LAX

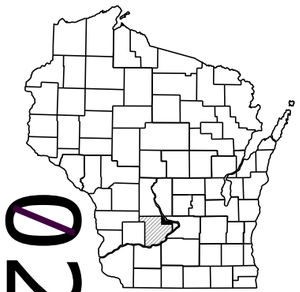
JULY 2017

PROJECT ID: 1014-00-65

COUNTY: SAUK

ORDER OF SHEETS

TOTAL SHEETS = 66



02

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WISCONSIN DELLS - PORTAGE

CTH A STRUCTURE B-56-0034

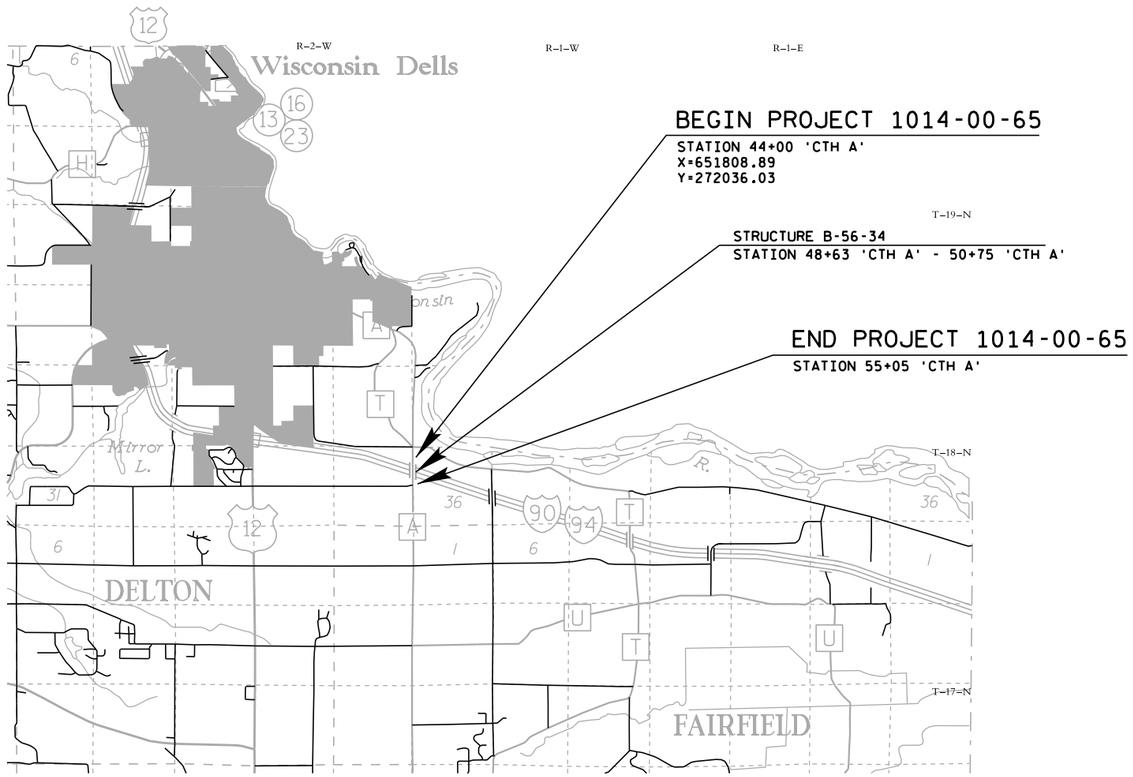
IH 90

SAUK COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1014-00-65	—	—

STATE PROJECT NUMBER

1014-00-65



LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, SAUK COUNTY, NAD83 2011, IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. VERTICAL DATUM NAVD 88 (2012)

DESIGN DESIGNATION CTH A

A.A.D.T. 2015	=	2,800
A.A.D.T. 2035	=	3,700
D.H.V.	=	426
D.D.	=	60/40
T.	=	4.8%
DESIGN SPEED	=	60 MPH
ESALS	=	300,000

DESIGN DESIGNATION IH 90

A.A.D.T. 2017	=	36,500
A.A.D.T. 2037	=	42,600
D.H.V.	=	6,134
D.D.	=	51/49
T.	=	22.4%
DESIGN SPEED	=	70 MPH
ESALS	=	36,000,000

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)
- MARSH 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	MIKE GREINER
Project Manager	BRIAN MEYER
Regional Examiner	MIKE RUD
Regional Supervisor	JIM SAVOLDELLI
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 1-25-2017 (Signature)

E

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.
- RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.
- PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD OR MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.
- ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- 4 INCH ASPHALTIC SURFACE PAVEMENT, MAY BE CONSTRUCTED WITH A SINGLE LAYER.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND EROSION MAT PLACED OR SODDED AS DIRECTED BY THE ENGINEER.

DIGGERS HOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

UTILITY CONTACTS

Carl Donahue
AT&T Legacy - Communication Line 866 Rock Creek Rd
Plano, IL 60545
(715) 833-2054
cd8729@att.com

Shawn Pietrzak
Adams-Columbia Electric Cooperative - Electricity 401 East Lake St
P.O. Box 70
Friendship, WI 53934-0070
(800)-831-8629 Ext. 323
spietrzak@acecwi.com

Steve Blado
CenturyLink - Communication Line
333 N Front St
P.O. Box 4800
La Crosse, WI 54602 (608) 796-5543
steve.blado@centurylink.com

DESIGN CONTACTS

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608 789-5676

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PROJECT DESIGNER
WISDOT SW REGION
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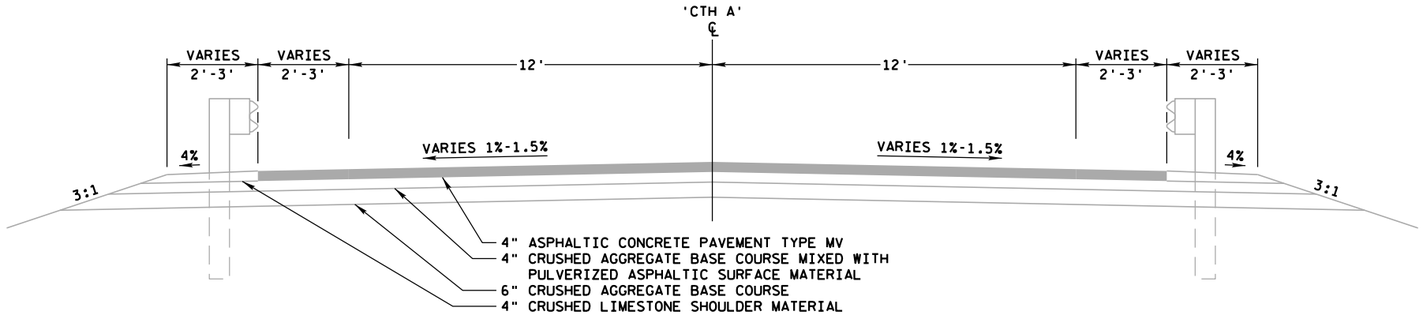
La Crosse, WI 54601
608 789-5958

DNR LIAISON

ANDY BARTA
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST
WISCONSIN DEPT. OF NATURAL RESOURCES
SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
608-275-3308

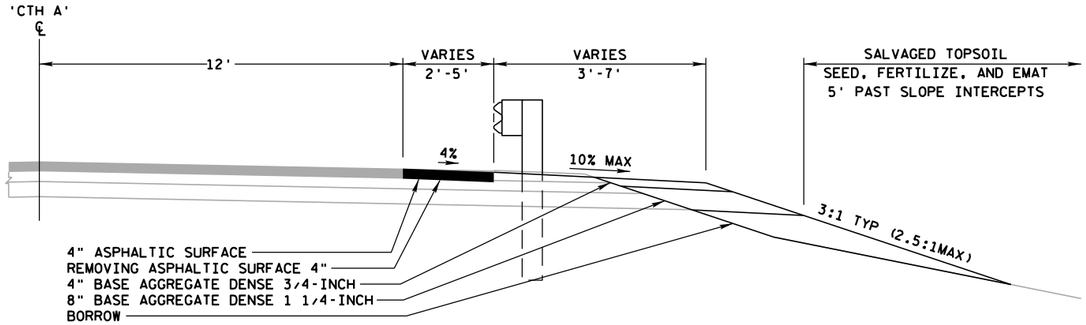
STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
AE, AEW	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
B.F.	BACK FACE
BM	BENCHMARK
BTWN	BETWEEN
CTR.	CENTER
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
C.E.	COMMERCIAL ENTRANCE
CONST.	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CO.	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR.	CREEK
CABC	CRUSHED AGGREGATE BASE COURSE
CY	CUBIC YARD
CP	CONTROL POINT OR CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
D.H.V.	DESIGN HOURLY VOLUME
DIA.	DIAMETER
D.D.	DIRECTIONAL DISTRIBUTION
DISCH.	DISCHARGE
DMS	DYNAMIC MESSAGE SIGN
EA	EACH
E	EAST
EB	EASTBOUND
ELEC.	ELECTRIC(AL), ELEC. CABLE
EL., ELEV.	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC.	EXCAVATION
EXIST	EXISTING
F.F.	FACE TO FACE
FERT.	FERTILIZER
F.E.	FIELD ENTRANCE
F/L, F.L.	FLOW LINE
GALV.	GALVANIZE
H.S.	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER.	INTERSECTION
IH	INTERSTATE HIGHWAY
JT.	JOINT
LT	LEFT
L.H.F.	LEFT HAND FORWARD
L.	LENGTH OF CURVE
L.F.	LINEAR FOOT(FEET)
LC.	LONG CHORD
LS	LUMP SUM
M.P.	MARKER POST
MGAL	1000 GALLONS
N.C.	NORMAL CROWN
N	NORTH
NB	NORTHBOUND
NOR	NORMAL
NO.	NUMBER
PAV'T	PAVEMENT
P.L.E.	PERMANENT LIMITED EASEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
P.E.	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
P.L.	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RT	RIGHT
R.H.F.	RIGHT HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHLD.	SHOULDER(S)
SHR.	SHRINKAGE
S	SOUTH
SB	SOUTHBOUND
S.F.	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAY
STA.	STATION
S.E.	SUPERELEVATION
S/L	SURVEY LINE
SYM	SYMMETRICAL
T.	PERCENT TRUCKS
TEL.	TELEPHONE
TEMP.	TEMPORARY
T.L.E.	TEMPORARY LIMITED EASEMENT
T.O.C.	TOP OF CURB
TYP	TYPICAL
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND (CABLE)
VAR	VARIABLE
V.C.	VERTICAL CURVE
V.P.C.	VERTICAL POINT OF CURVATURE
V.P.I.	VERTICAL POINT OF INTERSECTION
V.P.T.	VERTICAL POINT OF TANGENCY
Wt.	WEIGHT
W	WEST
WB	WESTBOUND



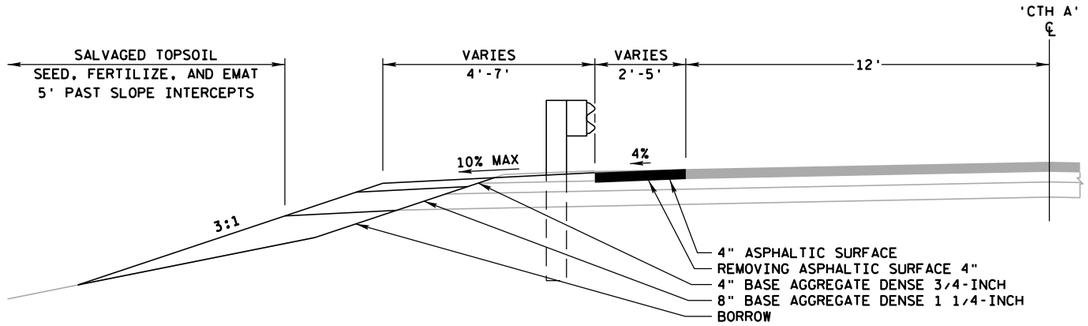
EXISTING TYPICAL SECTION

STATION 44+00 'CTH A' TO STATION 48+63 'CTH A'
STATION 50+75 'CTH A' TO STATION 55+05.45 'CTH A'



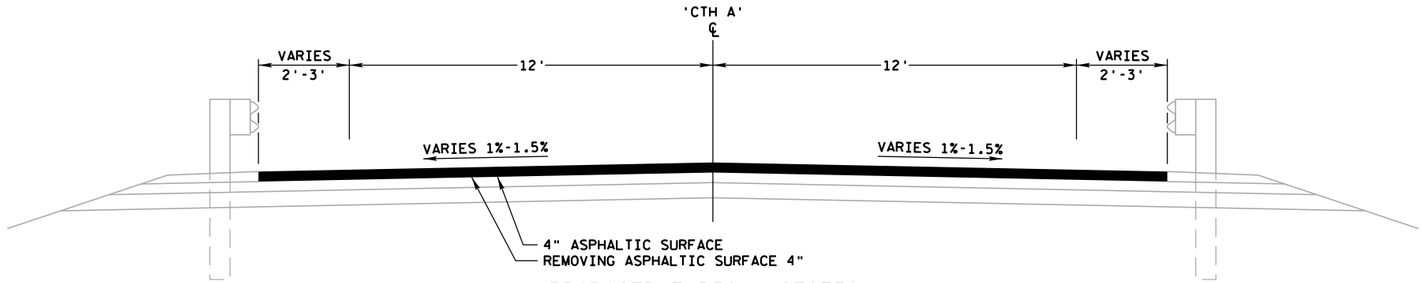
PROPOSED TYPICAL SECTION

STATION 44+98 'CTH A' TO STATION 46+02 'CTH A'
STATION 52+19 'CTH A' TO STATION 55+05 'CTH A'



PROPOSED TYPICAL SECTION

STATION 44+00 'CTH A' TO STATION 45+85 'CTH A'
STATION 52+28 'CTH A' TO STATION 54+42 'CTH A'

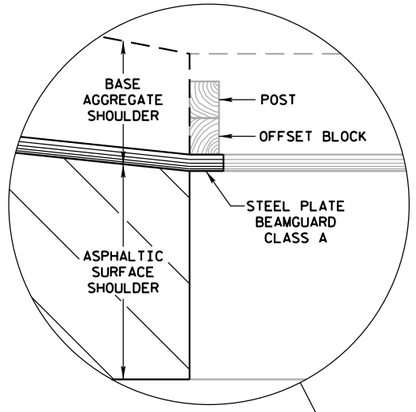


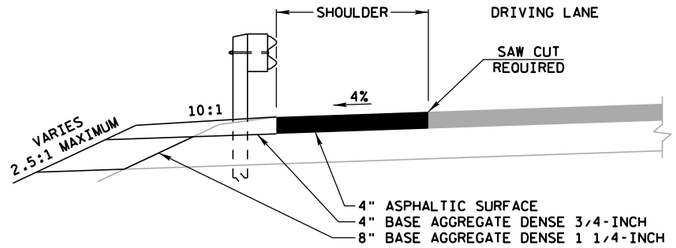
PROPOSED TYPICAL SECTION

STATION 48+32 'CTH A' TO STATION 48+63 'CTH A'
STATION 50+75 'CTH A' TO STATION 51+06 'CTH A'

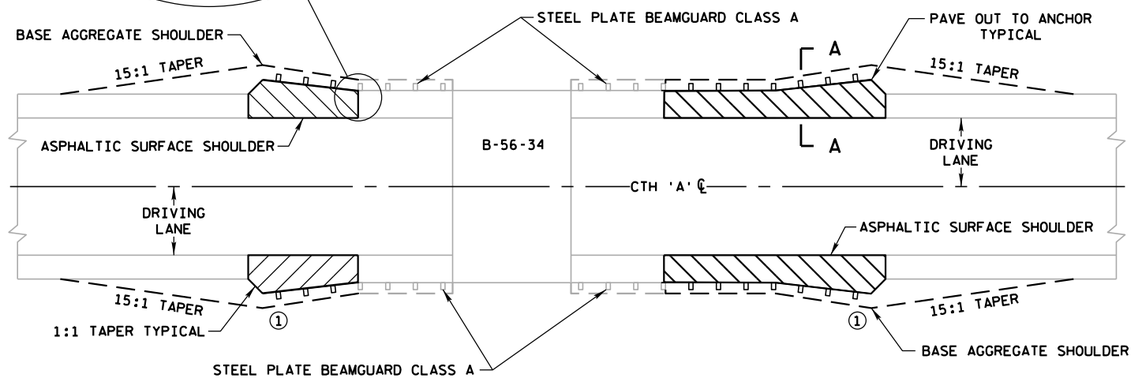
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	TYPICAL SECTIONS	SHEET 3	E

2





SECTION A-A

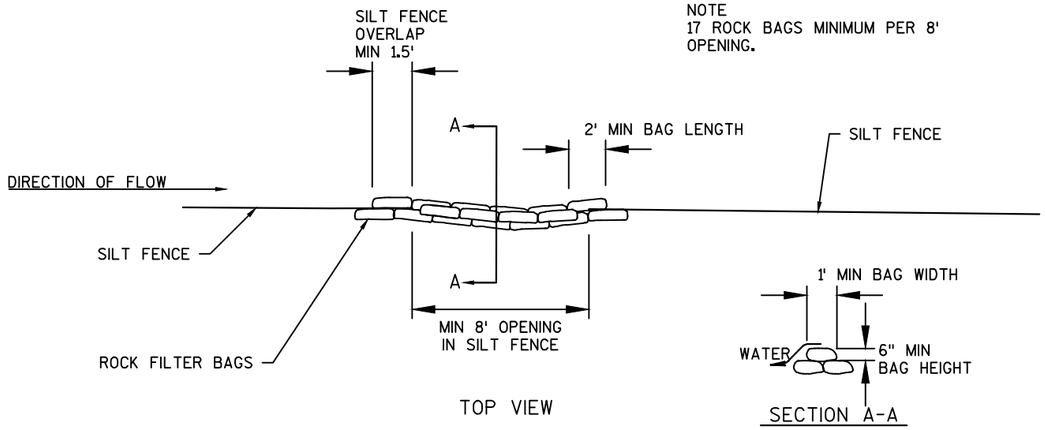


ASPHALTIC PAVED SHOULDER ALONG GUARDRAIL

NOTE

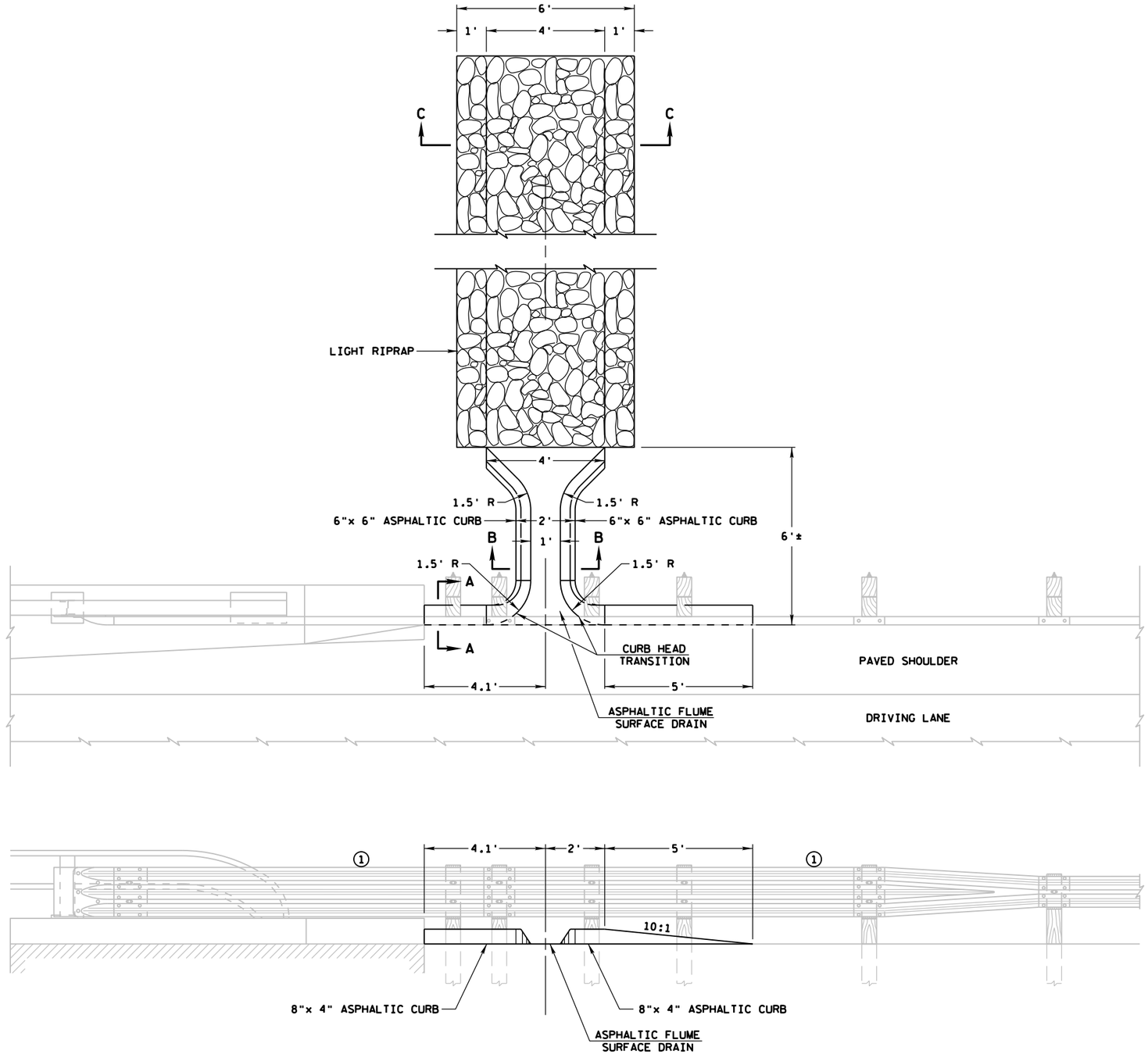
(1) POST NUMBER 1 HINGE WIDTH REDUCED FROM 5'-0" TO 2'-0" DUE TO REAL ESTATE CONSTRAINTS

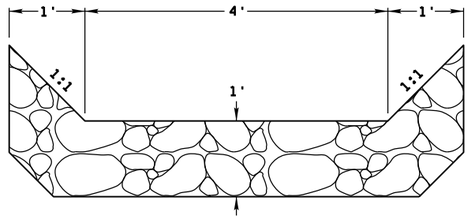
2



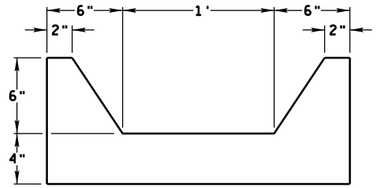
ROCK BAGS USED FOR SILT FENCE RELIEF

PROJECT NO:1014-00-65	HWY:IH 90	COUNTY:SAUK	CONSTRUCTION DETAIL	SHEET 5	E

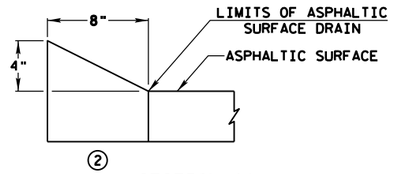




SECTION CC



SECTION BB



SECTION AA

NOTES:

FOR FURTHER DETAILS SEE
S.D.D. "CONCRETE SURFACE DRAIN & ASPHALTIC FLUME".

① STEEL THRIE BEAM TO BE REMOVED AND REPLACED USING BID ITEMS REMOVING GUARDRAIL AND STEEL TRHIE BEAM.

② ASPHALTIC CURB TO BE CONSTRUCTED USING BID ITEM ASPHALTIC SURFACE DRAIN.

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	ASPHALTIC FLUME SURFACE DRAIN	SHEET 6	E

LEGEND

- EROSION MAT CLASS I TYPE A
- ROCK BAGS (SILT FENCE RELIEF)
- TEMPORARY DITCH CHECKS
- DIRECTION OF FLOW
- SILT FENCE
- RIPRAP

NOTE
1. STOCK PILE AREAS CALCULATED USING A HEIGHT OF 2 FEET WITH 1:1 SIDE SLOPES
2. STOCK PILE AREAS CALCULATED USING A HEIGHT OF 2 FEET WITH 3:1 SIDE SLOPES

SALVAGED TOPSOIL, TEMP. SEEDING, SEEDING #10, FERT TYPE B AND EROSION MAT CLASS I TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

SLOPE INTERCEPT

R/W

SALVAGED TOPSOIL STOCK PILE LOCATION

SALVAGED TOPSOIL STOCK PILE LOCATION

44'CTHA'

46'CTHA'

48'CTHA'

R/W

SALVAGED TOPSOIL STOCK PILE LOCATION

SLOPE INTERCEPT

CTH A

TEMP

R/W

SLOPE INTERCEPT

SALVAGED TOPSOIL STOCK PILE LOCATION

2'

50'CTHA'

52'CTHA'

54'CTHA'

R/W

SALVAGED TOPSOIL STOCK PILE LOCATION

SLOPE INTERCEPT

SALVAGED TOPSOIL, TEMP. SEEDING, SEEDING #10, FERT TYPE B AND EROSION MAT CLASS I TYPE A UNLESS OTHERWISE NOTED ALL DISTURBED AREAS

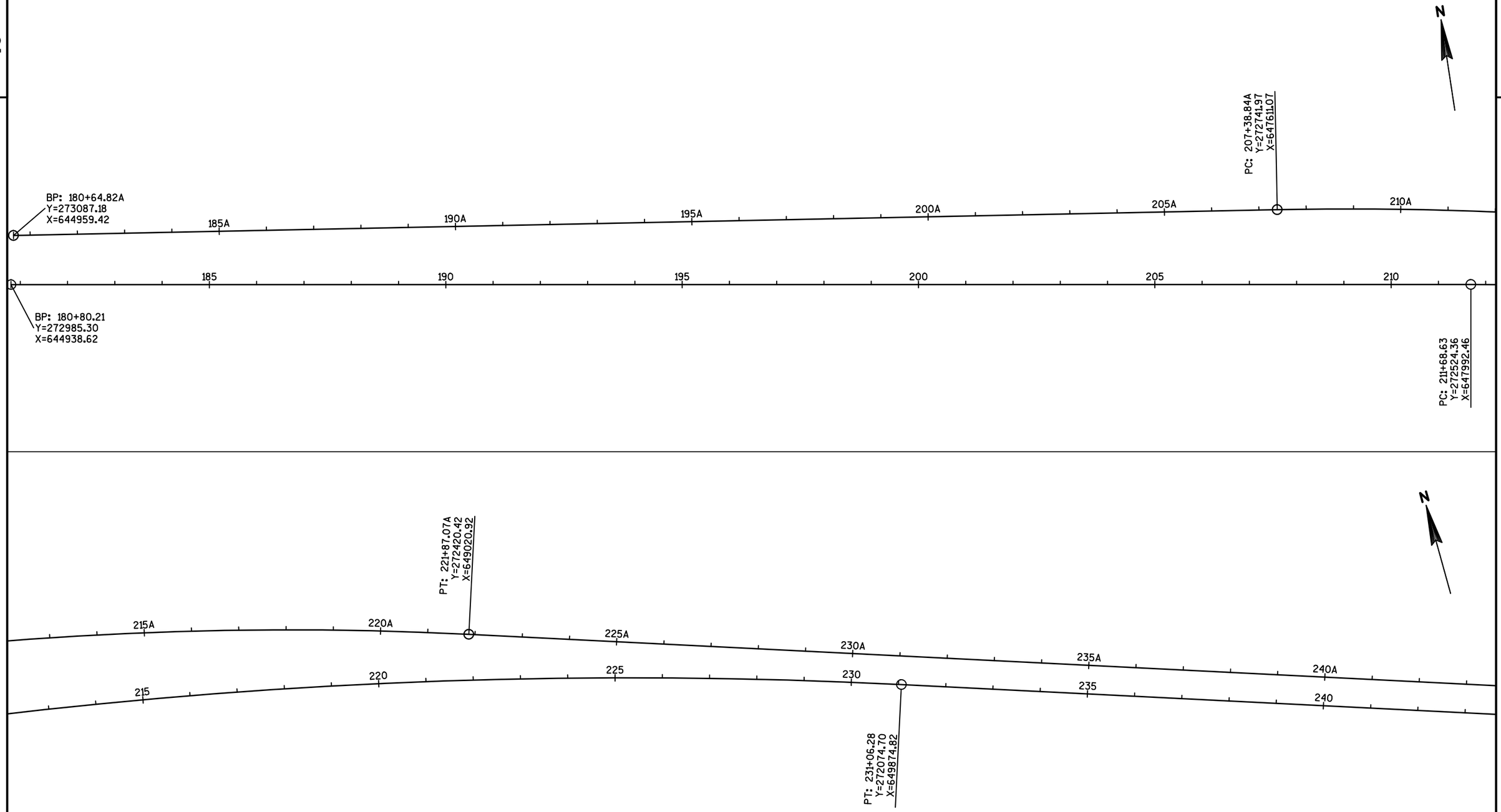
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	EROSION CONTROL	SHEET 7	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - SHEET - (1)

PLOT DATE : 1/18/2017 8:46 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

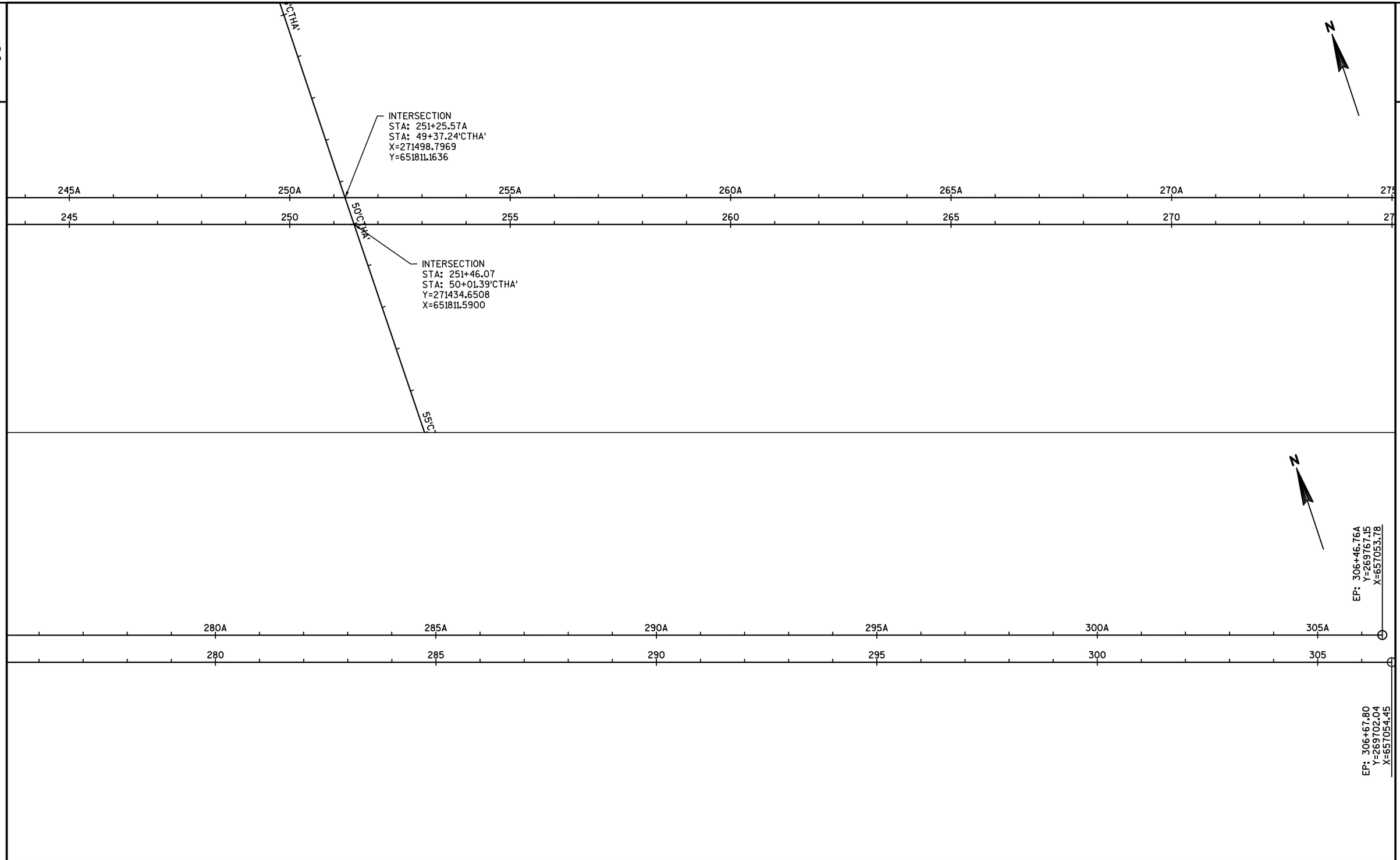
2



PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	IH 90 ALIGNMENT PLAN	SHEET 8	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\027202_AD.DWG
LAYOUT NAME - SHEET - (4)
PLOT DATE : 1/18/2017 4:22 PM
PLOT BY : GREINER JR, MICHAEL PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO:1014-00-65	HWY: IH 90	COUNTY: SAUK	IH 90 ALIGNMENT PLAN	SHEET 9	E

2

N

2554

255

2504

250

PI: 42+65.00'CTHA'
Y=272171.04
X=651808.37

PI: 48+67.34'CTHA'
Y=271568.70
X=651810.70

PI: 50+72.34'CTHA'
Y=271363.70
X=651812.06

EP: 56+48.39'CTHA'
Y=270787.67
X=651816.10

45'CTHA'

50'CTHA'

55'CTHA'

INTERSECTION
STA: 251+25.57A
STA: 49+37.24'CTHA'
X=271498.7969
Y=651811.1636

INTERSECTION
STA: 251+46.07
STA: 50+01.39'CTHA'
Y=271434.6508
X=651811.5900

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CTH A ALIGNMENT PLAN	SHEET 10	E

1014-00-65

Line	Item	Item Description	Unit	Total	Qty
0010	203.0225.S	Debris Containment (structure) 01. B-56-0034	LS	1.000	1.000
0020	204.0110	Removing Asphaltic Surface	SY	357.000	357.000
0030	204.0165	Removing Guardrail	LF	252.000	252.000
0040	205.0100	Excavation Common	CY	9.000	9.000
0050	208.0100	Borrow	CY	434.000	434.000
0060	213.0100	Finishing Roadway (project) 01. 1014-00-65	EACH	1.000	1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	32.000	32.000
0080	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	37.000	37.000
0090	465.0105	Asphaltic Surface	TON	88.000	88.000
0100	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 01. 2 1/4 Inch	LF	130.000	130.000
0110	502.3100	Expansion Device (structure) 01. B-56-0034	LS	1.000	1.000
0120	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,450.000	1,450.000
0130	509.0301	Preparation Decks Type 1	SY	14.000	14.000
0140	509.0302	Preparation Decks Type 2	SY	2.000	2.000
0150	509.1000	Joint Repair	SY	36.000	36.000
0160	509.1200	Curb Repair	LF	350.000	350.000
0170	509.1500	Concrete Surface Repair	SF	530.000	530.000
0180	509.2000	Full-Depth Deck Repair	SY	2.000	2.000
0190	509.5100.S	Polymer Overlay	SY	619.000	619.000
0200	606.0100	Riprap Light	CY	48.000	48.000
0210	614.0230	Steel Thrie Beam	LF	100.000	100.000
0220	614.0305	Steel Plate Beam Guard Class A	LF	288.000	288.000
0230	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	4.000	4.000
0240	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1014-00-65	EACH	1.000	1.000
0250	619.1000	Mobilization	EACH	1.000	1.000
0260	624.0100	Water	MGAL	75.000	75.000
0270	625.0500	Salvaged Topsoil	SY	2,142.000	2,142.000
0280	628.1504	Silt Fence	LF	1,177.000	1,177.000
0290	628.1520	Silt Fence Maintenance	LF	1,177.000	1,177.000
0300	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0310	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0320	628.2002	Erosion Mat Class I Type A	SY	3,264.000	3,264.000
0330	628.7504	Temporary Ditch Checks	LF	45.000	45.000
0340	628.7570	Rock Bags	EACH	238.000	238.000
0350	629.0210	Fertilizer Type B	CWT	2.000	2.000
0360	630.0110	Seeding Mixture No. 10	LB	43.000	43.000
0370	630.0200	Seeding Temporary	LB	20.000	20.000
0380	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000

1014-00-65

Line	Item	Item Description	Unit	Total	Qty
0390	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
0400	637.2210	Signs Type II Reflective H	SF	16.250	16.250
0410	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0420	638.2602	Removing Signs Type II	EACH	7.000	7.000
0430	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0440	642.5201	Field Office Type C	EACH	1.000	1.000
0450	643.0100	Traffic Control (project) 01. 1014-00-65	EACH	1.000	1.000
0460	643.0300	Traffic Control Drums	DAY	468.000	468.000
0470	643.0420	Traffic Control Barricades Type III	DAY	468.000	468.000
0480	643.0705	Traffic Control Warning Lights Type A	DAY	936.000	936.000
0490	643.0715	Traffic Control Warning Lights Type C	DAY	170.000	170.000
0500	643.0800	Traffic Control Arrow Boards	DAY	24.000	24.000
0510	643.0900	Traffic Control Signs	DAY	600.000	600.000
0520	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0530	645.0130	Geotextile Type R	SY	165.000	165.000
0540	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,420.000	4,420.000
0550	650.9910	Construction Staking Supplemental Control (project) 01. 1014-00-65	LS	1.000	1.000
0560	650.9920	Construction Staking Slope Stakes	LF	1,105.000	1,105.000
0570	690.0150	Sawing Asphalt	LF	578.000	578.000
0580	SPV.0035	Special 01. Concrete Masonry Deck Patching	CY	33.000	33.000
0590	SPV.0060	Special 01. Asphalt Surface Drain	EACH	4.000	4.000
0600	SPV.0060	Special 02. Cleaning and Painting Bearings	EACH	44.000	44.000

Division	From / To Station	Location	Common Excavation (1)	Salvaged / Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + / - (14)	Waste	Borrow	Comment:
			Cut (2)				Factor 1.25				
Division 1										(item #208.0100)	
	43+50'CTHA'-46+50'CTHA'		9	0	9	254	318	-309		434	
	52+00'CTHA'-55+05'CTHA'		-	-	-	100	125	-125			
Division 1 Subtotal			9	0	9	354	443	-434		434	
Grand Total			9.0	0.0	9.0	354	443	-434	0.0	434	
Total Common Exc			9.0								

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.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusable Pavement Material
13) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
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.

3

3

GUARDRAIL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0230 STEEL THRIE BEAM LF	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	REMARKS
0010	45+30'CTHA'	-	45+68'CTHA'	CTH A LT	38.0	-	-	-	
0010	45+23'CTHA'	-	45+61'CTHA'	CTH A RT	38.0	-	-	-	
0010	45+18'CTHA'	-	45+68'CTHA'	CTH A LT	-	-	-	1	
0010	45+18'CTHA'	-	45+68'CTHA'	CTH A RT	-	-	-	1	
0010	48+31'CTHA'	-	48+56'CTHA'	CTH A RT	25.0	25	-	-	
0010	48+40'CTHA'	-	48+65'CTHA'	CTH A LT	25.0	25	-	-	
0010	50+74'CTHA'	-	50+99'CTHA'	CTH A RT	25.0	25	-	-	
0010	50+82'CTHA'	-	51+07'CTHA'	CTH A LT	25.0	25	-	-	
0010	52+28'CTHA'	-	52+66'CTHA'	CTH A LT	38.0	-	-	-	
0010	52+19'CTHA'	-	52+57'CTHA'	CTH A RT	38.0	-	-	-	
0010	52+28'CTHA'	-	53+40'CTHA'	CTH A LT	-	-	112.5	-	
0010	52+19'CTHA'	-	53+94'CTHA'	CTH A RT	-	-	175	-	
0010	53+40'CTHA'	-	53+90'CTHA'	CTH A LT	-	-	-	1	
0010	53+94'CTHA'	-	54+44'CTHA'	CTH A RT	-	-	-	1	
				TOTAL 0010	252	100	288	4	

BASE AGGREGATE SUMMARY

CAT.	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER **MGAL**	REMARKS
0010	44+00'CTHA'	-	45+68'CTHA'	CTH A LT	11	13	0.12	
0010	53+50'CTHA'	-	54+42'CTHA'	CTH A LT	6	4	0.08	
0010	45+00'CTHA'	-	45+36'CTHA'	CTH A RT	3	2	0.03	
0010	52+70'CTHA'	-	54+75'CTHA'	CTH A RT	12	18	0.18	
				TOTAL 0010	32	37	1.00	

MGAL QUANTITY LISTED ELSEWHERE

ASPHALT SUMMARY

CAT.	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	465.0105 ASPHALTIC SURFACE TON	REMARKS
0010	48+32'CTHA'	-	48+63'CTHA'	CTH A	96	22	
0010	50+75'CTHA'	-	51+06'CTHA'	CTH A	96	22	
0010	45+16'CTHA'	-	45+68'CTHA'	CTH A LT	17	6	
0010	45+09'CTHA'	-	45+61'CTHA'	CTH A RT	17	6	
0010	52+28'CTHA'	-	53+92'CTHA'	CTH A LT	55	14	
0010	52+19'CTHA'	-	54+47'CTHA'	CTH A RT	76	18	
				TOTAL 0010	357	88	

3

TOPSOIL, FERTILIZER, SEED, EROSION MAT SUMMARY

CAT.	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2002 EROSION MAT CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB	624.0100 WATER **MGAL**	REMARKS
0010	44+00'CTHA'	-	45+68'CTHA'	CTH A LT	561	630	0.40	9	-	14	
0010	45+00'CTHA'	-	46+50'CTHA'	CTH A RT	366	418	0.30	6	-	9	
0010	53+50'CTHA'	-	54+25'CTHA'	CTH A LT	78	120	0.07	2	-	3	
0010	52+68'CTHA'	-	54+76'CTHA'	CTH A RT	329	412	0.26	6	-	9	
0010	48+40'CTHA'		-	CTH A LT	2	79	0.05	1	-	2	SURFACE DRAIN
0010	48+48'CTHA'		-	CTH A RT	9	92	0.06	1	-	2	SURFACE DRAIN
0010	50+90'CTHA'		-	CTH A LT	3	48	0.05	1	-	1	SURFACE DRAIN
0010	50+95'CTHA'		-	CTH A RT	1	77	0.05	1	-	2	SURFACE DRAIN
0010	43+25'CTHA'	-	44+00'CTHA'	CTH A LT	110	218	0.14	3	-	5	STOCK PILE RESTORATION
0010	44+15'CTHA'	-	44+89'CTHA'	CTH A RT	110	218	0.14	3	-	5	STOCK PILE RESTORATION
0010	45+80'CTHA'	-	45+90'CTHA'	CTH A LT	38	93	0.05	1	-	2	STOCK PILE RESTORATION
0010	52+07'CTHA'	-	52+55'CTHA'	CTH A RT	74	154	0.10	2	-	3	STOCK PILE RESTORATION
0010	54+34'CTHA'	-	54+58'CTHA'	CTH A LT	33	51	0.03	1	-	1	STOCK PILE RESTORATION
				UNDISTRIBUTED	428	653	0.30	6	20	15	
				TOTAL 0010	2142	3264	2.00	43	20	74	

MGAL QUANTITY LISTED ELSEWHERE
THE FOLLOWING FORMULA WAS USED TO COMPUTE WATER QUANTITY
SEEDED AREA (SY) x 1 INCH OF RAIN x 0.0278 YD/INCH = XXXX CY OF WATER
XXXX CY OF WATER x 1 GAL/0.004951 CY x 1 MGAL/1000 GAL = XXXX MGAL
XXXX MGAL x 4 WEEKS OF WATERING = XXXX MGAL

EROSION CONTROL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH	REMARKS
0010	43+18'CTHA'	-	45+99'CTHA'	CTH A LT	250	250	-	-	-	-	
0010	48+17'CTHA'	-	48+59'CTHA'	CTH A LT	55	55	-	-	-	-	
0010	53+37'CTHA'	-	54+64'CTHA'	CTH A LT	124	124	-	-	-	-	
0010	44+08'CTHA'	-	46+23'CTHA'	CTH A RT	198	198	-	-	-	-	
0010	50+71'CTHA'	-	51+14'CTHA'	CTH A RT	38	38	-	-	-	-	
0010	51+97'CTHA'	-	54+92'CTHA'	CTH A RT	276	276	-	-	-	-	
0010	46+71'CTHA'			CTH A LT	-	-	-	-	18	-	
0010	47+46'CTHA'			CTH A RT	-	-	-	-	18	-	
0010	43+29'CTHA'			CTH A LT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	44+20'CTHA'			CTH A LT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	45+07'CTHA'			CTH A LT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	45+89'CTHA'			CTH A LT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	53+54'CTHA'			CTH A LT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	44+14'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	44+95'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	46+08'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	50+90'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	52+08'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	52+92'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	53+83'CTHA'			CTH A RT	-	-	-	-	-	17	SILT FENCE RELIEF
0010	PROJECT						2	1	-	-	INITIAL AND FINAL
0010		-		UNDISTRIBUTED	235	235	1	1	9	34	
				TOTAL 0010	1177	1177	3	2	45	238	

SIGN SUMMARY

CATEGORY	SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0612 POSTS WOOD 4 x 6 - INCH 12 FOOT EACH	634.0616 POSTS WOOD 4 x 6 - INCH 16 FOOT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	1-1	47+23'CTHA'	CTH A LT	R12-1	24" x 30"	Weight Limit __ Tons	45		1	5.00			
0010	1-2R	47+23'CTHA'	CTH A LT	R12-1	24" x 30"	Weight Limit __ Tons	45					1	1
0010	1-3	47+97'CTHA'	CTH A LT	W5-52R	12" x 36"	Bridge Clearance Marker, Right		1			3.00		
0010	1-4R	47+97'CTHA'	CTH A LT	W5-52R	12" x 36"	Bridge Clearance Marker, Right						1	1
0010	1-5	48+00'CTHA'	CTH A RT	W5-52L	12" x 36"	Bridge Clearance Marker, Left		1			3.00		
0010	1-6R	48+00'CTHA'	CTH A RT	W5-52L	12" x 36"	Bridge Clearance Marker, Left						1	1
0010	1-7	50+92'CTHA'	CTH A LT	W5-52L	12" x 36"	Bridge Clearance Marker, Left		1			3.00		
0010	1-8R	50+92'CTHA'	CTH A LT	W5-52L	12" x 36"	Bridge Clearance Marker, Left						1	1
0010	1-9	50+95'CTHA'	CTH A RT	W5-52R	12" x 36"	Bridge Clearance Marker, Right		1			3.00		
0010	1-10R	50+95'CTHA'	CTH A RT	W5-52R	12" x 36"	Bridge Clearance Marker, Right						1	1
0010	1-11	52+08'CTHA'	CTH A RT	R12-1	24" x 30"	Weight Limit __ Tons	45		1	5.00			
0010	1-12R	52+08'CTHA'	CTH A RT	R12-1	24" x 30"	Weight Limit __ Tons	45					1	1
0010	1-13	52+42'CTHA'	CTH A, Left	W2-2	30" x 30"	Side Road Warning Sign			1	6.25			
0010	1-14R	52+42'CTHA'	CTH A, Left	W2-2	30" x 30"	Side Road Warning Sign						1	1
							TOTAL 0010	4	3	16.25	12	7	7

TRAFFIC CONTROL SUMMARY

CAT.	STATION	TO	STATION	LOCATION	DURATION DAYS	DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	BARRICADES EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	LIGHTS EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	LIGHTS EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
0010	182+48	-	257+20	I90/94 EB	3	42	126	2	6	4	12	17	51	2	6	12	36	1	3	STAGE 1 LANE CLOSURE
0010	212+77	-	257+09	I90/94 EB	3	42	126	2	6	4	12	17	51	2	6	12	36	1	3	STAGE 2 SHOULDER CLOSURE
0010	245+51'A'	-	320+24'A'	I90/94 WB	2	12	24	-	-	-	-	-	-	1	2	8	16	1	2	STAGE 1 LANE CLOSURE
0010	245+62'A'	-	289+95'A'	I90/94 WB	2	12	24	-	-	-	-	-	-	1	2	8	16	1	2	STAGE 2 SHOULDER CLOSURE
0010		-		CTH A	32	-	-	14	448	28	896	-	-	-	-	14	448	-	-	CTH A CLOSURE
0010	182+48	-	257+20	I90/94 EB	2	42	84	2	4	4	8	17	34	2	4	12	24	1	2	UNDISTRIBUTED LANE CLOSURE
0010	245+51'A'	-	320+24'A'	I90/94 WB	2	42	84	2	4	4	8	17	34	2	4	12	24	1	2	UNDISTRIBUTED LANE CLOSURE
				TOTAL 0010			468		468		936		170		24		600		14	

3

PAVEMENT MARKING

CAT.	STATION	TO	STATION	LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	REMARKS
0010	44+00'CTHA'	-	55+05'CTHA'	CTH A LT	1105	WHITE
0010	44+00'CTHA'	-	55+05'CTHA'	CTH A RT	1105	WHITE
0010	44+00'CTHA'	-	55+05'CTHA'	CTH A CENTER	2210	DOUBLE YELLOW
				TOTAL 0010	4420	

CONSTRUCTION STAKING

CAT.	STATION	TO	STATION	LOCATION	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	44+00'CTHA'	-	55+05'CTHA'	CTH A	1105	
				TOTAL 0010	1105	

3

SAWING ASPHALT

CAT.	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	REMARKS
0010	48+32'CTHA'			CTH A	29	TRANSITION
0010	51+06'CTHA'			CTH A	29	TRANSITION
0010	45+16'CTHA'	-	45+68'CTHA'	CTH A LT	58	**EAT AND SHOULDER**
0010	52+28'CTHA'	-	53+92'CTHA'	CTH A LT	170	**EAT AND SHOULDER**
0010	45+09'CTHA'	-	45+61'CTHA'	CTH A RT	58	**EAT AND SHOULDER**
0010	52+19'CTHA'	-	54+47'CTHA'	CTH A RT	234	**EAT AND SHOULDER**
				TOTAL 0010	578	

QUANTITY INCLUDES 3' CROSS CUT OF EACH END

ASPHALT SURFACE DRAIN SUMMARY

CAT.	STATION	LOCATION	606.0100 RIPRAP LIGHT CY	645.0130 GEOTEXTILE FABRIC TYPE R SY	SPV.0060.01 ASPHALT SURFACE DRAIN EACH	REMARKS
0010	48+40'CTHA'	CTH A LT	14.5	50	1	
0010	48+48'CTHA'	CTH A RT	13.0	45	1	
0010	50+90'CTHA'	CTH A LT	6.9	24	1	
0010	50+95'CTHA'	CTH A RT	13.5	46	1	
		TOTAL 0010	48	165	4	

LEGEND

XXXX SAWING ASPHALT

REMOVING GUARDRAIL:
STA 45+30'CTH A' TO 45+68'CTH A'
15' LT, 38 LF
STEEL PLATE BEAMGUARD EAT:
STA 45+18'CTH A' TO 45+68'CTH A'
17'LT, 1 EACH

SLOPE INTERCEPT

R/W

44+50.73'CTHA'
-18.41

BEGIN PROJECT
STA. 44+00'CTH A'
X=651808.89
Y=272036.03

BM 901

45+17.66'CTHA'
-22.89

45+17.66'CTHA'
-16.99

45+42.66'CTHA'
-20.31

45+84.55'CTHA'
-17.98

45+67.65'CTHA'
-14.62

45+15.58'CTHA'
-15.16

44'CTH A'

46'CTH A'

48'CTH A'

AT&T LEGACY

REHABILITATE B-56-34
STA. 48+63'CTH A' TO
STA. 50+75'CTHA'
SEE STRUCTURE PLAN

SEE CONSTRUCTION DETAIL
ASPHALT SURFACE DRAIN

REMOVING ASPHALTIC SURFACE
AND REPLACE WITH ASPHALTIC SURFACE
STA 48+32'CTH A' TO 48+63'CTHA'

PI: 48+67.34'CTH A'

45+61.15'CTHA'
14.71

45+08.61'CTHA'
14.41

44+98.42'CTHA'
19.87

45+61.29'CTHA'
17.71

45+35.58'CTHA'
18.89

45+11.15'CTHA'
17.00

45+11.15'CTHA'
21.00

SLOPE INTERCEPT

REMOVING GUARDRAIL:
STA 45+23'CTH A' TO 45+61'CTH A'
15' RT, 38 LF
STEEL PLATE BEAMGUARD EAT:
STA 45+11'CTH A' TO 45+61'CTH A'
17'LT, 1 EACH

SEE CONSTRUCTION DETAIL
ASPHALT SURFACE DRAIN

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
901	43+63'CTHA'	FENO	895.97
900	51+06'CTHA'	FENO	887.42

ADAMS-COLUMBIA
ELECTRIC COOPERATIVE

REMOVING GUARDRAIL:
STA 52+28'CTH A' TO 52+66'CTH A'
15' LT, 38 LF
STEEL PLATE BEAM GUARD CLASS A:
STA 52+28'CTH A' TO 53+40'CTH A'
15' LT, 112.5 LF
STEEL PLATE BEAMGUARD EAT:
STA 53+40'CTH A' TO 53+90'CTH A'
17'LT, 1 EACH

53+65.34'CTHA'
-20.25

53+90.34'CTHA'
-22.90

53+90.34'CTHA'
-17.00

SLOPE INTERCEPT

END PROJECT
STA. 55+05'CTH A'

R/W

PI: 50+72.34'CTH A'

SEE CONSTRUCTION DETAIL
ASPHALT SURFACE DRAIN

52+52.70'CTHA'
-19.00

52+27.84'CTHA'
-15.35

53+40.37'CTHA'
-19.00

54+41.75'CTHA'
-19.57

EP: 56+48.39'CTH A'

53+40.34'CTHA'
-15.00

53+92.35'CTHA'
-15.34

52'CTH A'

54'CTH A'

56'CTH A'

53+94.05'CTHA'
15.00

54+46.86'CTHA'
14.19

55+05.45'CTHA'
18.17

BM 900

52+19.05'CTHA'
14.26

52+63.15'CTHA'
19.00

53+92.36'CTHA'
19.00

SEE CONSTRUCTION DETAIL
ASPHALT SURFACE DRAIN

R/W

SLOPE INTERCEPT

REMOVING GUARDRAIL:
STA 52+19'CTH A' TO 52+57'CTH A'
15' RT, 38 LF
STEEL PLATE BEAM GUARD CLASS A:
STA 52+19'CTH A' TO 53+94'CTH A'
15' RT, 175 LF
STEEL PLATE BEAMGUARD EAT:
STA 53+94'CTH A' TO 54+44'CTH A'
17'LT, 1 EACH

CENTURY LINK

ALLIANT ENERGY

54+44.05'CTHA'
17.00

54+44.01'CTHA'
21.00

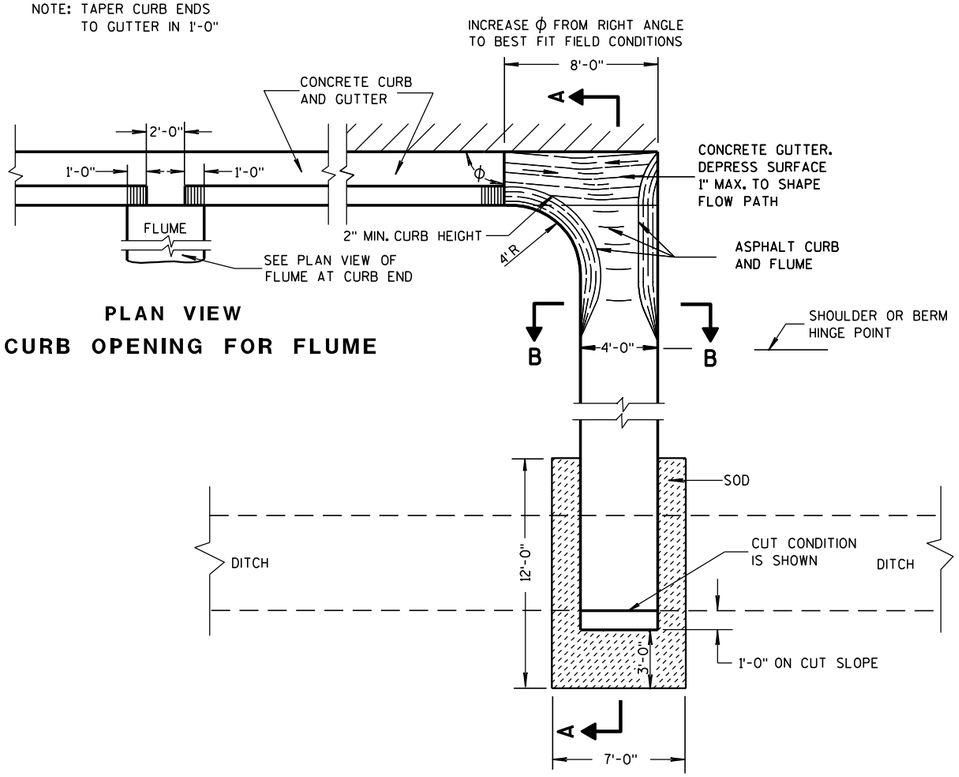
REMOVING ASPHALTIC SURFACE
AND REPLACE WITH ASPHALTIC SURFACE
STA 50+75'CTH A' TO 51+06'CTHA'

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	PLAN: CTH A	SHEET 19	E

Standard Detail Drawing List

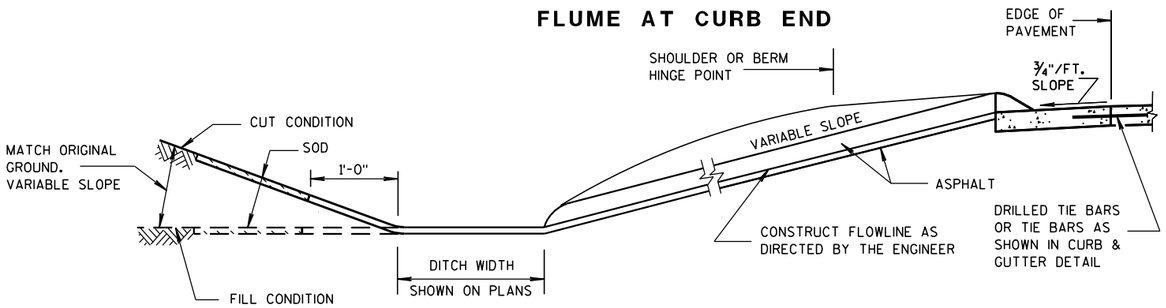
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
14B15-09A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-09C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B24-08A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-08C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C12-05	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D12-06B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

ASPHALTIC FLUME

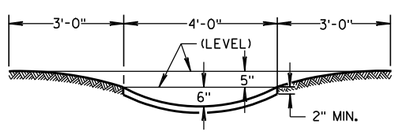


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

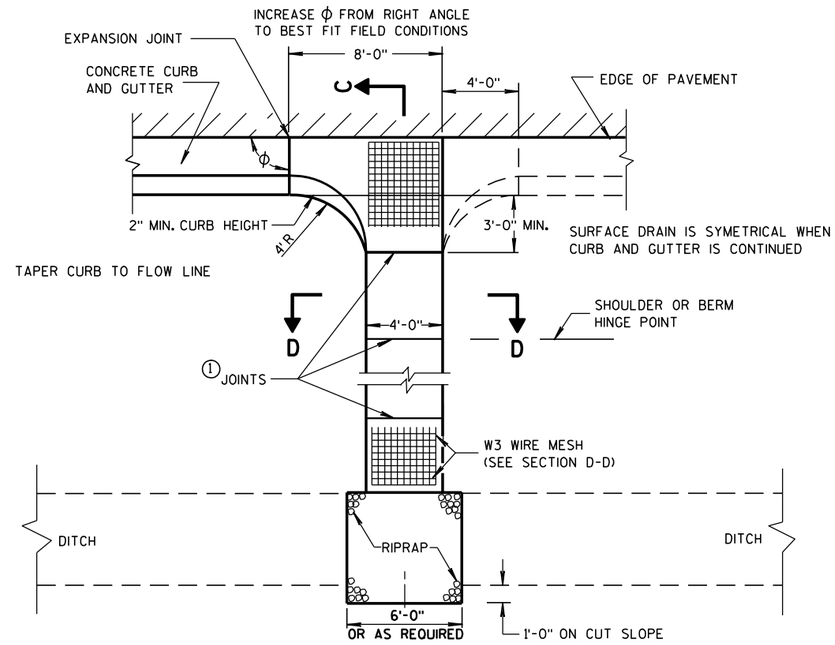
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

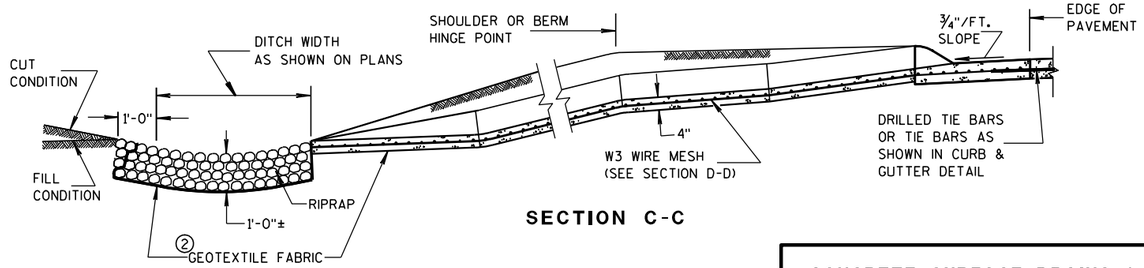
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

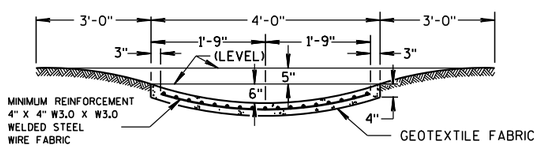
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT

FHWA

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S.D.D. 8 D 4-5

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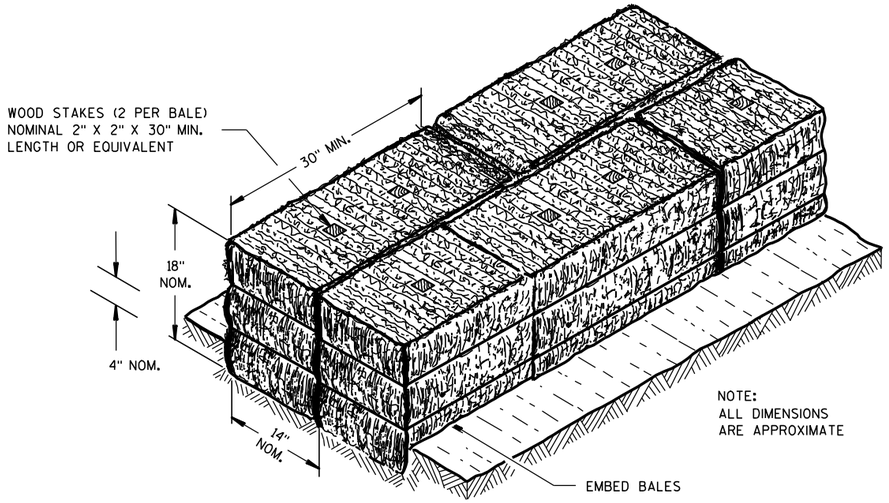
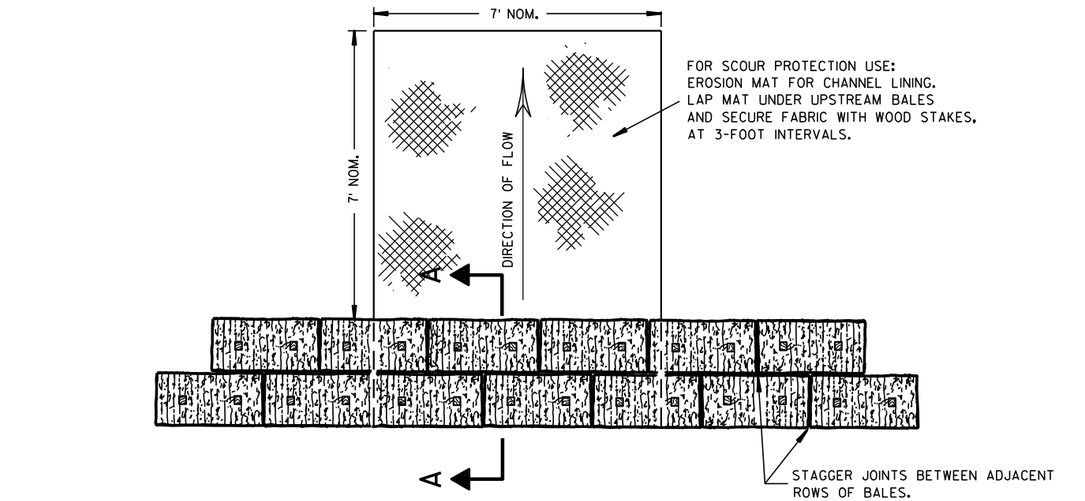
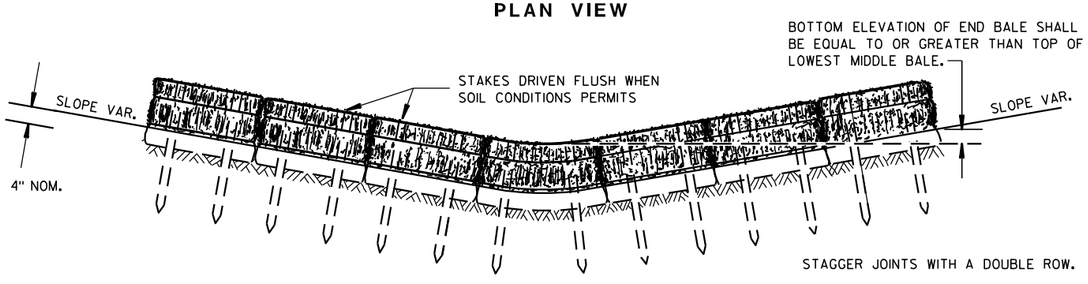
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



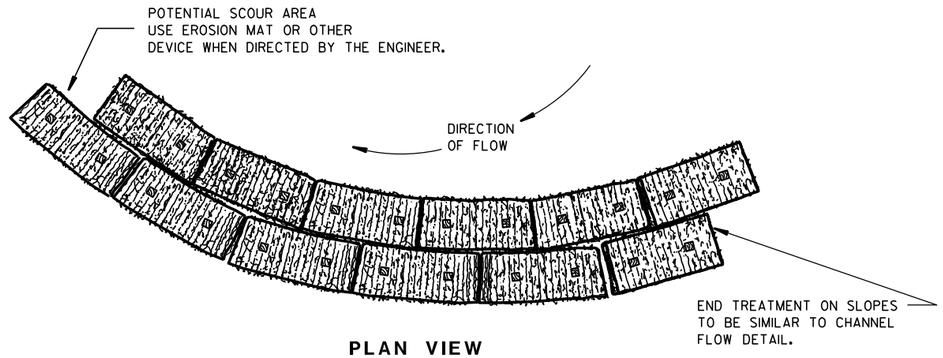
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

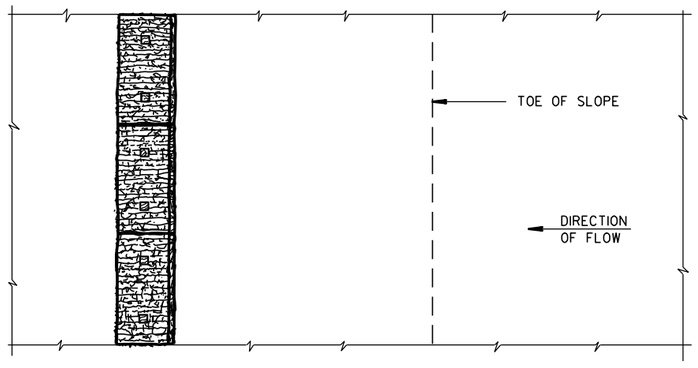
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

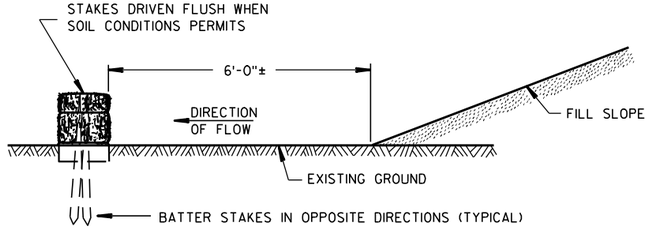


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

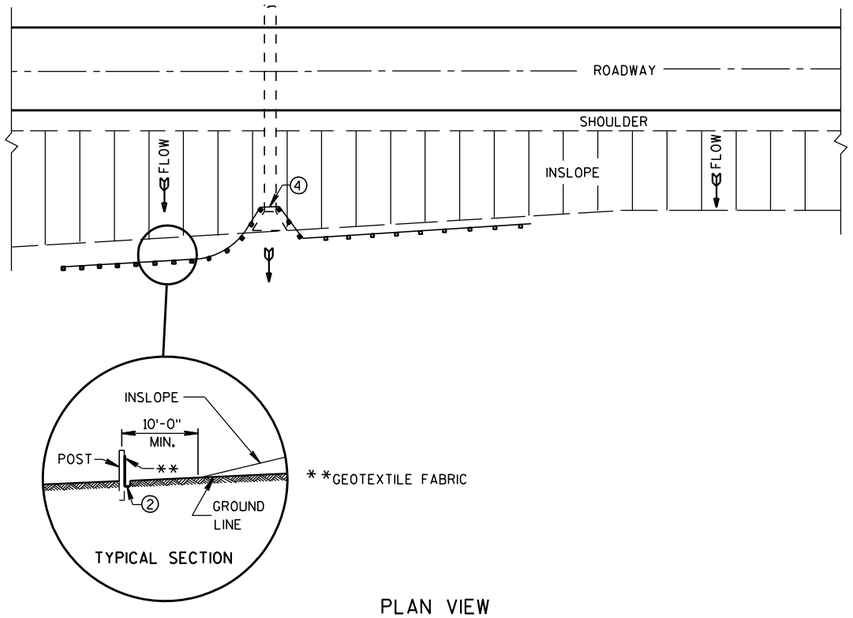
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

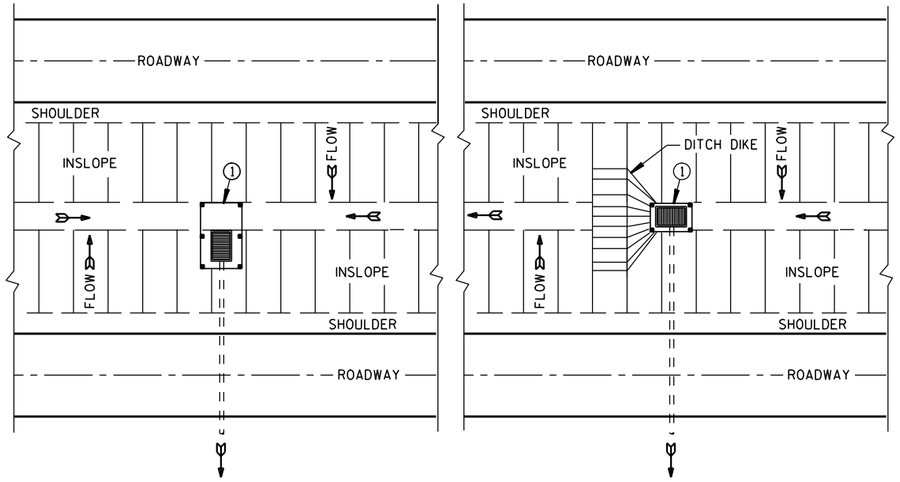
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 8-3



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.

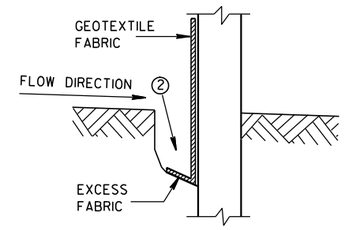
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

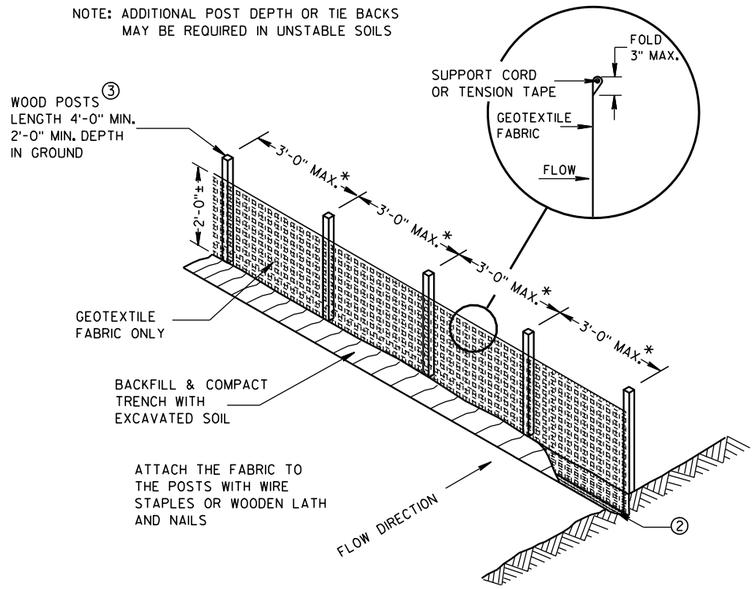
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

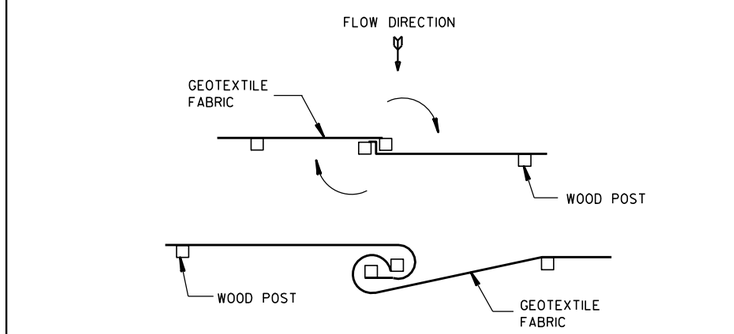
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



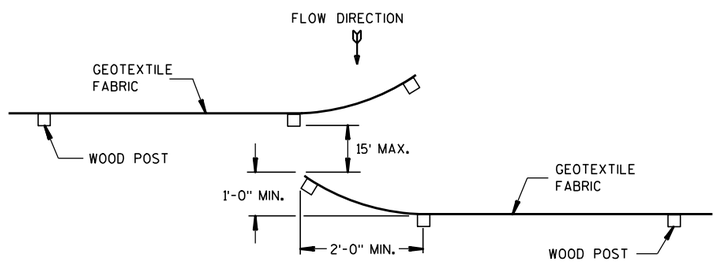
TRENCH DETAIL



SILT FENCE

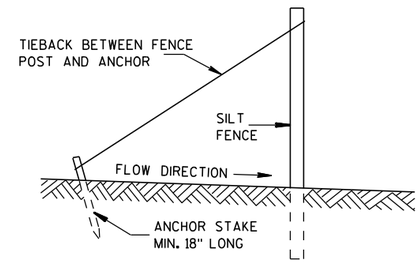


TWIST METHOD



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

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S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

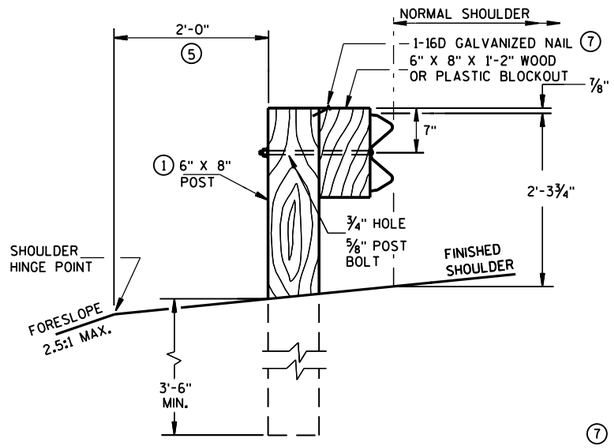
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

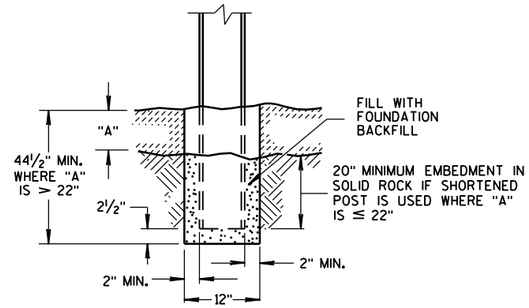
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

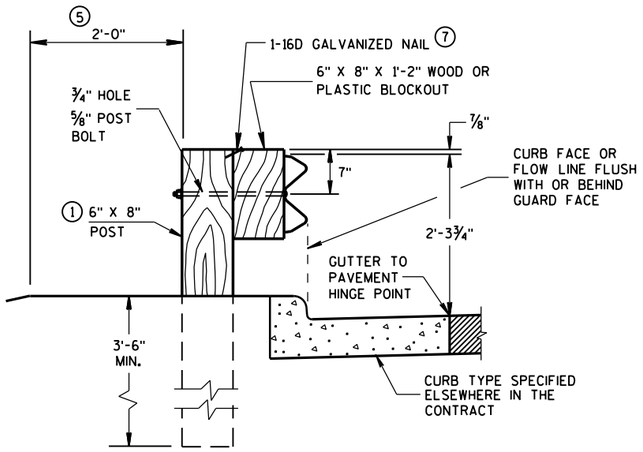
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



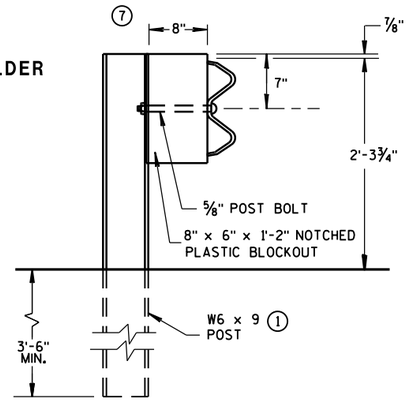
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



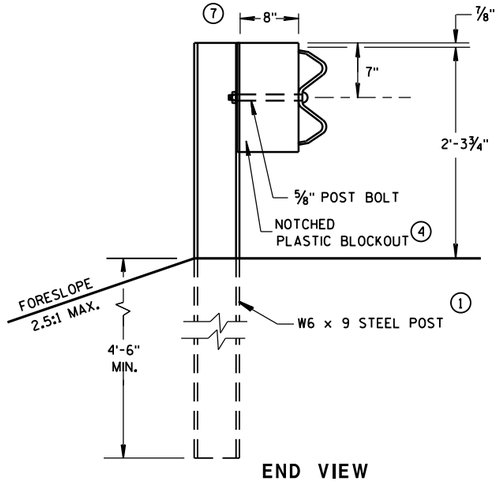
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



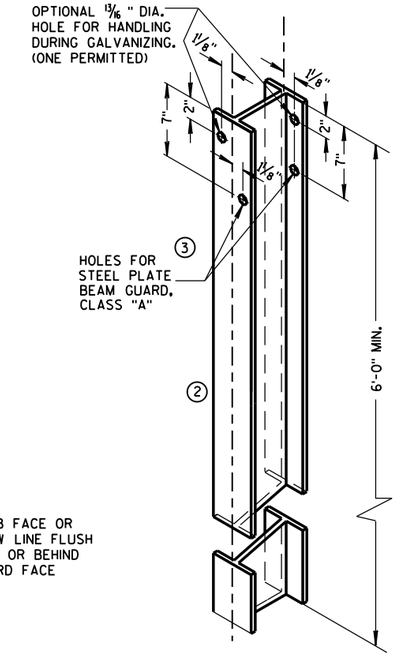
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION

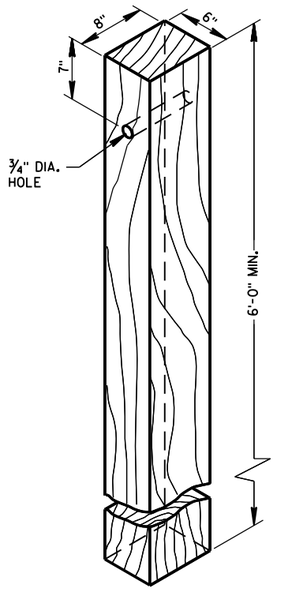


END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

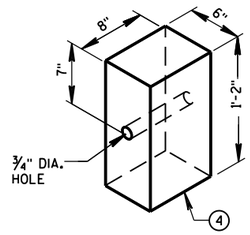


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

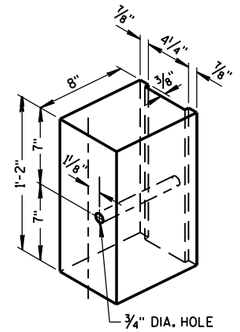
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



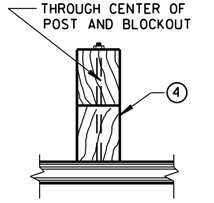
WOOD POST
(6"X8") NOMINAL



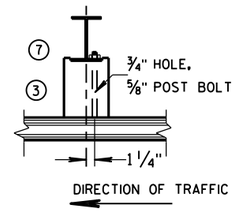
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



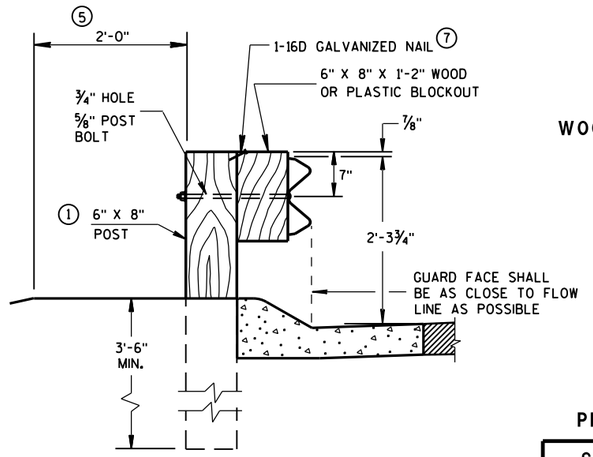
TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



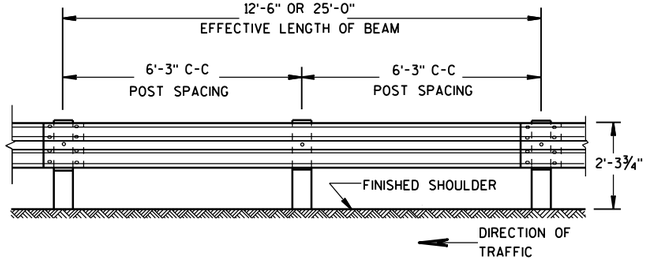
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

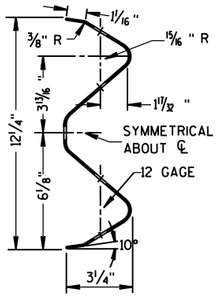
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

6
S.D.D. 14 B 15-9a

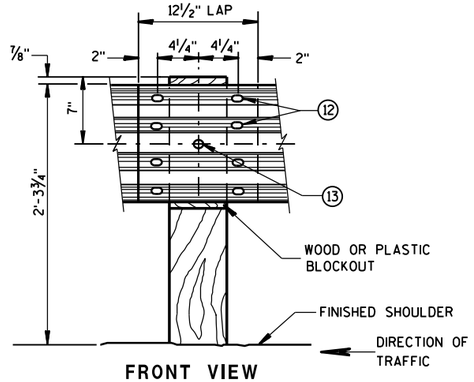


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(8) PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

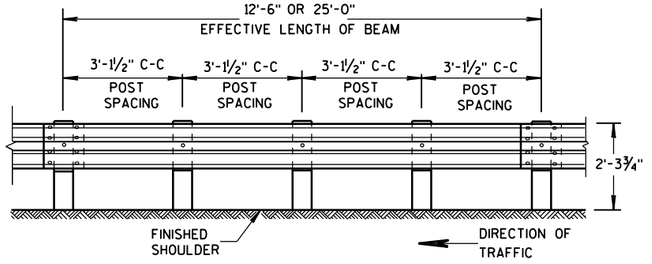
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

(10) REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

(11) PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

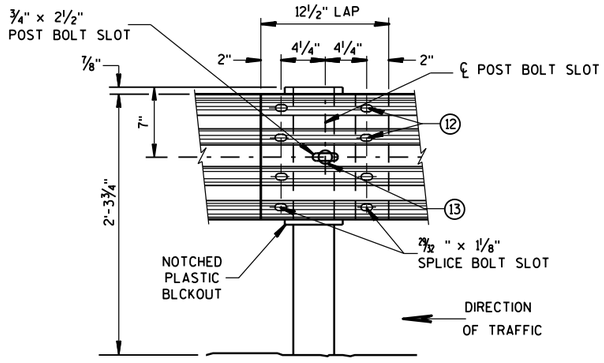
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

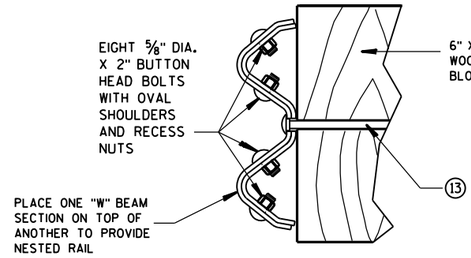
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

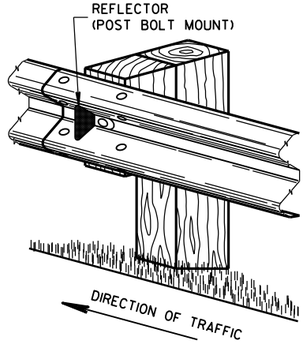


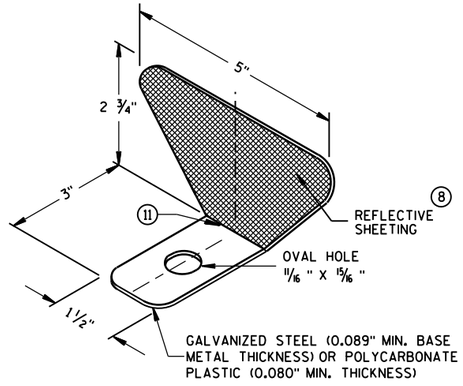
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (9)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (10)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 (11)	3
	> 200'	100' C-C	2	



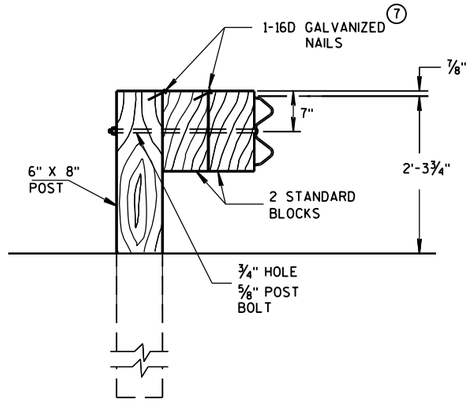


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (8)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

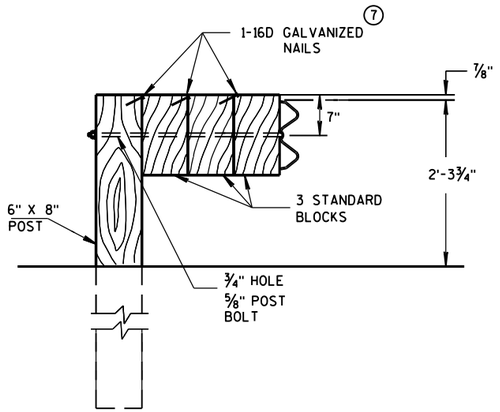
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 15-9b



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

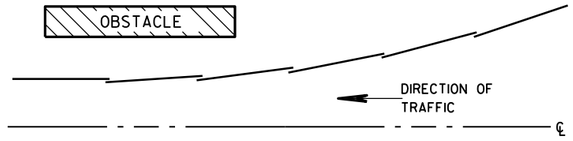


DETAIL FOR TRIPLE BLOCKS

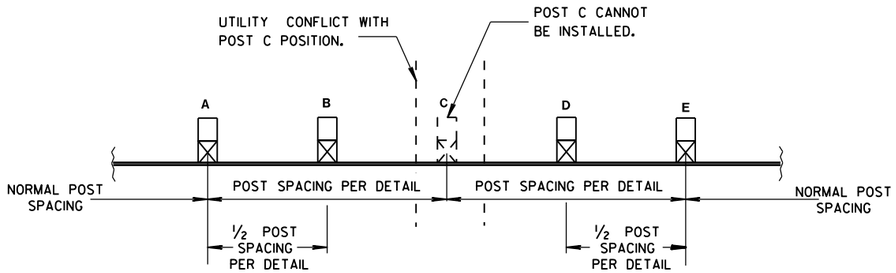
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 15-9c

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
③	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑮	1	E.A.T. MARKER POST

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL ⅝" ø X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

(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) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

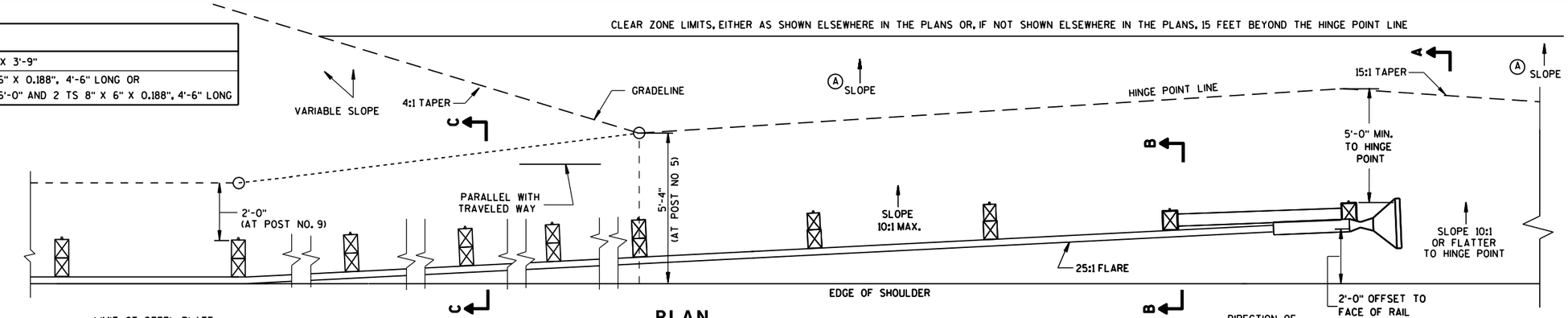
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

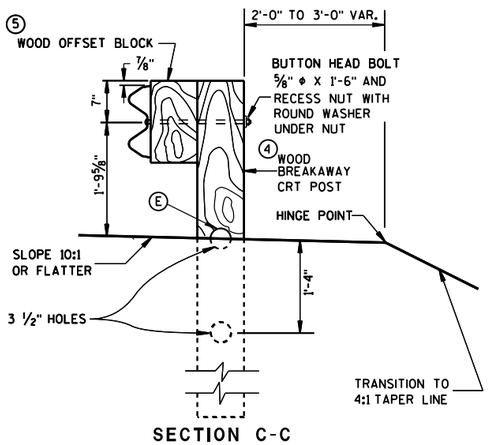
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

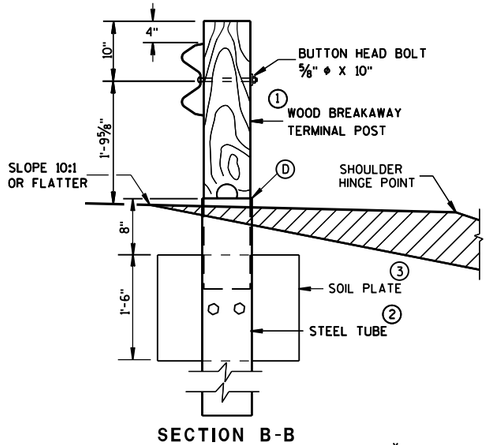
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.

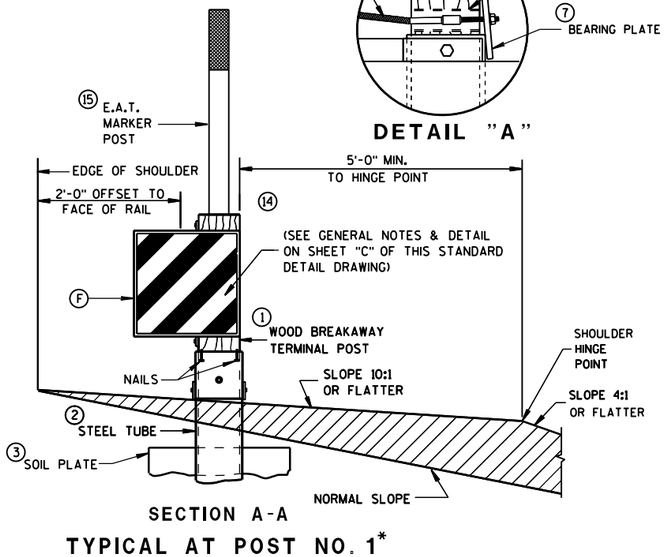




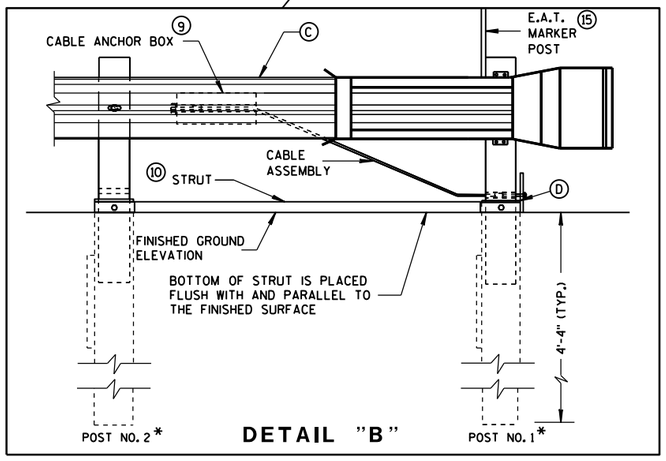
SECTION C-C
TYPICAL AT POST NOS. 6, 8



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

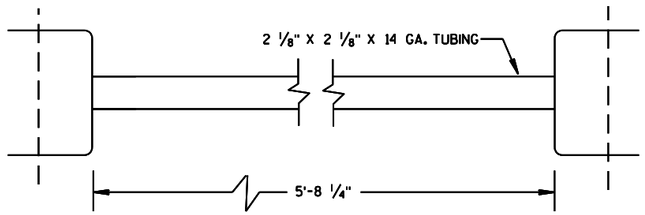


DETAIL "B"

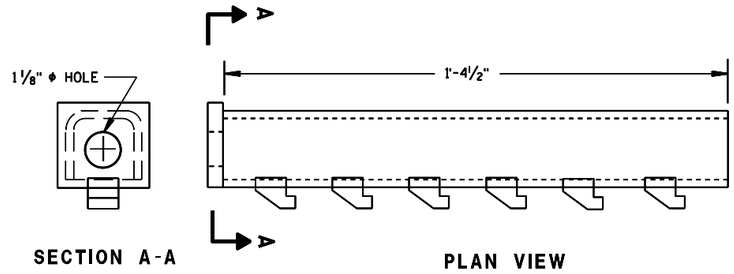
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

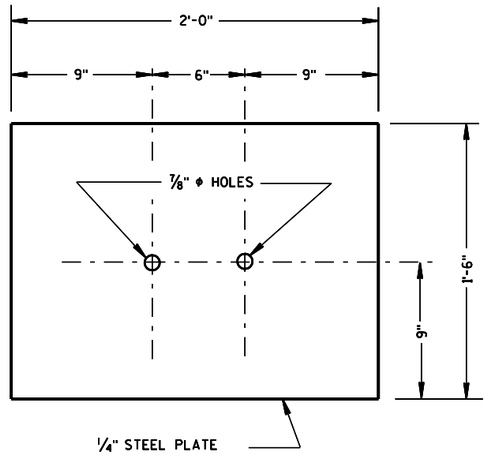
6
S.D.D. 14 B 24-8a



⑩ STRUT DETAIL (SKT-350)

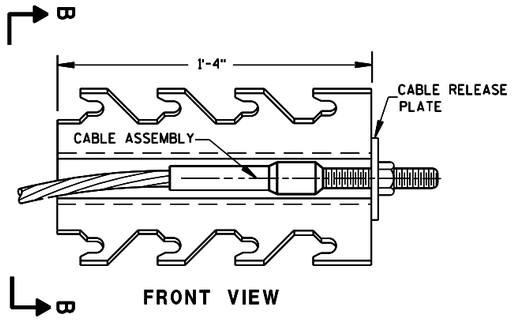


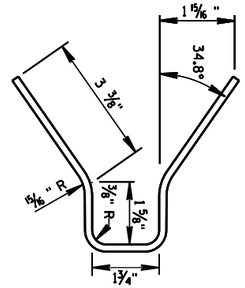
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

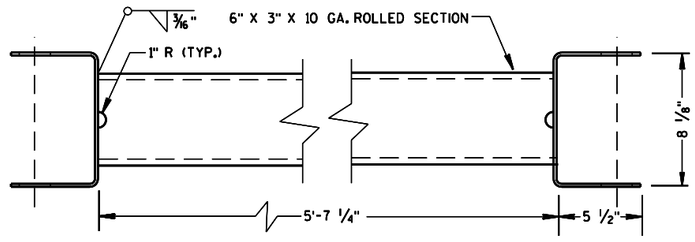
(SKT-350, ET-2000/ET-2000 PLUS)





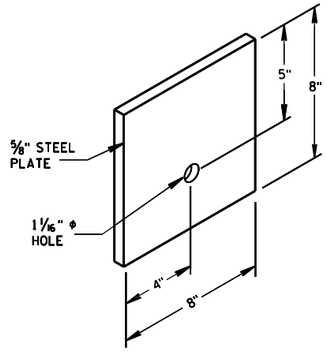
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE

(SKT-350, ET-2000/ET-2000 PLUS)

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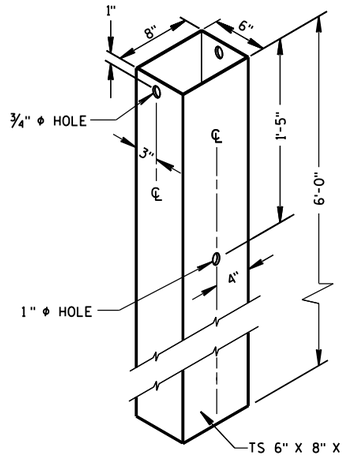
S.D.D. 14 B 24-8b

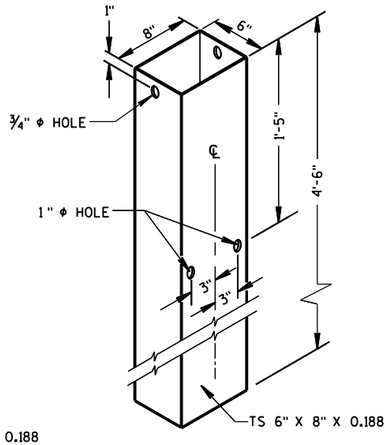
S.D.D. 14 B 24-8b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

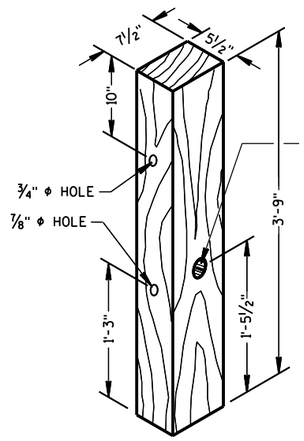
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



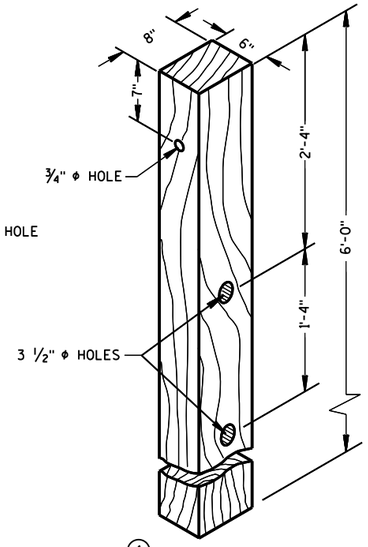
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

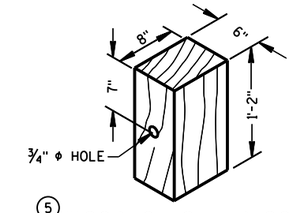
WOOD BREAKAWAY POSTS

GENERAL NOTES

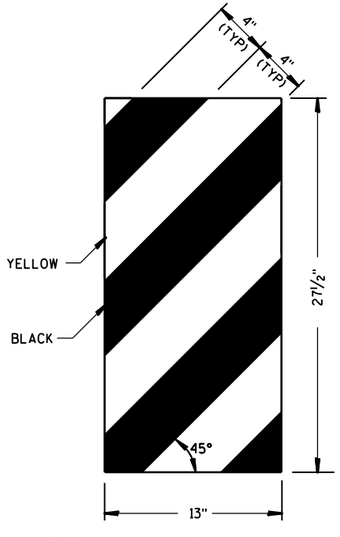
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

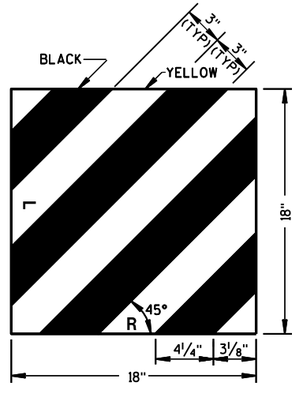
(G) ½" DIA. X 3" LAG BOLT WITH WASHER.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

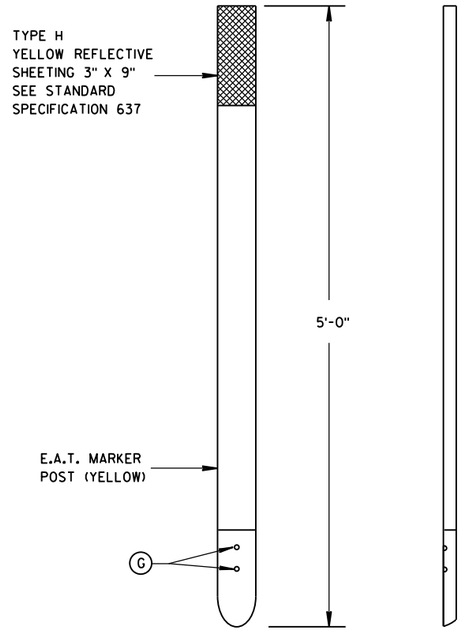


ET-2000 PLUS ONLY



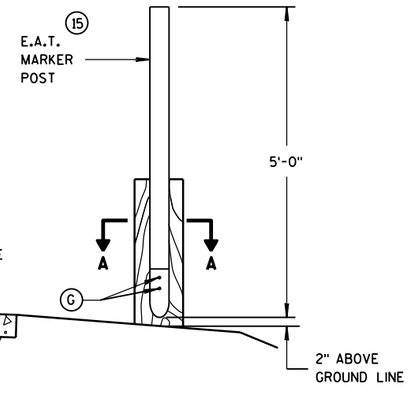
ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

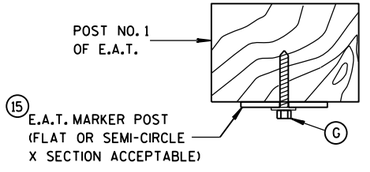


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 24-8c

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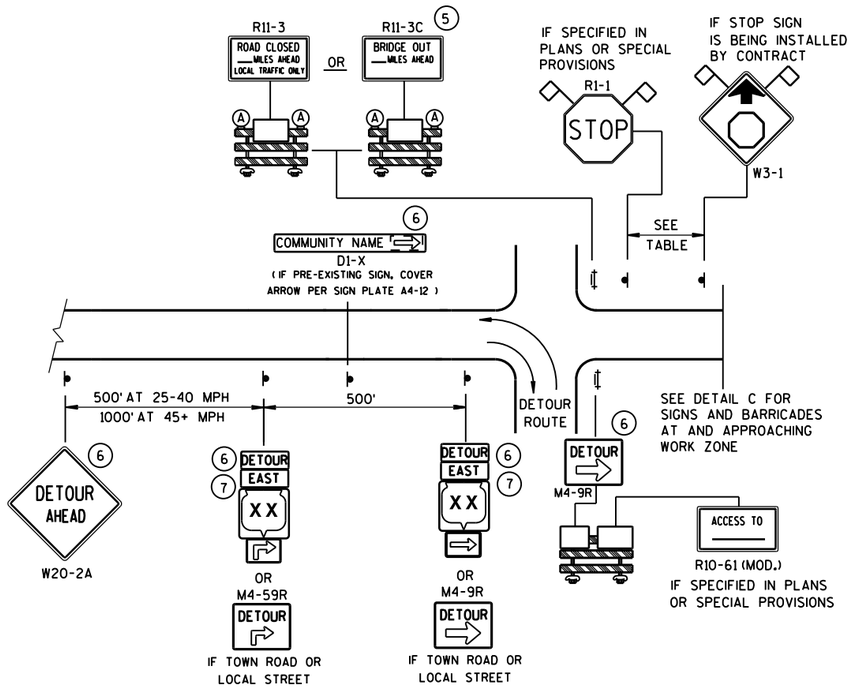
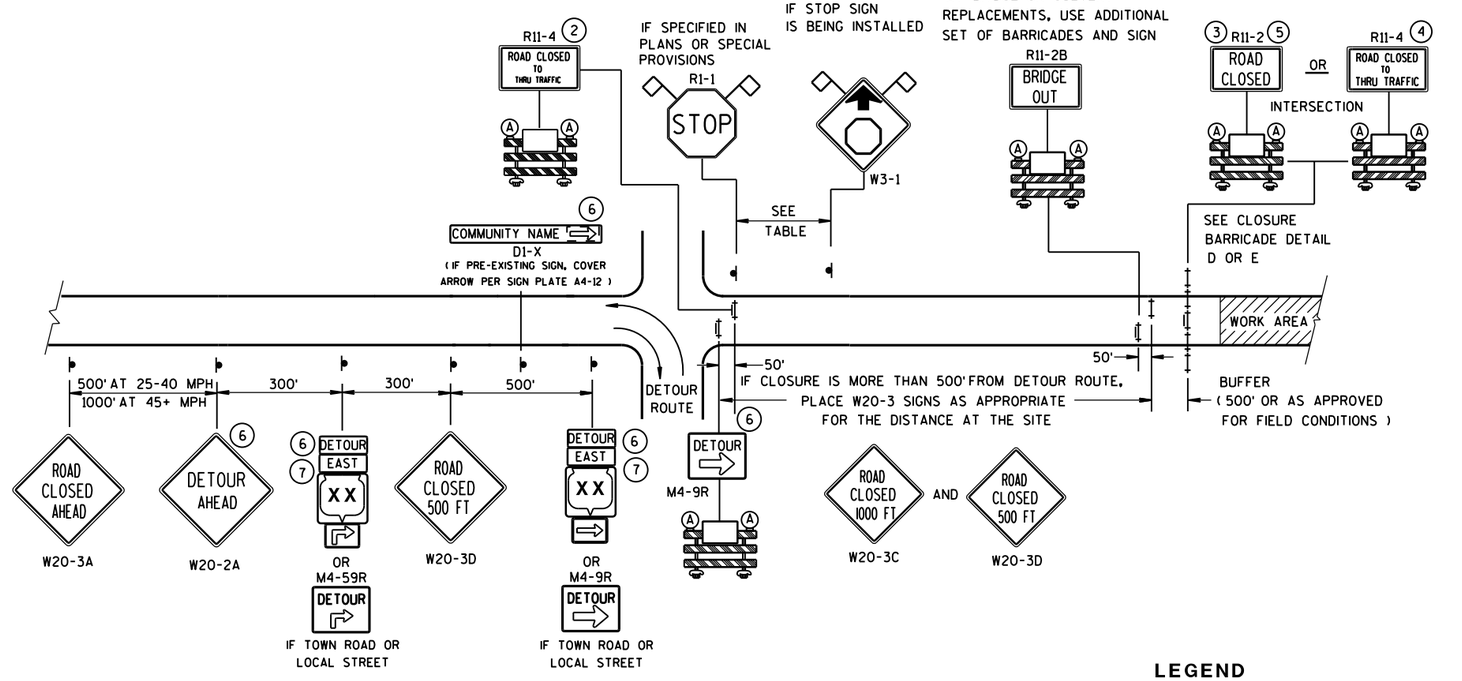
S.D.D. 14 B 24-8c



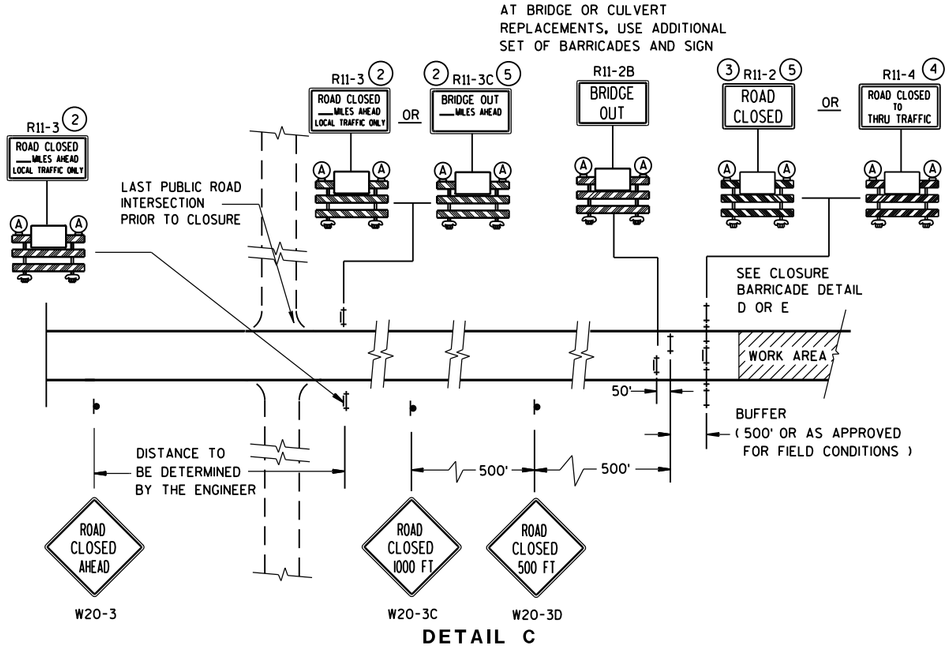
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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)

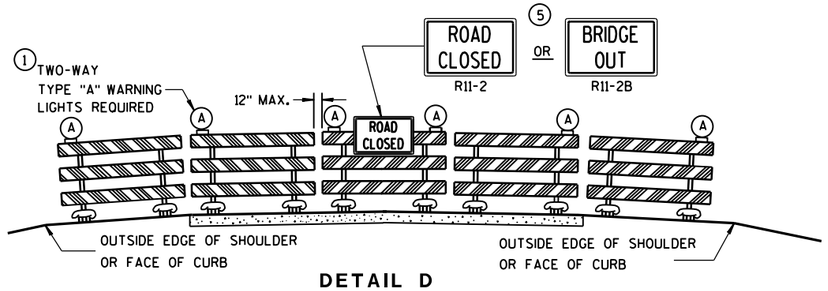
SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

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

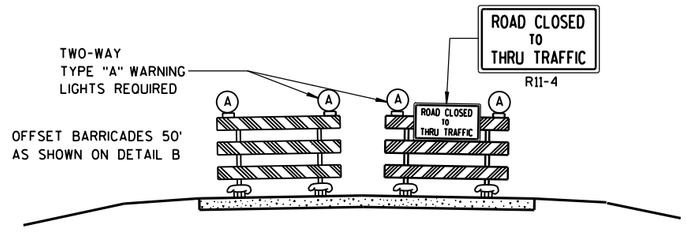
S.D.D. 15 C 2-6a



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

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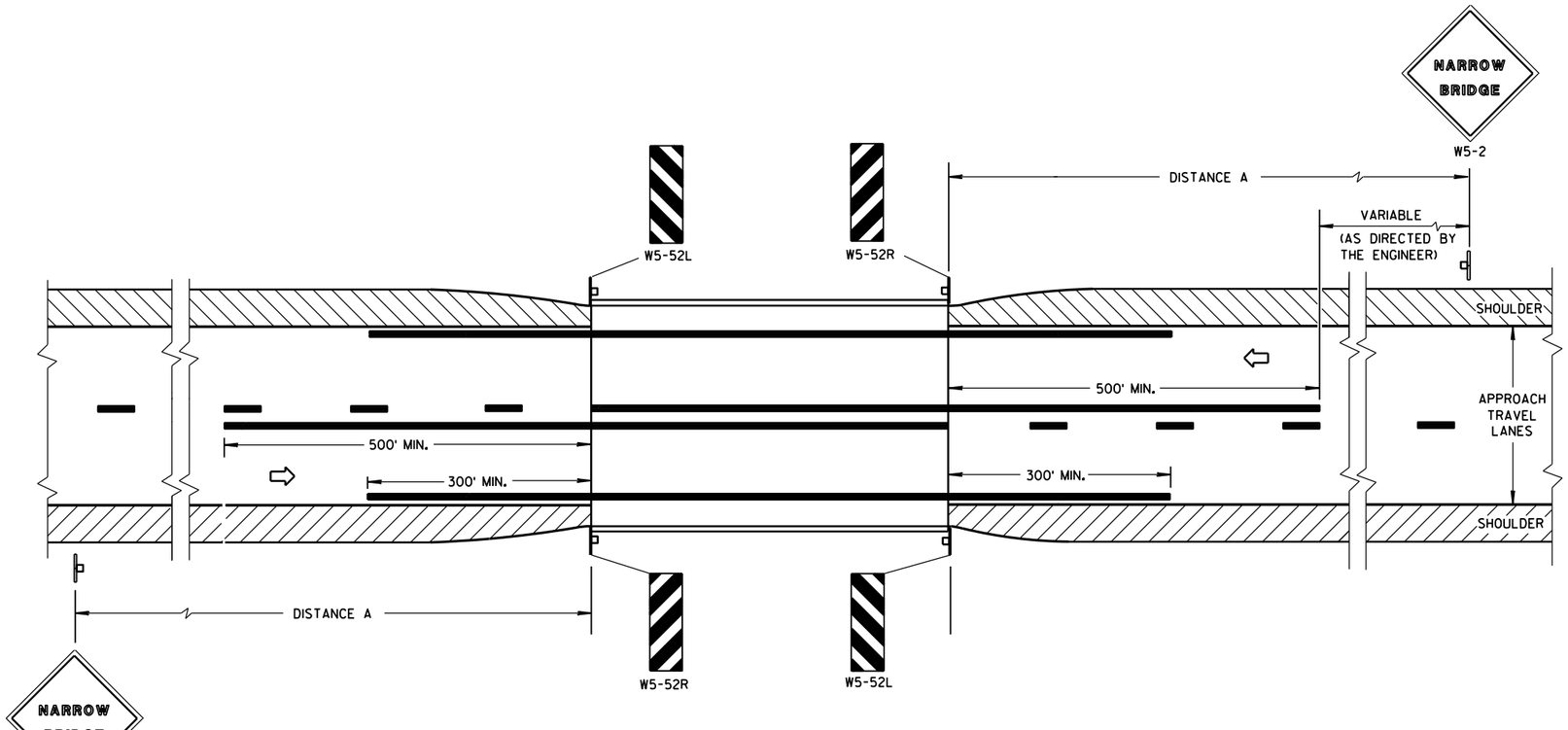
S.D.D. 15 C 2-6b

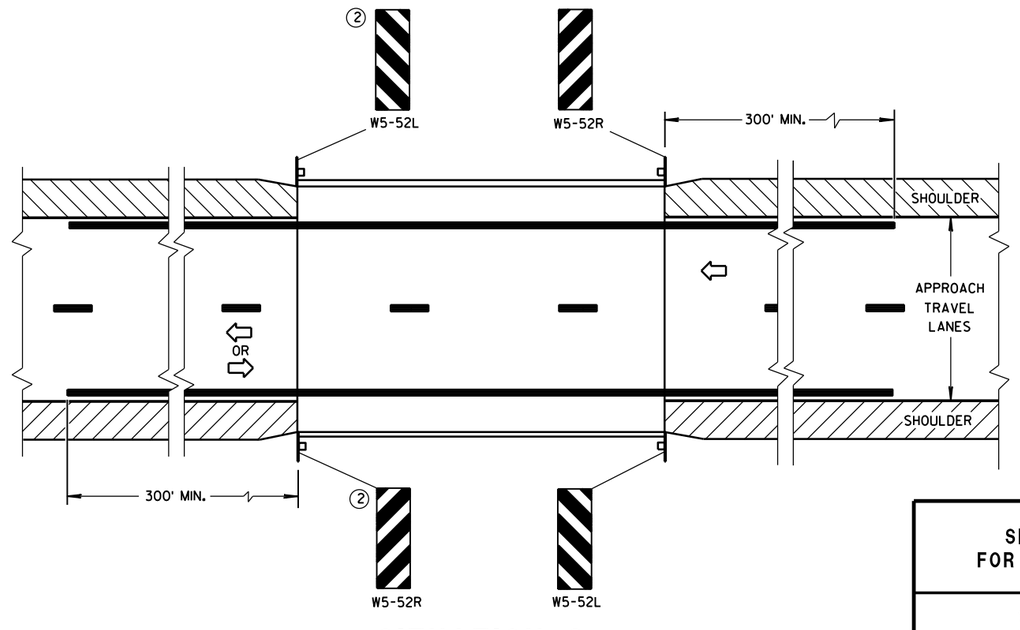


SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

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.

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

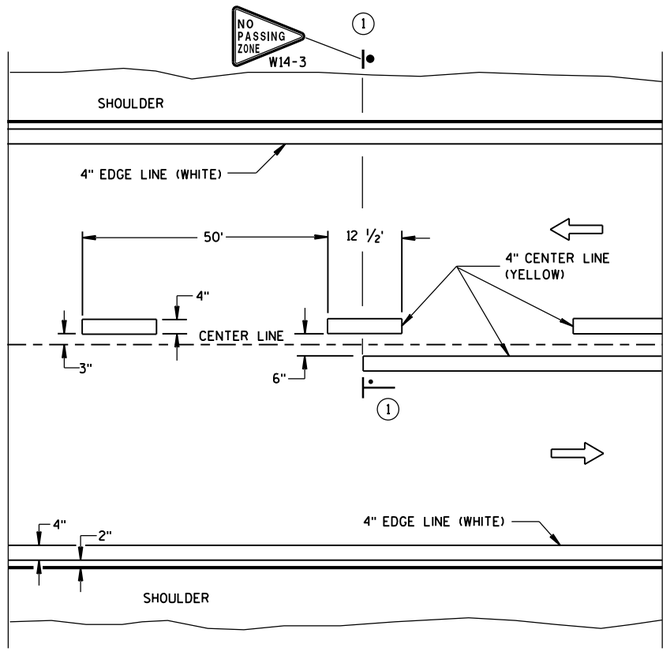
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

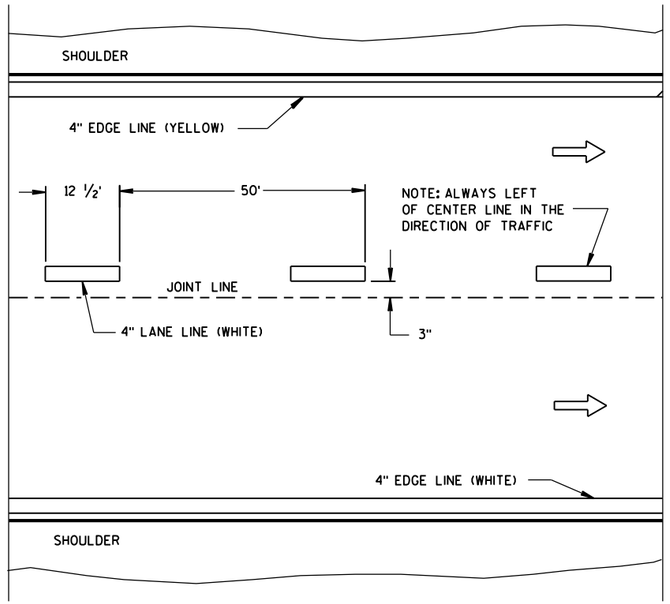
APPROVED
4-18-16 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

6

S.D.D. 15 C 6-8



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) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

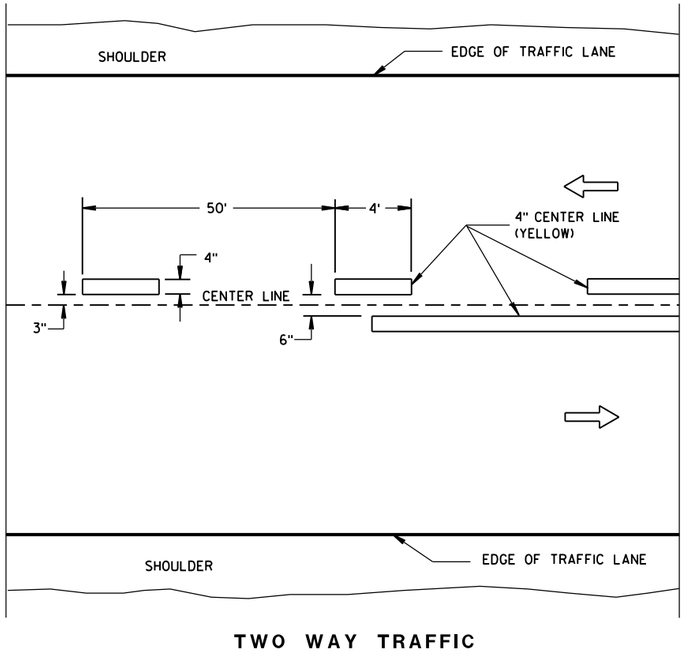
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

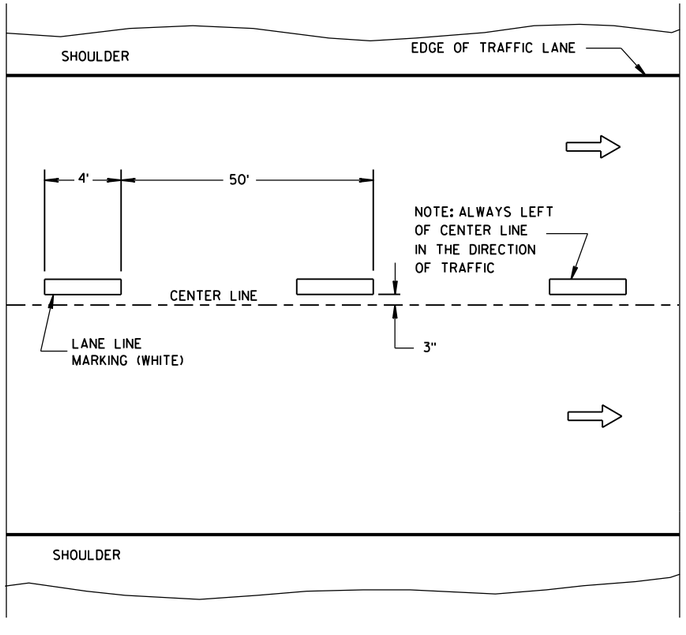
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

S.D.D. 15 C 8-17a

6

S.D.D. 15 C 8-17a

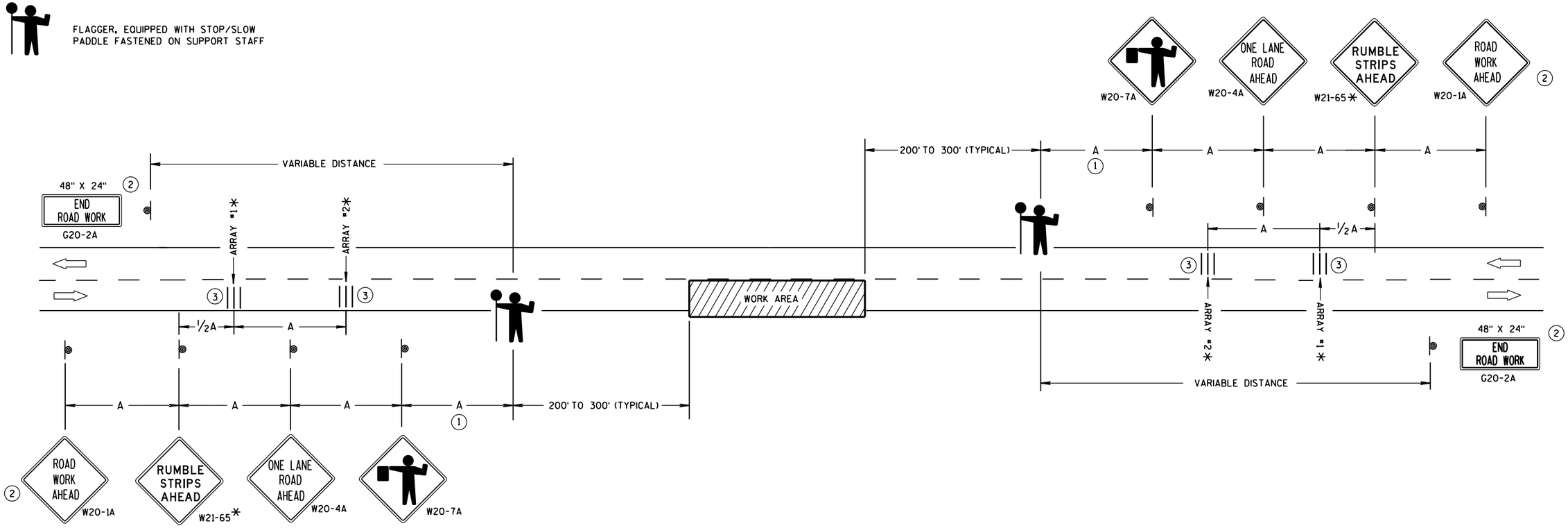
LEGEND

- 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.



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
December, 2016 — /S/ Andrew Heldtke
DATE — WORK ZONE ENG
FHWA

6
S.D.D. 15 C 12-5

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"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.

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.

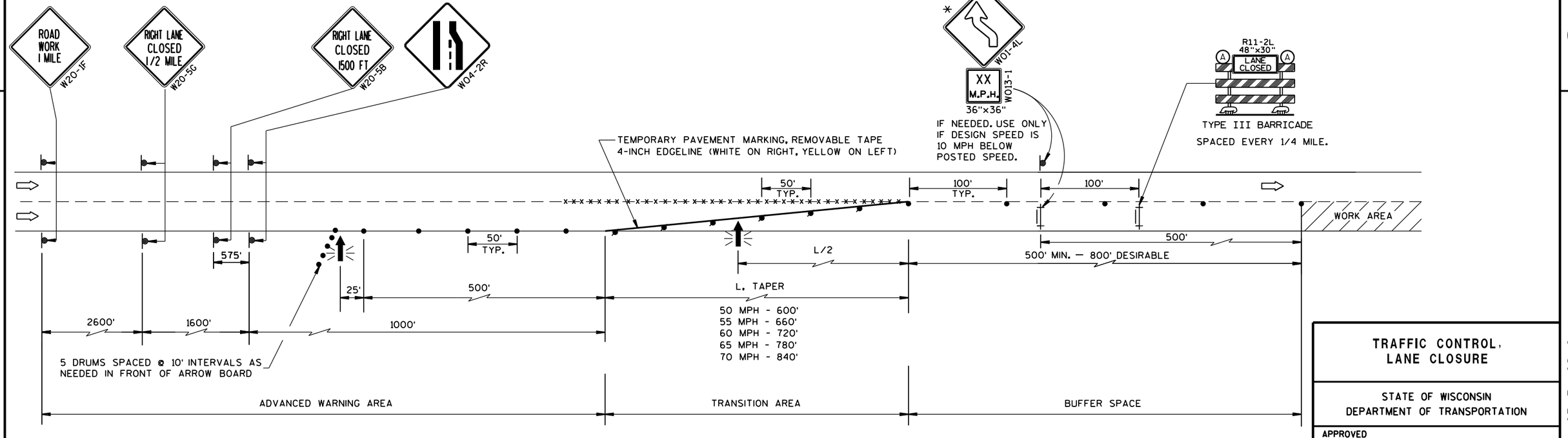
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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 (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

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 12-6a

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.

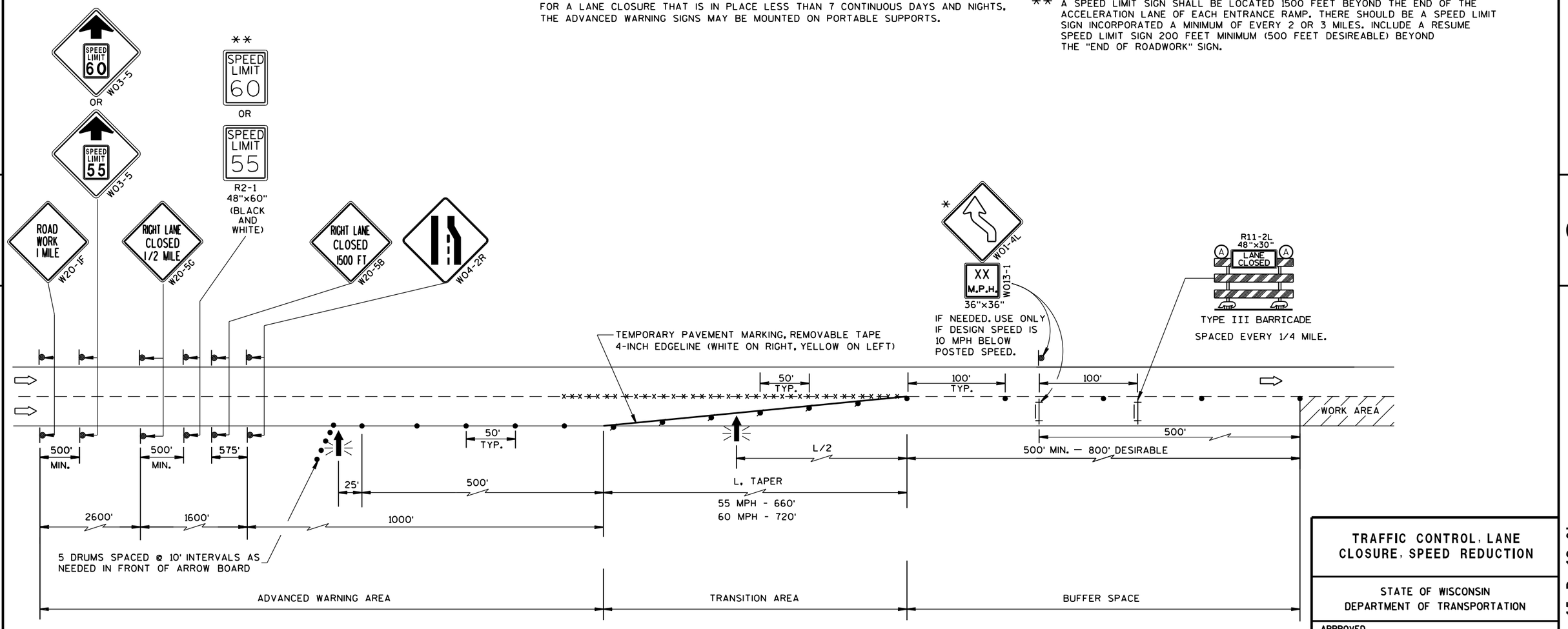
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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.

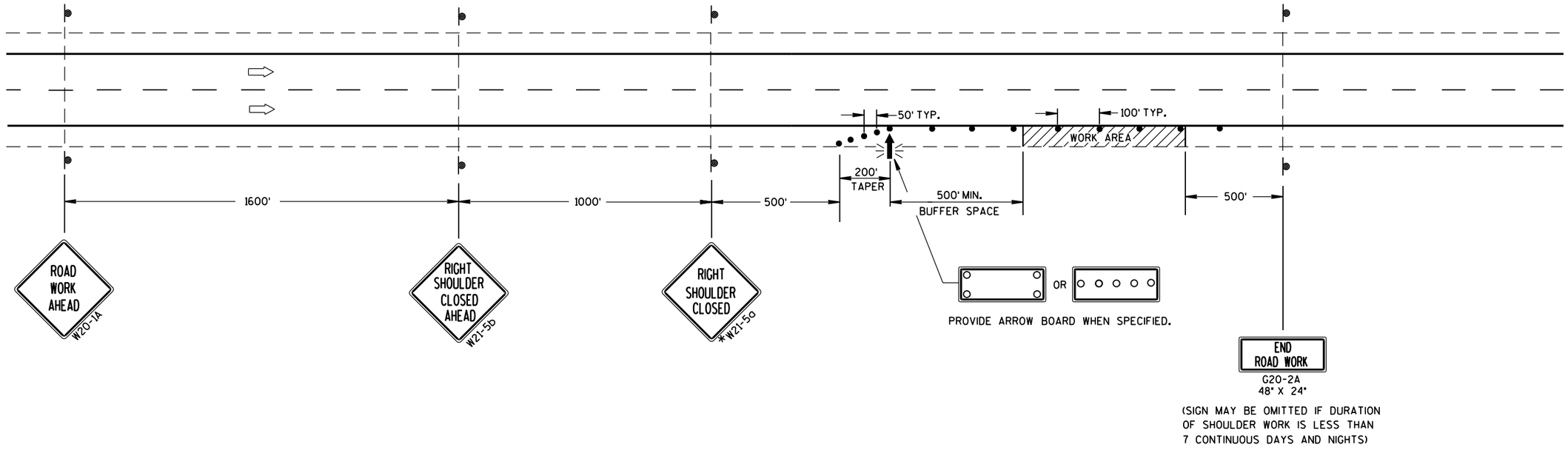
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

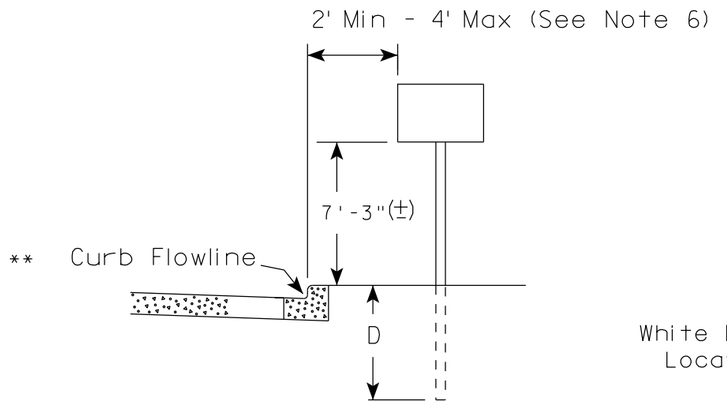
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

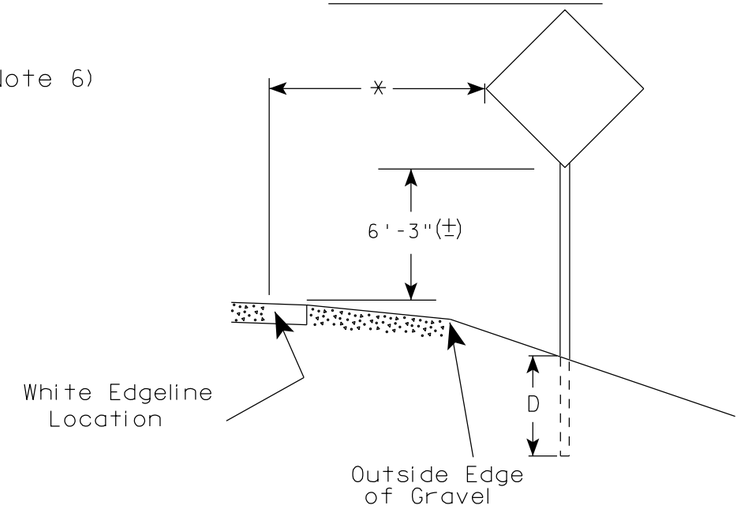
6

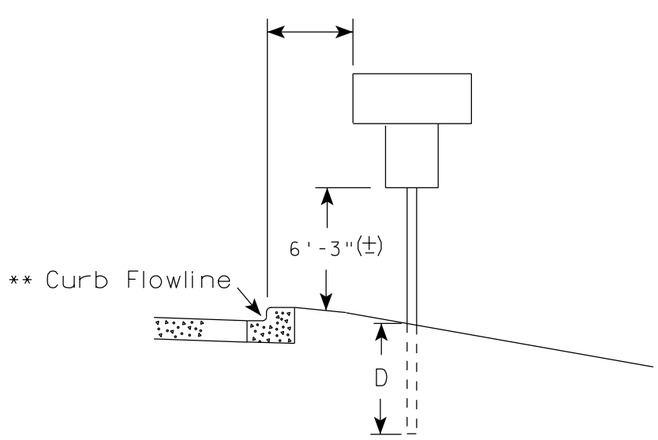
S.D.D. 15 D 27-3

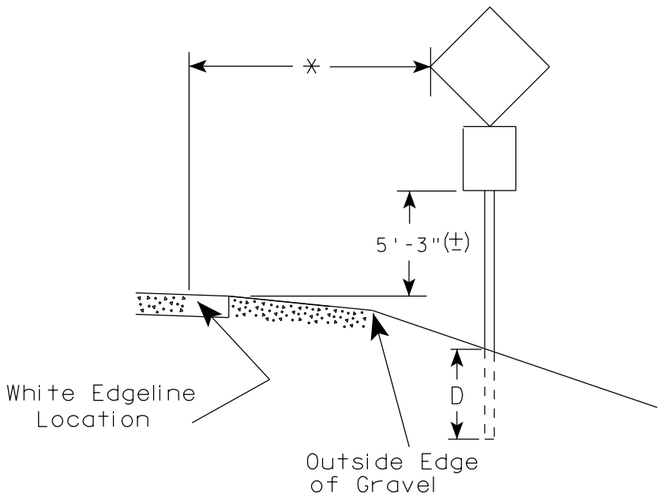
URBAN AREA



RURAL AREA (See Note 2)







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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

** 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.

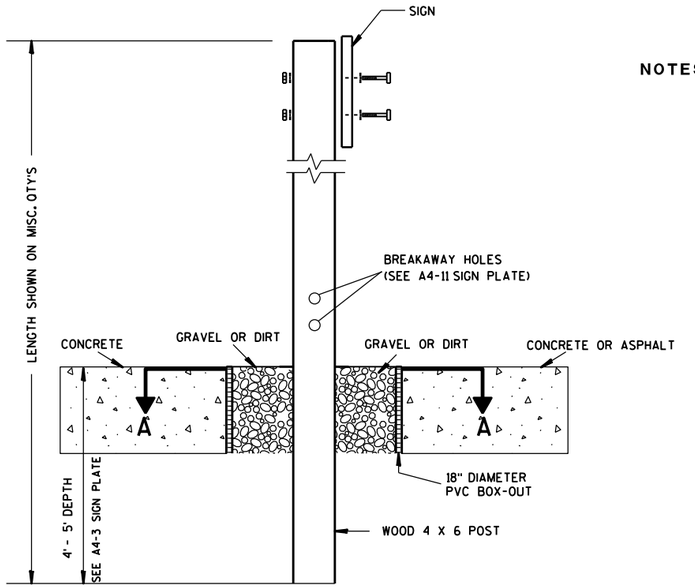
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

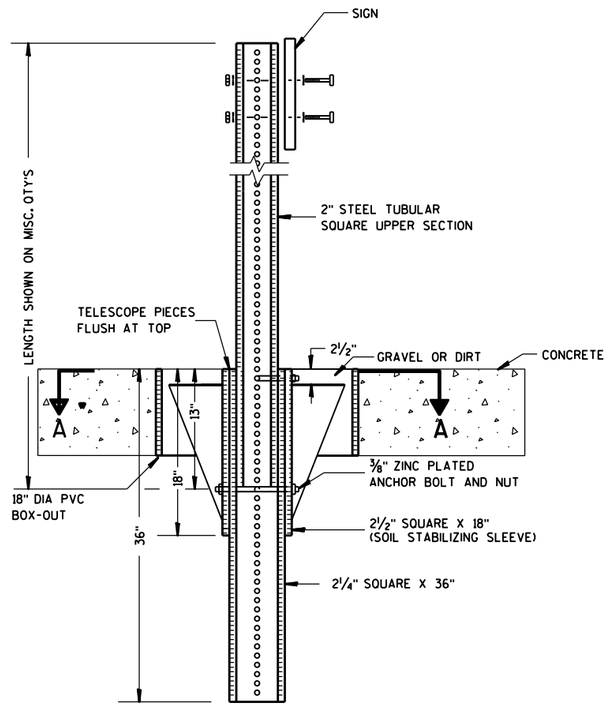
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

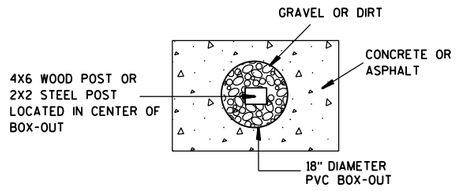
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

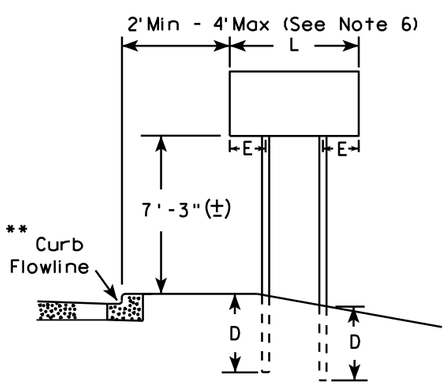
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

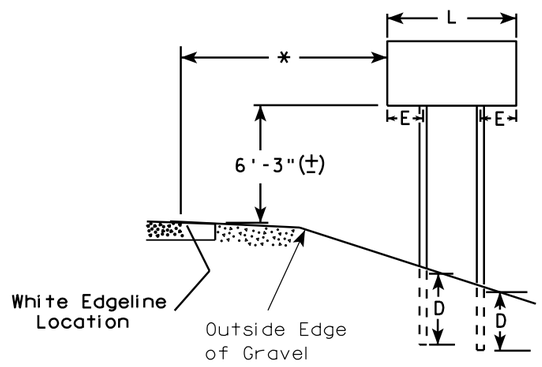
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

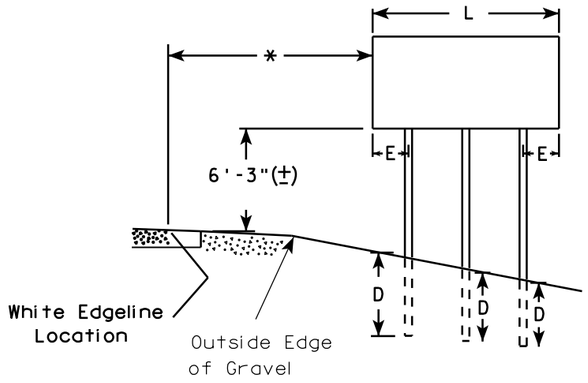
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

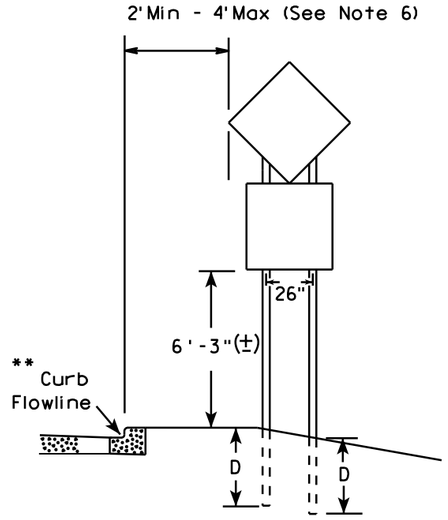
URBAN AREA



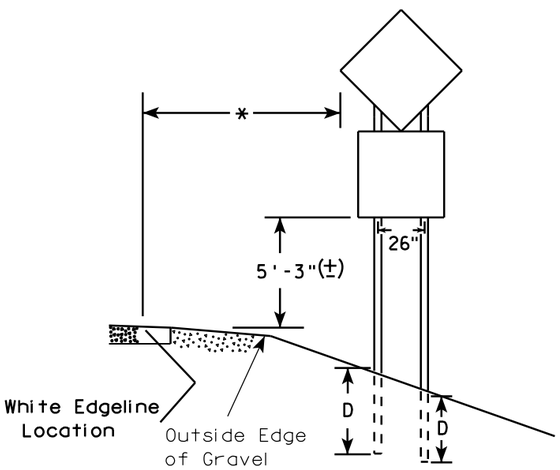
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

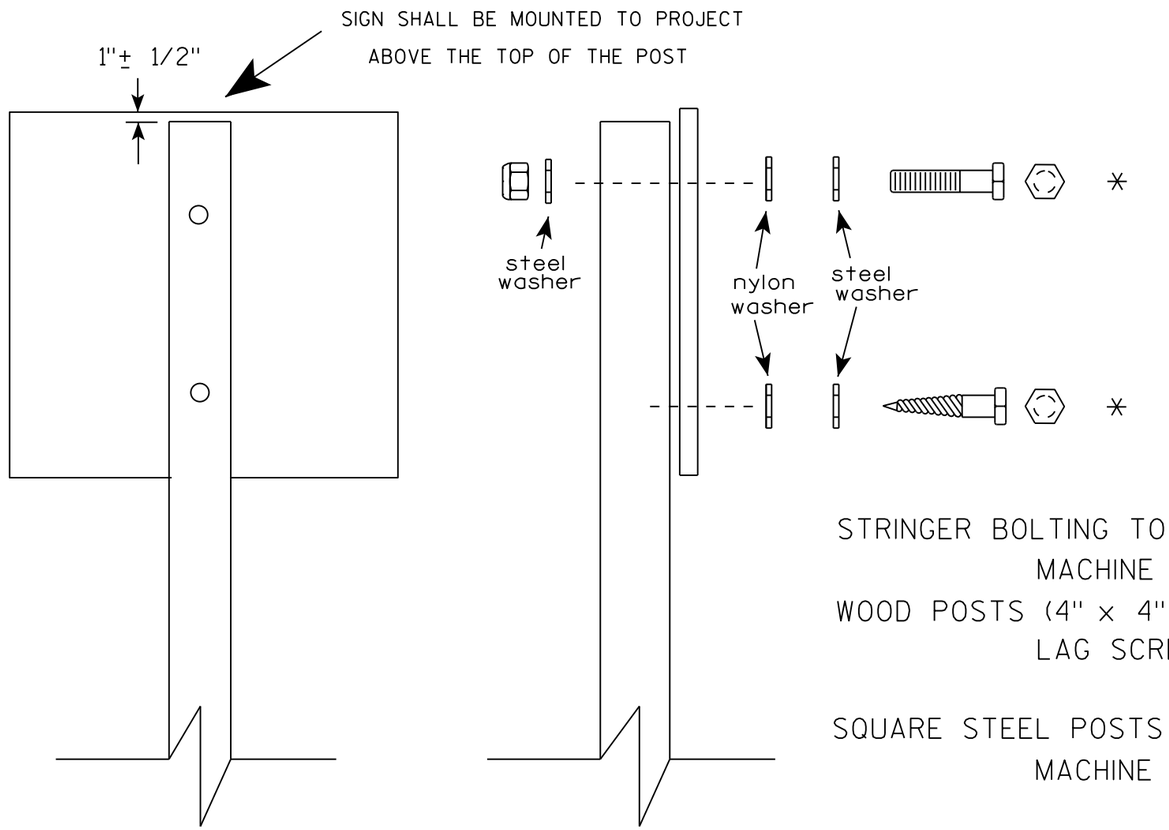
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14/40

PROJECT NO:	HWY:	COUNTY:		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

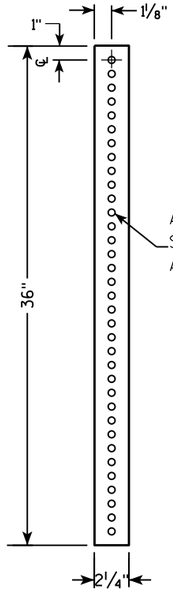
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

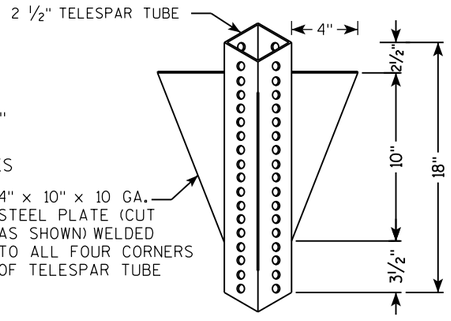
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

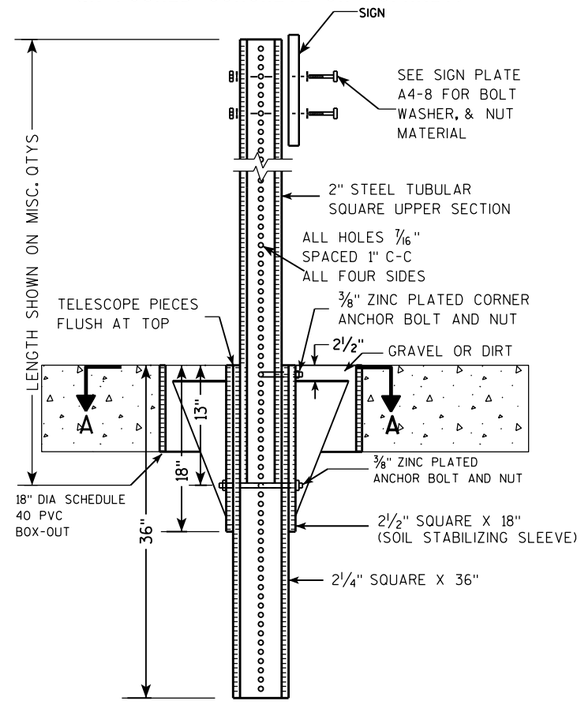
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



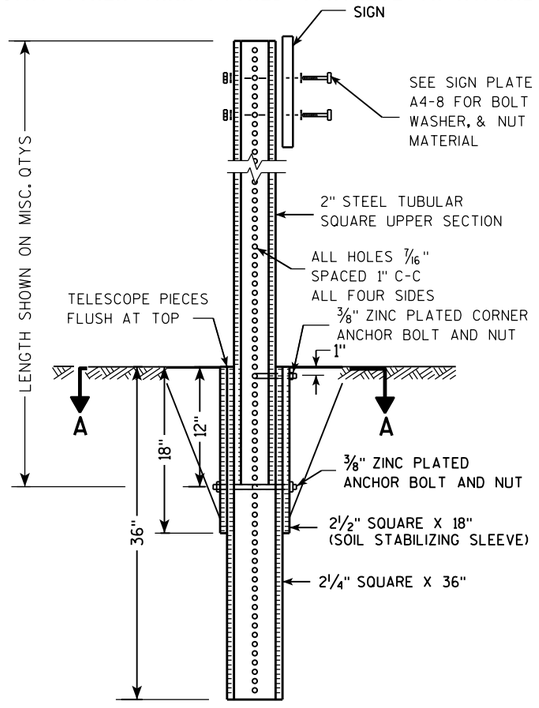
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

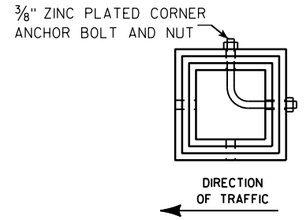


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

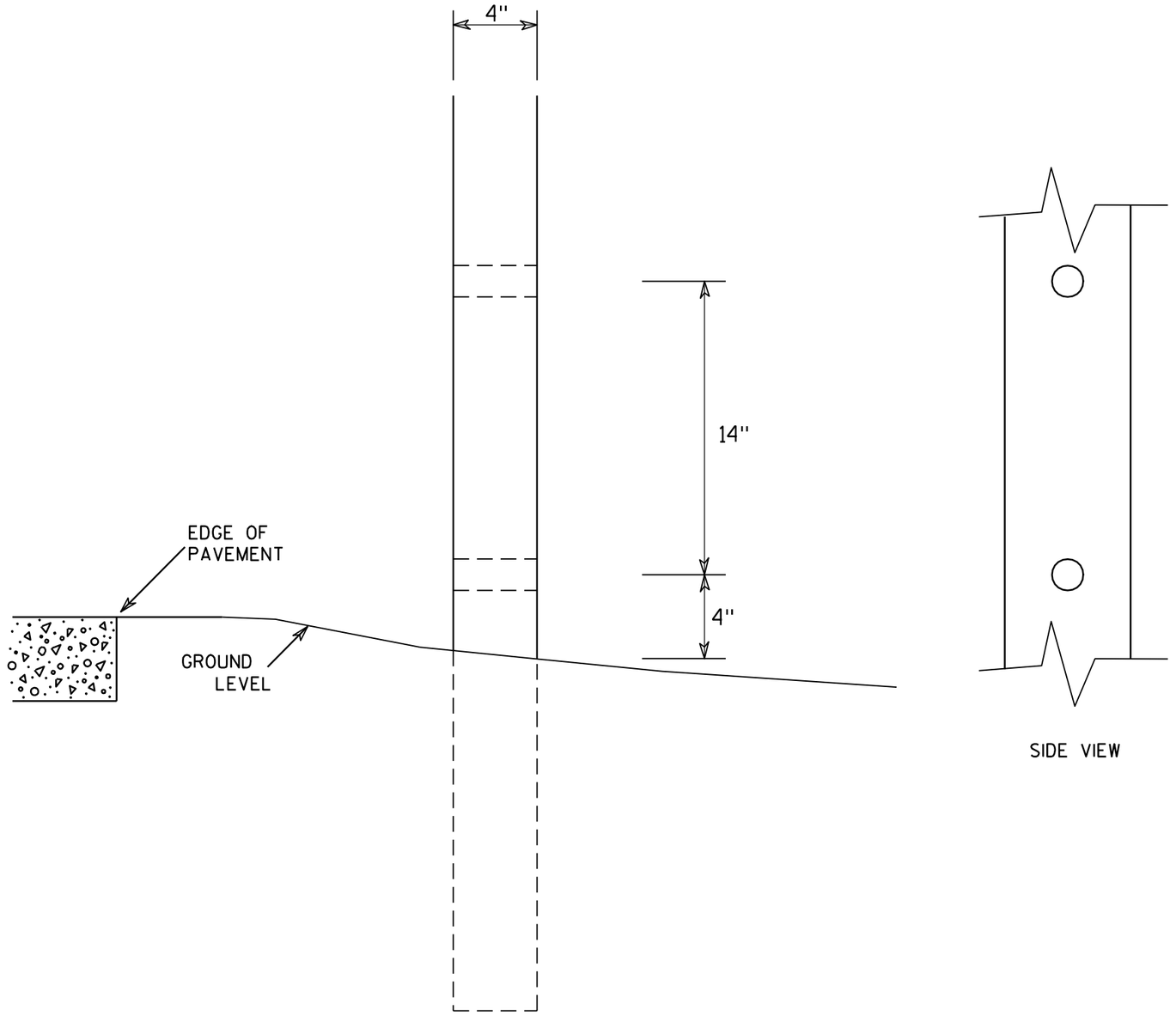
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 42 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



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

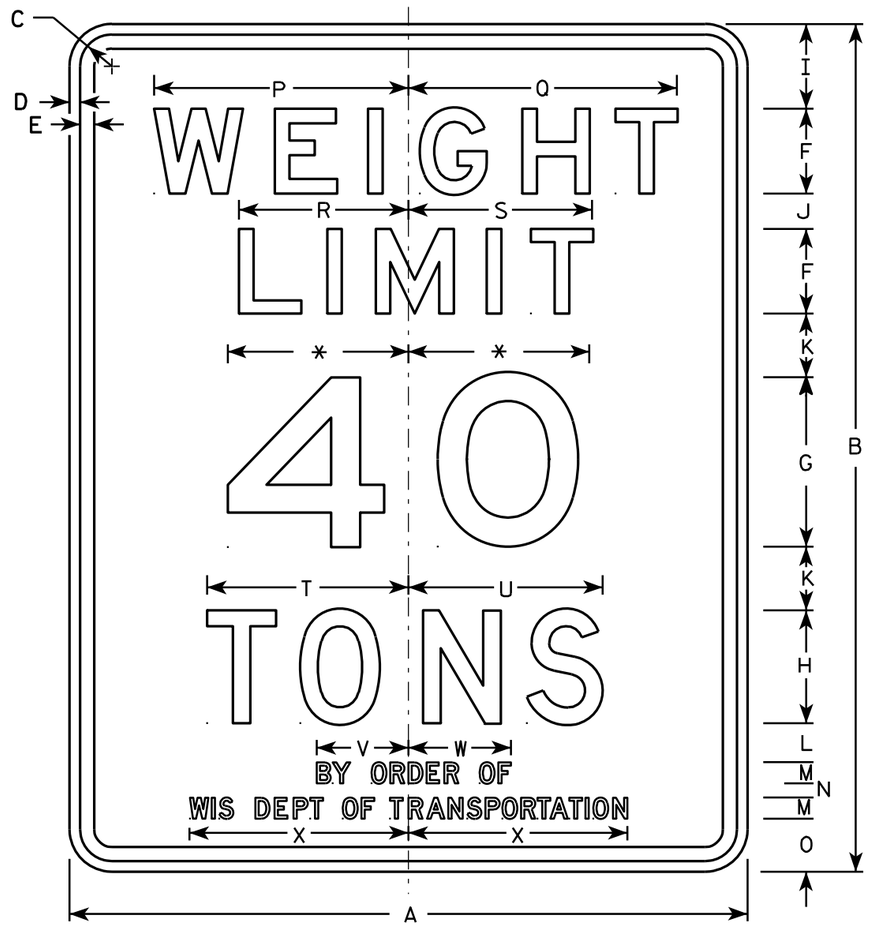
4 X 6 WOOD POST MODIFICATIONS

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: 43	E



R12-1

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 - 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, 2 & 3 are series E
   Lines 4, 5, & 6 are series D.
6. Substitute appropriate numeral and optically adjust spacing to achieve proper balance.
7. Substitute name of county or town on County Trunk and Town Highways respectively. Community name on City or Village Streets including Connecting Highways is optional.

* Varies (see note 6)

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	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
2S	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
2M	24	30	1 1/8	3/8	1/2	3	6	4	3	1 1/4	2 1/4	1 3/8	3/4	1/2	1 7/8	9	9 1/2	6	6 1/2	7 1/8	6 7/8	3 1/4	3 5/8	7 3/4			5.0
3	36	48	1 3/8	1/2	5/8	6	10	8	4 1/2	2 1/2	2 1/4	1 1/2	3/4	1/2	3	13 1/2	14 1/4	9	9 3/4	10 5/8	10 1/4	3 1/4	3 5/8	7 3/4			12.0
4	48	60	2 1/4	3/4	1	6	12	8	6	2 1/2	4 1/2	2 3/4	1 1/2	1	3 3/4	18	19	12	13	14 1/4	13 3/4	6 1/2	7 1/4	15 1/2			20.0
5																											

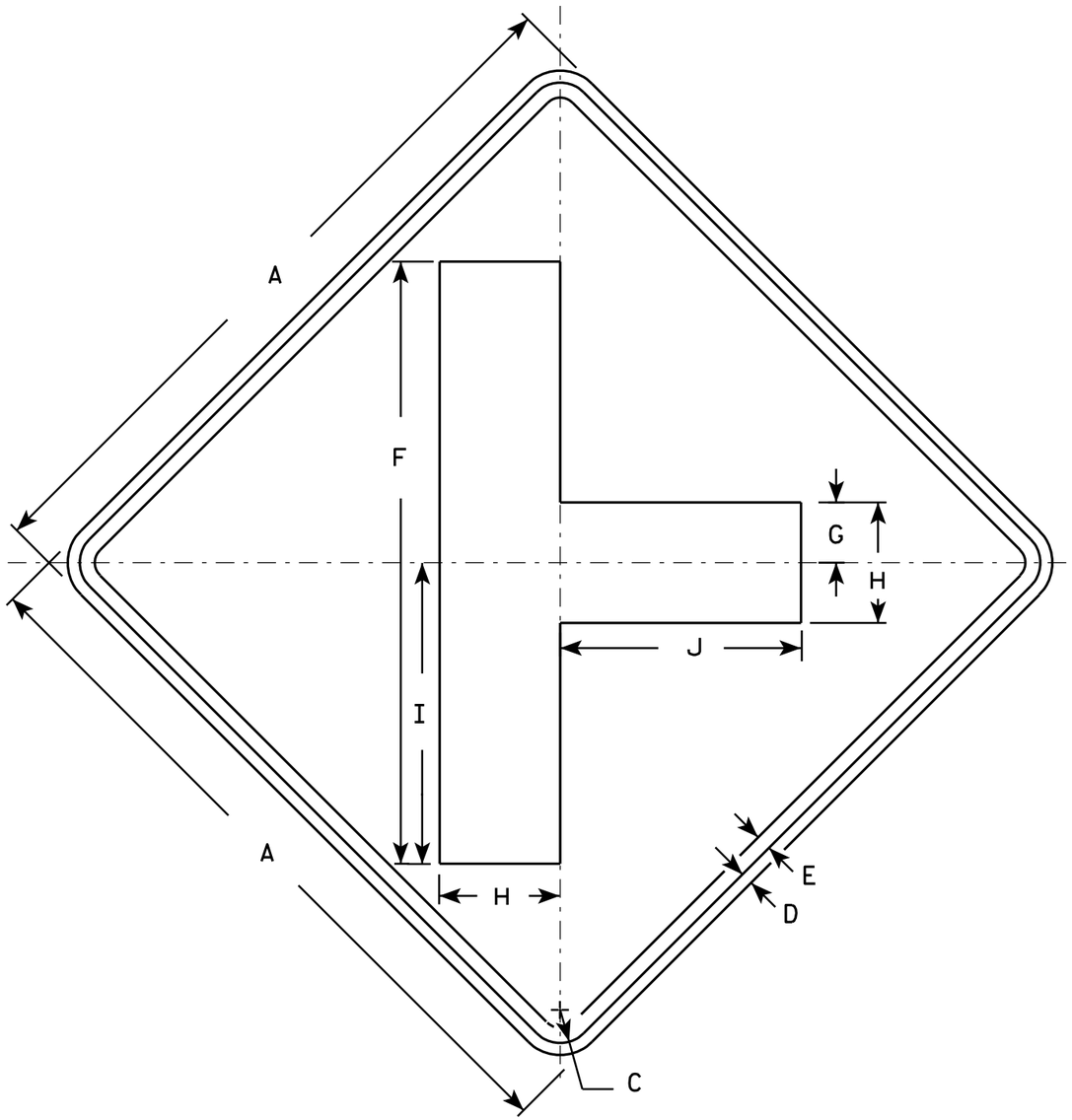
STANDARD SIGN
R12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R12-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 44 | E



W2-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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	24		1 1/8	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

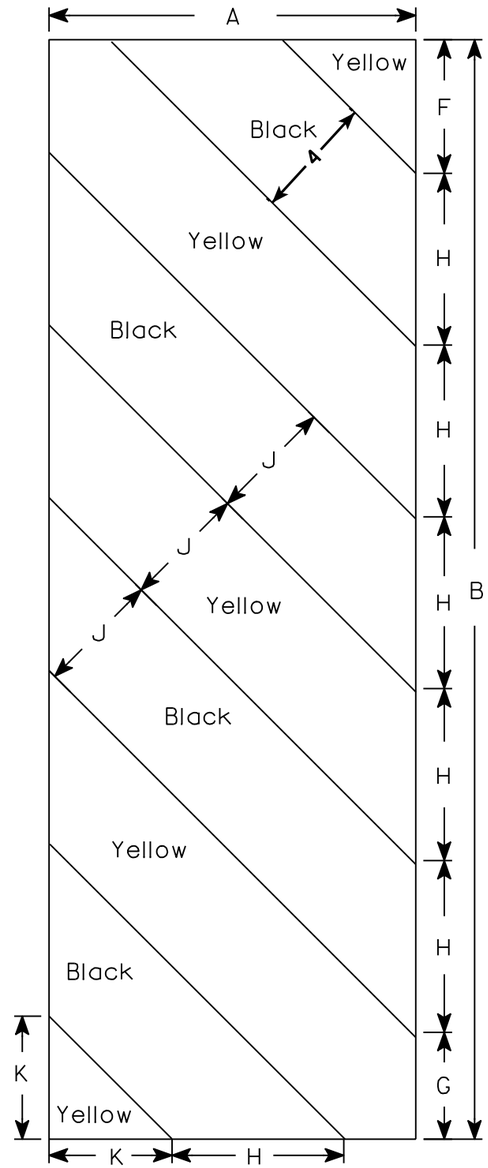
STANDARD SIGN
W2-2

WISCONSIN DEPT OF TRANSPORTATION

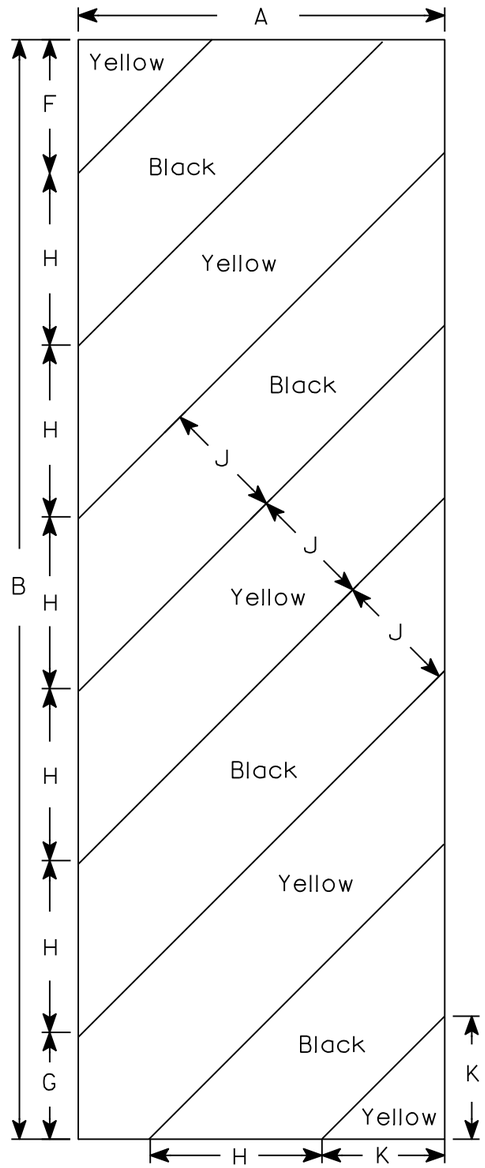
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-2.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 45	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

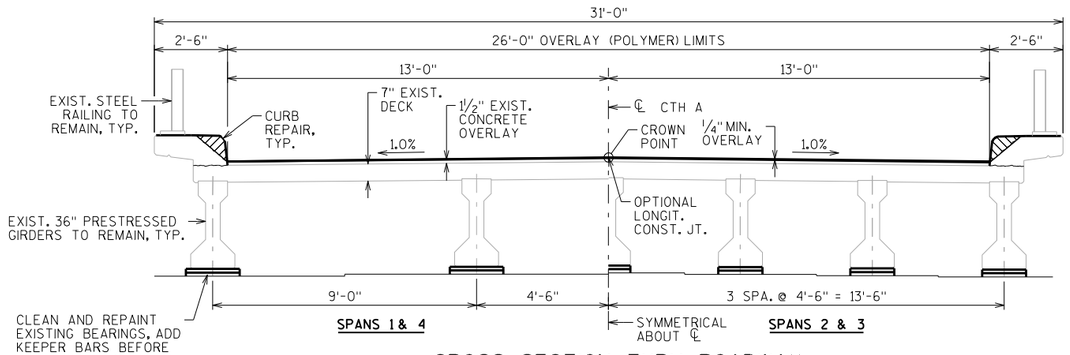
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

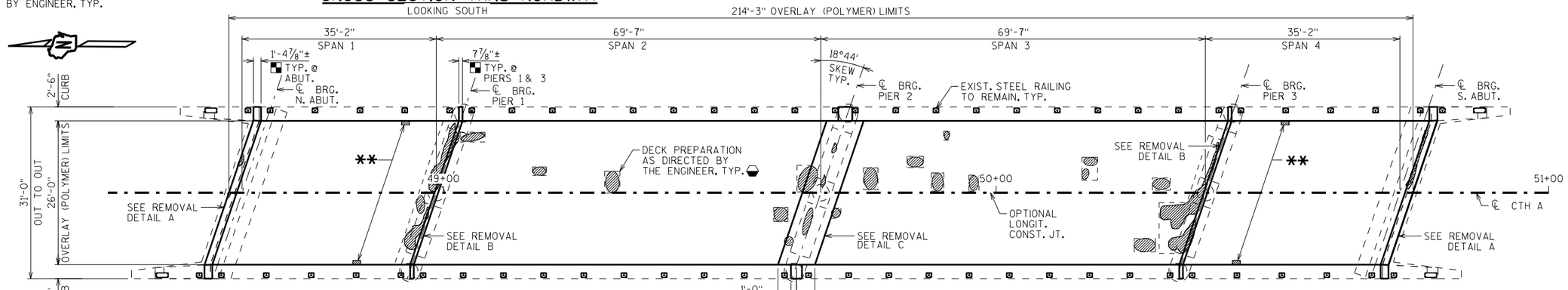
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 46	E

STATE PROJECT NUMBER

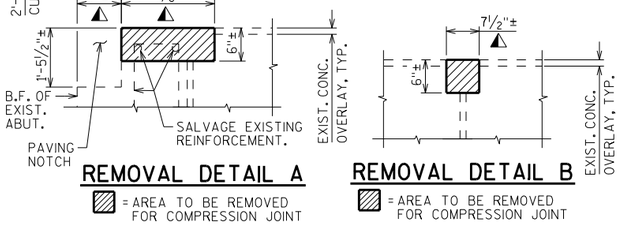
1014-00-65



CROSS SECTION THRU ROADWAY



PLAN

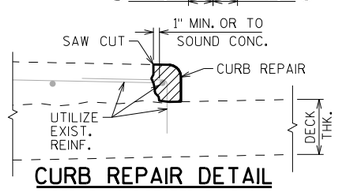


REMOVAL DETAIL A

▨ = AREA TO BE REMOVED FOR COMPRESSION JOINT

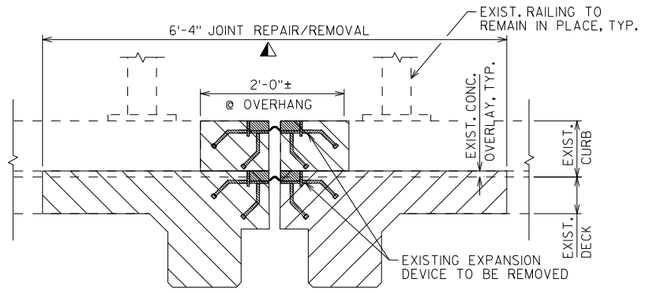
REMOVAL DETAIL B

▨ = AREA TO BE REMOVED FOR COMPRESSION JOINT



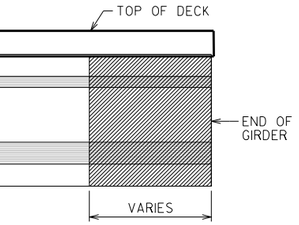
CURB REPAIR DETAIL

CURB REPAIR AS DIRECTED BY ENGINEER.



REMOVAL DETAIL C

▨ = AREA TO BE REMOVED FOR STRIP SEAL



GIRDER CONCRETE SURFACE REPAIR

AS DETERMINED BY ENGINEER

⬟ REPAIRS TO GIRDERS SHALL BE INCIDENTAL TO "CONCRETE SURFACE REPAIR"

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-14
OPERATING RATING: HS- 33
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK PATCHING — f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.

TRAFFIC VOLUME

CTH A
ADT = 2800 (2016)
R.D.S. = 55 M.P.H.

IH 90
ADT = 40,550 (2016)
R.D.S. = 70 M.P.H.

TOTAL ESTIMATED QUANTITIES

	BID ITEM NUMBER	BID ITEMS	TOTALS	UNIT
	203.0225.S	DEBRIS CONTAINMENT B-56-34	1	LS
	502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 2 1/4-INCH	130	LF
	502.3100	EXPANSION DEVICE B-56-34	1	LS
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	1450	LB
	509.0301	PREPARATION DECKS TYPE 1	14	SY
	509.0302	PREPARATION DECKS TYPE 2	2	SY
	509.1000	JOINT REPAIR	36	SY
	509.1200	CURB REPAIR	350	LF
⬟	509.1500	CONCRETE SURFACE REPAIR	530	SF
	509.2000	FULL-DEPTH DECK REPAIR	2	SY
	509.5100.S	POLYMER OVERLAY	619	SY
★	SPV.0035	CONCRETE MASONRY DECK PATCHING	33	CY
◒	SPV.0060	CLEANING AND PAINTING BEARINGS	44	EACH

★ CONCRETE MASONRY DECK PATCHING INCLUDES CONCRETE FOR DECK PREPARATION 1 & 2, JOINT AND CURB REPAIRS.

◒ CONTRACTOR TO ADD KEEPER BARS TO EXISTING BEARINGS AS DIRECTED BY THE ENGINEER, INCIDENTAL TO "CLEANING AND PAINTING BEARINGS". CLEAN AND PAINT ALL BEARINGS. FINISH COLOR IS TO BE WHITE (FEDERAL COLOR #27780) OR SIMILAR COLOR AS APPROVED BY THE ENGINEER.

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.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS AND PIERS BELOW EXPANSION DEVICES. WORK TO BE INCIDENTAL TO "JOINT REPAIR".

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAWCUT.

CONCRETE SURFACE AND CURB REPAIR LOCATIONS TO BE DETERMINED BY THE FIELD ENGINEER.

APPLY POLYMER OVERLAY TO THE TOP OF DECK ONLY. JOINT REPAIR AREAS ARE TO BE COMPLETED PRIOR TO POLYMER OVERLAY APPLICATION.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

ANY EXCAVATION OR REMOVALS AT THE ABUTMENT THAT ARE REQUIRED TO PERFORM "JOINT REPAIR" SHALL BE INCIDENTAL TO THAT BID ITEM.

▪ JOINT REPAIR SEE "COMPRESSION SEAL" SHEET FOR DETAILS.

◐ JOINT REPAIR SEE "EXPANSION DEVICE" SHEET FOR DETAILS.

** = REMOVE STEEL GRATING AND DETERIORATED CONCRETE AROUND DRAIN. FILL EXISTING FLOOR DRAIN WITH NEW CONCRETE. THIS SHALL BE CONSIDERED INCIDENTAL TO AND PAID FOR UNDER THE BID ITEM "FULL-DEPTH DECK REPAIR" (TYP.)

⚠ DIMENSION MEASURED PERPENDICULAR TO ℄ OF SUBSTRUCTURE

◒ SURVEY TYPE: INFRARED INSPECTION
SURVEY COMPLETED DATE: 4/12/16

▨ DELAMINATION AREAS

⬚ ESTIMATED DECK PREPARATION AREAS

LIST OF DRAWINGS

1. POLYMER OVERLAY
2. COMPRESSION SEAL
3. EXPANSION DEVICE
4. EXPANSION DEVICE AT CURB

STRUCTURE DESIGN CONTACTS:
STEVE DOOCY (608) 261-6063
AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

Plans Prepared By **WISDOT**
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher — CHIEF STRUCTURES DESIGN ENGINEER — 1/30/17 DATE

STRUCTURE B-56-34

CTH A OVER IH 90

COUNTY	TOWN/~~CITY/VILLAGE~~
SAUK	DELTON

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SAD	SEW	SAD	SEW

POLYMER OVERLAY

SHEET 1 OF 4

47

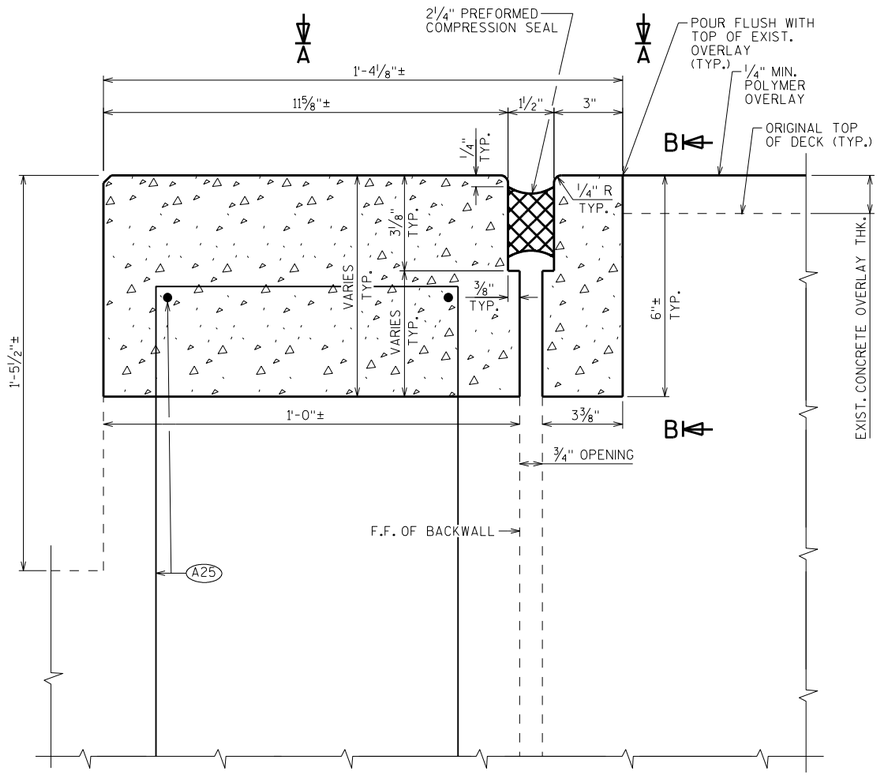
I.D. 1014-00-35A

DATE: **OCT. 2016**

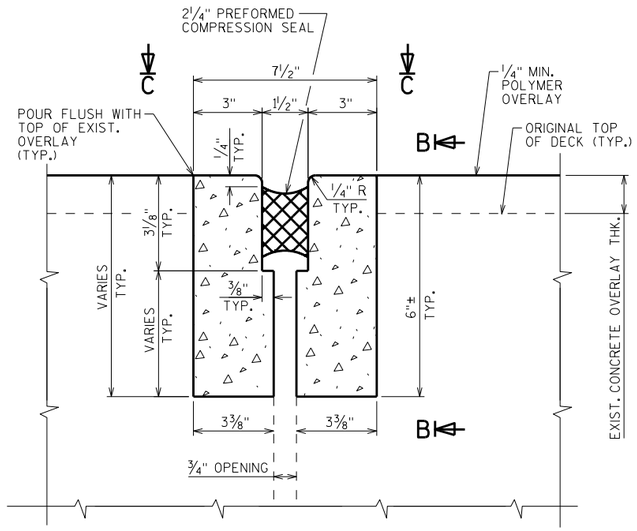
SCALE = 10.0

STATE PROJECT NUMBER

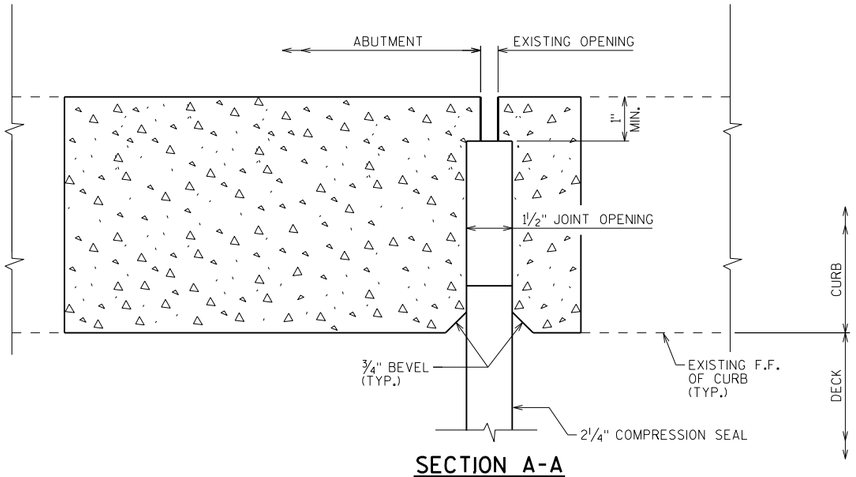
1014-00-65



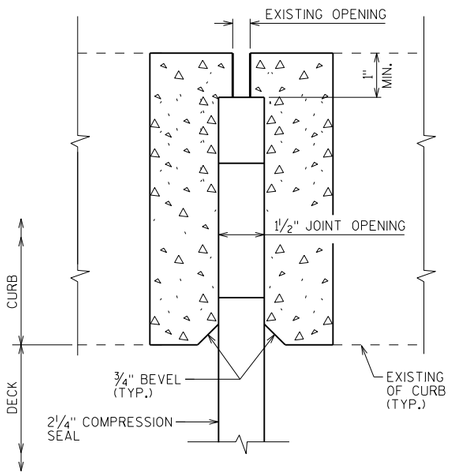
COMPRESSION SEAL DETAIL AT ABUTMENTS



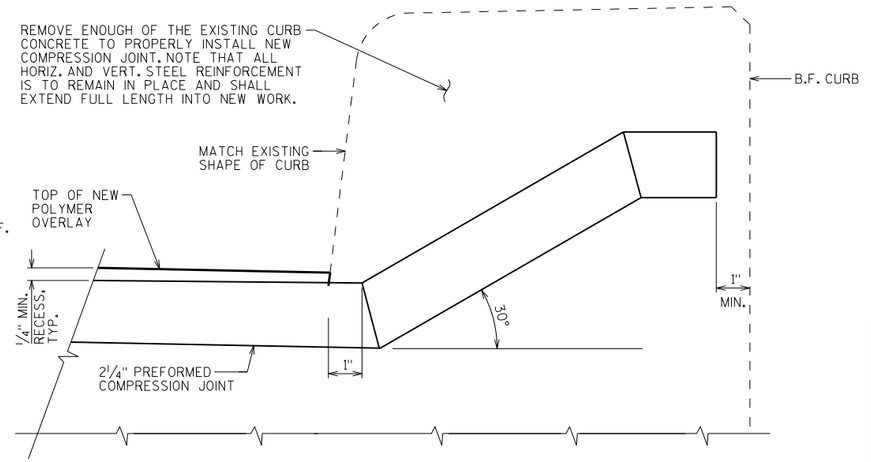
COMPRESSION SEAL DETAIL AT PIERS 1&3



SECTION A-A
PLAN VIEW



SECTION C-C
PLAN VIEW



SECTION B-B
TYPICAL - BOTH ENDS

NOTES

FABRICATOR SHALL PROVIDE MEANS OF KEEPING PREFORMED COMPRESSION SEAL CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR A 2¼" PREFORMED COMPRESSION SEAL INSTALLATION.

2¼" PREFORMED COMPRESSION SEAL WILL BE PAID FOR UNDER THE BID ITEM "COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 2¼-INCH".

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-56-34

DRAWN BY SAD | PLANS CK'D. SEW

COMPRESSION SEAL

SHEET 2

48

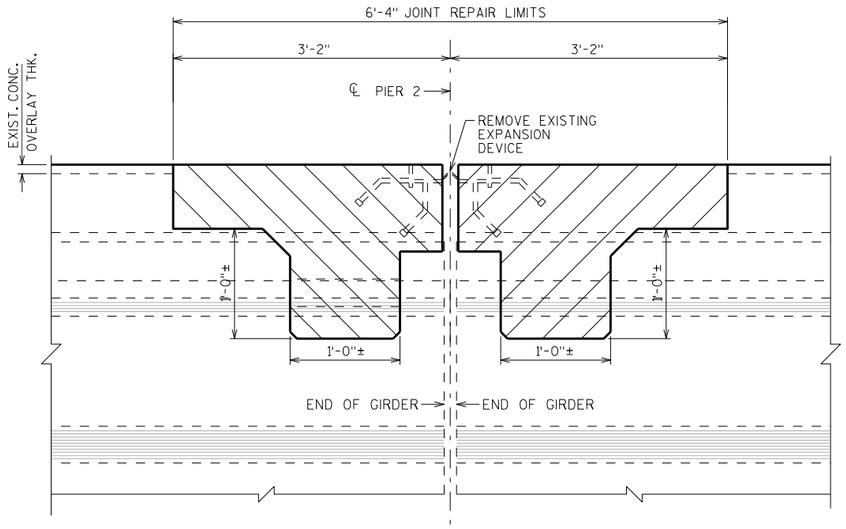
8

8

SCALE = 1

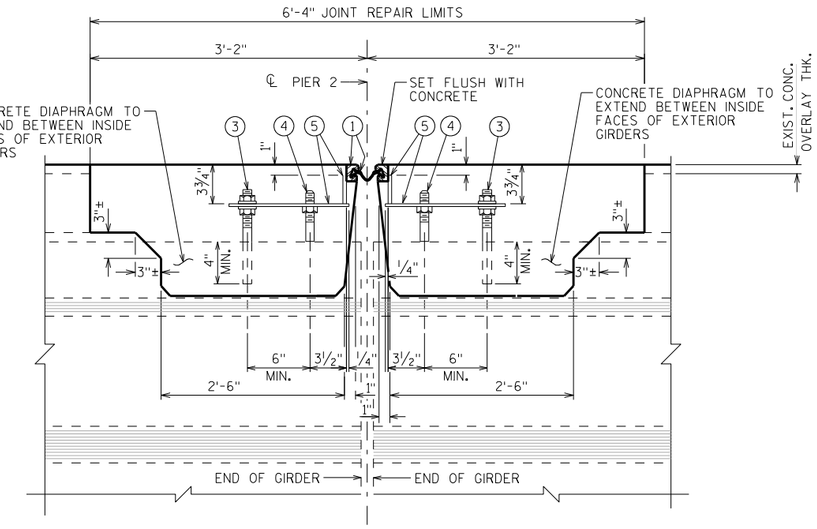
STATE PROJECT NUMBER

1014-00-65



SECTION THRU EXISTING EXPANSION JOINT AT PIER 2

SHOWING REMOVAL
NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU NEW EXPANSION JOINT AT PIER 2

NORMAL TO ℄ SUBSTRUCTURE

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

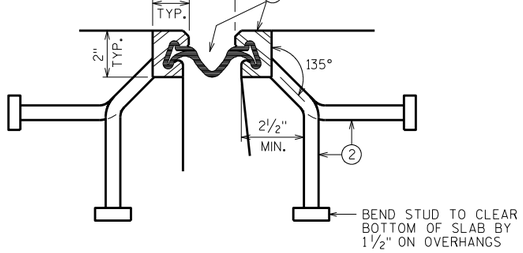
(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON ℄ OF GIRDER.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

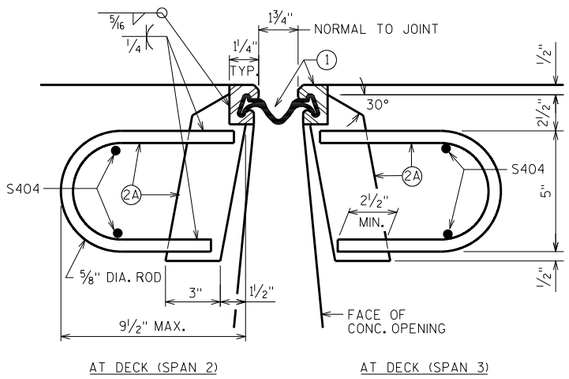
(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

(A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.



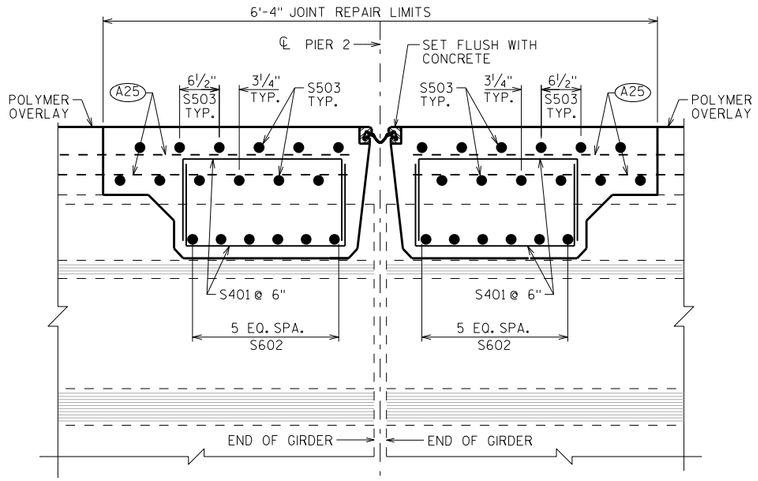
SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



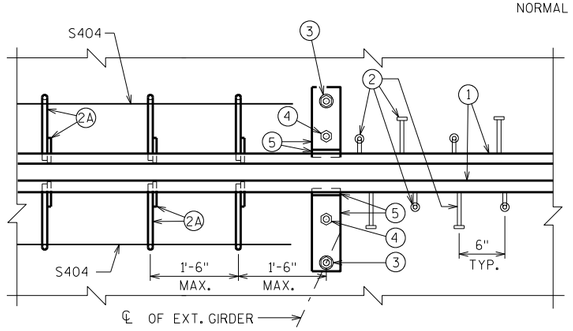
SECTION THRU JOINT - PIER 2

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



SECTION THRU NEW EXPANSION JOINT AT PIER 2

NORMAL TO ℄ SUBSTRUCTURE

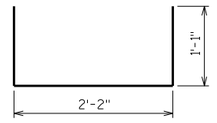


PART PLAN

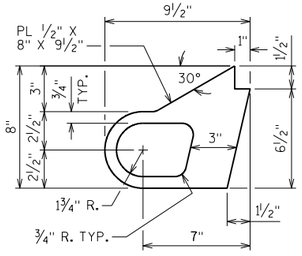
BILL OF BARS

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
S401	X	120	4'-2"	X		PIER 2 DIAPH. - VERT.
S602	X	72	3'-2"			PIER 2 DIAPH. - HORIZ.
S503	X	24	29'-0"			DECK OVER PIER 2 - HORIZ.
S404	X	24	3'-2"			PIER 2 DIAPH. - HORIZ. - AT EXPAN. DEVICE



S401



ALTERNATE STRIP SEAL ANCHOR

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-56-34".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-56-34

DRAWN BY SAD | PLANS CK'D. SEW

EXPANSION DEVICE

SHEET 3

49

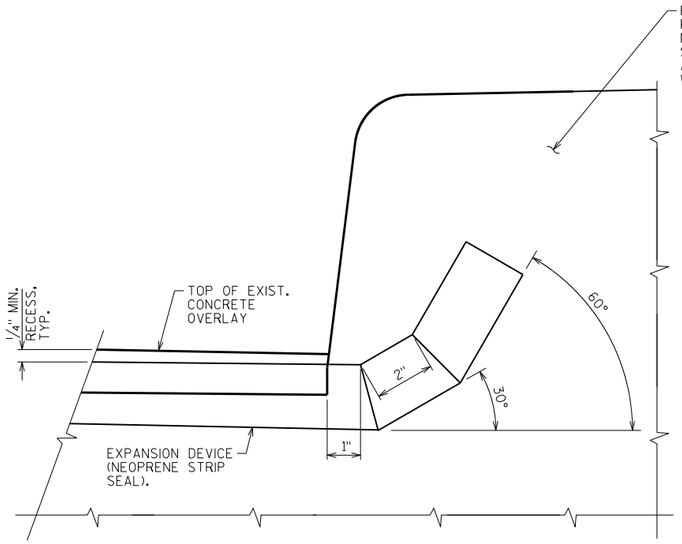
SCALE = 1.0

8

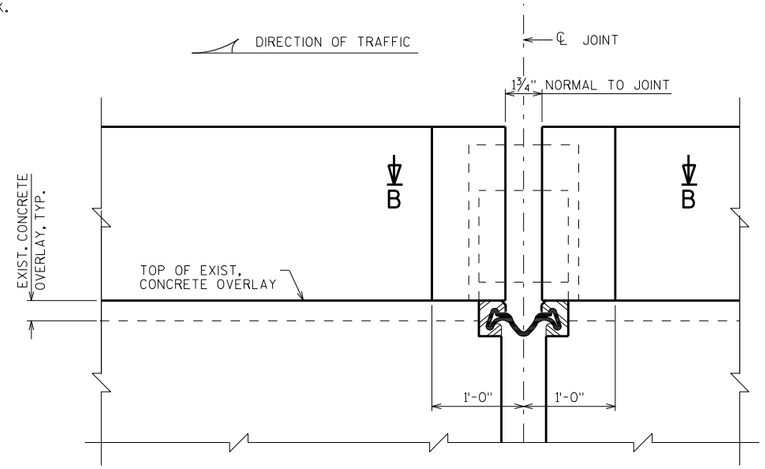
8

STATE PROJECT NUMBER

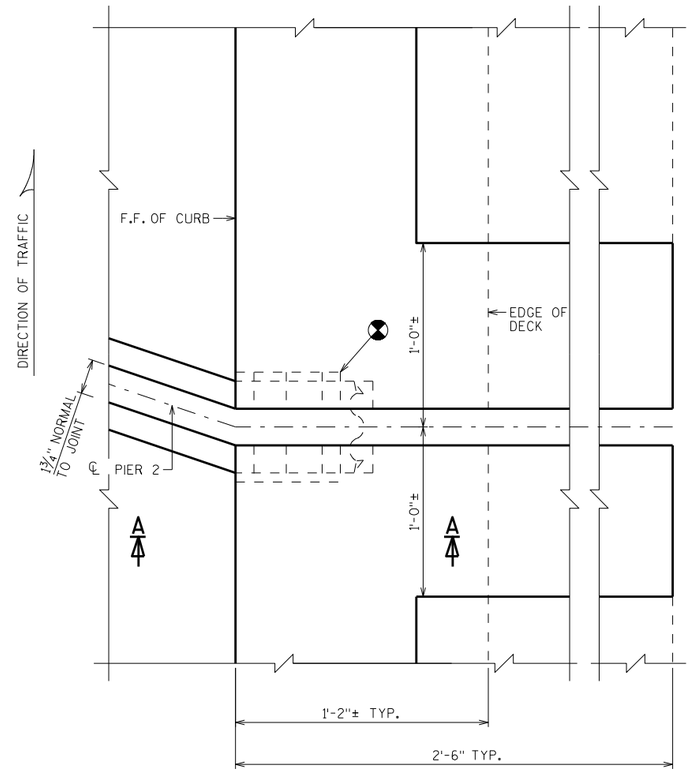
1014-00-65



SECTION A-A



VIEW OF CURB FROM ROADWAY



PLAN

SECTION B-B

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-56-34

DRAWN BY SAD | PLANS CK'D. SEW

EXPANSION DEVICE AT CURB

SHEET 4

50

8

8

SCALE = 1

STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
43+50'A'	0.00	0.00	0.00	0.00	0	0	0	0	0	0.00
44+00'A'	50.00	0.00	0.00	0.01	0	0	0	0	0	-0.01
44+36'A'	36.15	0.00	0.00	16.74	0	0	11	0	14	-14.03
44+50'A'	13.85	0.00	0.00	23.40	0	0	10	0	27	-26.90
44+51'A'	0.73	0.00	0.00	23.76	0	0	1	0	28	-27.70
44+83'A'	32.34	0.00	0.00	38.44	0	0	37	0	74	-74.26
44+98'A'	15.35	0.00	0.00	43.26	0	0	23	0	103	-103.29
45+00'A'	1.58	0.00	0.00	60.65	0	0	3	0	107	-107.09
45+11'A'	11.15	0.00	0.00	74.67	0	0	28	0	142	-142.01
45+18'A'	6.51	0.00	0.00	79.18	0	0	19	0	165	-165.18
45+36'A'	18.49	0.63	0.00	54.52	0	0	46	0	222	-222.20
45+43'A'	6.51	4.20	0.00	37.17	1	0	11	1	236	-235.44
45+50'A'	7.34	5.04	0.00	32.43	1	0	9	2	248	-246.00
45+61'A'	11.15	5.72	0.00	35.95	2	0	14	4	266	-261.43
45+68'A'	6.51	5.70	0.00	35.72	1	0	9	6	277	-270.86
46+00'A'	32.34	0.00	0.00	7.75	3	0	26	9	309	-299.98
46+50'A'	50.00	0.00	0.00	0.00	0	0	7	9	318	-308.95
					9	0	254		318	

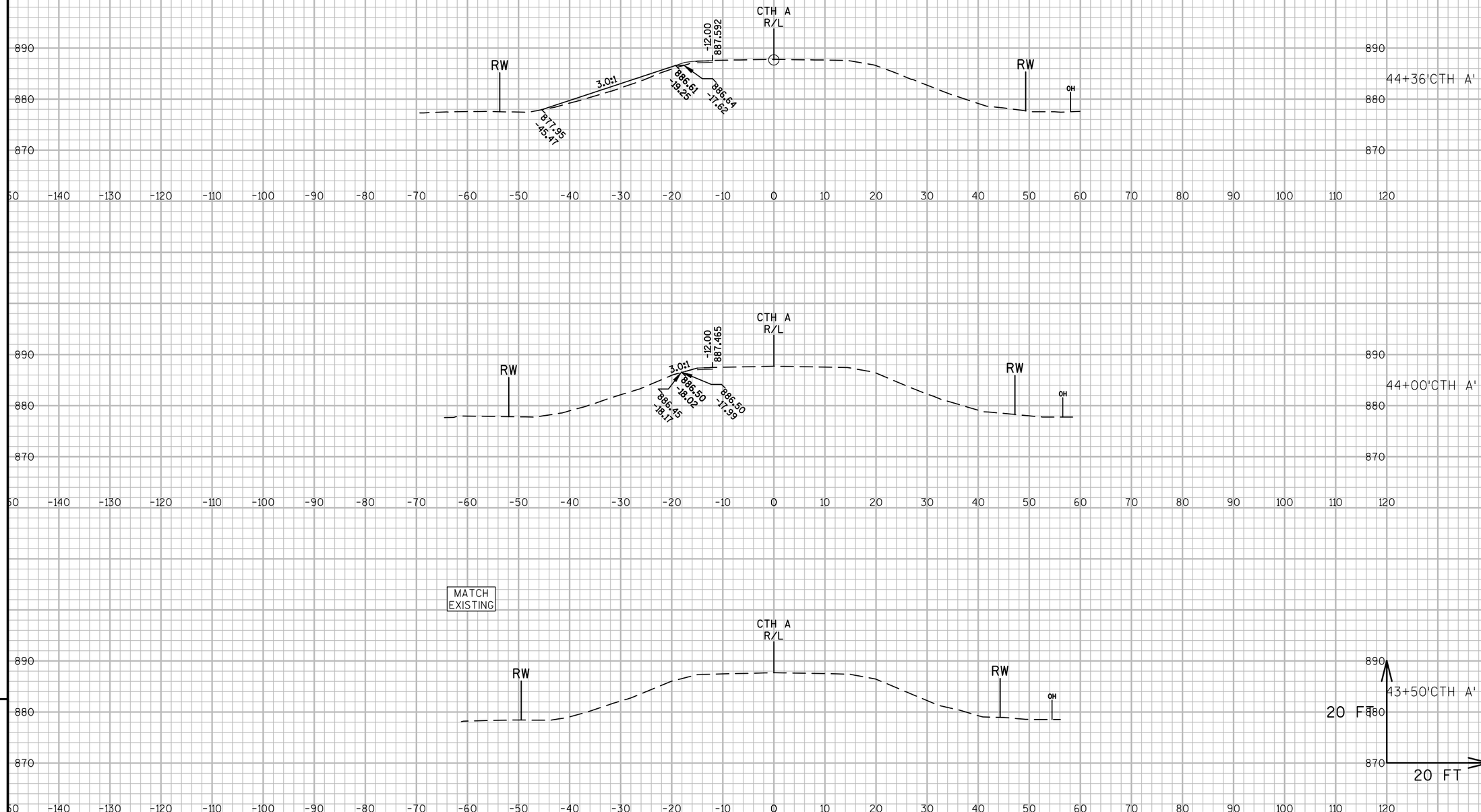
STATION	Distance	AREA (SF) Cut	AREA (SF) Salvaged / Unusable Pavement Material	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged / Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Mass Ordinate Note 8
52+28'A'	0.00	0.00	0.00	0.00	0	0	0	0	0	0.00
52+70'A'	42.05	0.00	0.00	7.48	0	0	6	0	7	-7.28
53+00'A'	30.11	0.00	0.00	9.75	0	0	10	0	19	-19.29
53+40'A'	40.34	0.00	0.00	8.22	0	0	13	0	36	-36.06
53+50'A'	9.66	0.00	0.00	8.15	0	0	3	0	40	-39.72
53+65'A'	15.34	0.00	0.00	11.12	0	0	5	0	47	-46.57
53+90'A'	25.00	0.00	0.00	14.94	0	0	12	0	62	-61.65
53+94'A'	3.71	0.00	0.00	14.23	0	0	2	0	64	-64.15
54+00'A'	5.95	0.00	0.00	14.90	0	0	3	0	68	-68.17
54+19'A'	19.05	0.00	0.00	19.96	0	0	12	0	84	-83.54
54+42'A'	22.70	0.00	0.00	20.02	0	0	17	0	105	-104.54
54+44'A'	2.30	0.00	0.00	20.09	0	0	2	0	107	-106.67
54+50'A'	5.95	0.00	0.00	16.86	0	0	4	0	112	-111.77
54+75'A'	25.00	0.00	0.00	2.42	0	0	9	0	123	-122.93
55+05'A'	30.45	0.00	0.00	0.00	0	0	1	0	125	-124.64
					0	0	100		125	

9

9

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	EARTHWORK SUMMARY	SHEET NO:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1



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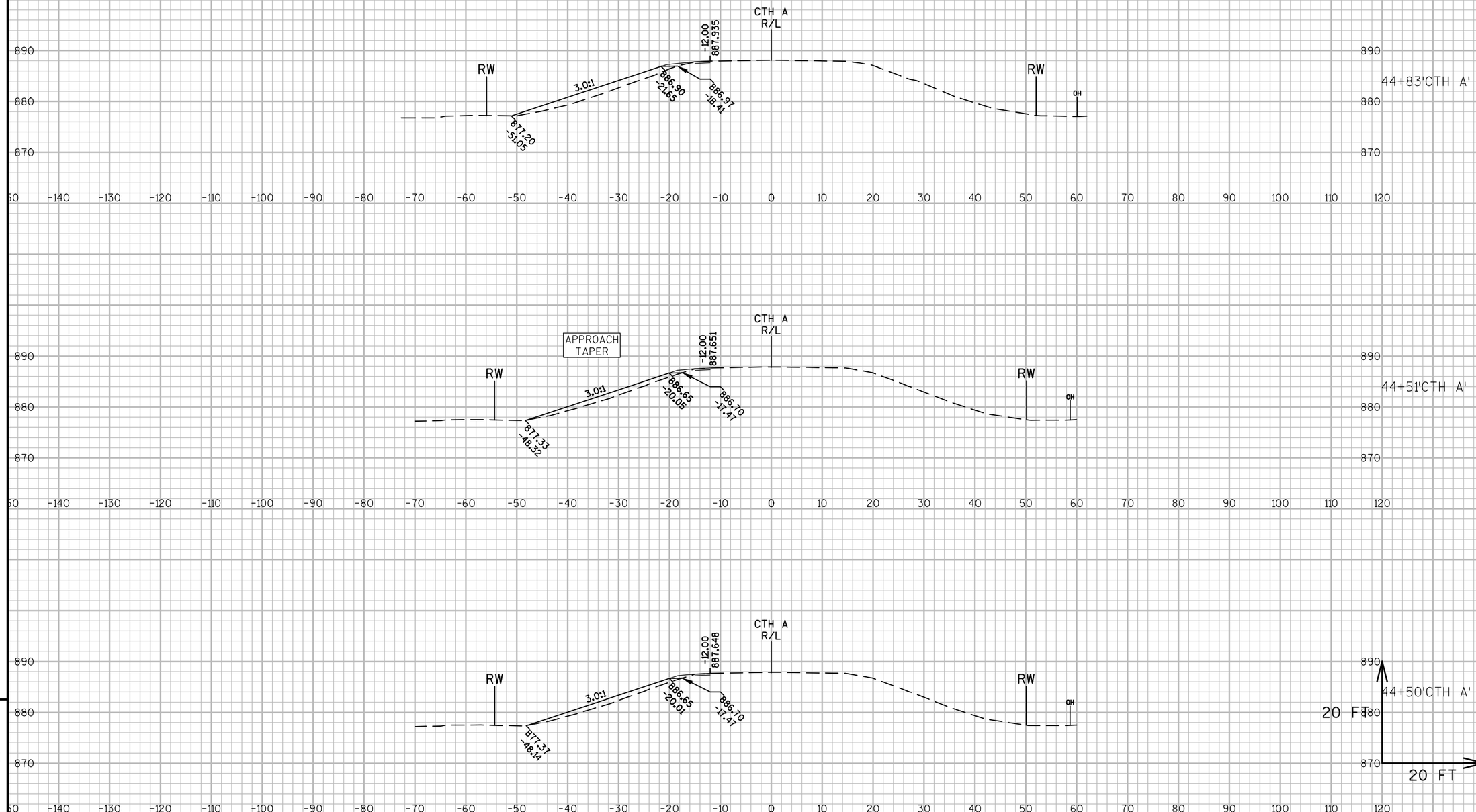
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 52	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - SECTION SHEET - (27)

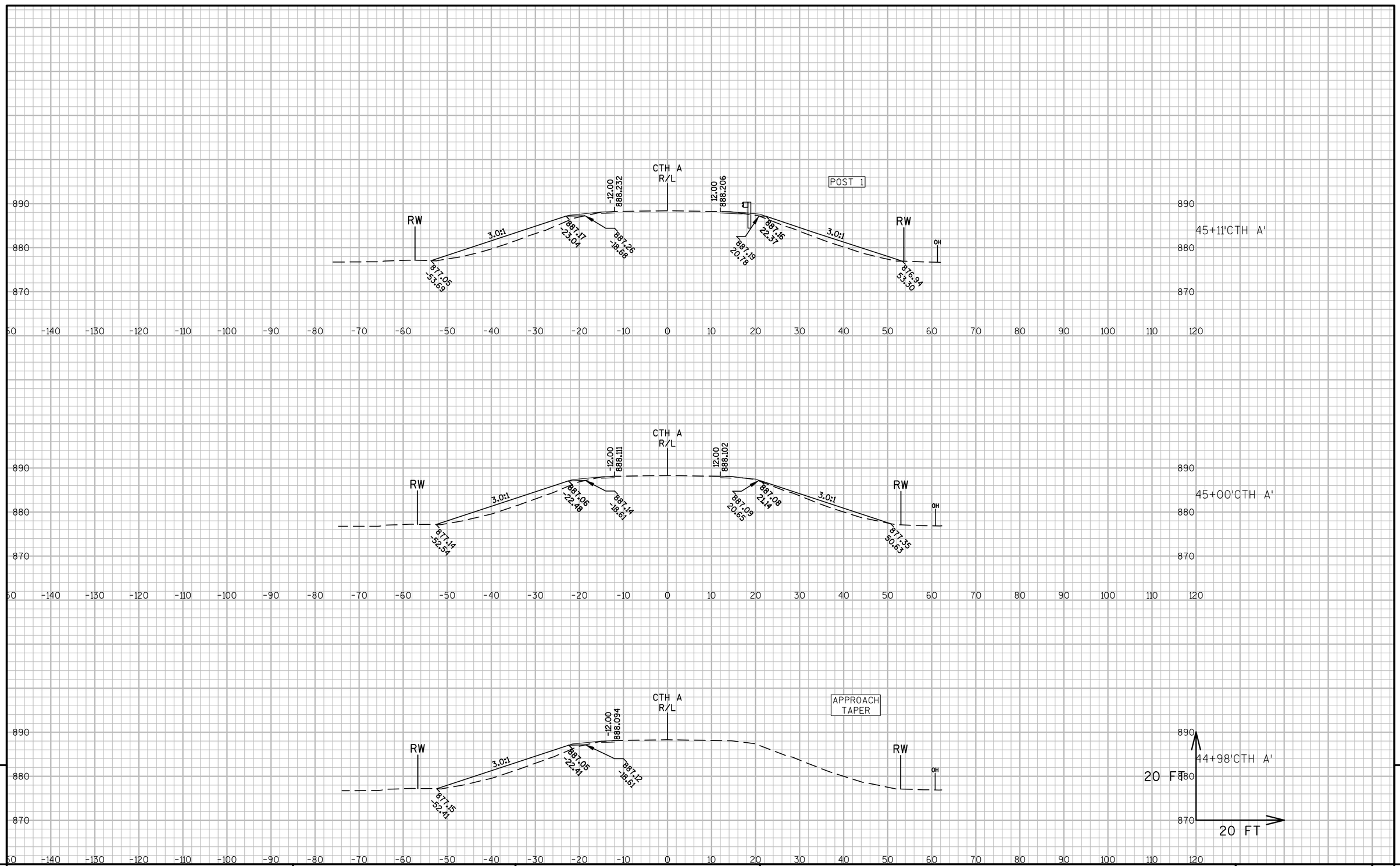
PLOT DATE : 1/17/2017 12:52 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 53	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - SECTION SHEET - (28)

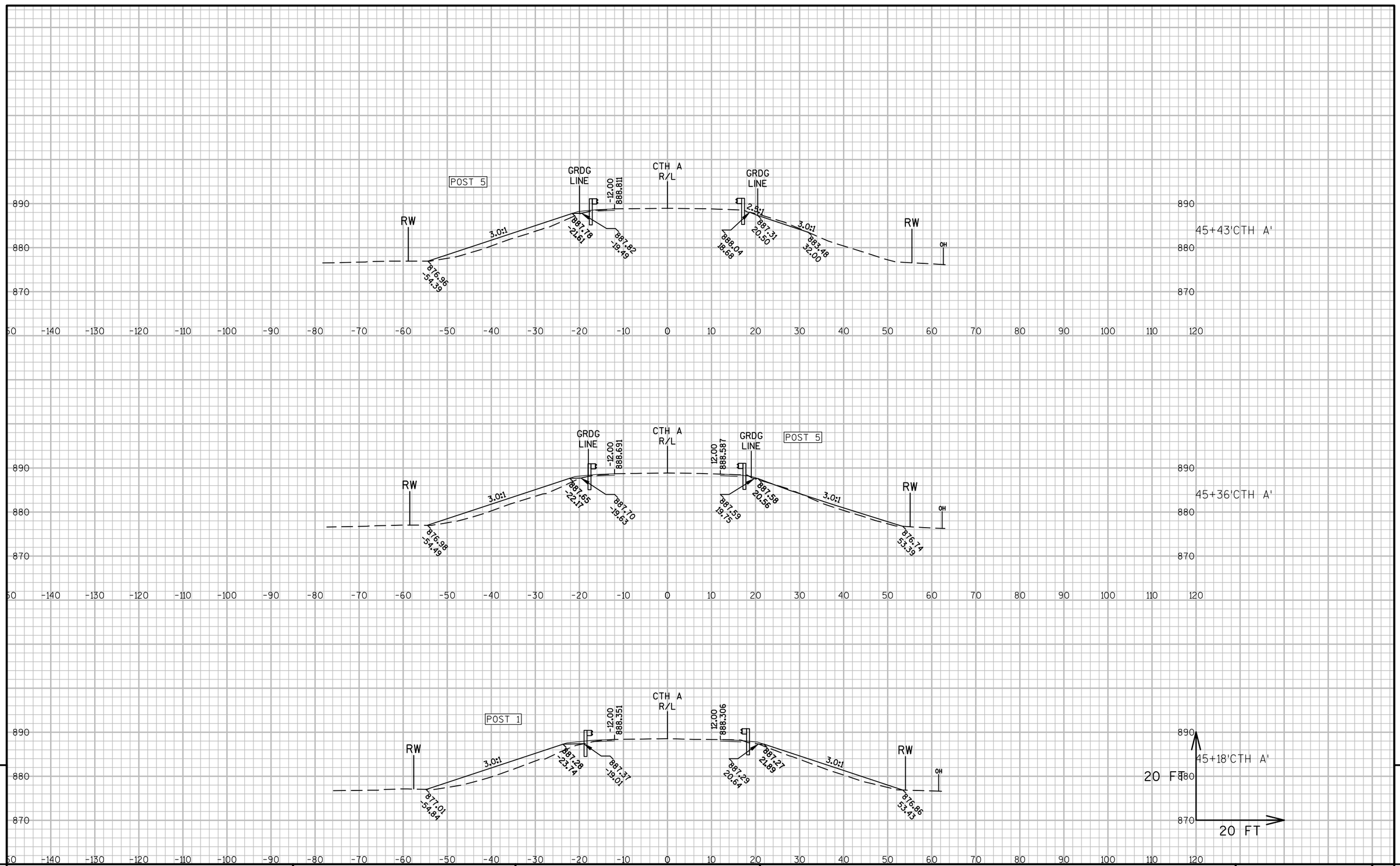
PLOT DATE : 1/12/2017 4:16 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

9

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 54	E



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9

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 55	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - SECTION SHEET - (30)

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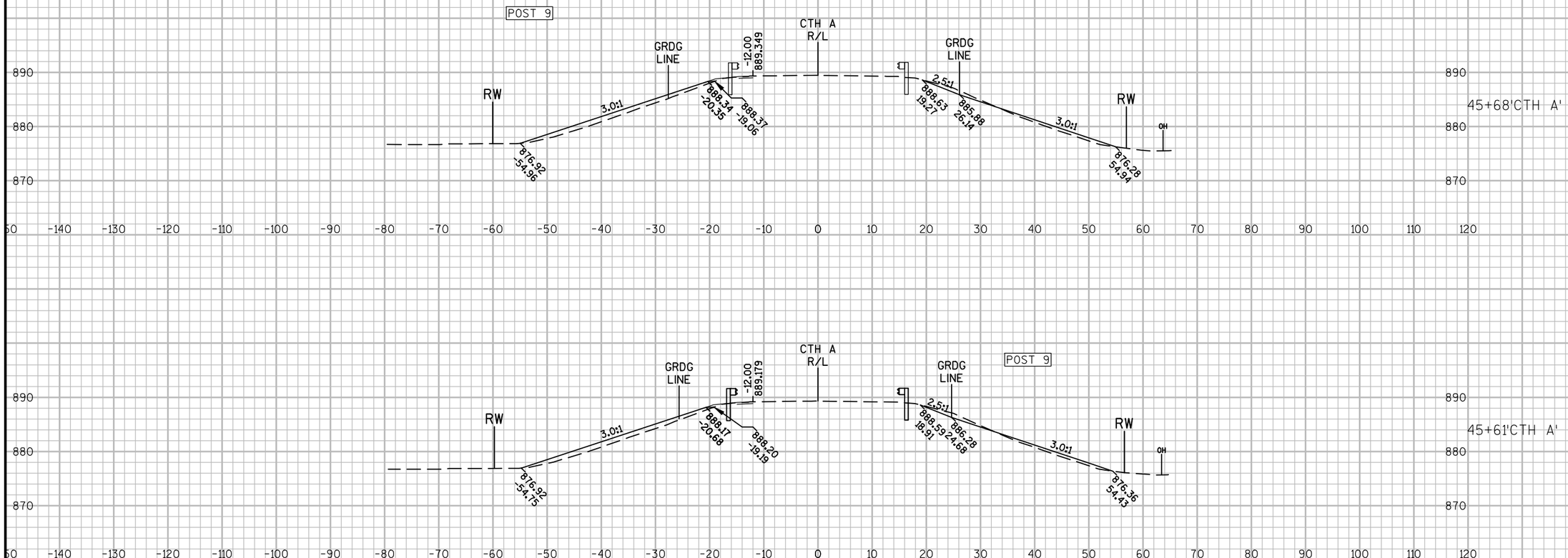

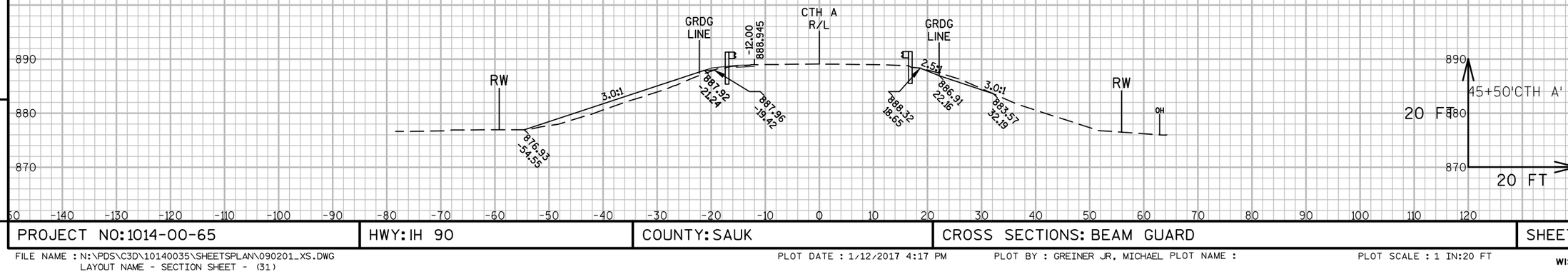

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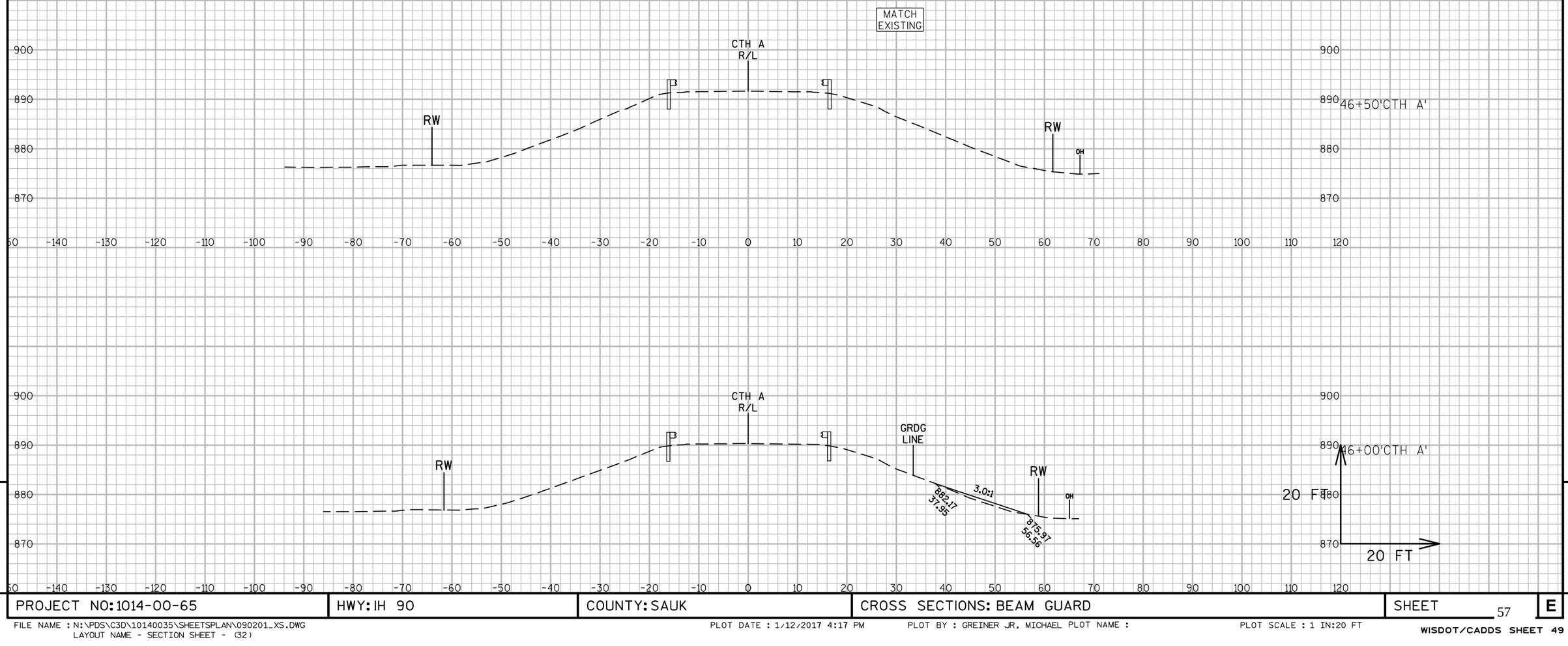
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 56	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - SECTION SHEET - (31)

PLOT DATE : 1/12/2017 4:17 PM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

PLOT SCALE : 1 IN:20 FT



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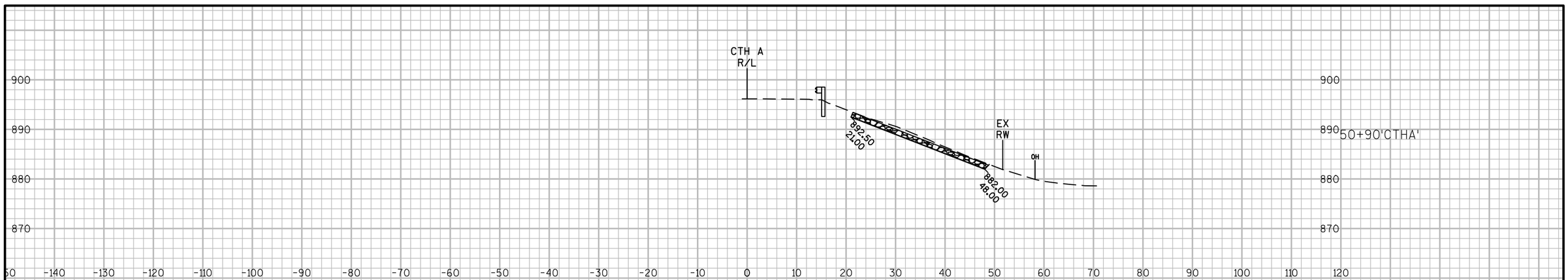
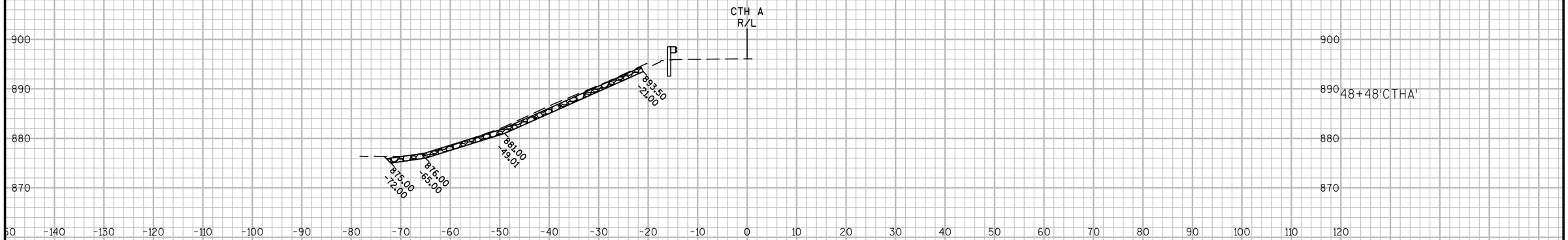
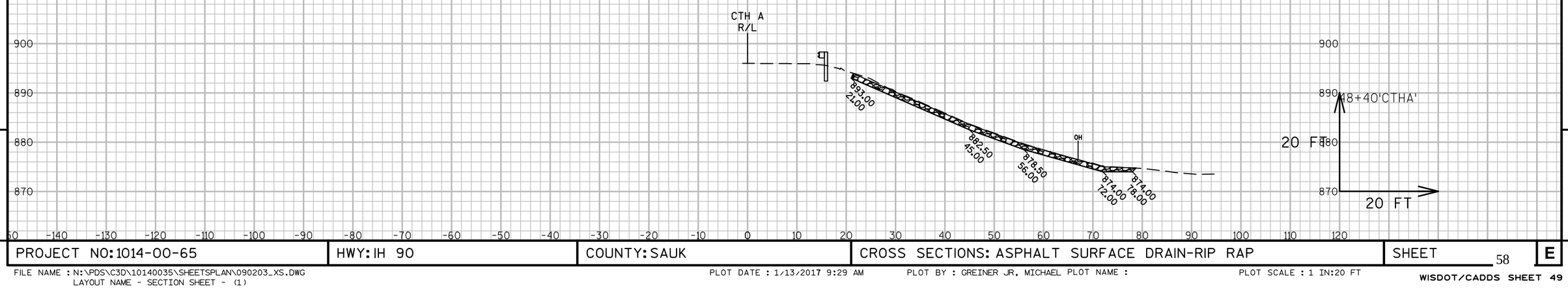
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 57	E







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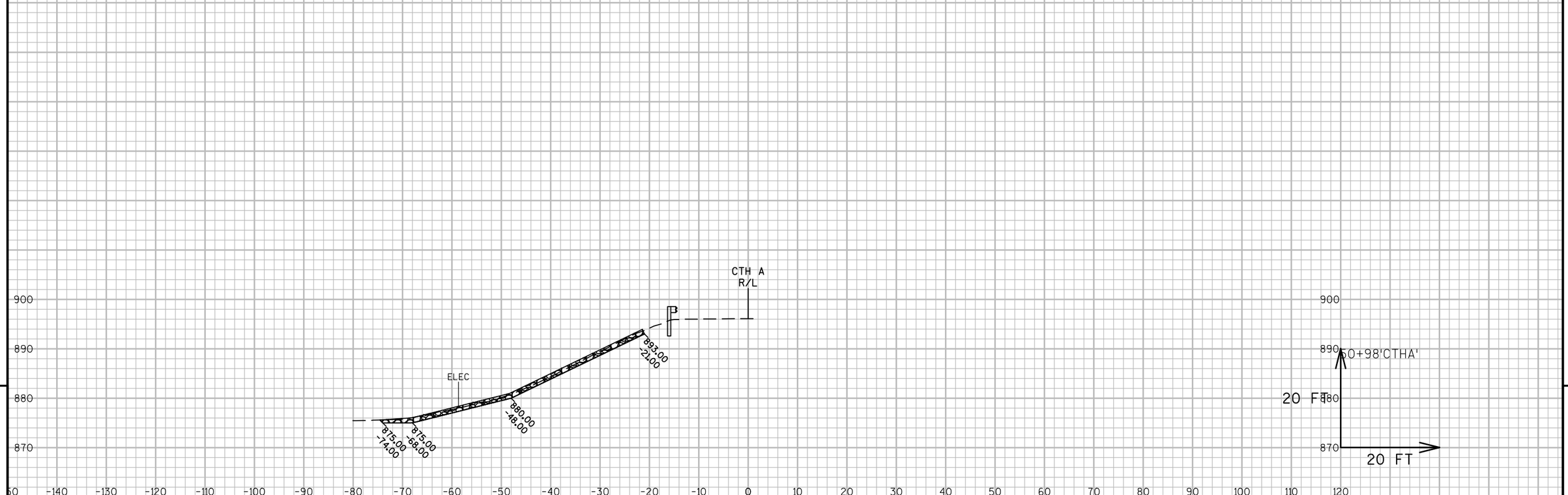
9

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: ASPHALT SURFACE DRAIN-RIP RAP	SHEET 58	E



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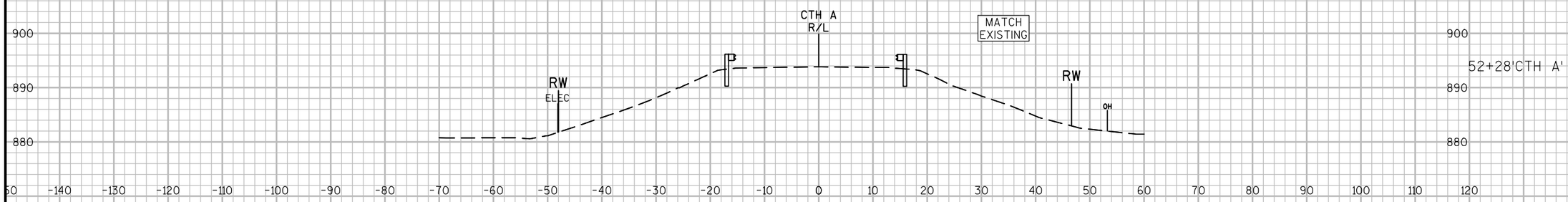
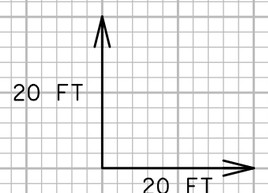
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: ASPHALT SURFACE DRAIN-RIP RAP	SHEET 59	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - SECTION SHEET - (2)

PLOT DATE : 1/13/2017 9:29 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



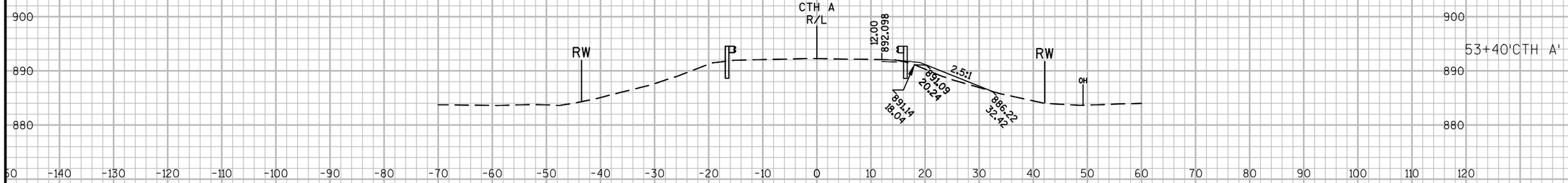


PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 60	E

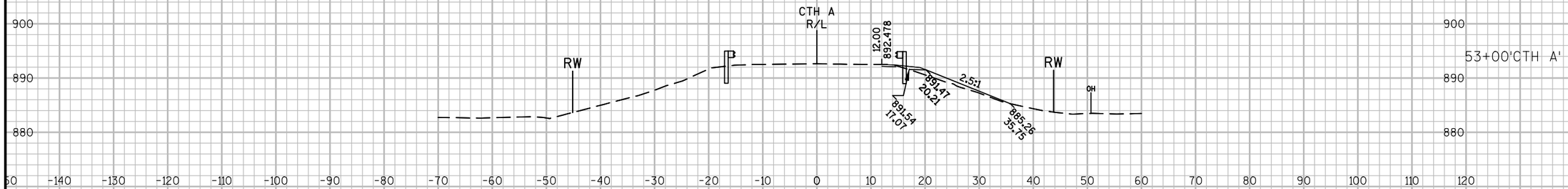
FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (27)

PLOT DATE : 1/19/2017 8:51 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

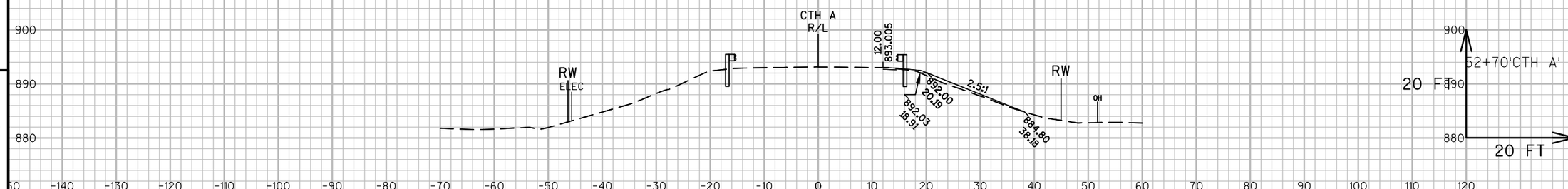
POST 9



53+40'CTH A'



53+00'CTH A'



52+70'CTH A'

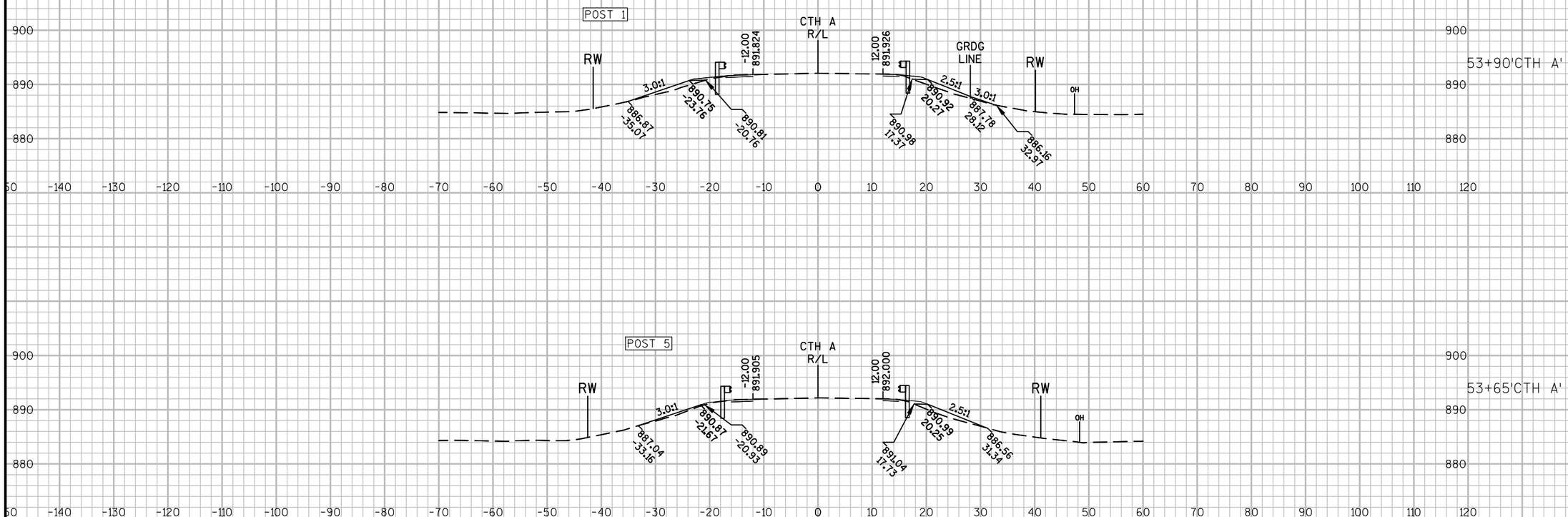
9

9

PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 61	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (28)

PLOT DATE : 1/13/2017 9:02 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT



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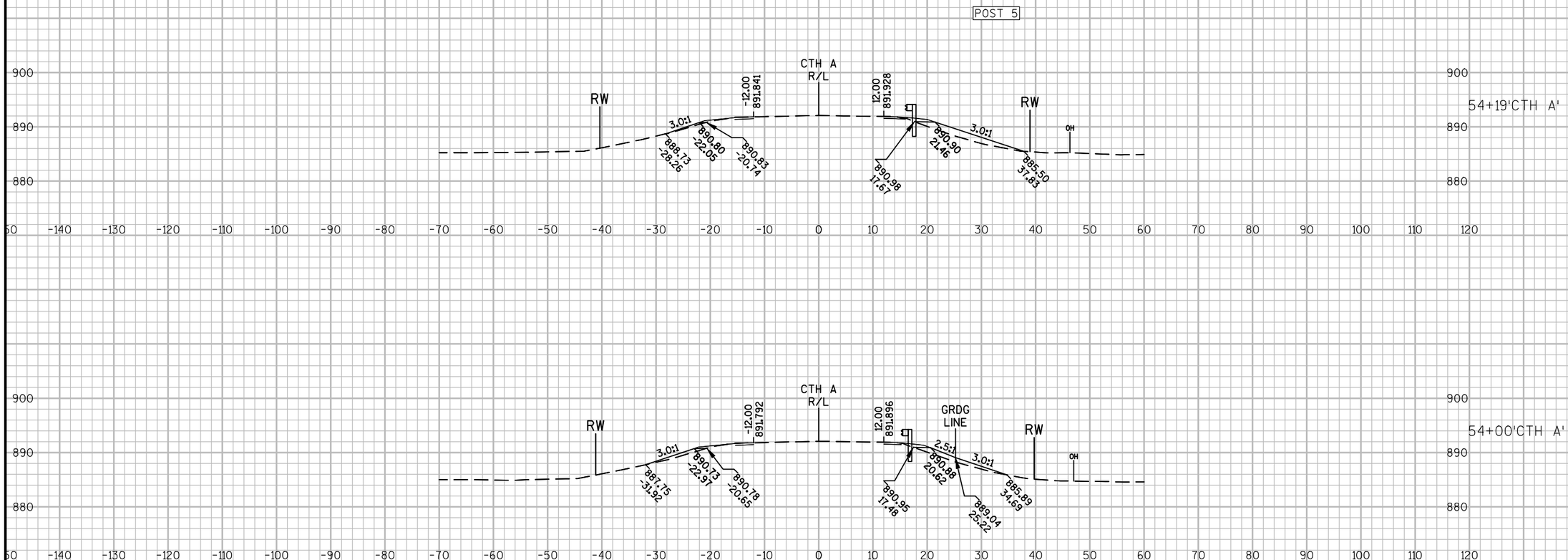
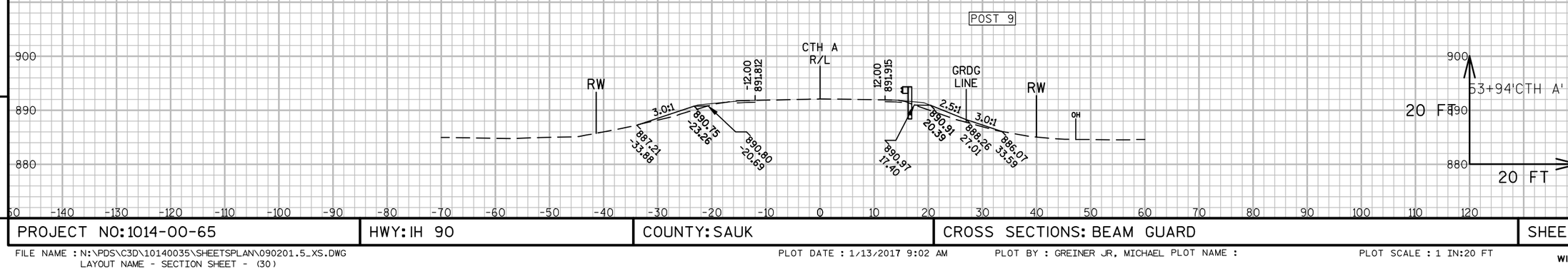
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 62	E

FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (29)

PLOT DATE : 1/13/2017 9:02 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT





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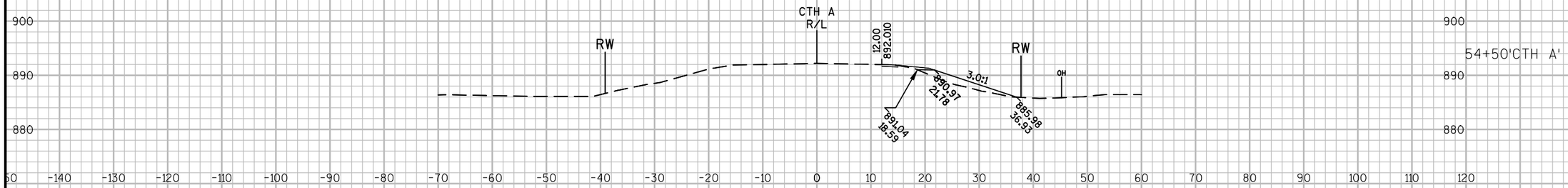
PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 63	E

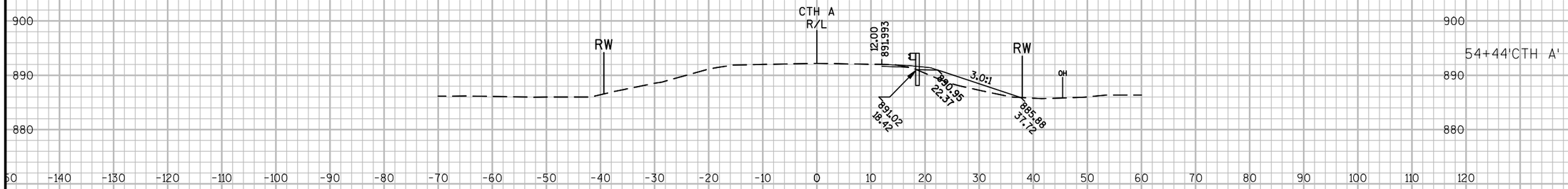
FILE NAME : N:\PDS\C3D\10140035\SHEETSPLAN\090201.5_XS.DWG
LAYOUT NAME - SECTION SHEET - (30)

PLOT DATE : 1/13/2017 9:02 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME :

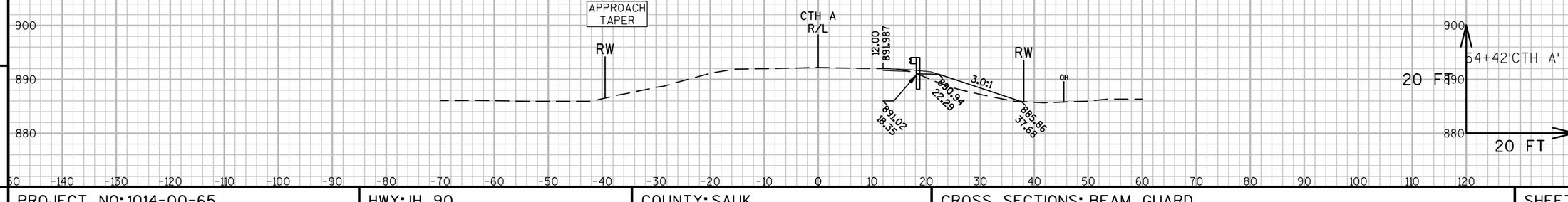
PLOT SCALE : 1 IN:20 FT



POST 1



APPROACH TAPER



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PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 64	E

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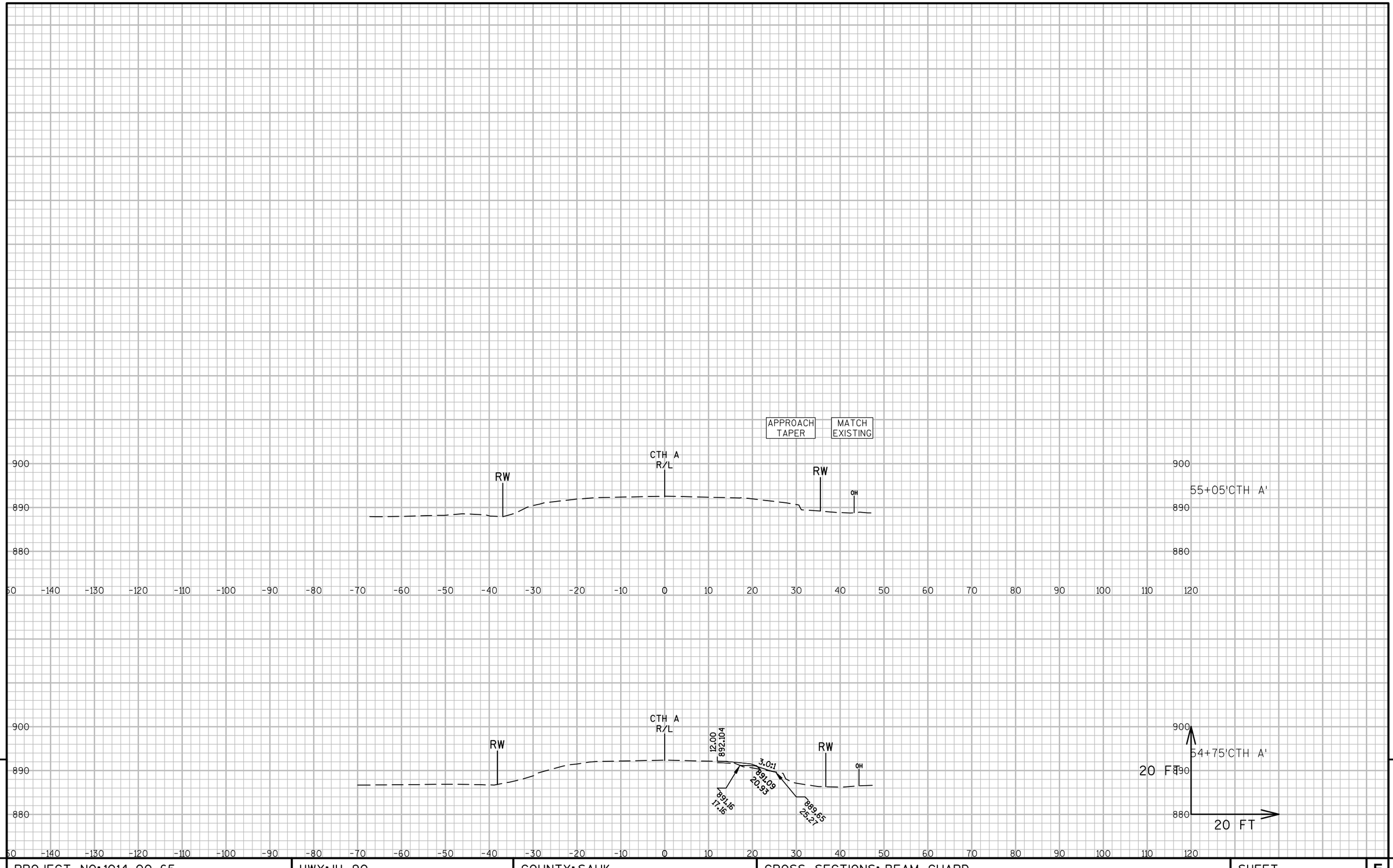
LAYOUT NAME - SECTION SHEET - (31)
PLOT DATE : 1/13/2017 9:02 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



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PROJECT NO: 1014-00-65	HWY: IH 90	COUNTY: SAUK	CROSS SECTIONS: BEAM GUARD	SHEET 65	E

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LAYOUT NAME - SECTION SHEET - (32)

PLOT DATE : 1/13/2017 9:02 AM PLOT BY : GREINER JR, MICHAEL PLOT NAME : PLOT SCALE : 1 IN:20 FT

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