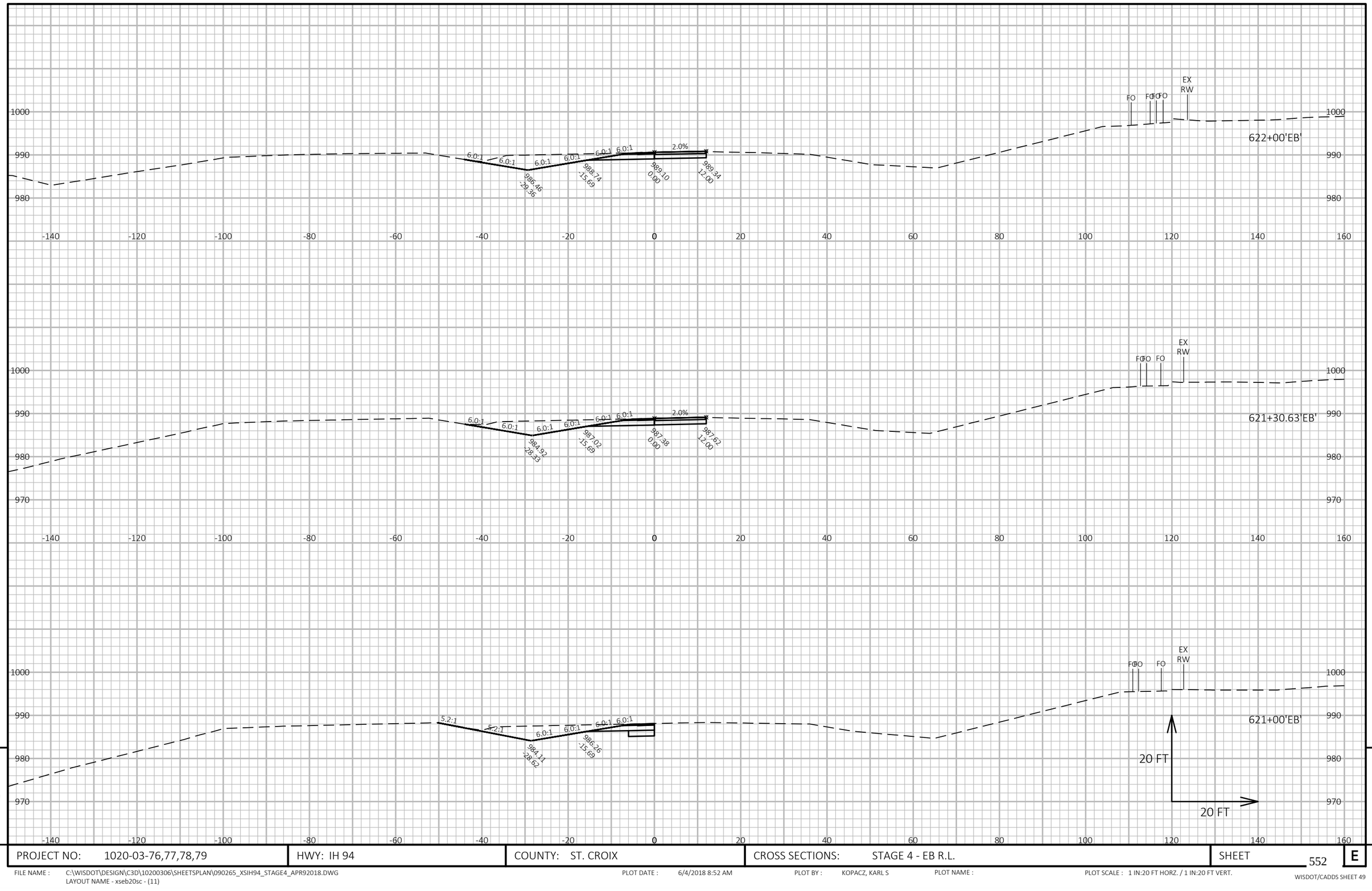


PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 551	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (10)

PLOT DATE : 6/4/2018 8:52 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



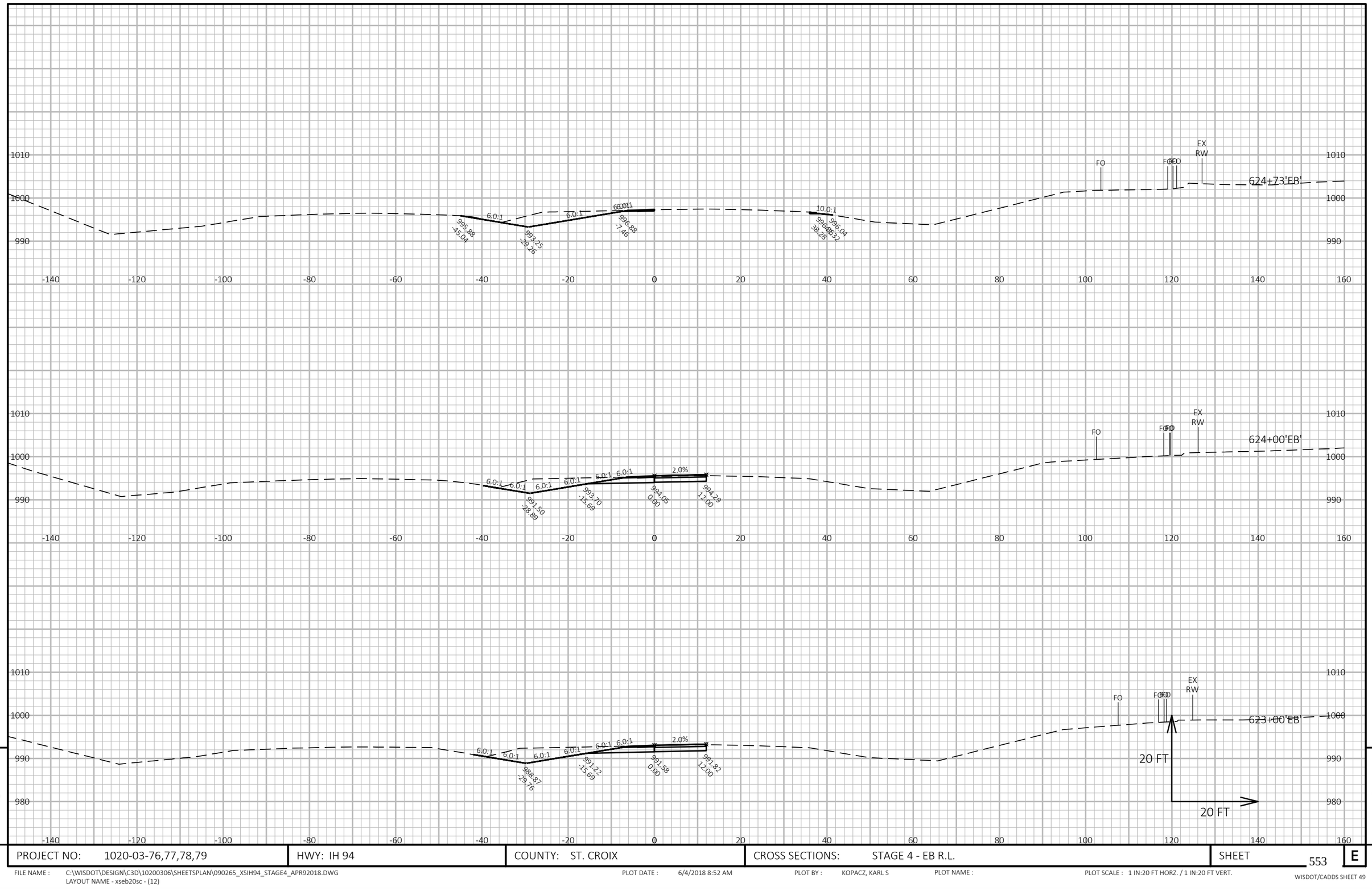
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 552	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (11)

PLOT DATE : 6/4/2018 8:52 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



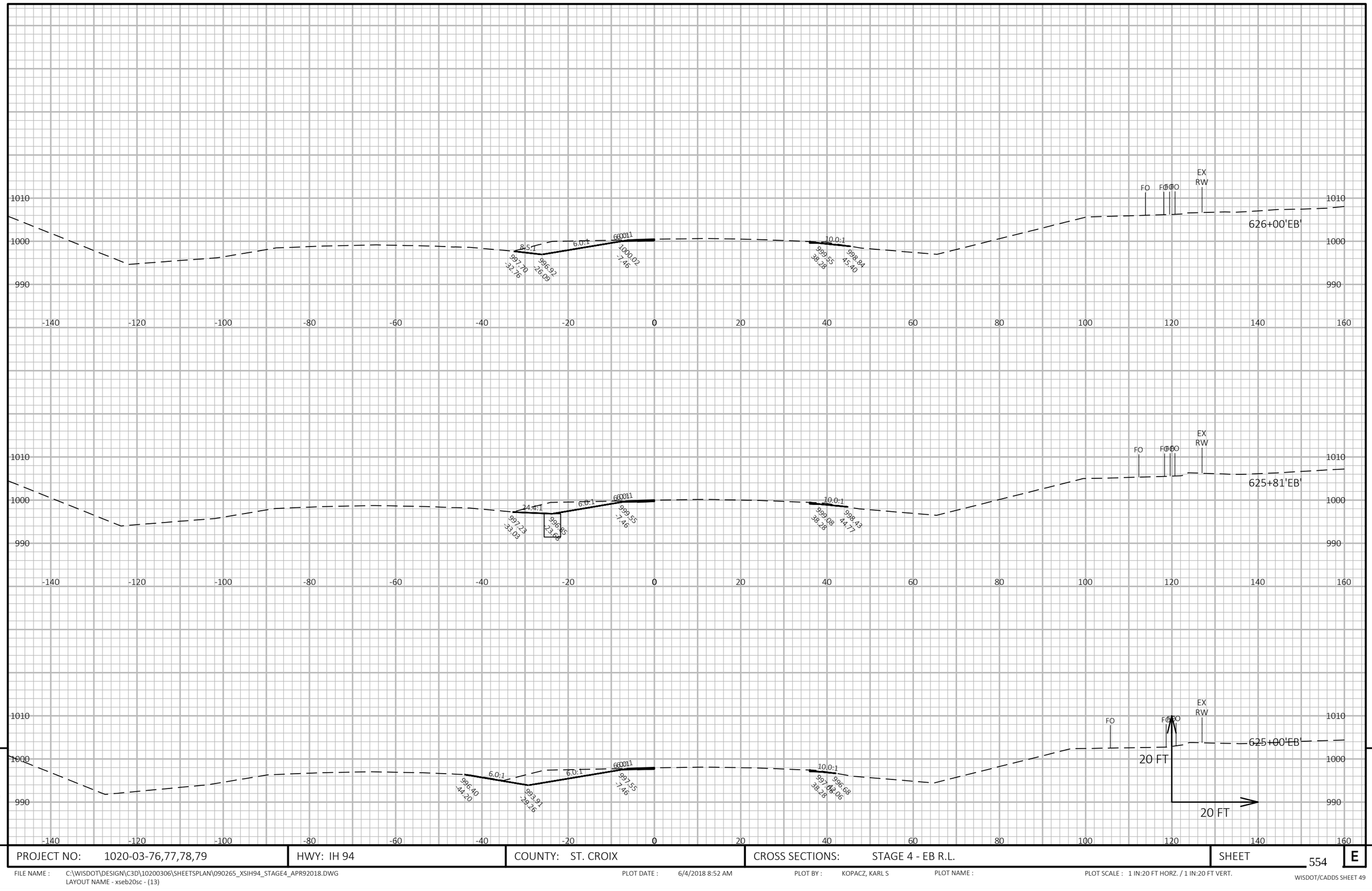
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 553	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (12)

PLOT DATE : 6/4/2018 8:52 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 554	E

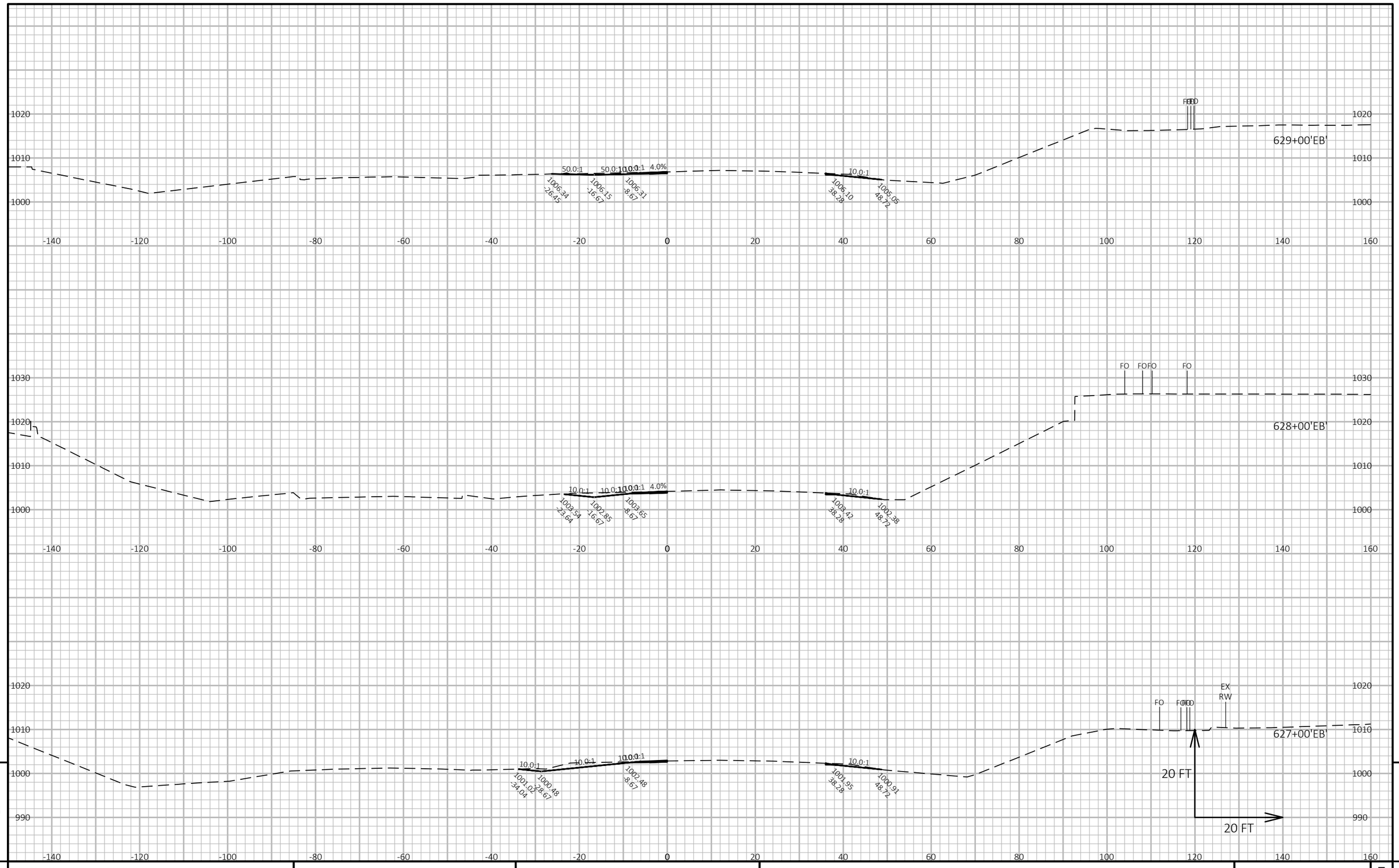
FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (13)

PLOT DATE : 6/4/2018 8:52 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



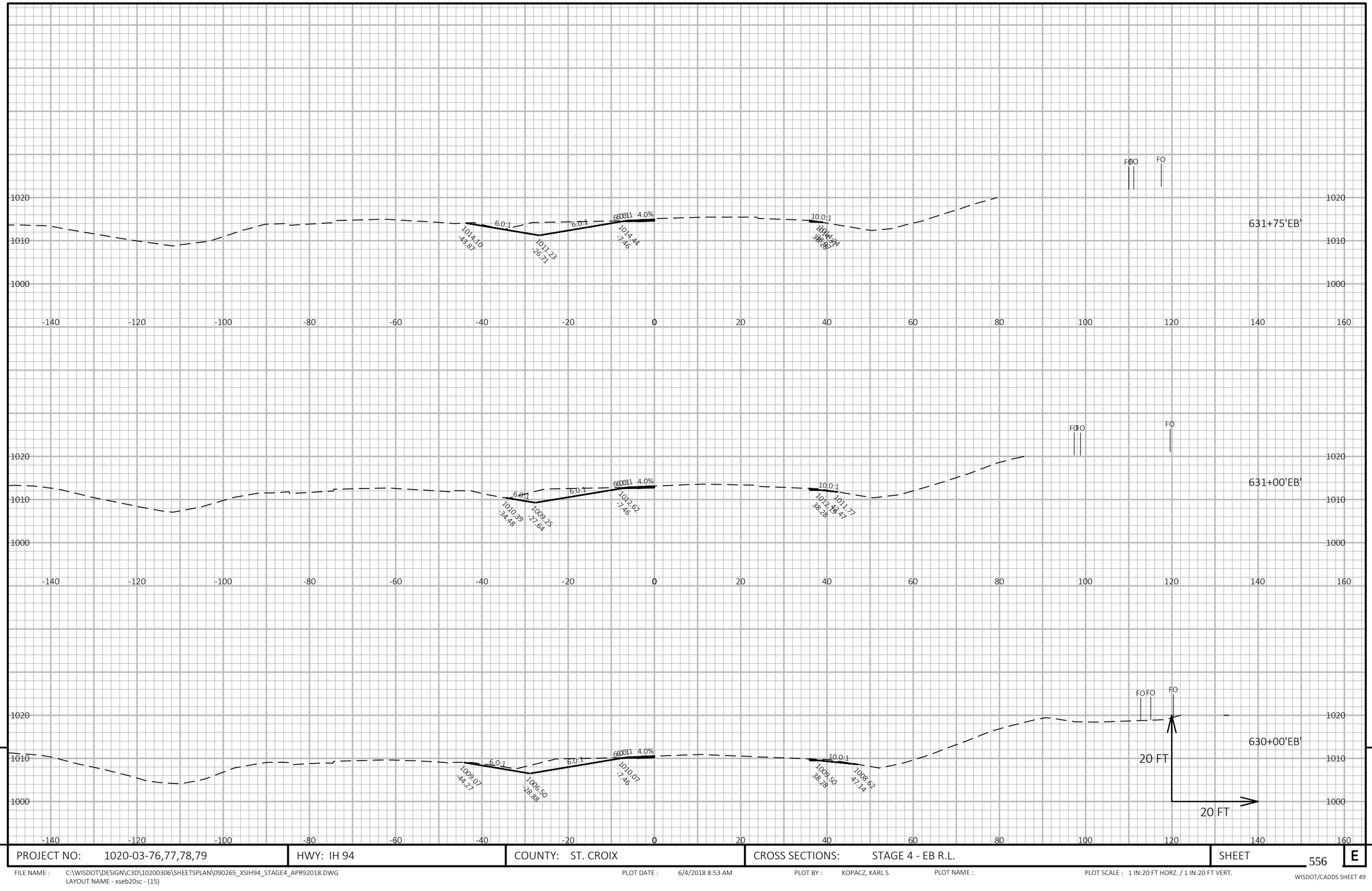
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 555	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (14)

PLOT DATE : 6/4/2018 8:52 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 556	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (15)

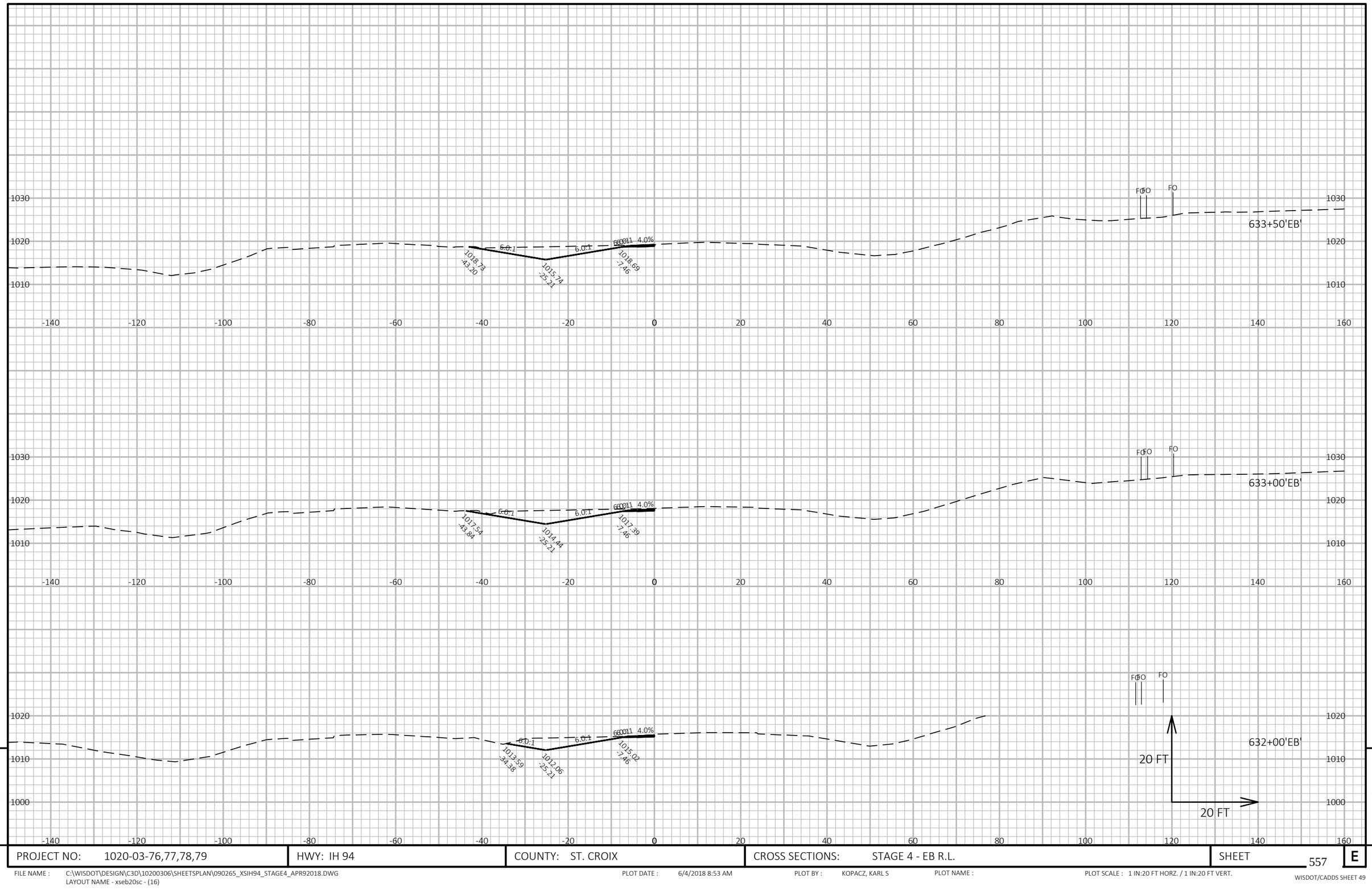
PLOT DATE : 6/4/2018 8:53 AM

PLOT BY : KOPACZ, KARL S

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



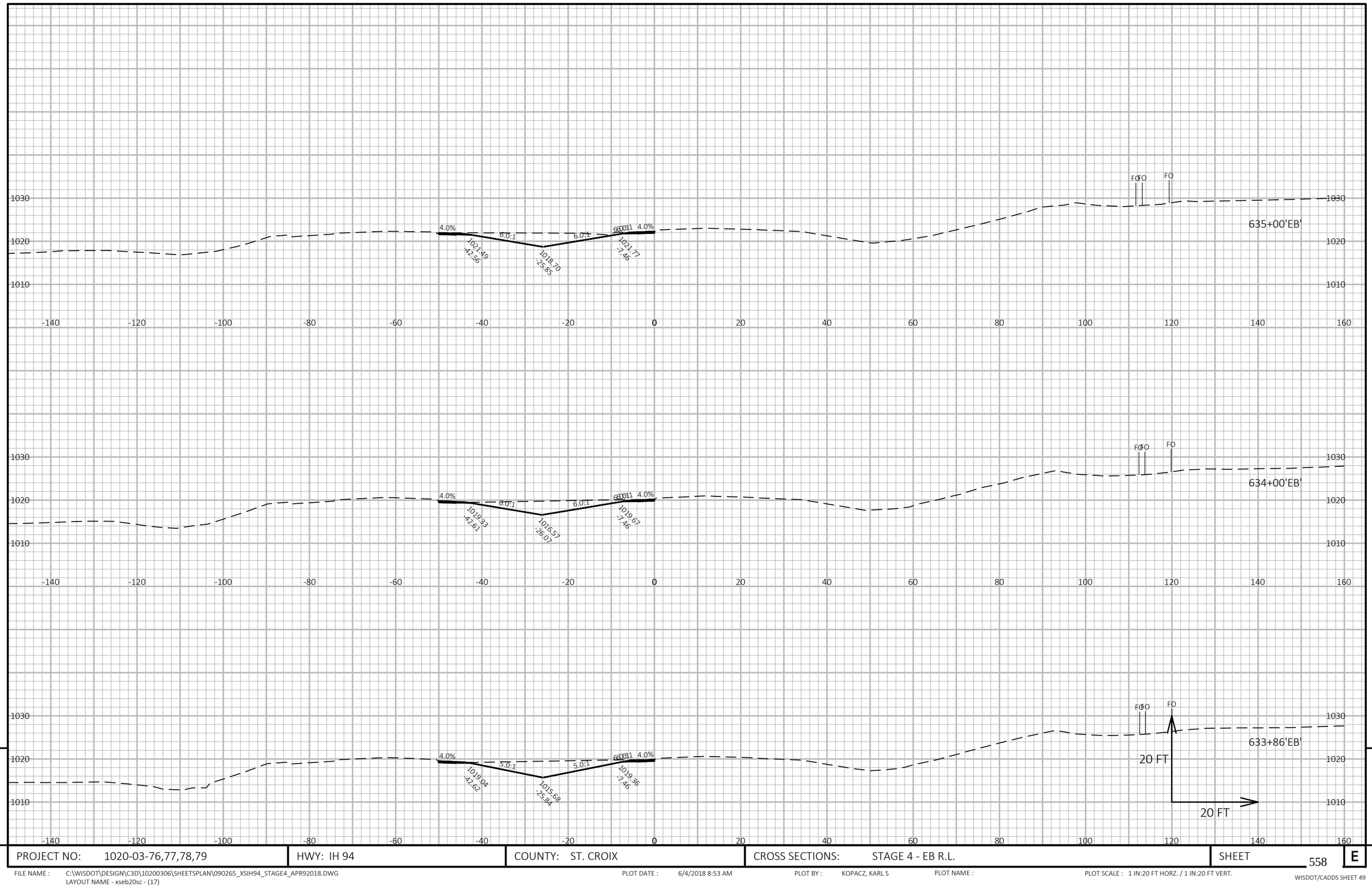
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 557	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (16)

PLOT DATE : 6/4/2018 8:53 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



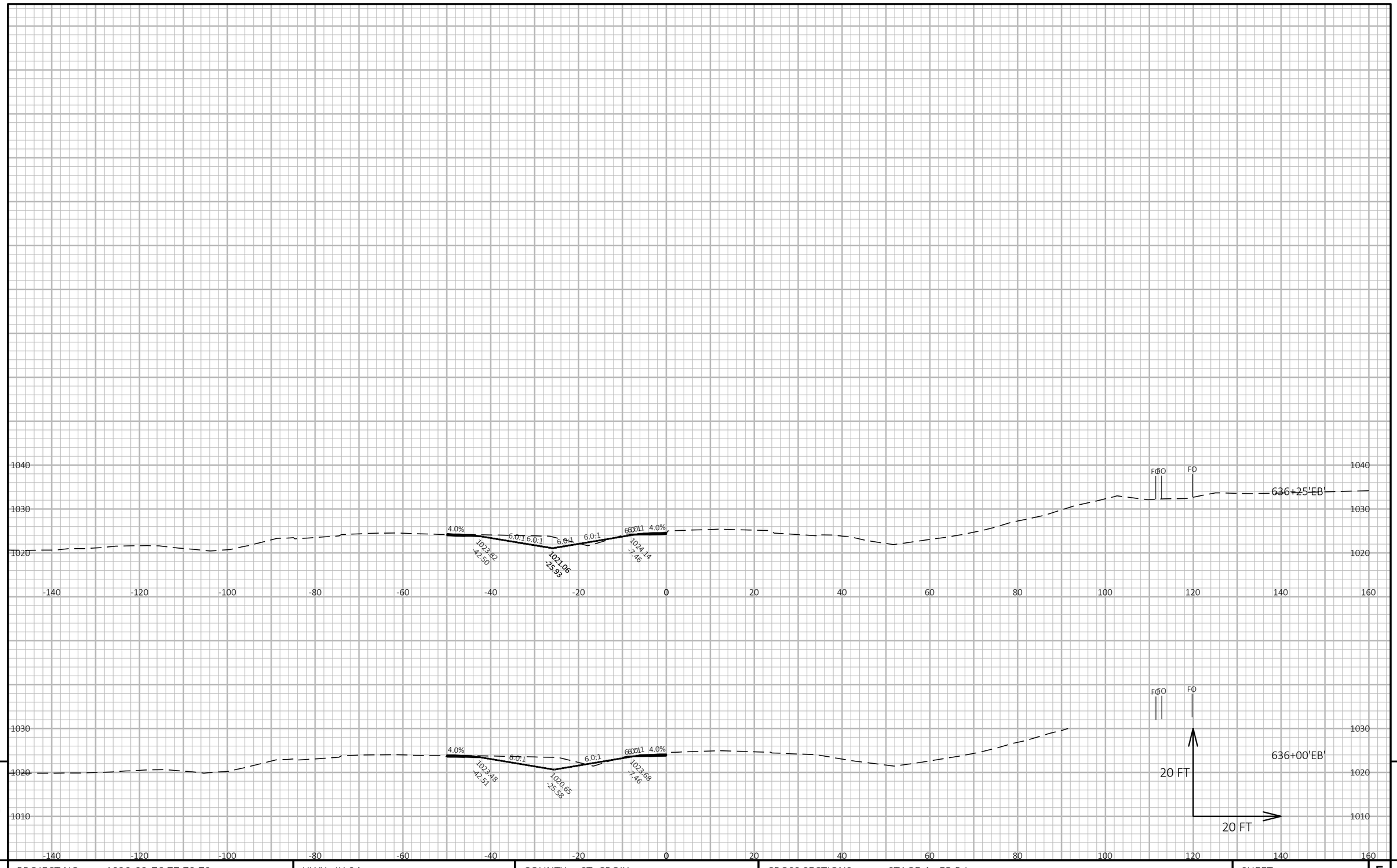
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 558	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (17)

PLOT DATE : 6/4/2018 8:53 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



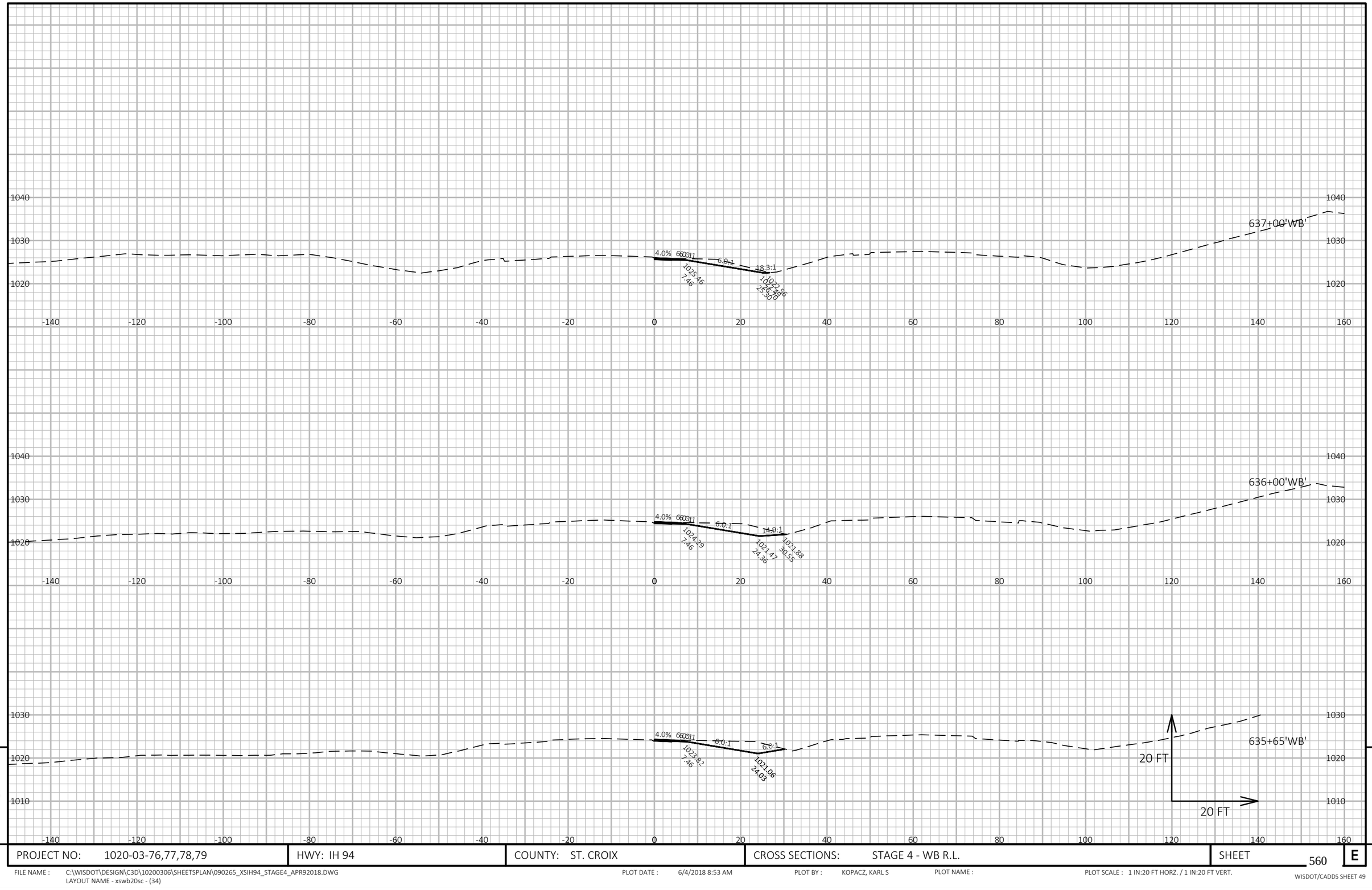
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - EB R.L.	SHEET 559	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xseb20sc - (18)

PLOT DATE : 6/4/2018 8:53 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



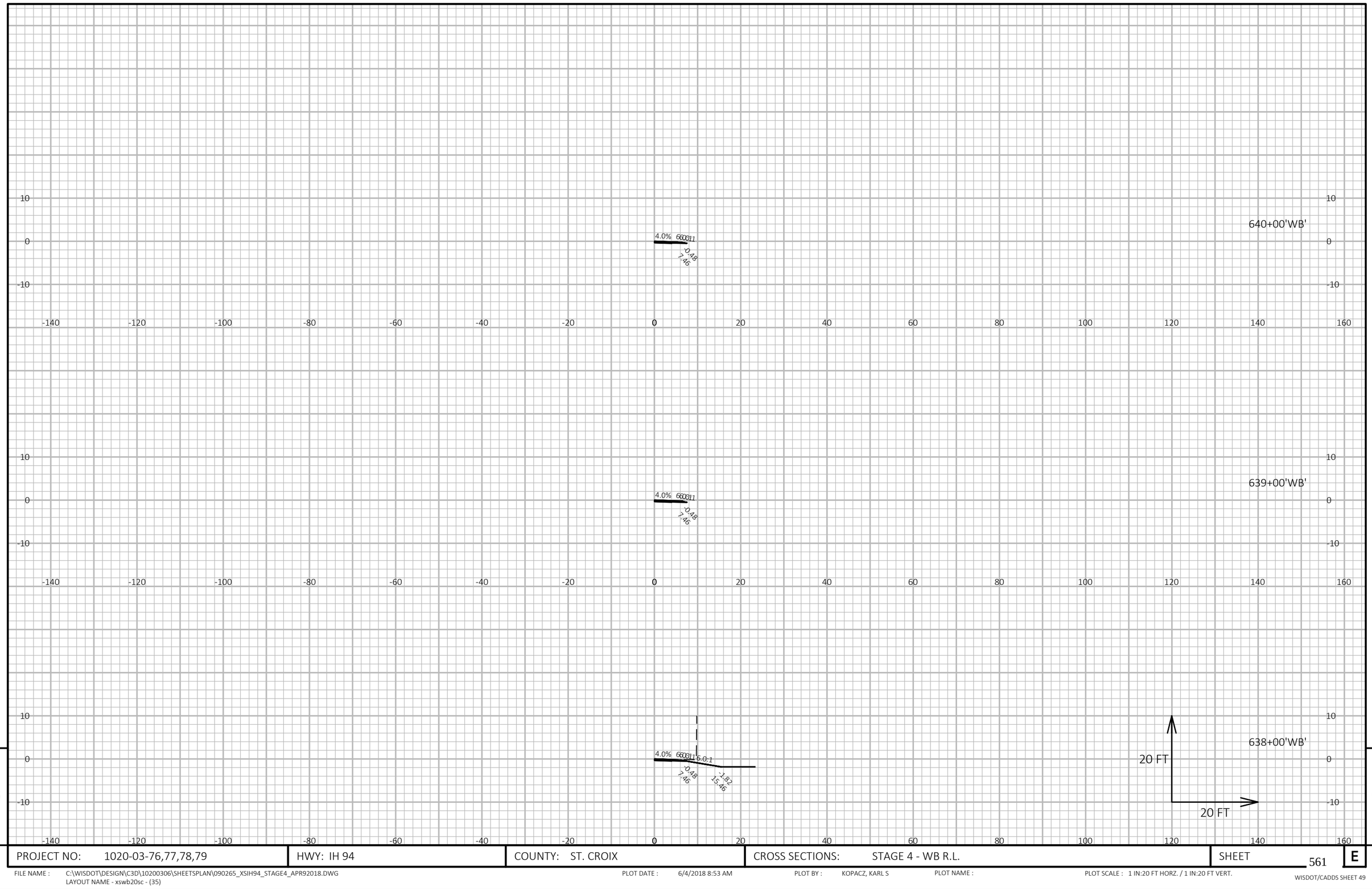
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 560	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (34)

PLOT DATE : 6/4/2018 8:53 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



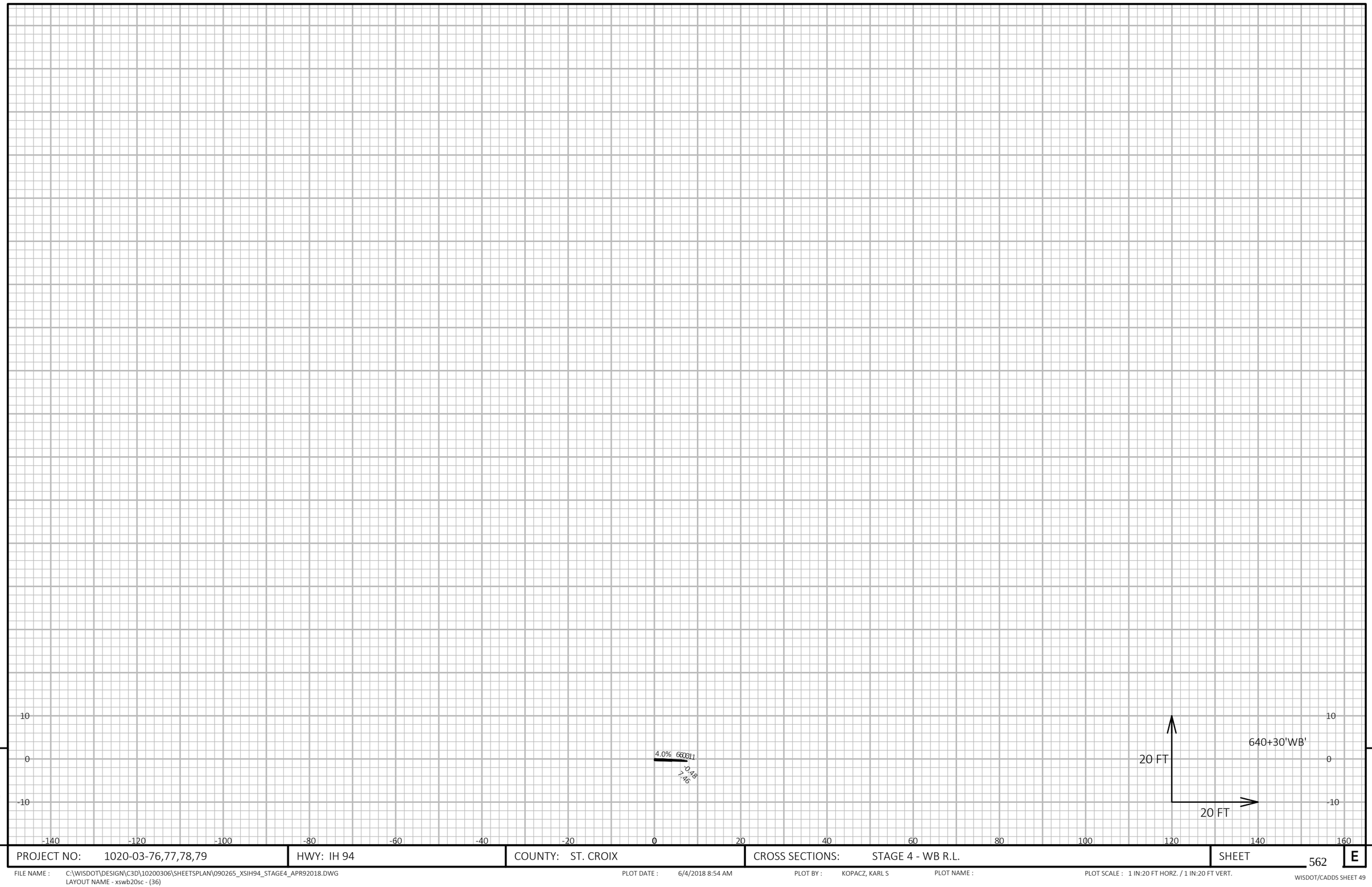
9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 561	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (35)

PLOT DATE : 6/4/2018 8:53 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 1020-03-76,77,78,79	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: STAGE 4 - WB R.L.	SHEET 562	E

FILE NAME : C:\WISDOT\DESIGN\C3D\10200306\SHEETSPLAN\090265_XSIH94_STAGE4_APR92018.DWG
LAYOUT NAME - xswb20sc - (36)

PLOT DATE : 6/4/2018 8:54 AM PLOT BY : KOPACZ, KARL S PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov