

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
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Section No.	9	Cross Sections

TOTAL SHEETS = 60



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T HARTLAND, 570TH STREET

DRY RUN BRIDGE B-47-0232

LOC STR
PIERCE COUNTY

STATE PROJECT NUMBER
7895-00-71

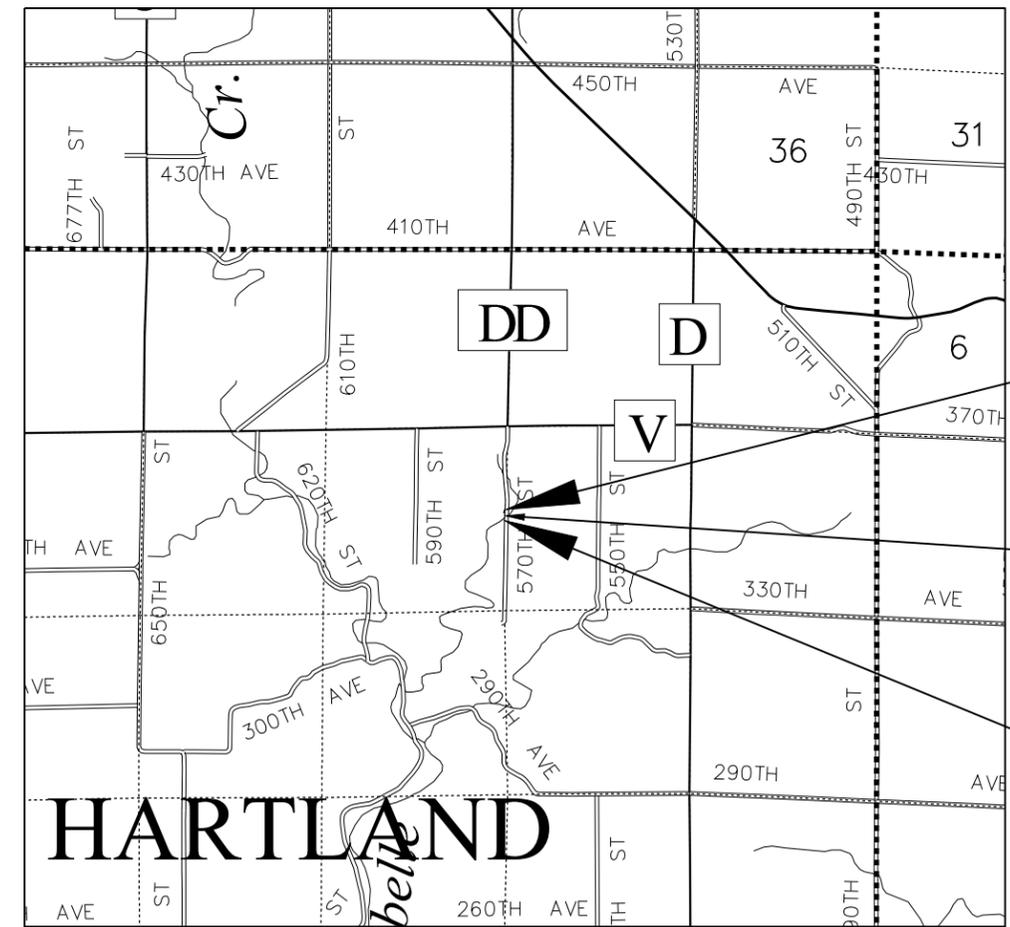
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7895-00-71		

DESIGN DESIGNATION

A.A.D.T. (2026)	=	<100
A.A.D.T. (2046)	=	<100
D.H.V.	=	10
D.D.	=	50/50
T.	=	5%
DESIGN SPEED	=	20 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
	STORM SEWER
	TELEPHONE
MARSH AREA	WATER
	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE



END PROJECT
STA 10+75
 Y = 293920.790
 X = 500826.437

STRUCTURE B-47-0232
 STA 10+00

BEGIN PROJECT
STA 9+25
 Y = 293770.859
 X = 500821.887

LAYOUT
 SCALE 0 1 MI
 TOTAL NET LENGTH OF CENTERLINE = 0.028 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2018). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ACCEPTED FOR
 TOWN _____ of HARTLAND
 10/21/25 *Kurt W. Nelson*
 (Date) (Town Chairman)

ORIGINAL PLANS PREPARED BY
AYRES

 10/23/2025
 (Date) (Signature)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 PREPARED BY
 Surveyor _____ AYRES ASSOCIATES INC
 Designer _____ AYRES ASSOCIATES INC
 Project Manager _____ MATTHEW BERG, PE
 Regional Examiner _____ NW REGION
 Regional Supervisor _____ TOU YANG, PE

APPROVED FOR THE DEPARTMENT
 DATE: 10/28/2025 *Matthew Berg*
 (Signature)

E

UTILITIES CONTACTS

AT&T
 COMMUNICATION
 RICK PODOLAK
 304 S DEWEY STREET
 EAU CLAIRE, WI 54701
 PHONE: 715-839-5565
 CELL: 715-410-0656
 EMAIL: rp4514@att.com

PIERCE PEPIN COOPERATIVE
 ELECTRIC & COMMUNICATION
 BRAD RISTOW
 W7725 US HWY 10
 ELLSWORTH, WI 54011
 PHONE: 715-273-2473
 CELL: 715-307-1904
 EMAIL: bristow@piercepepin.coop

WISCONSIN DNR LIAISON

AMY LESIK
 WDNR
 1300 CLAIREMONT AVENUE
 EAU CLAIRE, WI 54701
 PHONE: 715-836-6571
 CELL: 715-495-1903
 EMAIL: AmyL.Lesik@wisconsin.gov

TOWN OF HARTLAND CONTACT

KURT NELSON
 TOWN OF HARTLAND, CHAIRMAN
 W5137 290TH AVENUE
 BAY CITY, WI 54723
 PHONE: 715-597-3805
 EMAIL: netnls@bevcomm.net

DESIGN PROJECT MANAGER

MATTHEW BERG, PE
 WISDOT NW REGION LPPM
 718 CLAIREMONT AVENUE
 EAU CLAIRE, WI 54701
 PHONE: 920-492-4147
 EMAIL: Matthew.Berg@dot.wi.gov

DESIGN PROJECT LEADER

DAN SYDOW, PE
 AYRES ASSOCIATES INC
 3433 OAKWOOD HILLS PARKWAY
 EAU CLAIRE, WI 54701
 PHONE: 715-834-3161
 EMAIL: sydowd@AyresAssociates.com

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.

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SUBGRADE SHOULDER POINTS ARE TO BE SEEDED AND EITHER MULCHED OR EROSION MATTED AS DIRECTED BY THE ENGINEER.

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.



RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.888 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.407 ACRES

PROJECT NO: 7895-00-71

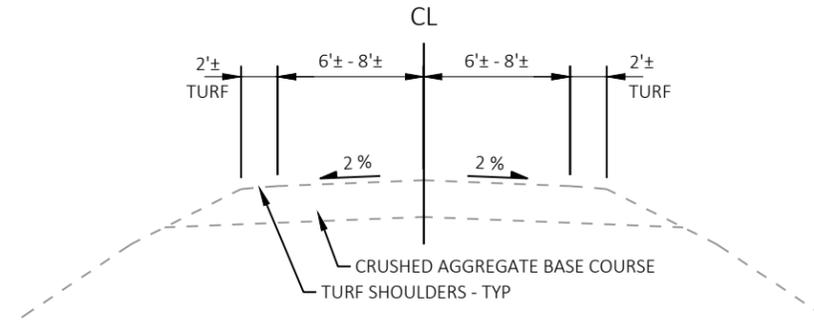
HWY: 570TH STREET

COUNTY: PIERCE

GENERAL NOTES

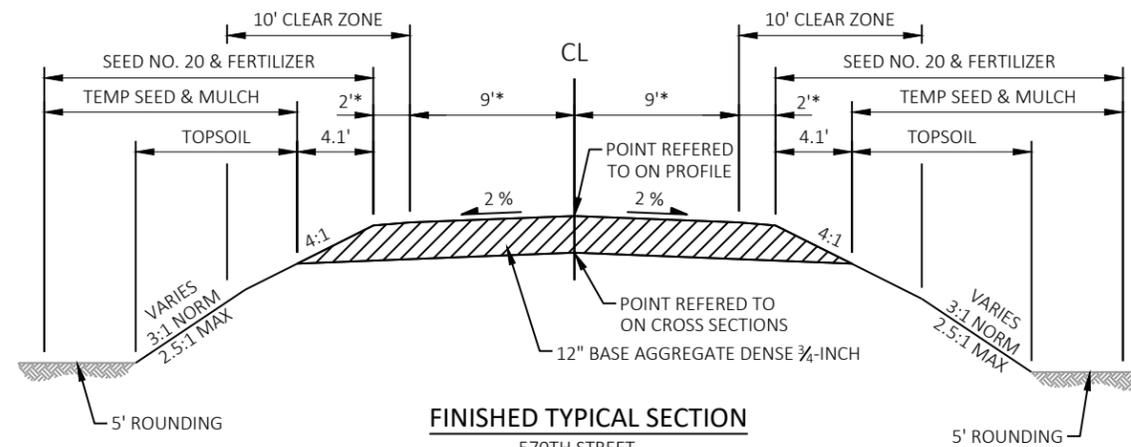
SHEET

E



EXISTING TYPICAL SECTION

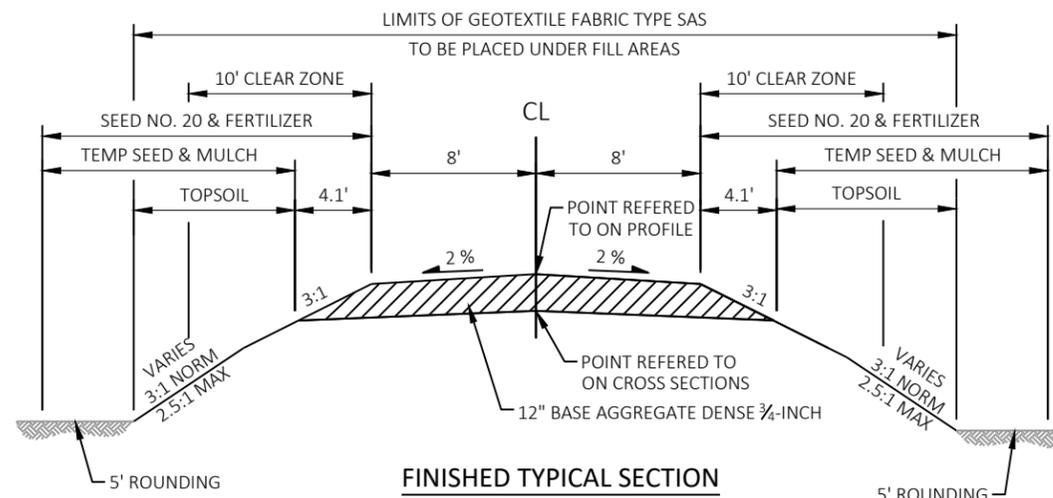
570TH STREET
STA 9+25 - STA 10+75



FINISHED TYPICAL SECTION

570TH STREET
STA 9+25 - STA 9+74.55
STA 10+25.44 - STA 10+75

* THE TOTAL BASE AGGREGATE LANE PLUS SHOULDER SHALL TAPER FROM 15.25' WIDE AT THE ENDS OF THE WINGS TO 9' WIDE AT THE ENDS OF PROJECT AND THE OVERALL BASE AGGREGATE WIDTH TO MATCH EXISTING AT THE ENDS OF PROJECT.



FINISHED TYPICAL SECTION

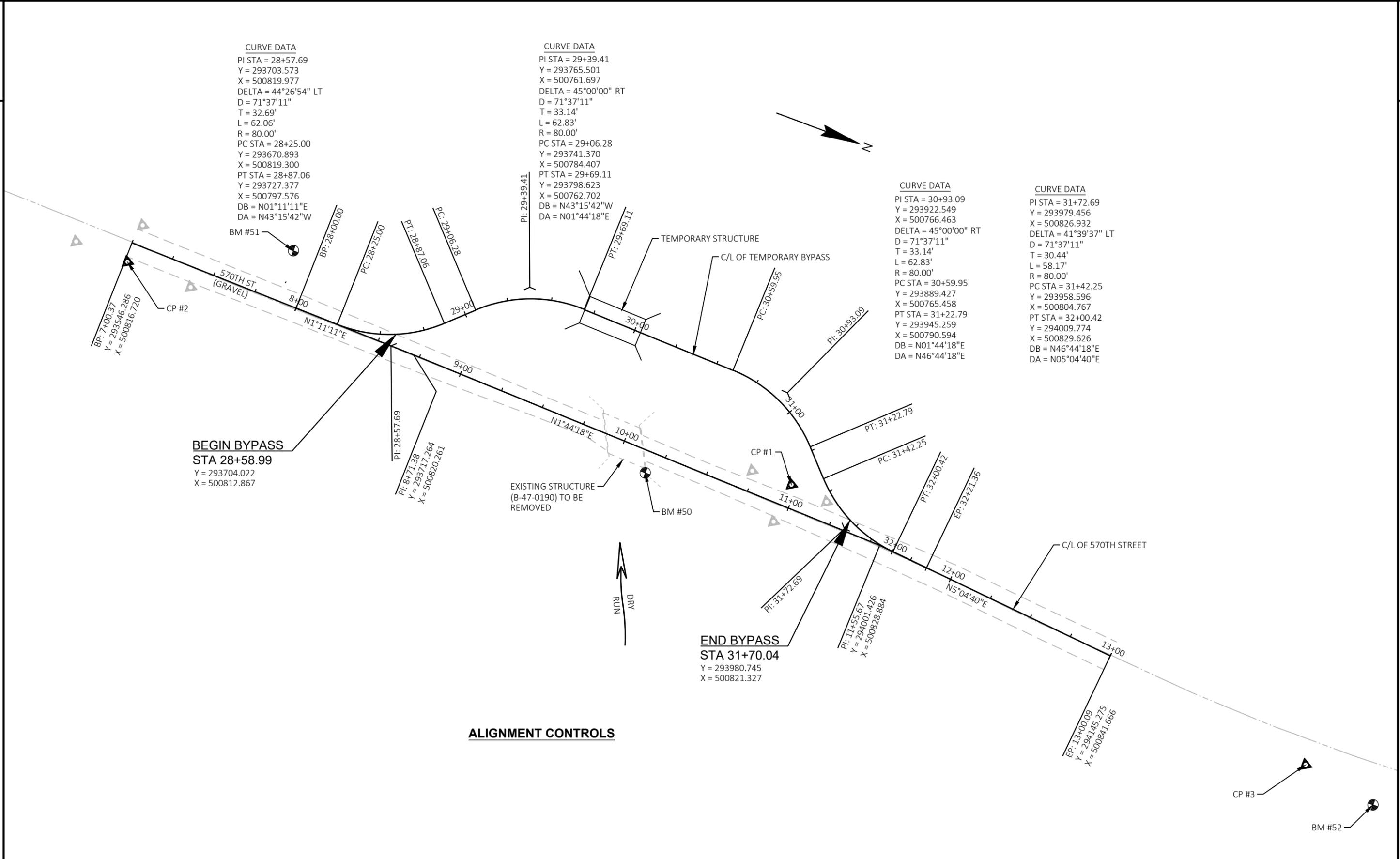
TEMPORARY BYPASS
STA 28+58.99 - STA 31+70.04

CURVE DATA
 PI STA = 28+57.69
 Y = 293703.573
 X = 500819.977
 DELTA = 44°26'54" LT
 D = 71°37'11"
 T = 32.69'
 L = 62.06'
 R = 80.00'
 PC STA = 28+25.00
 Y = 293670.893
 X = 500819.300
 PT STA = 28+87.06
 Y = 293727.377
 X = 500797.576
 DB = N01°11'11"E
 DA = N43°15'42"W

CURVE DATA
 PI STA = 29+39.41
 Y = 293765.501
 X = 500761.697
 DELTA = 45°00'00" RT
 D = 71°37'11"
 T = 33.14'
 L = 62.83'
 R = 80.00'
 PC STA = 29+06.28
 Y = 293741.370
 X = 500784.407
 PT STA = 29+69.11
 Y = 293798.623
 X = 500762.702
 DB = N43°15'42"W
 DA = N01°44'18"E

CURVE DATA
 PI STA = 30+93.09
 Y = 293922.549
 X = 500766.463
 DELTA = 45°00'00" RT
 D = 71°37'11"
 T = 33.14'
 L = 62.83'
 R = 80.00'
 PC STA = 30+59.95
 Y = 293889.427
 X = 500765.458
 PT STA = 31+22.79
 Y = 293945.259
 X = 500790.594
 DB = N01°44'18"E
 DA = N46°44'18"E

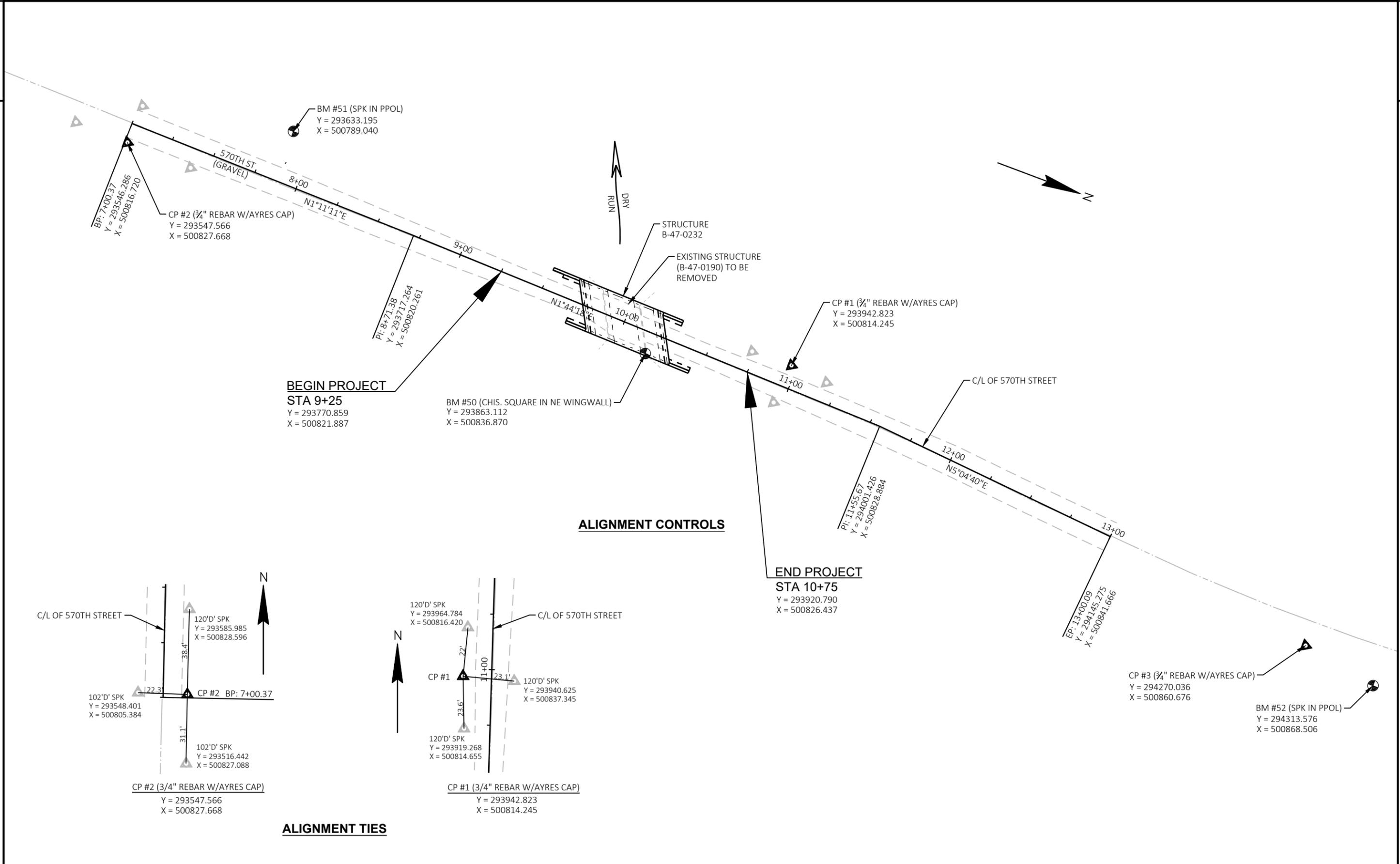
CURVE DATA
 PI STA = 31+72.69
 Y = 293979.456
 X = 500826.932
 DELTA = 41°39'37" LT
 D = 71°37'11"
 T = 30.44'
 L = 58.17'
 R = 80.00'
 PC STA = 31+42.25
 Y = 293958.596
 X = 500804.767
 PT STA = 32+00.42
 Y = 294009.774
 X = 500829.626
 DB = N46°44'18"E
 DA = N05°04'40"E



BEGIN BYPASS
 STA 28+58.99
 Y = 293704.022
 X = 500812.867

END BYPASS
 STA 31+70.04
 Y = 293980.745
 X = 500821.327

ALIGNMENT CONTROLS

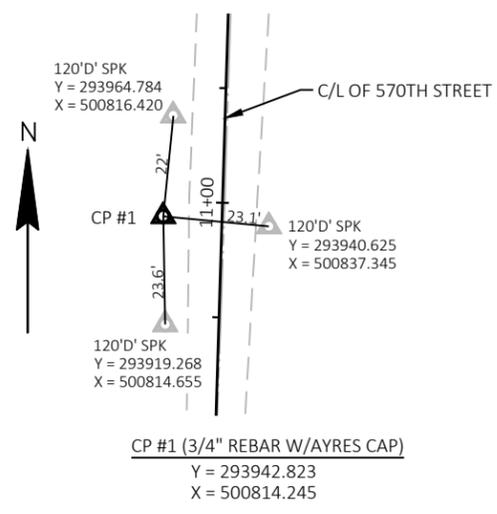
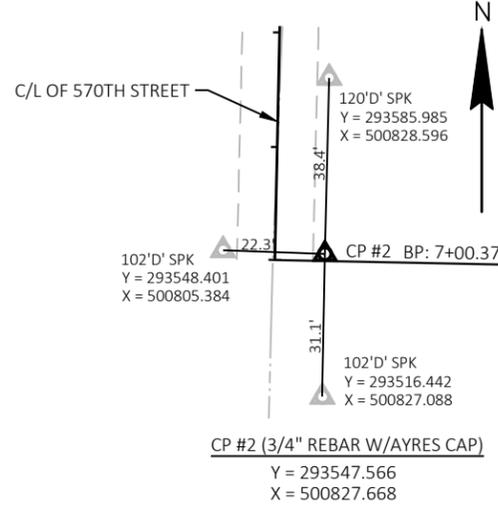


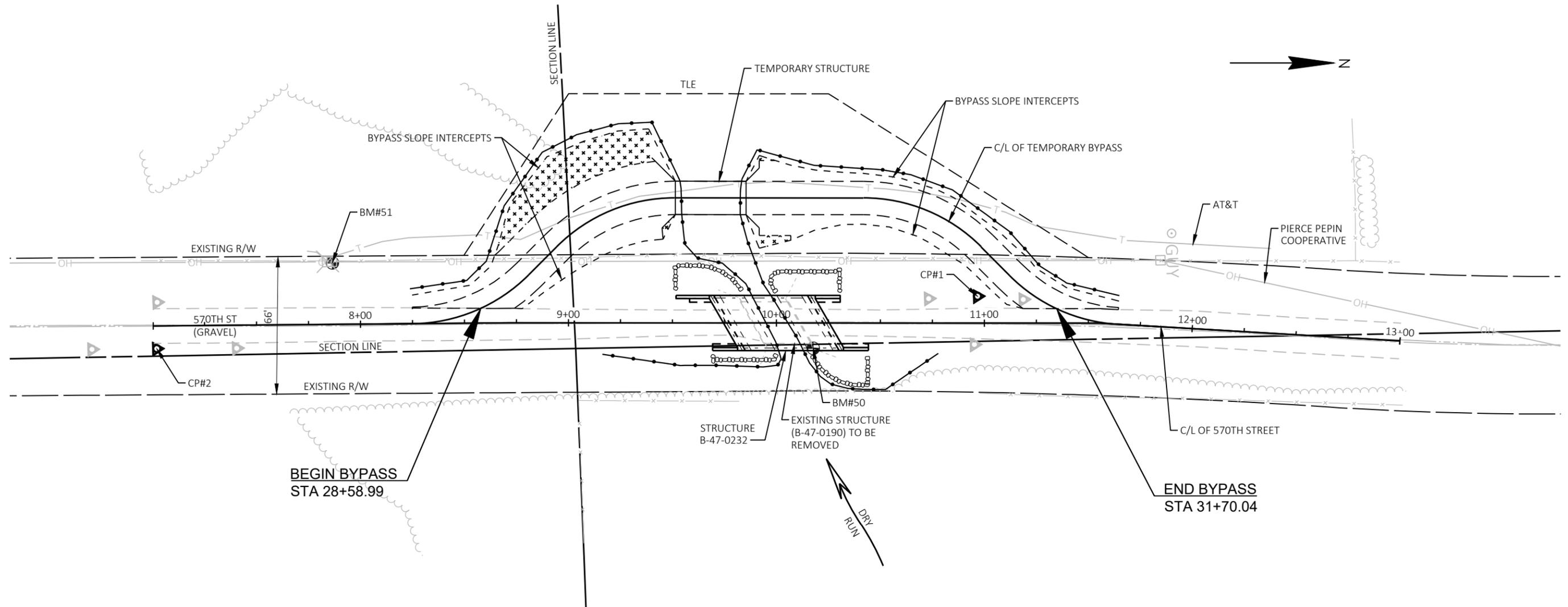
BEGIN PROJECT
STA 9+25
 Y = 293770.859
 X = 500821.887

END PROJECT
STA 10+75
 Y = 293920.790
 X = 500826.437

ALIGNMENT CONTROLS

ALIGNMENT TIES





**BEGIN BYPASS
STA 28+58.99**

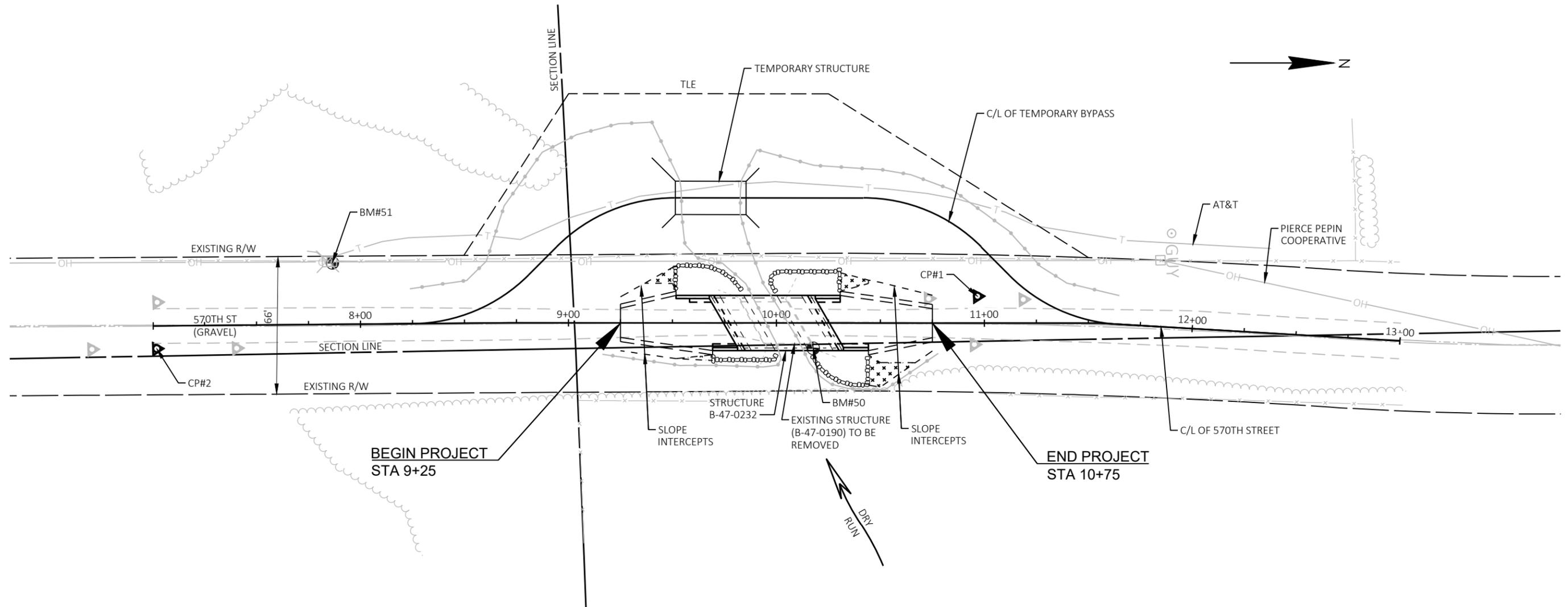
**END BYPASS
STA 31+70.04**

LEGEND

-  EROSION MAT CLASS II (TYPE C)
-  SILT FENCE
-  RIP RAP
-  SLOPE INTERCEPT
-  TEMPORARY DITCH CHECK (UNDISTRIBUTED)

HIGHWATER₂ EL. 946.93

- NOTES:**
- NO DISTURBANCE OR TOPSOIL STOCKPILING IS ALLOWED OUTSIDE OF THE SLOPE INTERCEPTS.
 - WETLANDS EXIST IN THE PROJECT AREA.
 - MULCH TO BE PLACED ON SIDE SLOPES NOT PROTECTED BY EROSION MAT.
 - NO IN-STREAM WORK BETWEEN SEPTEMBER 15 TO MAY 15, WITH BOTH DATES INCLUSIVE OF THE TIMEOUT PERIOD.
 - GEOTEXTILE TYPE SAS TO BE PLACED UNDER THE FILL FOR TEMPORARY BYPASS.
 - NO GRUBBING TO BE DONE ALONG THE TEMPORARY BYPASS.
 - RESTORE TEMPORARY BYPASS TO PRE-CONSTRUCTION CONTOURS. AFTER REMOVAL OF TEMPORARY BYPASS. DISTURBED AREAS TO BE MULCHED, SEEDED, AND FERTILIZED.



LEGEND

- EROSION MAT CLASS II (TYPE C)
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK (UNDISTRIBUTED)

HIGHWATER₂ EL. 946.93

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Estimate Of Quantities

7895-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0220	Removing Structure (structure) 01. B-47-0190	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	1,331.000	1,331.000
0010	206.1001	Excavation for Structures Bridges (structure) 01. B-47-0232	EACH	1.000	1.000
0012	208.0100	Borrow	CY	1,072.000	1,072.000
0014	210.1500	Backfill Structure Type A	TON	290.000	290.000
0016	213.0100	Finishing Roadway (project) 01. 7895-00-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	625.000	625.000
0020	502.0100	Concrete Masonry Bridges	CY	180.000	180.000
0022	502.3200	Protective Surface Treatment	SY	215.000	215.000
0024	505.0400	Bar Steel Reinforcement HS Structures	LB	4,070.000	4,070.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	23,940.000	23,940.000
0028	506.0105	Structural Steel Carbon	LB	530.000	530.000
0030	513.4061	Railing Tubular Type M	LF	160.000	160.000
0032	516.0500	Rubberized Membrane Waterproofing	SY	19.000	19.000
0034	526.0101	Temporary Structure (station) 01. 29+86.50	EACH	1.000	1.000
0036	550.0020	Pre-Boring Rock or Consolidated Materials	LF	60.000	60.000
0038	550.0500	Pile Points	EACH	11.000	11.000
0040	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	330.000	330.000
0042	606.0300	Riprap Heavy	CY	200.000	200.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7895-00-71	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	66.000	66.000
0052	625.0100	Topsoil	SY	845.000	845.000
0054	627.0200	Mulching	SY	1,365.000	1,365.000
0056	628.1504	Silt Fence	LF	955.000	955.000
0058	628.1520	Silt Fence Maintenance	LF	1,910.000	1,910.000
0060	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0062	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0064	628.2027	Erosion Mat Class II Type C	SY	270.000	270.000
0066	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0068	629.0210	Fertilizer Type B	CWT	1.000	1.000
0070	630.0120	Seeding Mixture No. 20	LB	74.000	74.000
0072	630.0200	Seeding Temporary	LB	39.000	39.000
0074	630.0300	Seeding Borrow Pit	LB	36.000	36.000
0076	630.0500	Seed Water	MGAL	36.000	36.000
0078	633.1100	Delineators Temporary	EACH	25.000	25.000
0080	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0082	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0084	638.2602	Removing Signs Type II	EACH	6.000	6.000
0086	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0300	Traffic Control Drums	DAY	2,376.000	2,376.000
0092	643.0420	Traffic Control Barricades Type III	DAY	1,980.000	1,980.000
0094	643.0705	Traffic Control Warning Lights Type A	DAY	792.000	792.000
0096	643.0715	Traffic Control Warning Lights Type C	DAY	990.000	990.000
0098	643.0900	Traffic Control Signs	DAY	3,762.000	3,762.000

Estimate Of Quantities

7895-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	643.5000	Traffic Control	EACH	1.000	1.000
0102	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0104	645.0120	Geotextile Type HR	SY	350.000	350.000
0106	645.0140	Geotextile Type SAS	SY	1,650.000	1,650.000
0108	650.4500	Construction Staking Subgrade	LF	441.000	441.000
0110	650.5000	Construction Staking Base	LF	441.000	441.000
0112	650.6501	Construction Staking Structure Layout (structure) 01. B-47-0232	EACH	1.000	1.000
0114	650.9911	Construction Staking Supplemental Control (project) 01. 7895-00-71	EACH	1.000	1.000
0116	650.9920	Construction Staking Slope Stakes	LF	441.000	441.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	1,080.000	1,080.000
0120	999.2005.S	Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+75	-	9+75	MAINLINE	1	1
TOTAL 0010				1	1

NOTE: TREES TO BE CUT BY OTHERS PRIOR TO CONSTRUCTION. CLEAR DOWN TREES.

FINISHING ROADWAY

PROJECT	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 7895-00-71) EACH
7895-00-71	1
TOTAL 0010	1

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
PROJECT LIMITS	1
TOTAL 0010	1

WATER

LOCATION	624.0100 WATER MGAL
COMPACTION	9
DUST CONTROL	57
TOTAL 0010	66

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON
28+50	-	32+00.42	TEMP BYPASS	425
9+25	-	9+74.55	MAINLINE	100
10+25.44	-	10+75	MAINLINE	100
TOTAL 0010				625

570TH STREET EARTHWORK SUMMARY

From/To Station	Location	Excavation Common (1) 205.0100	Salvaged / Unuseable Pavement Material (5)	Unexpanded Fill	Expanded Fill (2)	Mass Ordinate +/- (3)	Waste	Borrow 208.0100
		Cut			Factor 1.30			
9+25 - 9+74.55	570TH STREET	24	0	18	23	1	1	0
10+25.44 - 10+75	570TH STREET	23	0	40	53	-29	0	29
28+25 - 32+00.42	TEMP. BYPASS	30	0	825	1,072	-1,043	0	1,043
28+25 - 32+00.42	TEMP. BYPASS REMOVAL	1,253	0	30	39	1,215	1215	0
TOTAL		1,331	0	913	1,187			1,072

- 1) Excavation Common is the Cut. Item number 205.0100.
- 2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor
- 3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.
- 4) All quantities shown in CY.
- 5) Salvaged/unuseable pavement material

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 7895-00-71) EACH
0030	PROJECT LIMITS	1
TOTAL 0030		1

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.7504 TEMPORARY DITCH CHECKS LF
28+25	-	32+00.42	TEMP BYPASS	765	1,530	175	--
9+25	-	10+75	MAINLINE	--	--	40	--
			UNDISTRIBUTED	190	380	55	50
TOTAL 0010				955	1,910	270	50

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT LIMITS	4	4
TOTAL 0010	4	4

RESTORATION ITEMS

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	630.0500 SEED WATER MGAL
28+25	-	32+00.42	TEMP BYPASS	560	760	0.6	42	25	29	21
9+25	-	10+75	MAINLINE	115	185	0.1	10	6	-	5
28+25	-	32+00.42	TEMP BYPASS REMOVAL UNDISTRIBUTED	-	145	0.1	7	-	-	3
				170	275	0.2	15	8	7	7
TOTAL 0010				845	1,365	1.0	74	39	36	36

SIGNS TYPE II

DELINEATORS TEMPORARY

LOCATION	633.1100 DELINEATORS TEMPORARY EACH
BYPASS PER SDD 15D31 UNDISTRIBUTED	20 5
TOTAL 0010	25

STATION	LOCATION	SIGN CODE	SIGN SIZE (INCHES)	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
9+51	LT	W5-52L	12x36	1	3	--	--	OBJECT MARKER SIGN
9+68	RT	W5-52R	12x36	1	3	--	--	OBJECT MARKER SIGN
9+82	LT	W5-52L	--	--	--	1	1	OBJECT MARKER SIGN
9+88	RT	R12-1	--	--	--	1	1	WEIGHT LIMIT 20 TONS SIGN
9+93	RT	W5-52R	--	--	--	1	1	OBJECT MARKER SIGN
10+07	LT	W5-52R	--	--	--	1	1	OBJECT MARKER SIGN
10+12	LT	R12-1	--	--	--	1	1	WEIGHT LIMIT 20 TONS SIGN
10+18	RT	W5-52L	--	--	--	1	1	OBJECT MARKER SIGN
10+32	LT	W5-52R	12x36	1	3	--	--	OBJECT MARKER SIGN
10+45	RT	W5-52L	12x36	1	3	--	--	OBJECT MARKER SIGN
TOTAL 0010				4	12	6	6	

FIELD OFFICE TYPE B

LOCATION	642.5001 FIELD OFFICE TYPE B EACH
PROJECT LIMITS	1
TOTAL 0010	1

TRAFFIC CONTROL

LOCATION	DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0900 TRAFFIC CONTROL SIGNS EACH	643.5000 TRAFFIC CONTROL EACH					
PER SDD 15D31	90	24	2,160	20	1,800	8	720	10	900	32	2,880	--
PER SDD 15D45	90	--	--	--	--	--	--	--	--	6	540	--
UNDISTRIBUTED	--	--	216	--	180	--	72	--	90	--	342	1
TOTAL 0010			2,376		1,980		792		990		3,762	1

GEOTEXTILE TYPE SAS

STATION	TO	STATION	LOCATION	645.0140 GEOTEXTILE TYPE SAS SY
28+25	-	32+00.42	TEMP BYPASS UNDISTRIBUTED	1,320 330
TOTAL 0010				1,650

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
28+25	-	32+00.42	TEMP BYPASS	341	341	341
9+25	-	9+74.55	MAINLINE	50	50	50
10+25.44	-	10+75	MAINLINE	50	50	50
TOTAL 0010				441	441	441

'CONSTRUCTION STAKING STRUCTURE LAYOUT

CATEGORY	STATION	LOCATION	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-47-0232) EACH
0020	10+00	MAINLINE	1
TOTAL 0020			1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7895-00-71) EACH
7895-00-71	1
TOTAL 0010	1

MAINTAINING BIRD DETERRENT SYSTEM

STATION	LOCATION	999.2005.S.01 MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. 10+00) EACH
10+00	B-47-0190	1
TOTAL 0010		1

ALL ITEMS ON THIS SHEET
ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

R/W PROJECT NUMBER: 7895-00-01

SHEET NUMBER: 1

THE ACQUISITION EXHIBIT
T HARTLAND, 570TH STREET
DRY RUN BRIDGE B-47-0232
PIERCE COUNTY
PART OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 AND PART OF THE NORTHEAST 1/4 OF
THE SOUTHEAST 1/4, SECTION 10, T25N, R17W, TOWN OF HARTLAND, PIERCE COUNTY,
WISCONSIN.

RECEIVED

AUG 21 2025

TIME 4:40 PM
PIERCE COUNTY CLERK

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY.
REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.
THIS TLE IS FOR THE RIGHT TO CONSTRUCT, CUT, AND/OR FILL SLOPES, INCLUDING FOR
SUCH PURPOSE THE RIGHT TO OPERATE THE NECESSARY EQUIPMENT THEREON AND
THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE,
INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY
VEGETATION THAT THE HIGHWAY AUTHORITIES DEEM NECESSARY OR DESIRABLE.

50
AT&T
NO EASEMENTS OF RECORD - PARCEL 1

4

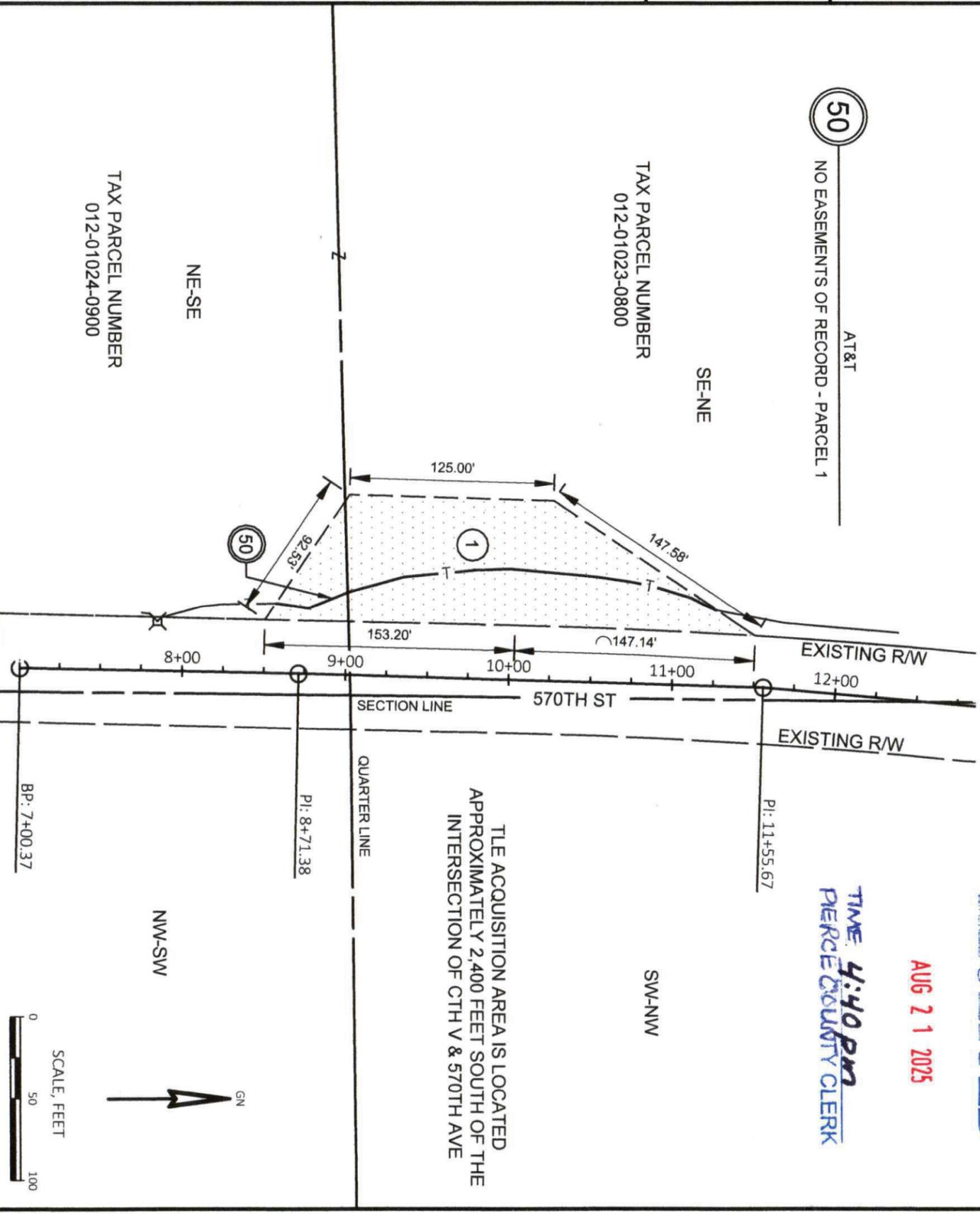
TAX PARCEL NUMBER
012-01023-0800

SE-NE

NE-SE

TAX PARCEL NUMBER
012-01024-0900

NW-SW



SCALE, FEET



**SCHEDULE OF LANDS
& INTERESTS REQUIRED**

OWNERS NAMES ARE SHOWN FOR REFERENCE
PURPOSES ONLY AND ARE SUBJECT TO CHANGE
PRIOR TO THE TRANSFER OF LAND INTERESTS TO
THE TOWN.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.
1	NATHAN J. SEARS	TLE	16,296

UTILITY INTERESTS REQUIRED

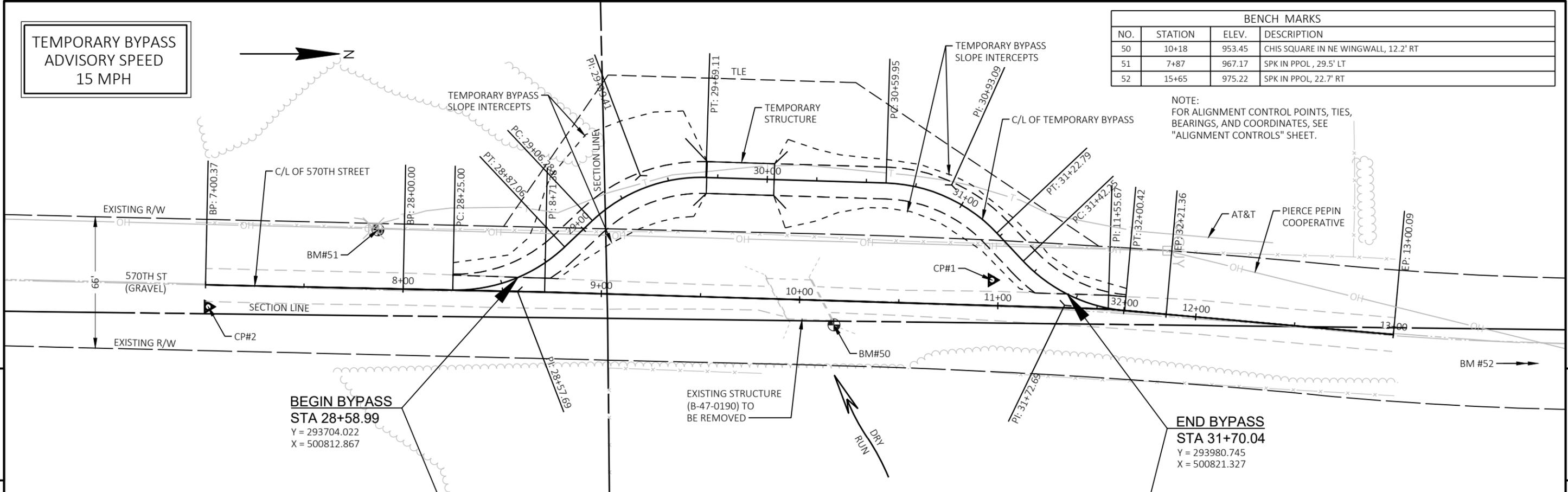
UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
50	AT&T	RELEASE OF RIGHTS

THIS MAP IS APPROVED FOR THE TOWN OF HARTLAND
SIGNATURE: *[Signature]* DATE: 8/14/25
PRINT NAME: Kurt Nelson - Town Chair

TEMPORARY BYPASS
ADVISORY SPEED
15 MPH

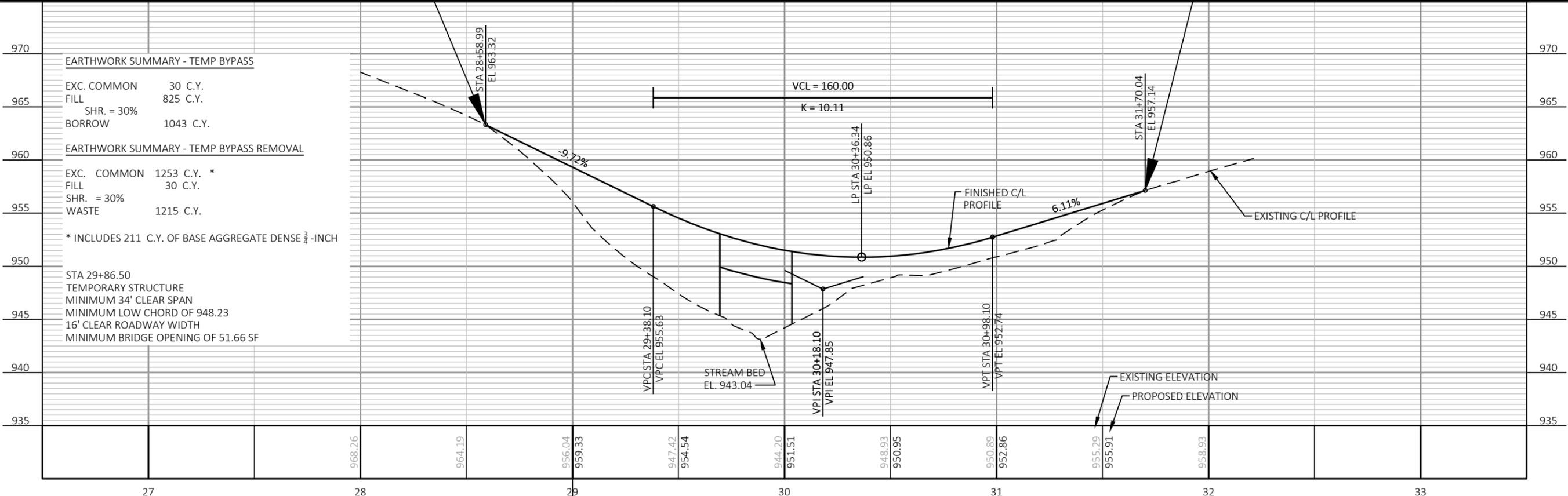
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	10+18	953.45	CHIS SQUARE IN NE WINGWALL, 12.2' RT
51	7+87	967.17	SPK IN PPOL, 29.5' LT
52	15+65	975.22	SPK IN PPOL, 22.7' RT

NOTE:
FOR ALIGNMENT CONTROL POINTS, TIES,
BEARINGS, AND COORDINATES, SEE
"ALIGNMENT CONTROLS" SHEET.



BEGIN BYPASS
STA 28+58.99
Y = 293704.022
X = 500812.867

END BYPASS
STA 31+70.04
Y = 293980.745
X = 500821.327



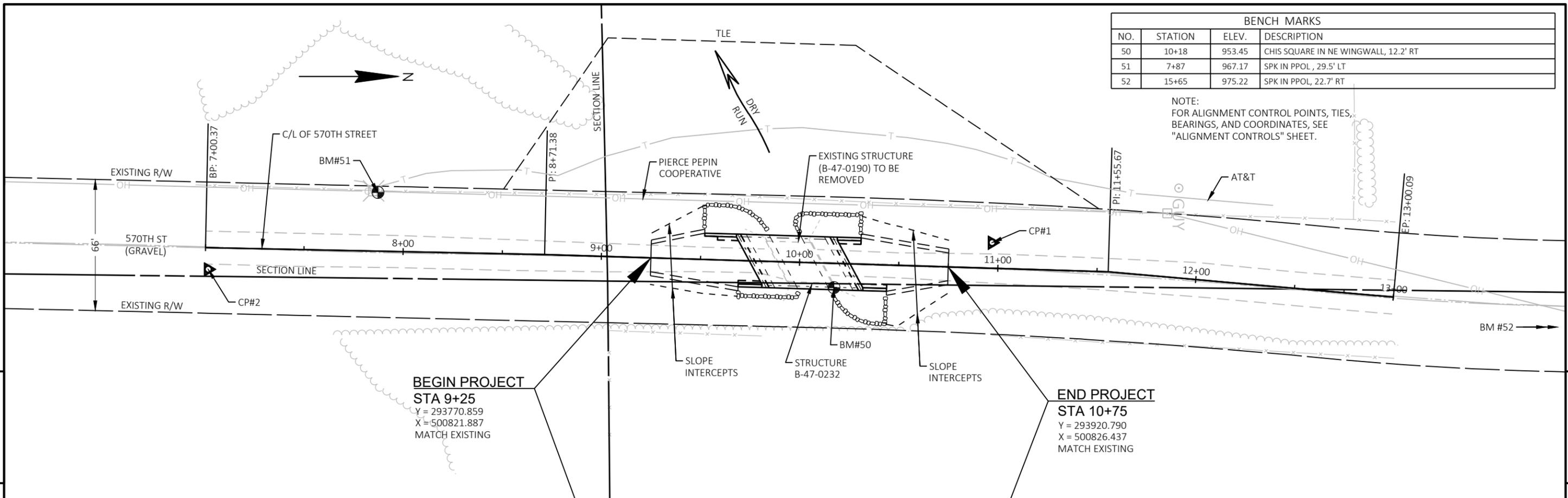
EARTHWORK SUMMARY - TEMP BYPASS	
EXC. COMMON	30 C.Y.
FILL	825 C.Y.
SHR. = 30%	
BORROW	1043 C.Y.
EARTHWORK SUMMARY - TEMP BYPASS REMOVAL	
EXC. COMMON	1253 C.Y. *
FILL	30 C.Y.
SHR. = 30%	
WASTE	1215 C.Y.

* INCLUDES 211 C.Y. OF BASE AGGREGATE DENSE 3/4-INCH

STA 29+86.50
TEMPORARY STRUCTURE
MINIMUM 34' CLEAR SPAN
MINIMUM LOW CHORD OF 948.23
16' CLEAR ROADWAY WIDTH
MINIMUM BRIDGE OPENING OF 51.66 SF

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	10+18	953.45	CHIS SQUARE IN NE WINGWALL, 12.2' RT
51	7+87	967.17	SPK IN PPOL, 29.5' LT
52	15+65	975.22	SPK IN PPOL, 22.7' RT

NOTE:
FOR ALIGNMENT CONTROL POINTS, TIES,
BEARINGS, AND COORDINATES, SEE
"ALIGNMENT CONTROLS" SHEET.



BEGIN PROJECT
STA 9+25
Y = 293770.859
X = 500821.887
MATCH EXISTING

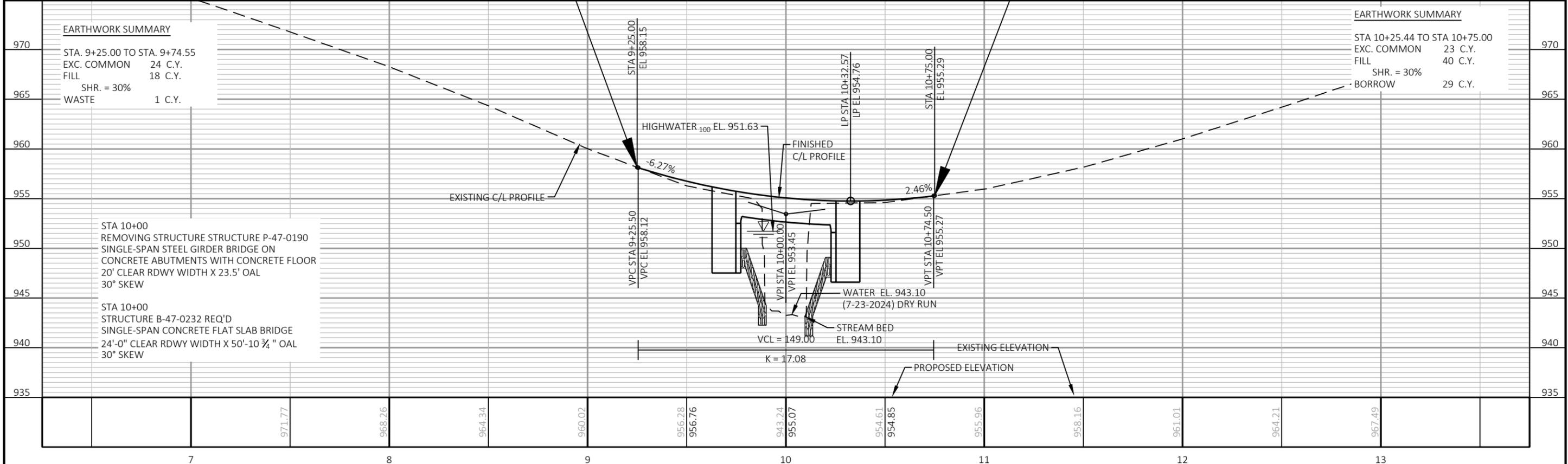
END PROJECT
STA 10+75
Y = 293920.790
X = 500826.437
MATCH EXISTING

EARTHWORK SUMMARY

STA. 9+25.00 TO STA. 9+74.55	
EXC. COMMON	24 C.Y.
FILL	18 C.Y.
SHR. = 30%	
WASTE	1 C.Y.

EARTHWORK SUMMARY

STA 10+25.44 TO STA 10+75.00	
EXC. COMMON	23 C.Y.
FILL	40 C.Y.
SHR. = 30%	
BORROW	29 C.Y.



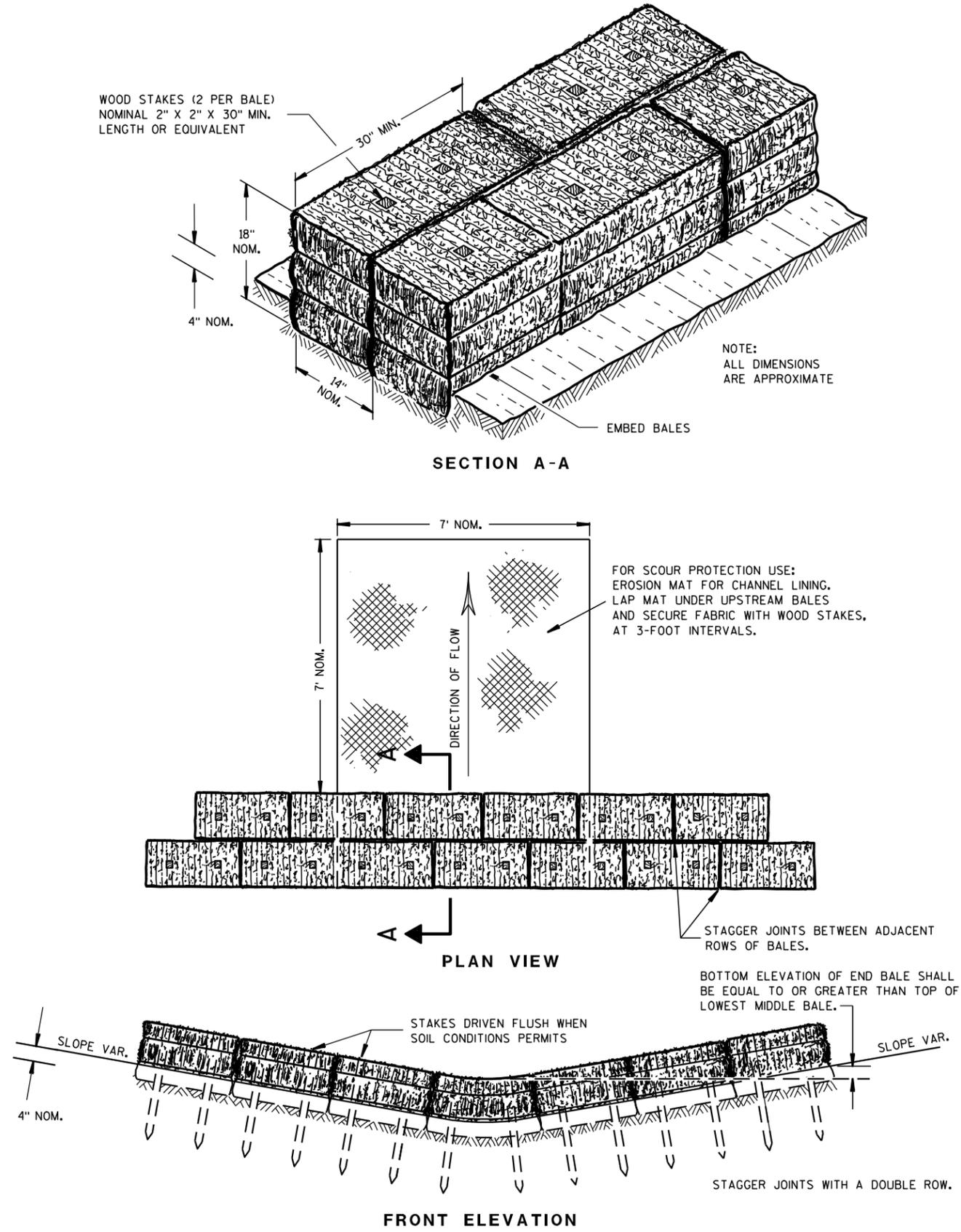
STA 10+00
REMOVING STRUCTURE P-47-0190
SINGLE-SPAN STEEL GIRDER BRIDGE ON
CONCRETE ABUTMENTS WITH CONCRETE FLOOR
20' CLEAR RDWY WIDTH X 23.5' OAL
30° SKEW

STA 10+00
STRUCTURE B-47-0232 REQ'D
SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE
24'-0" CLEAR RDWY WIDTH X 50'-10 3/4" OAL
30° SKEW

PROJECT NO: 7895-00-17	HWY: 570TH STREET	COUNTY: PIERCE	PLAN AND PROFILE: 570TH STREET	SHEET	E
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Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D31-05	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL

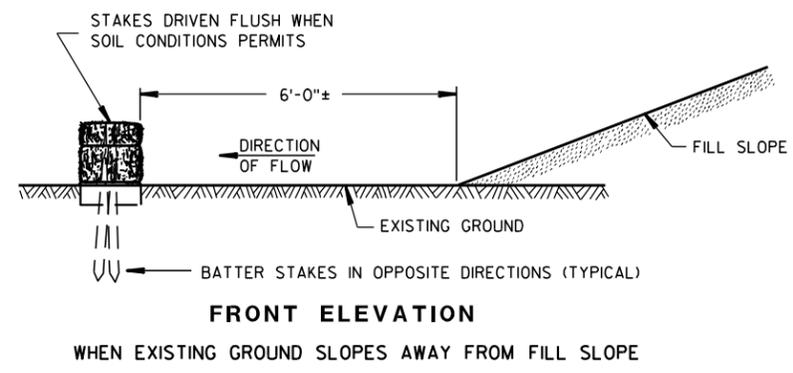
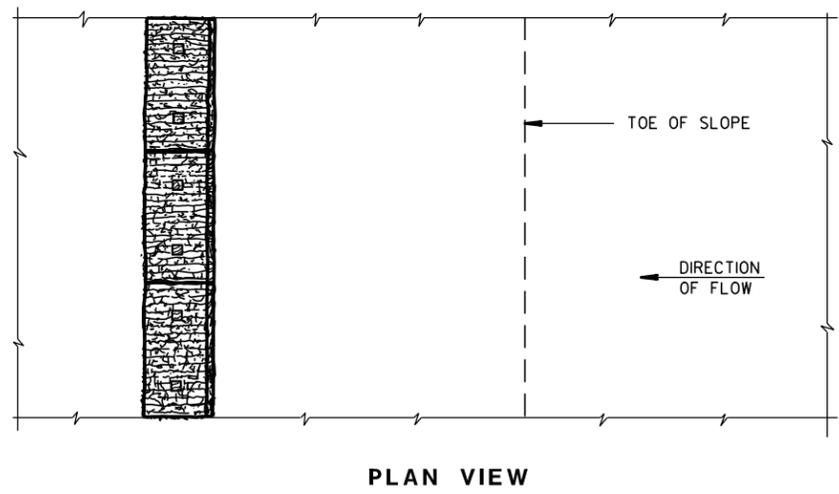
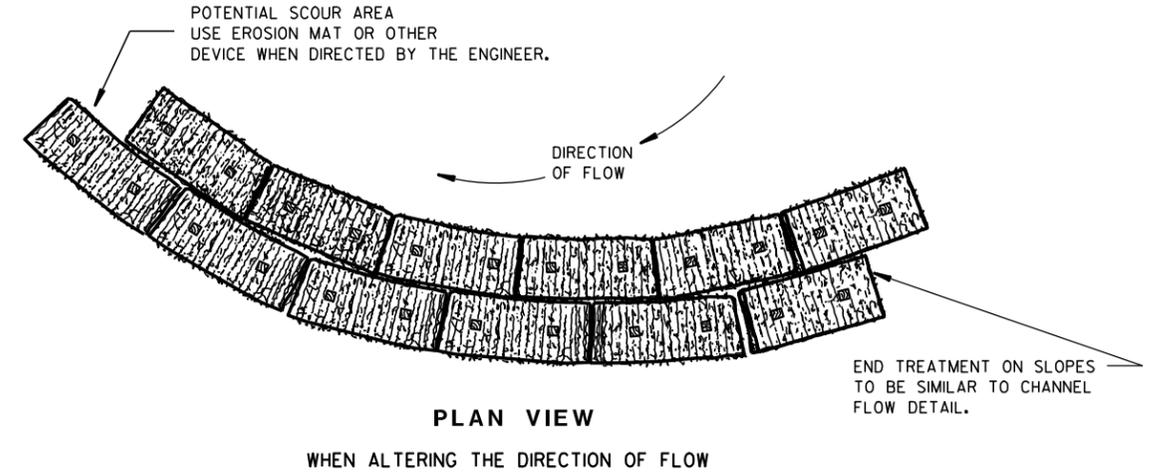


TEMPORARY DITCH CHECK USING EROSION BALES ①

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.

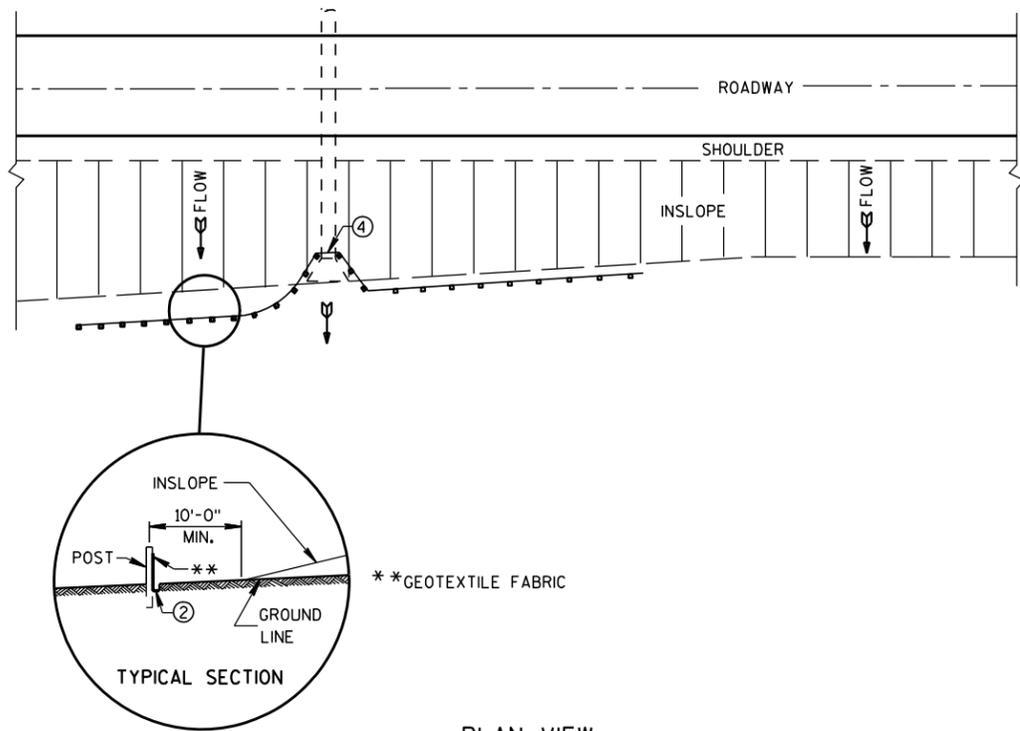


EROSION BALES FOR SHEET FLOW

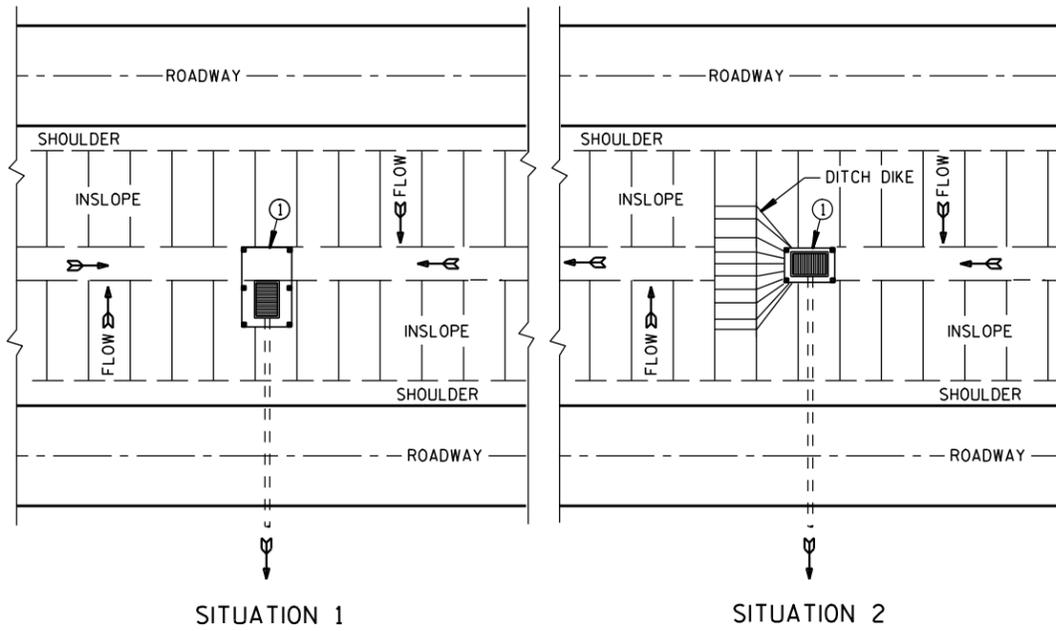
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

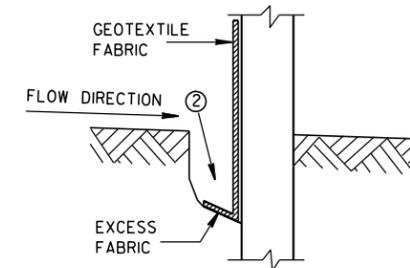


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

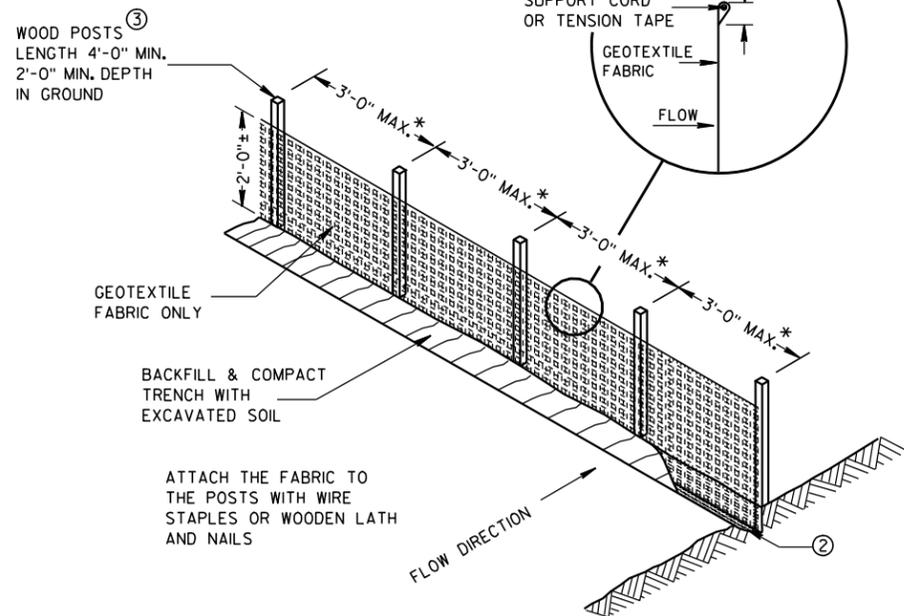
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



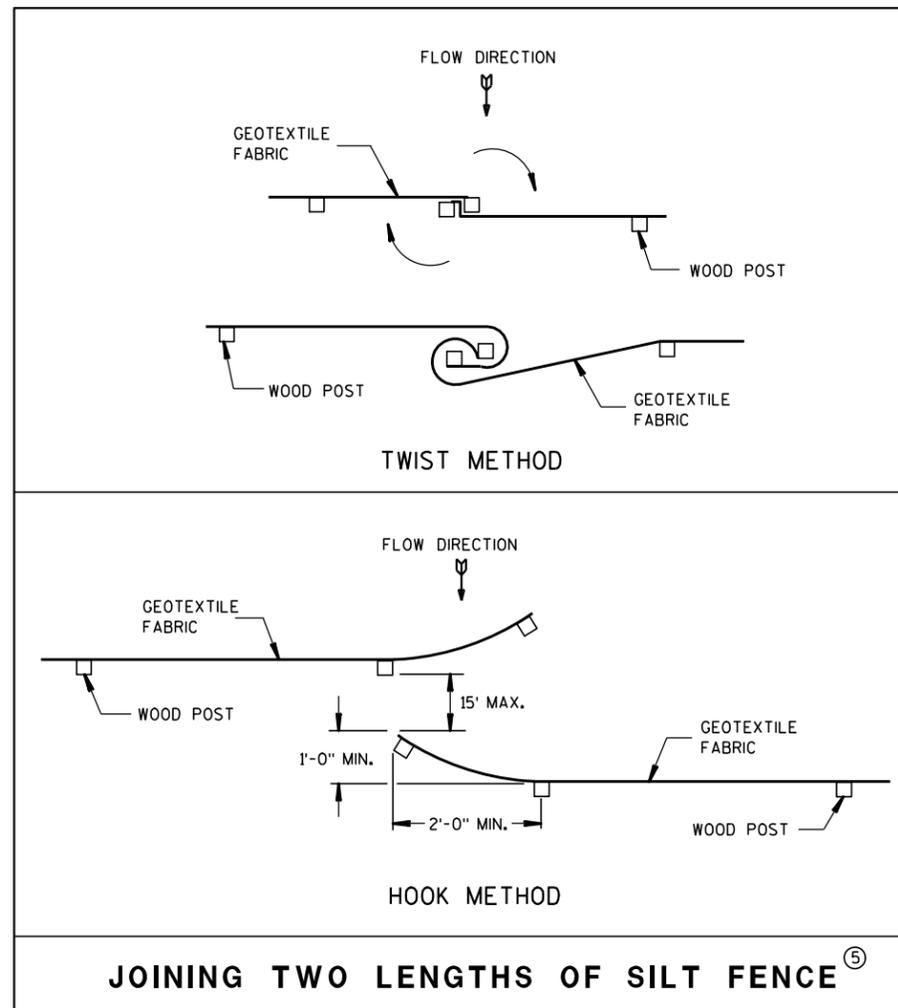
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

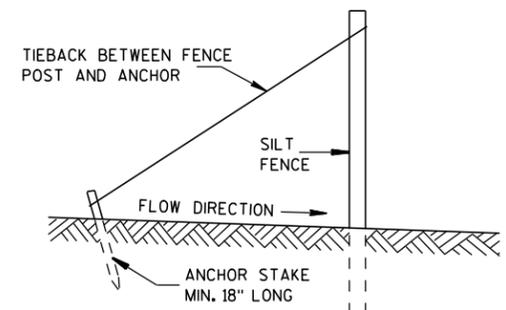


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

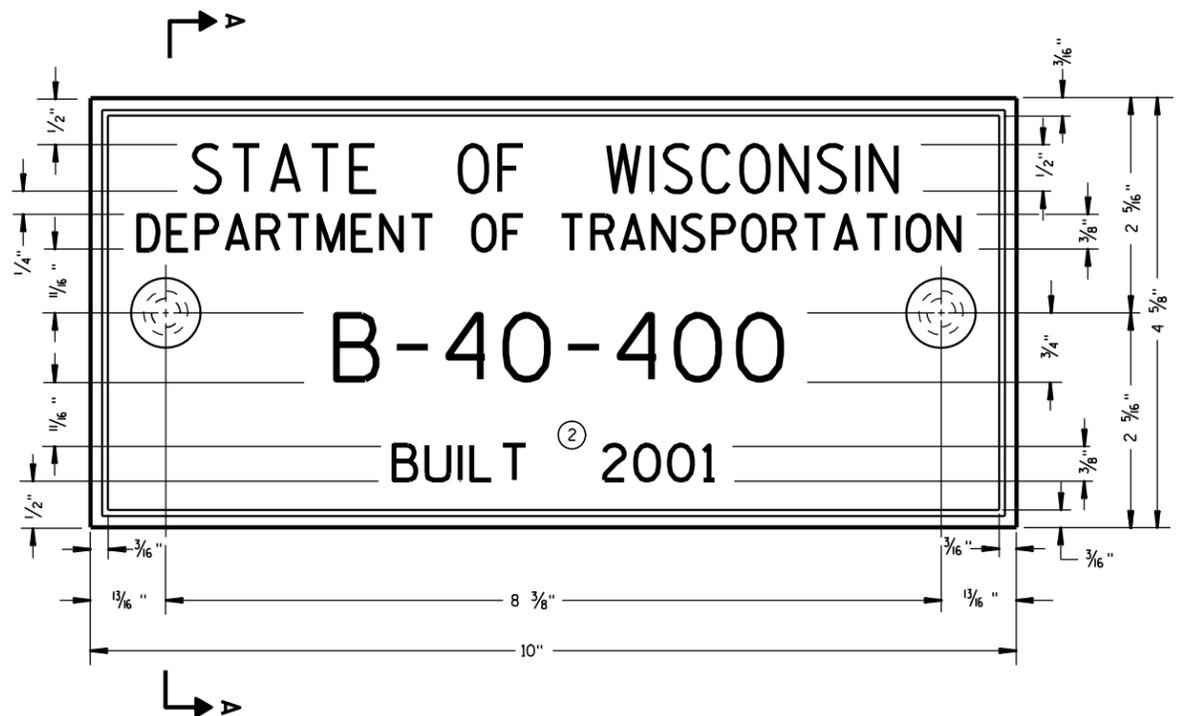


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



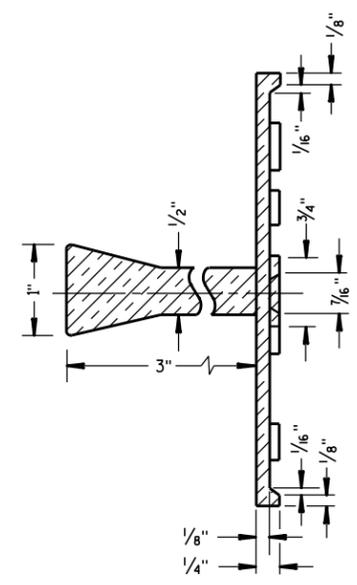
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

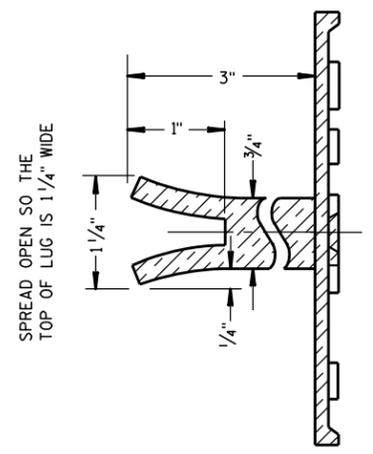
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



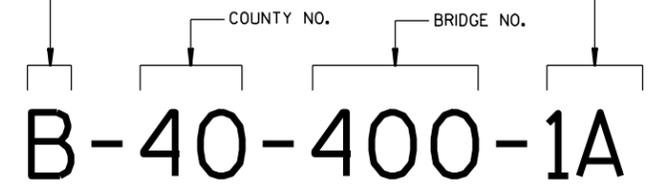
ALTERNATE LUG

6

6

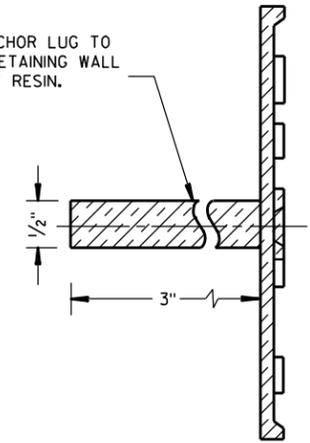
FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

- B = BRIDGE
- C = CULVERT
- R = RETAINING WALL
- UNIT NO. FOR MULTIPLE UNIT BRIDGE



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.

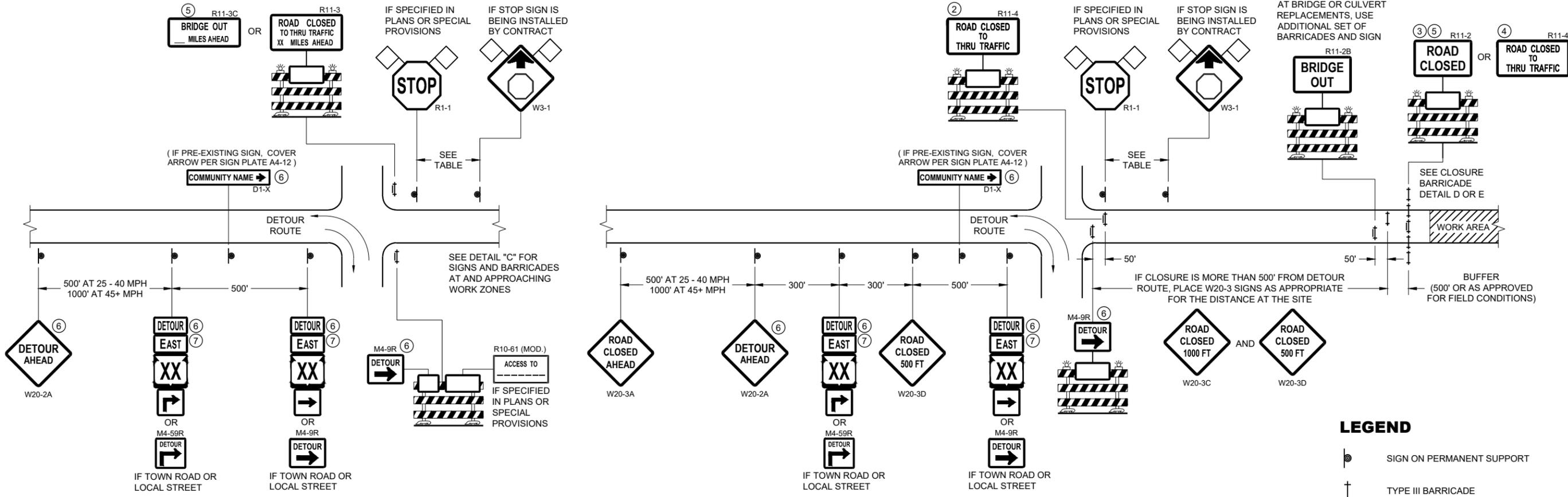


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

S.D.D. 12 A 3-10

S.D.D. 12 A 3-10

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

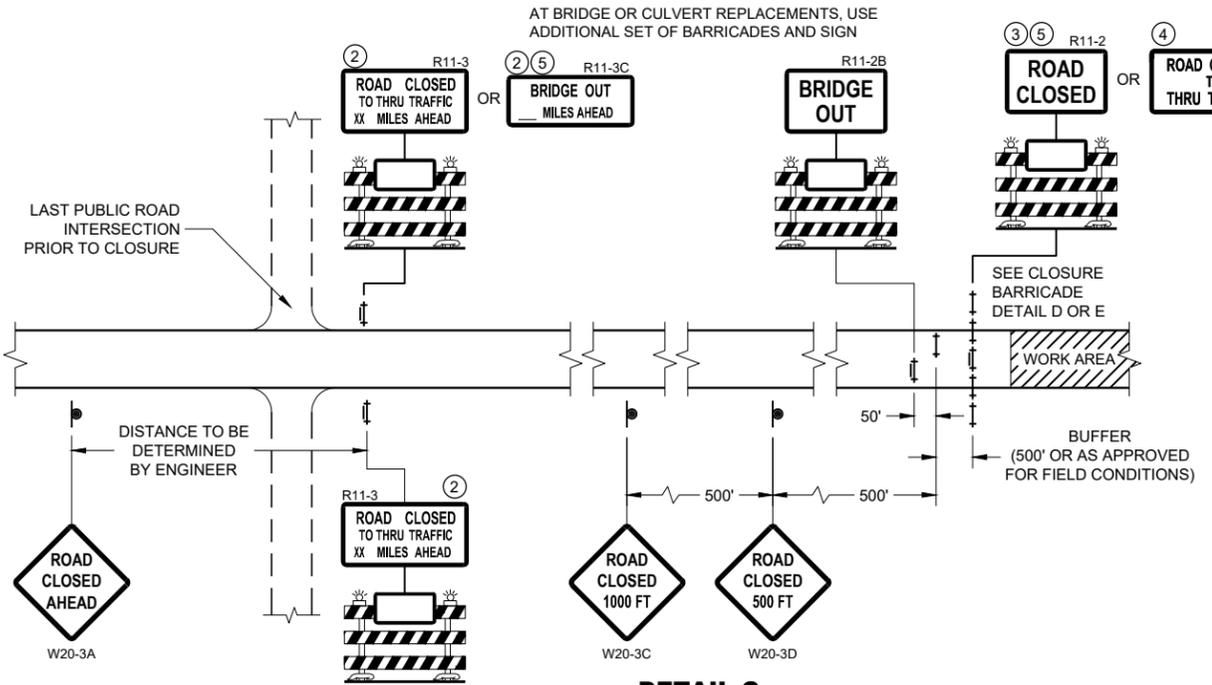
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



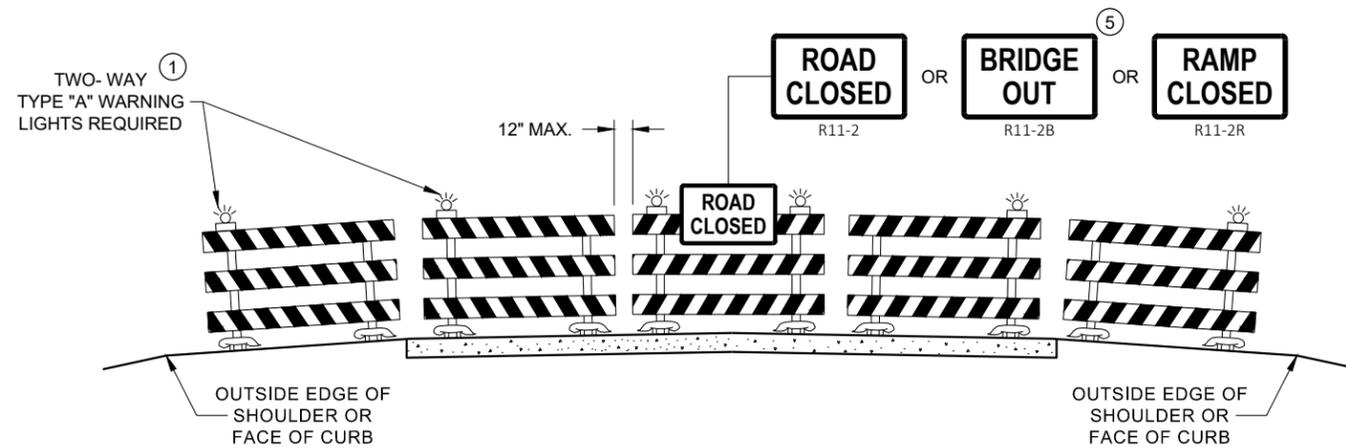
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

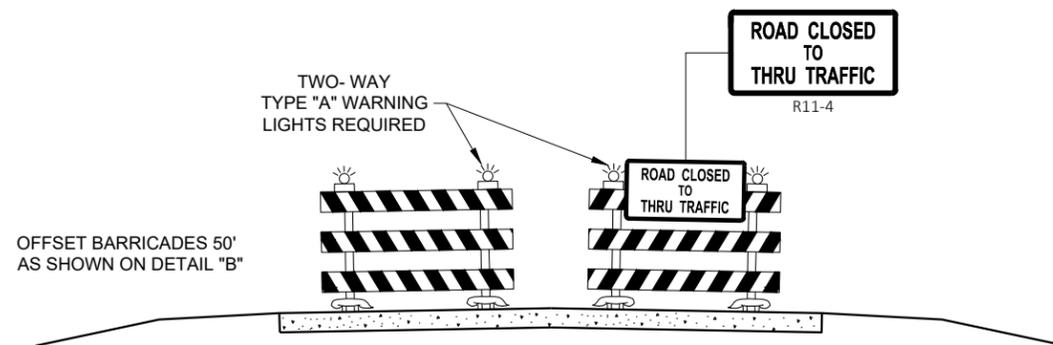
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER
FHWA



**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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL 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:

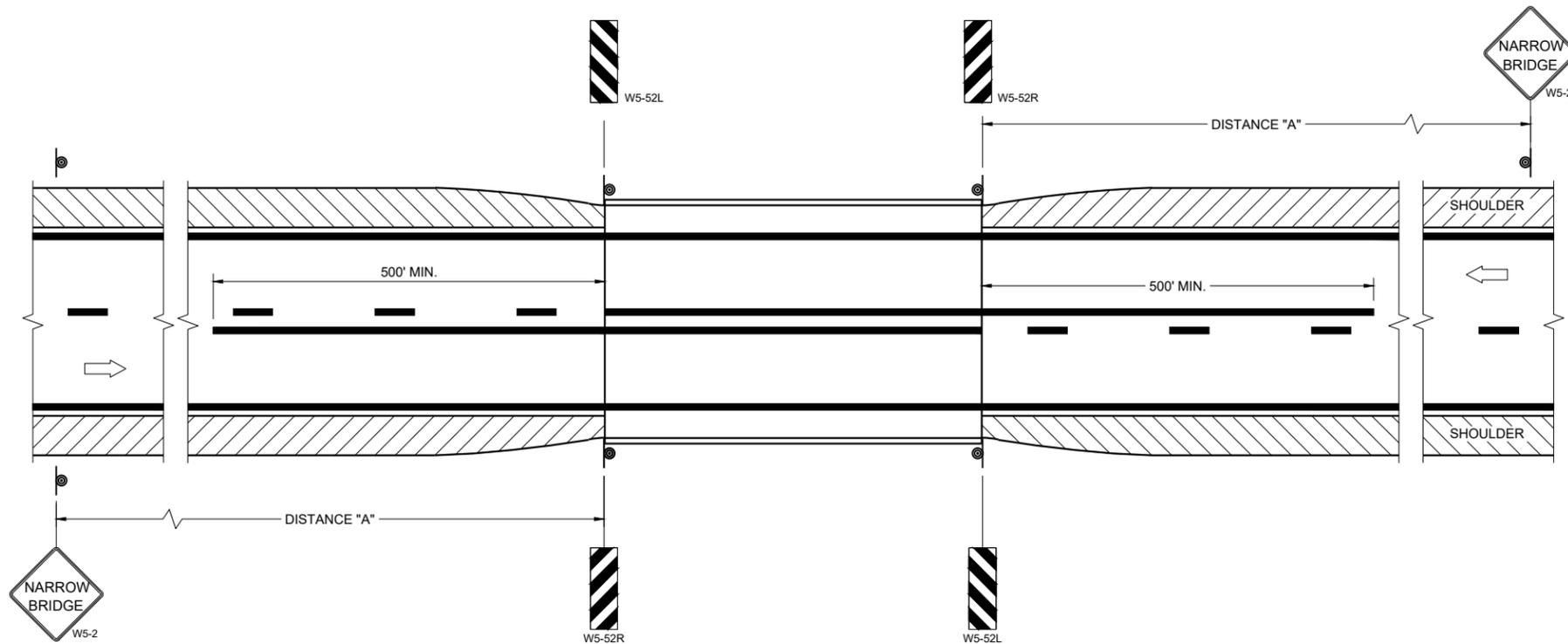
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 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 AN 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 ROAD 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.

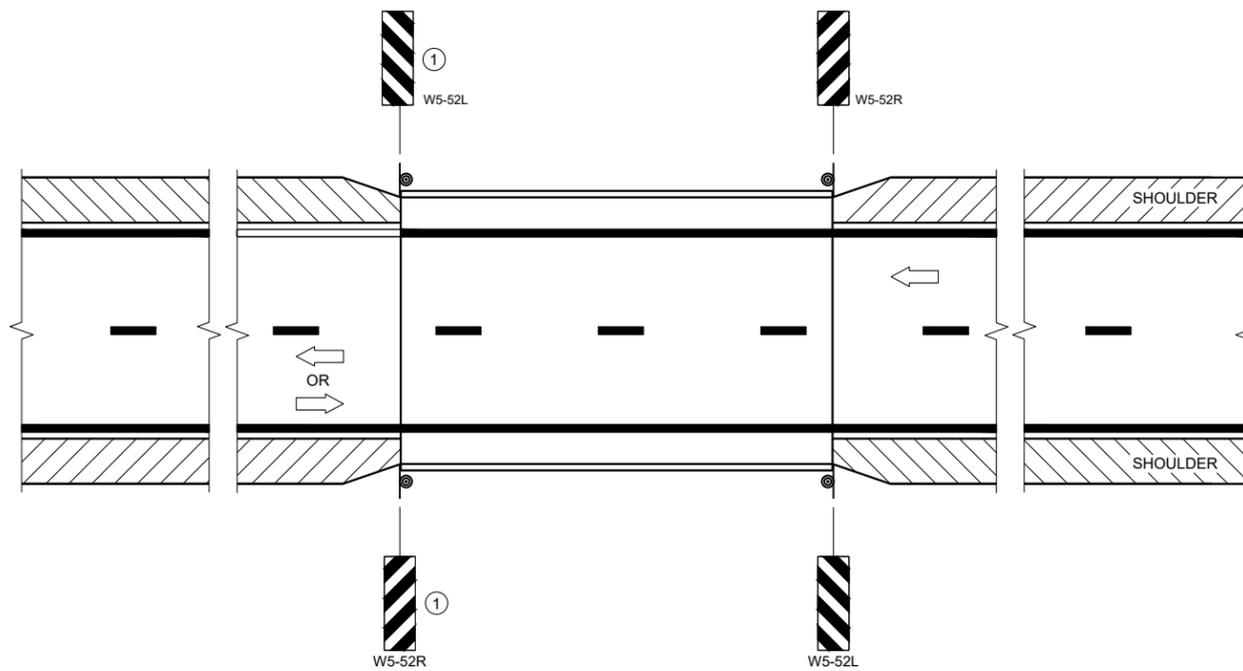
**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER



SITUATION 1
 WARRANTING CRITERIA:
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



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 THE DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

6

6

SDD 15C06-12

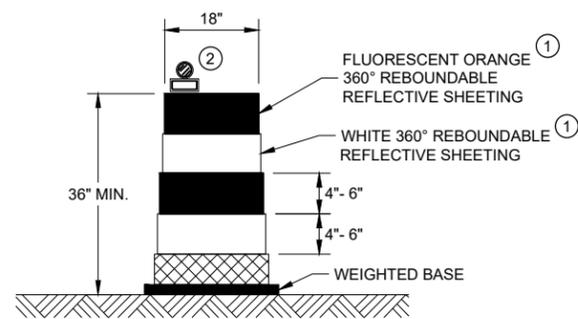
SDD 15C06-12

**SIGNING AND MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

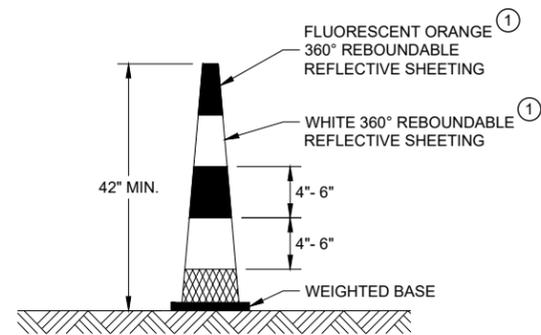
APPROVED _____ /S/ Jeannie Silver
 DATE _____ Statewide Pavement Marking Engineer

FHWA



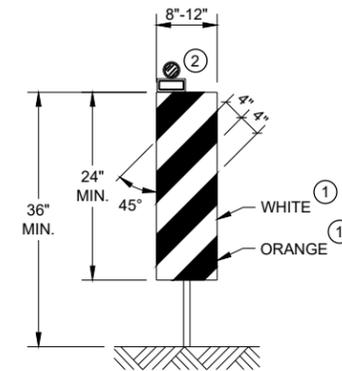
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

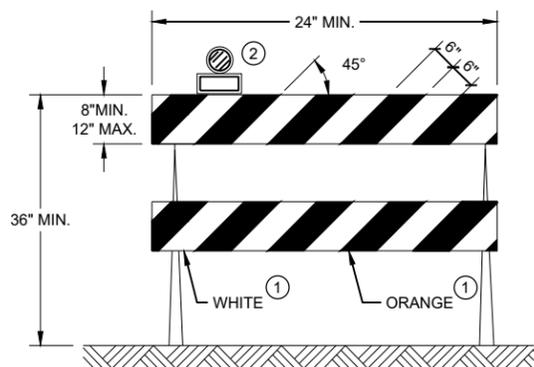


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.

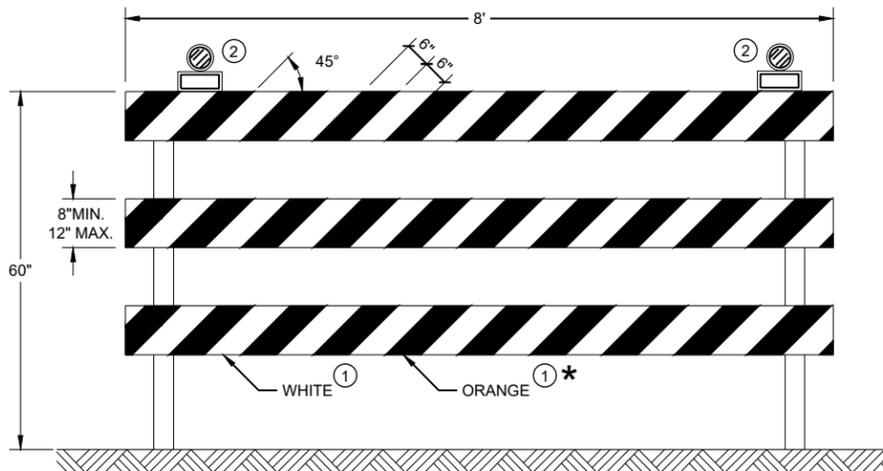
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2022 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER
 FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

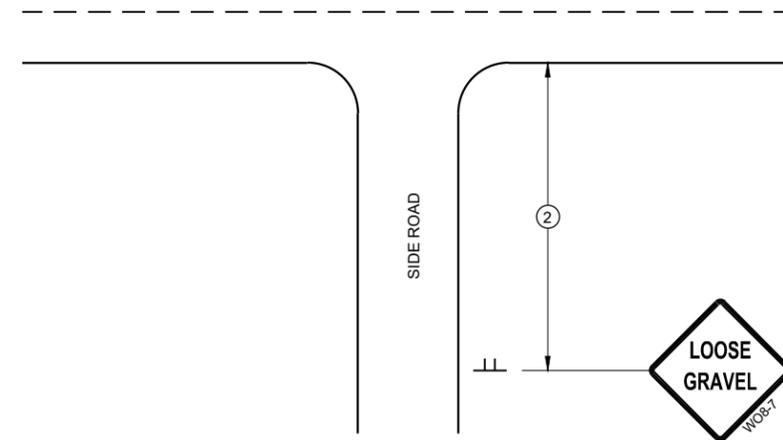
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

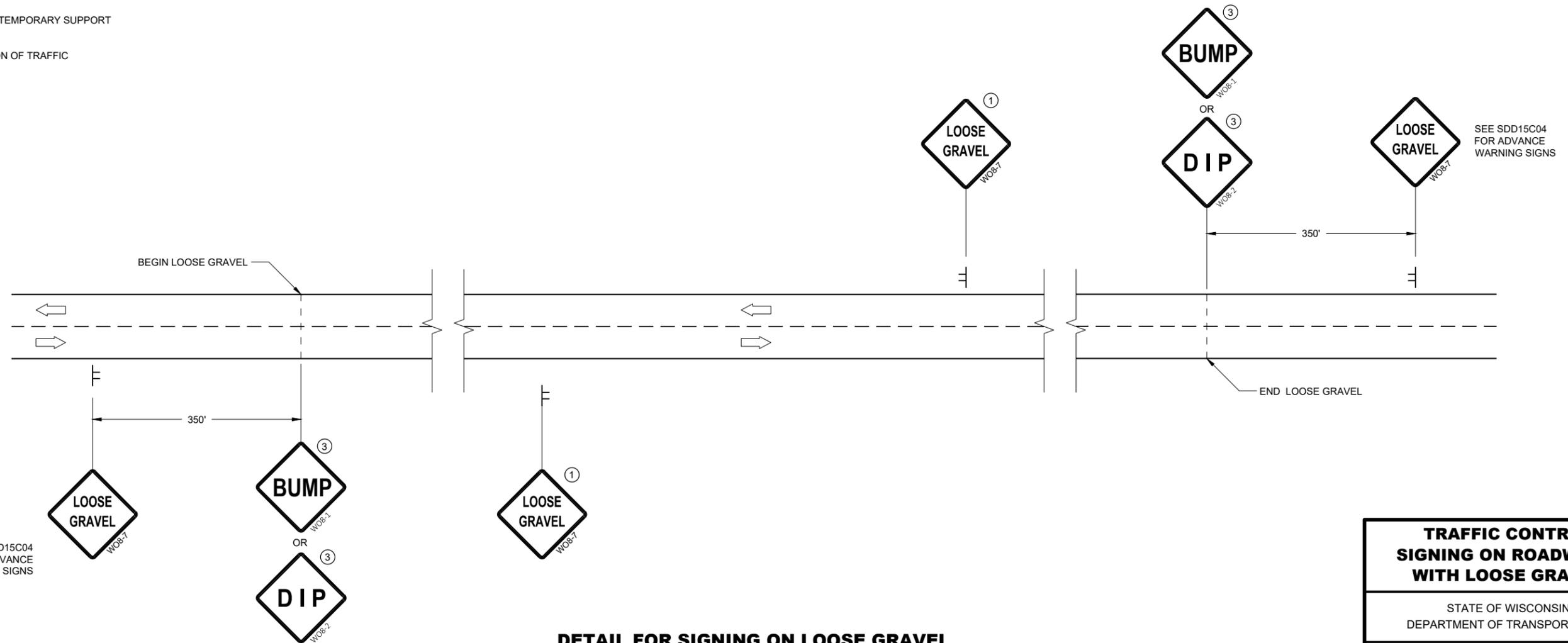
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

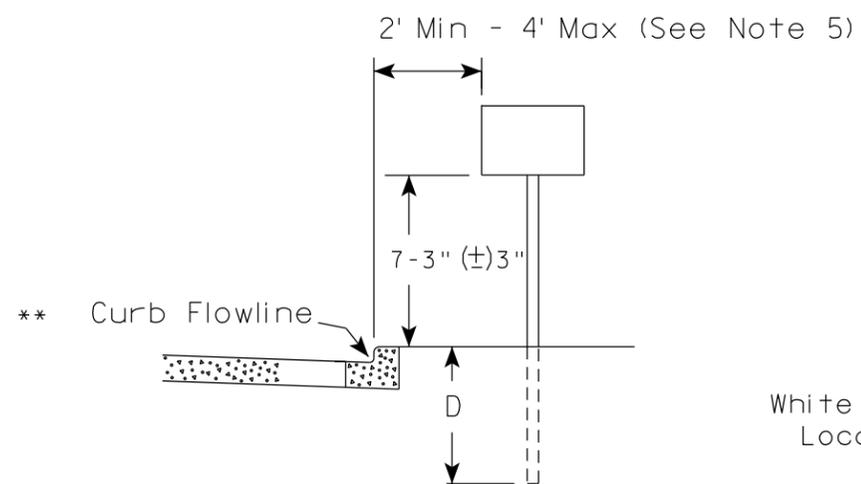
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

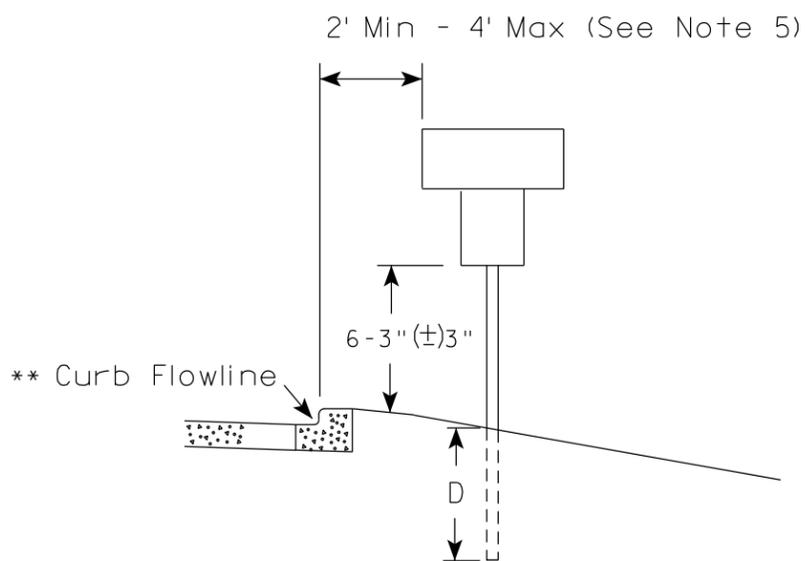
URBAN AREA

RURAL AREA (See Note 2)



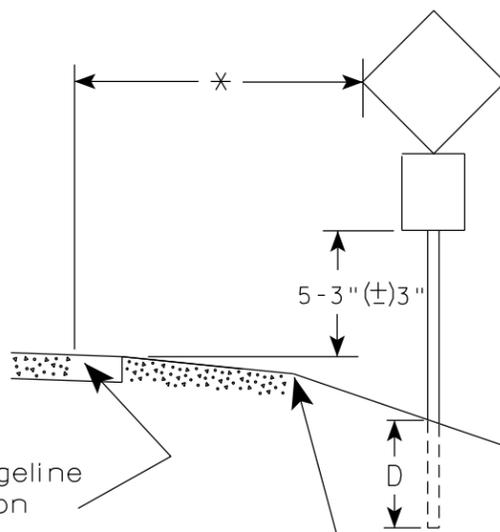
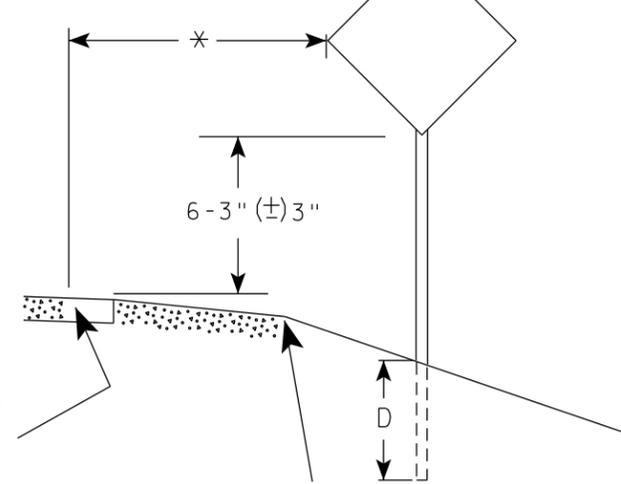
White Edgeline Location

Outside Edge of Gravel



White Edgeline Location

Outside Edge of Gravel



POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 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" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the 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.

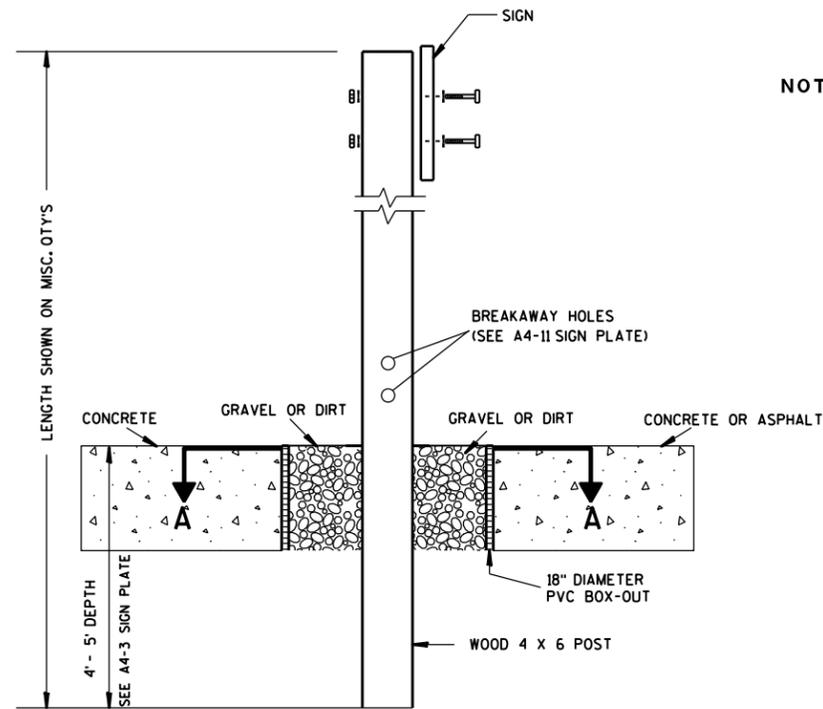
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Raub*
for State Traffic Engineer

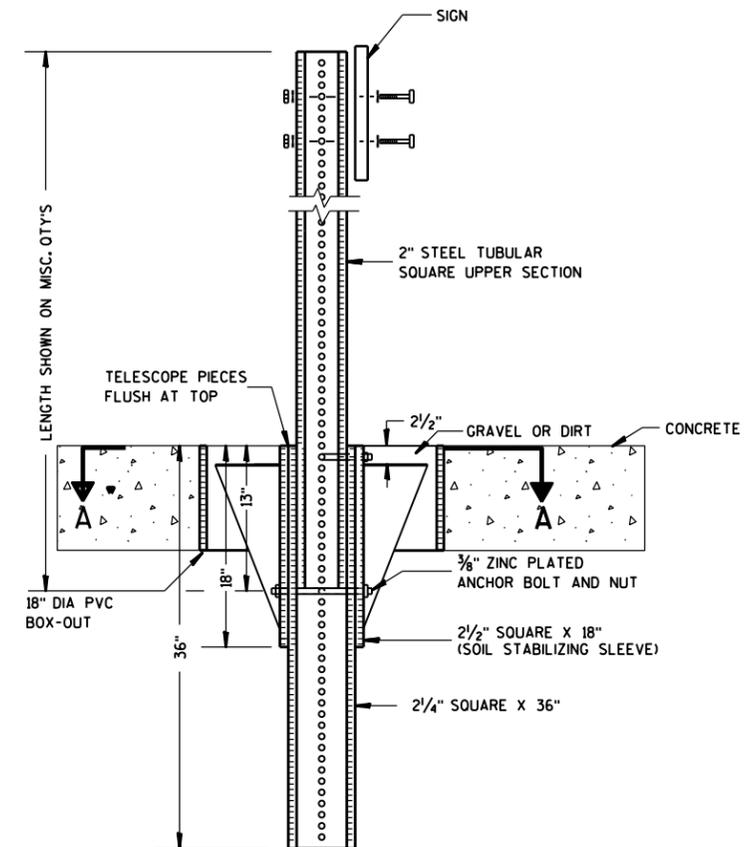
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

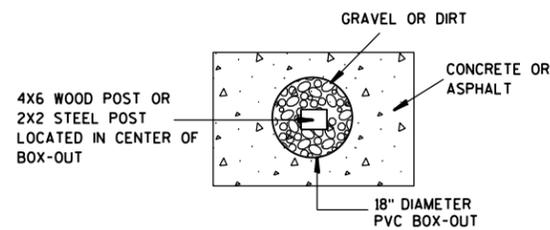
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

GENERAL NOTES

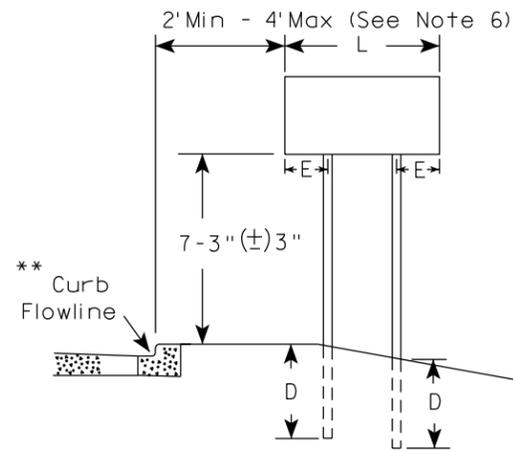
- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- J-Assemblies are considered to be one sign for mounting height.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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.

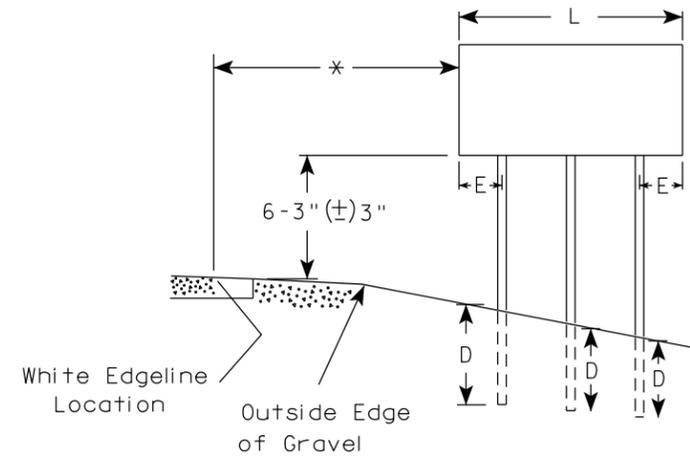
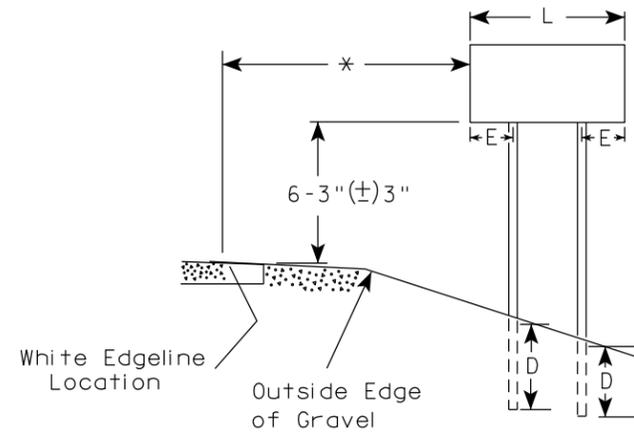
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs 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.

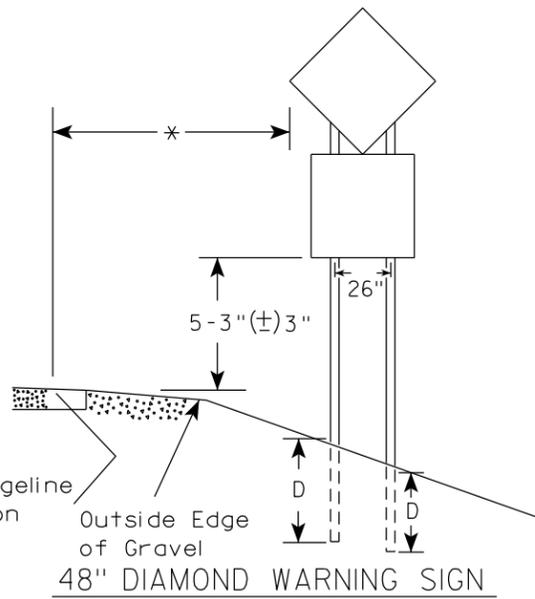
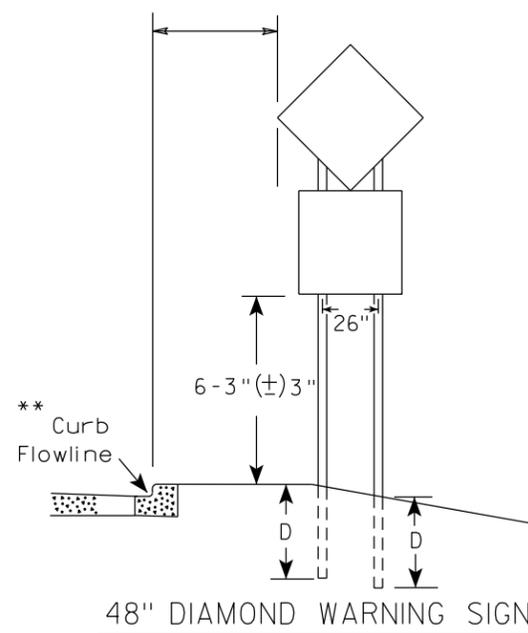
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 12/6/23 PLATE NO. A4-4.16

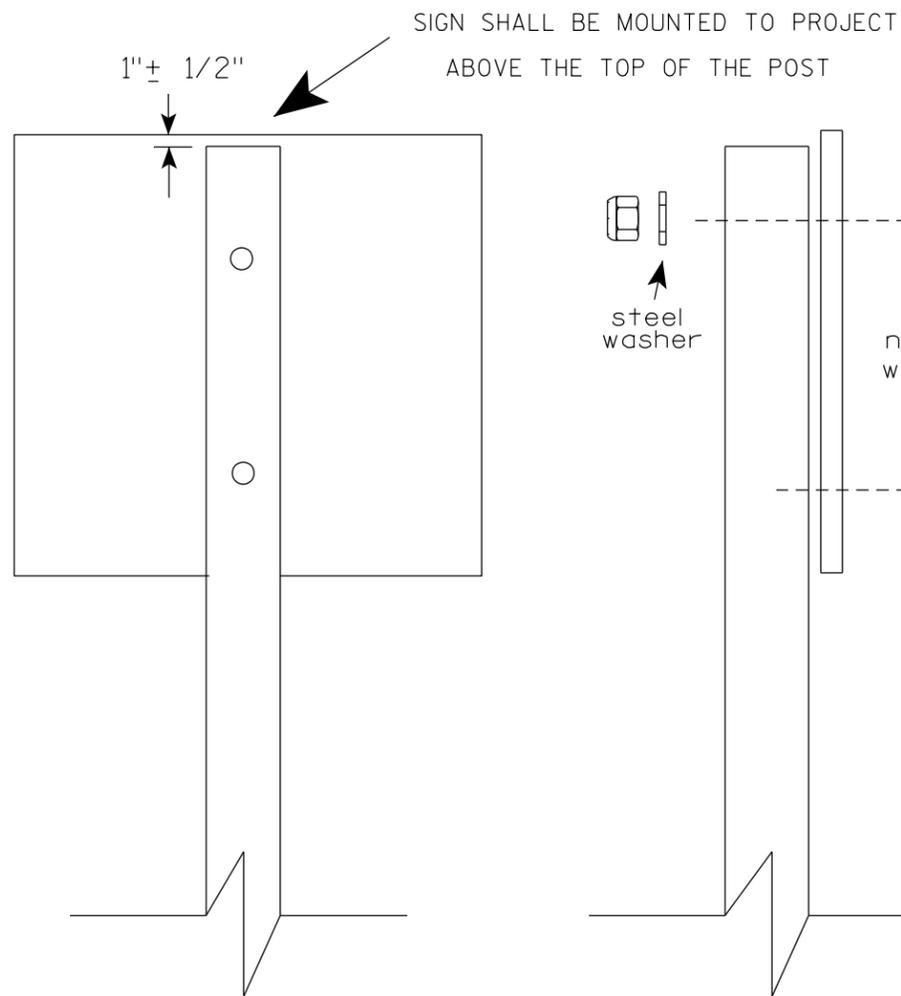
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

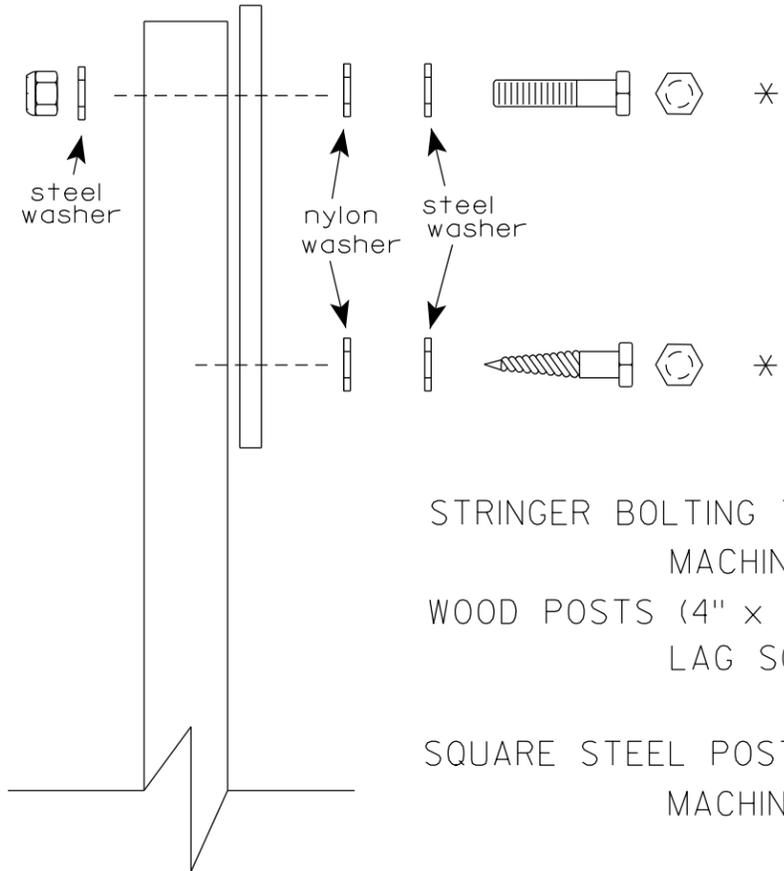
E



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 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) -

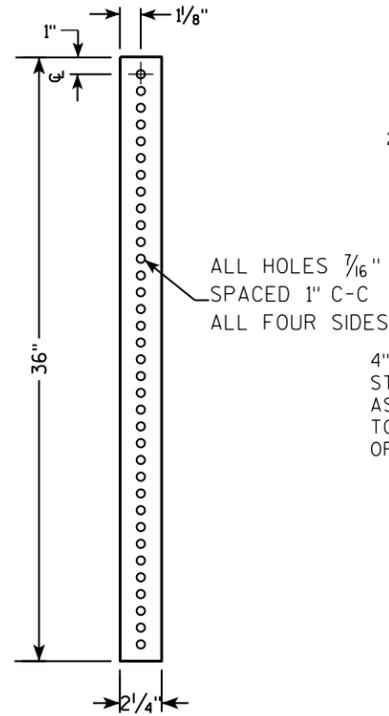
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* 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.

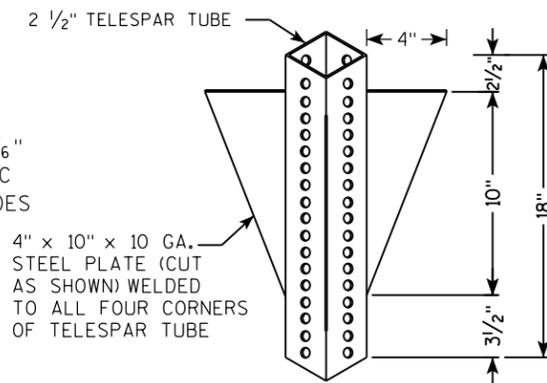
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

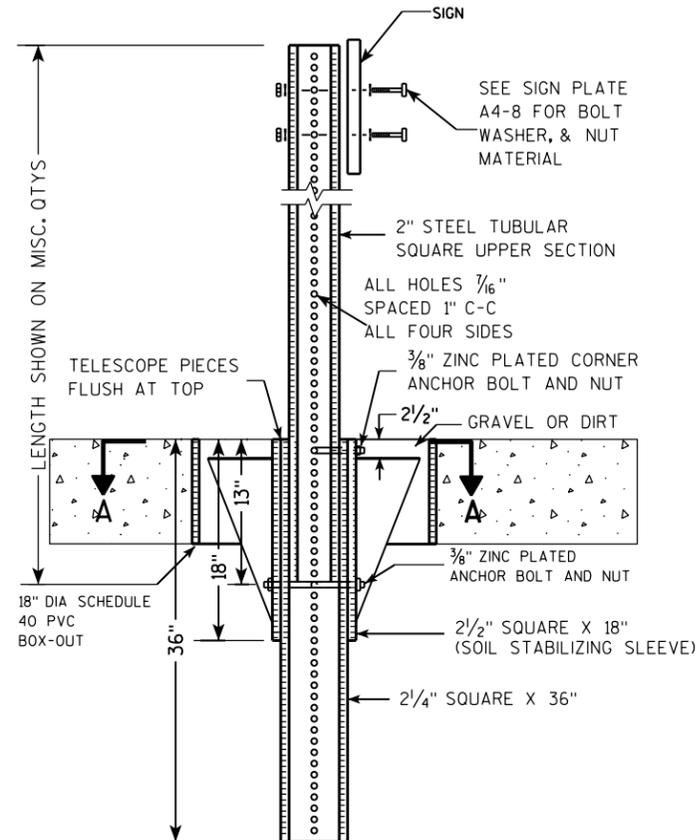
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



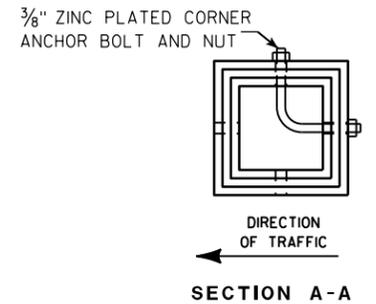
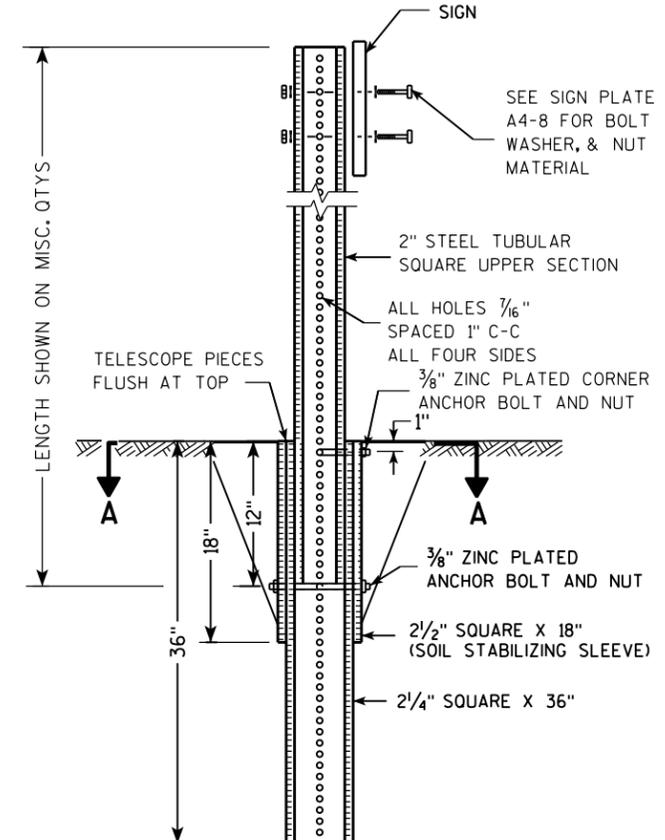
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**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)**



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 NO. A4-9.9

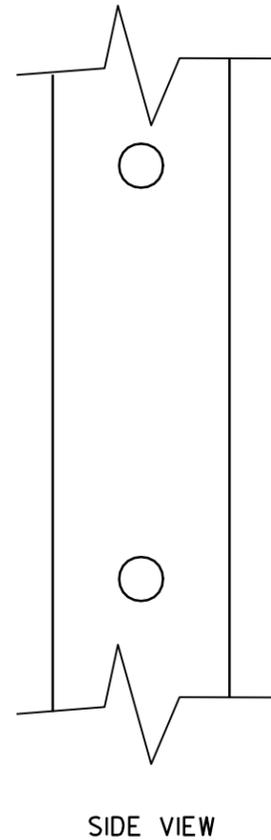
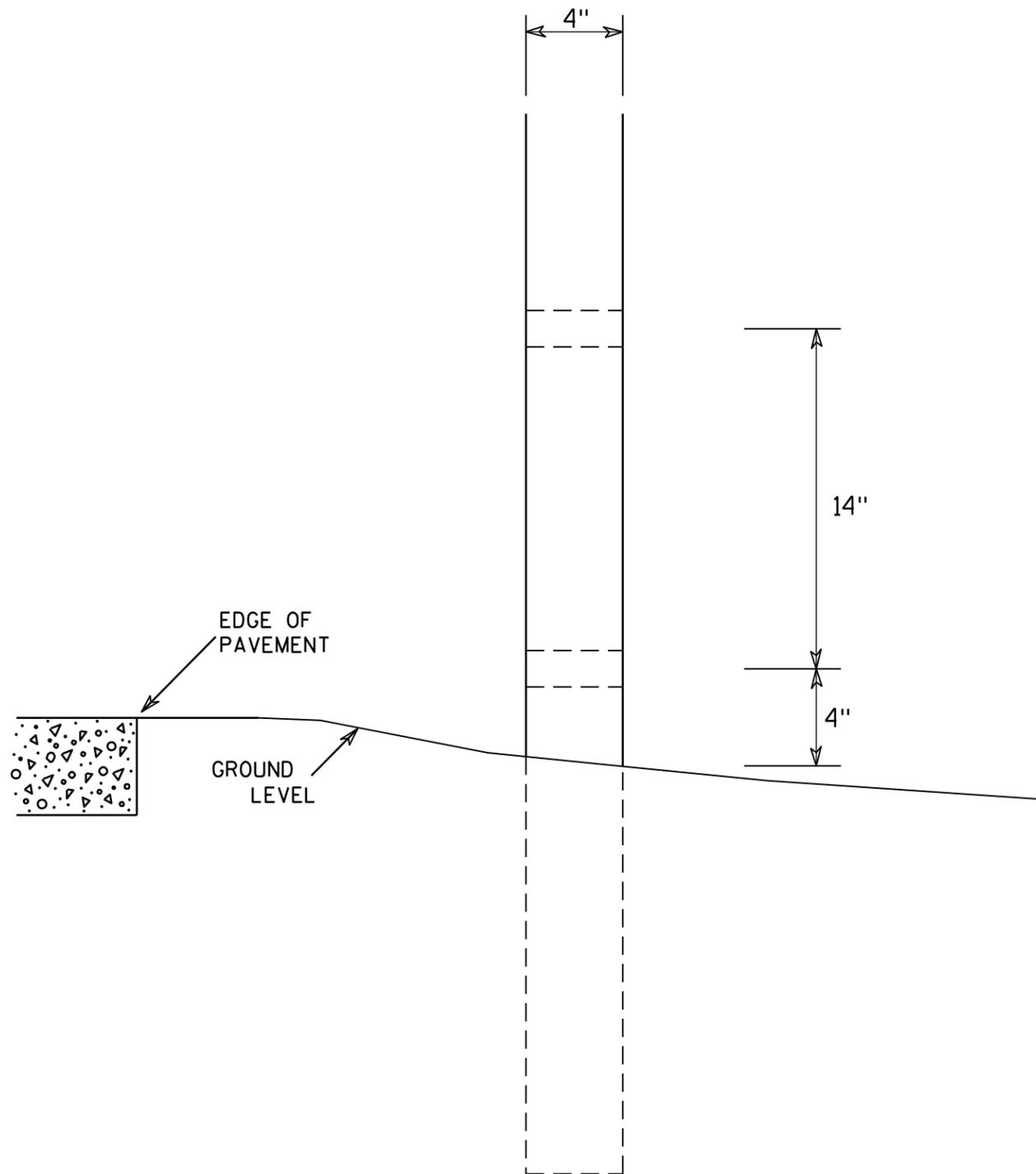
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

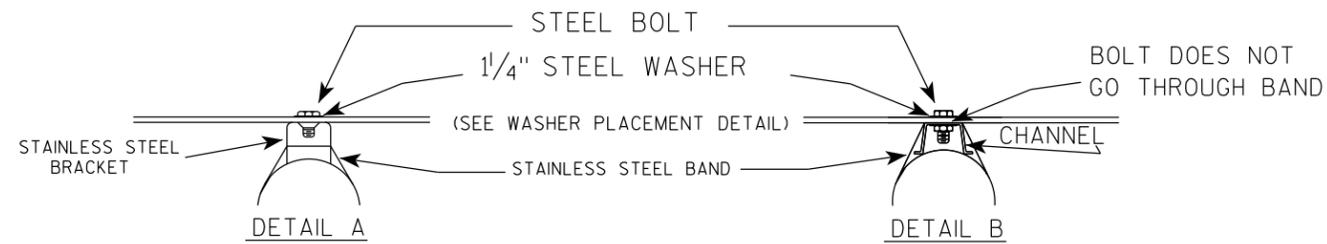
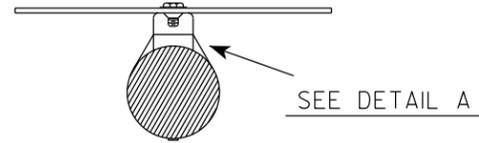
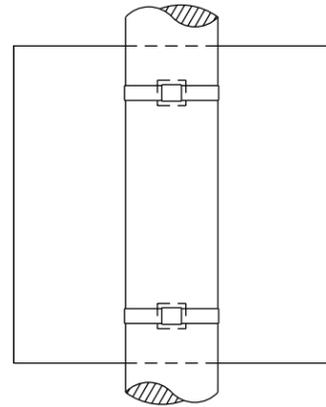
7

7

4 X 6 WOOD POST MODIFICATIONS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Chester J. Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2

BANDING

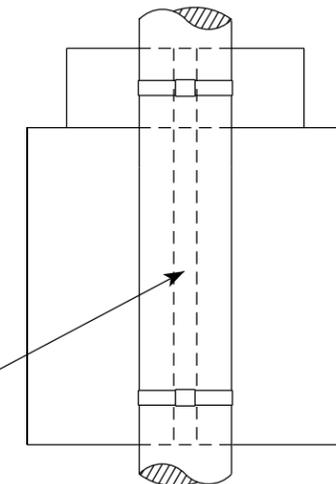
SINGLE SIGN



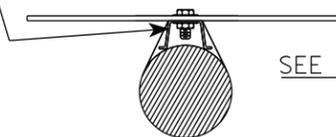
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

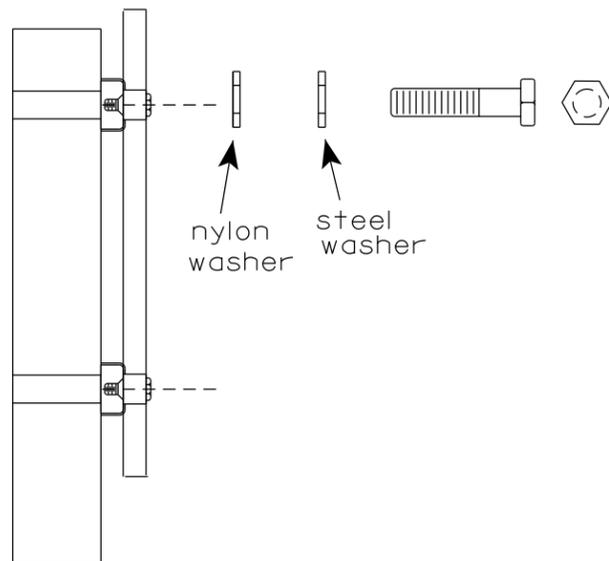
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

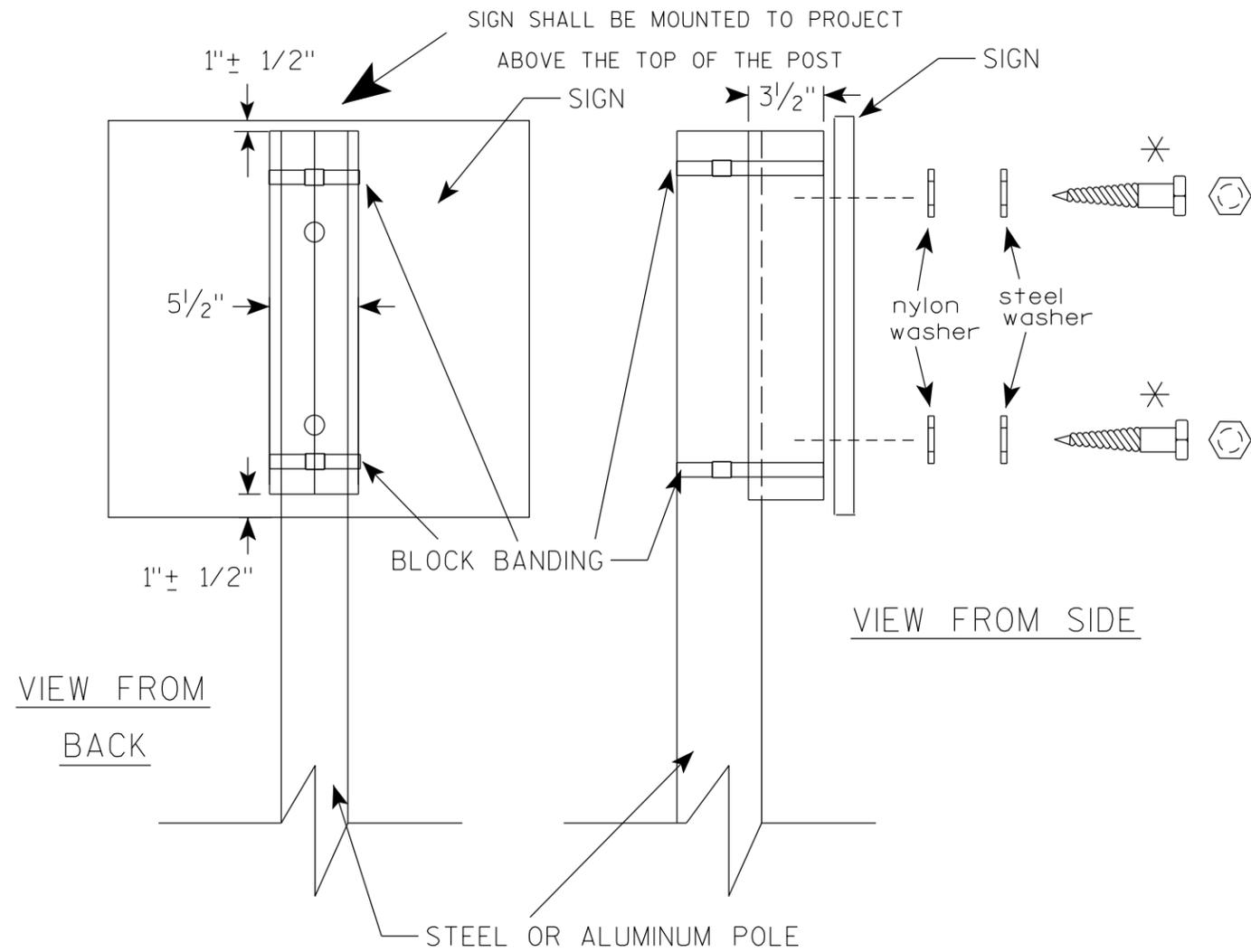


WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

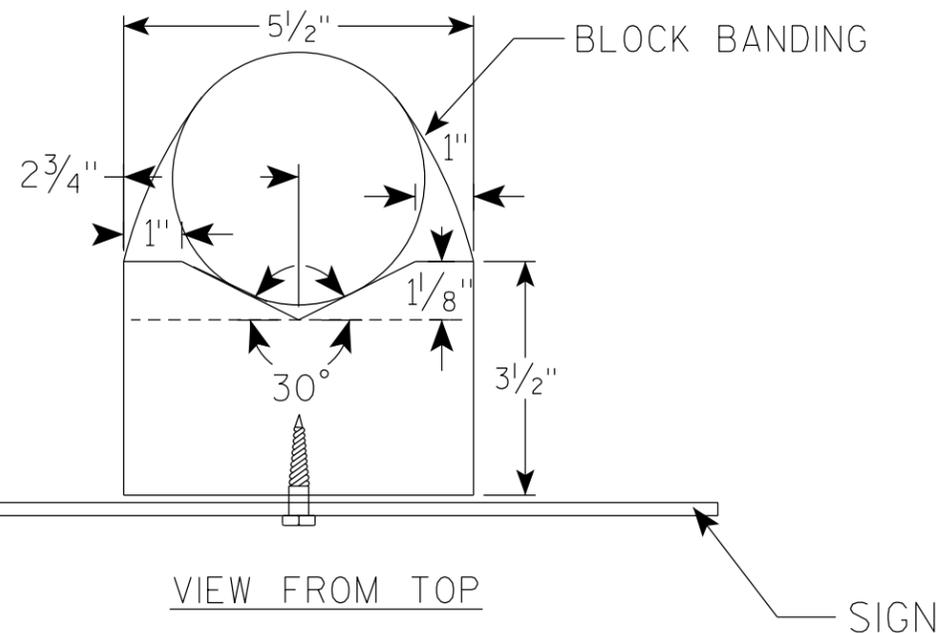
STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-9.4



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

* LAG BOLTS SHALL BE 3/8" X 2 1/2"

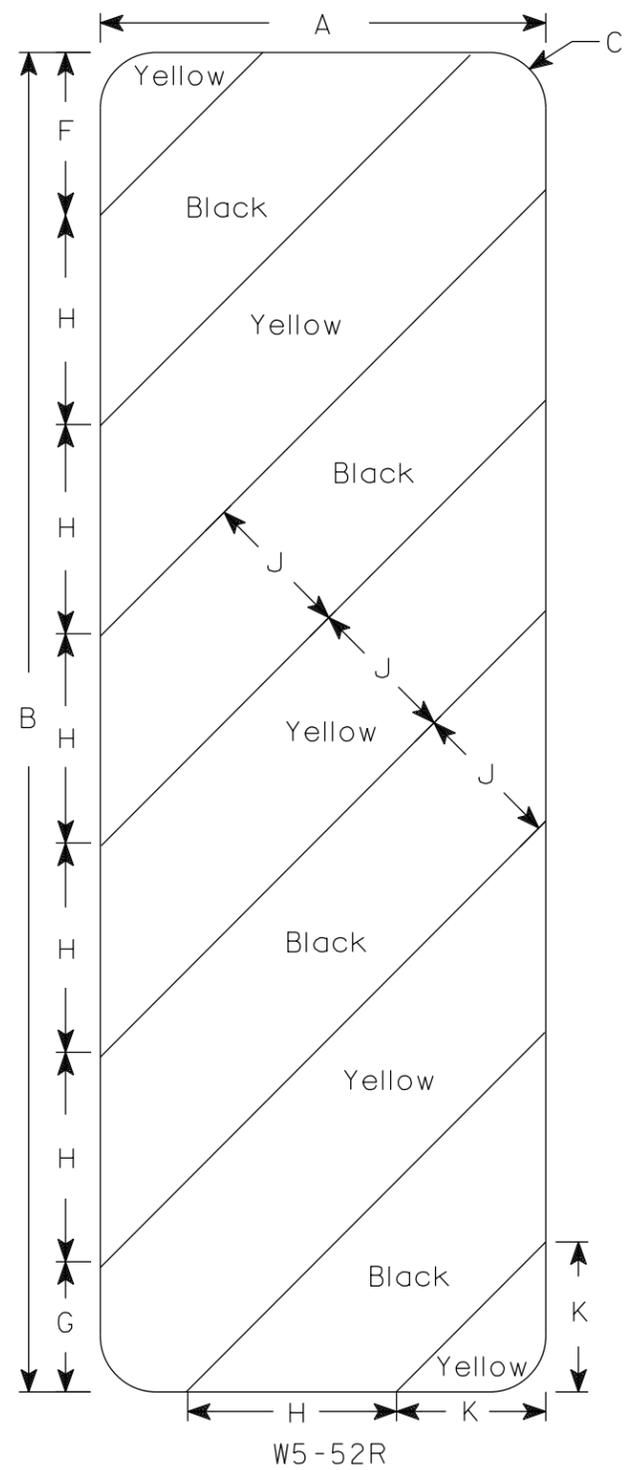
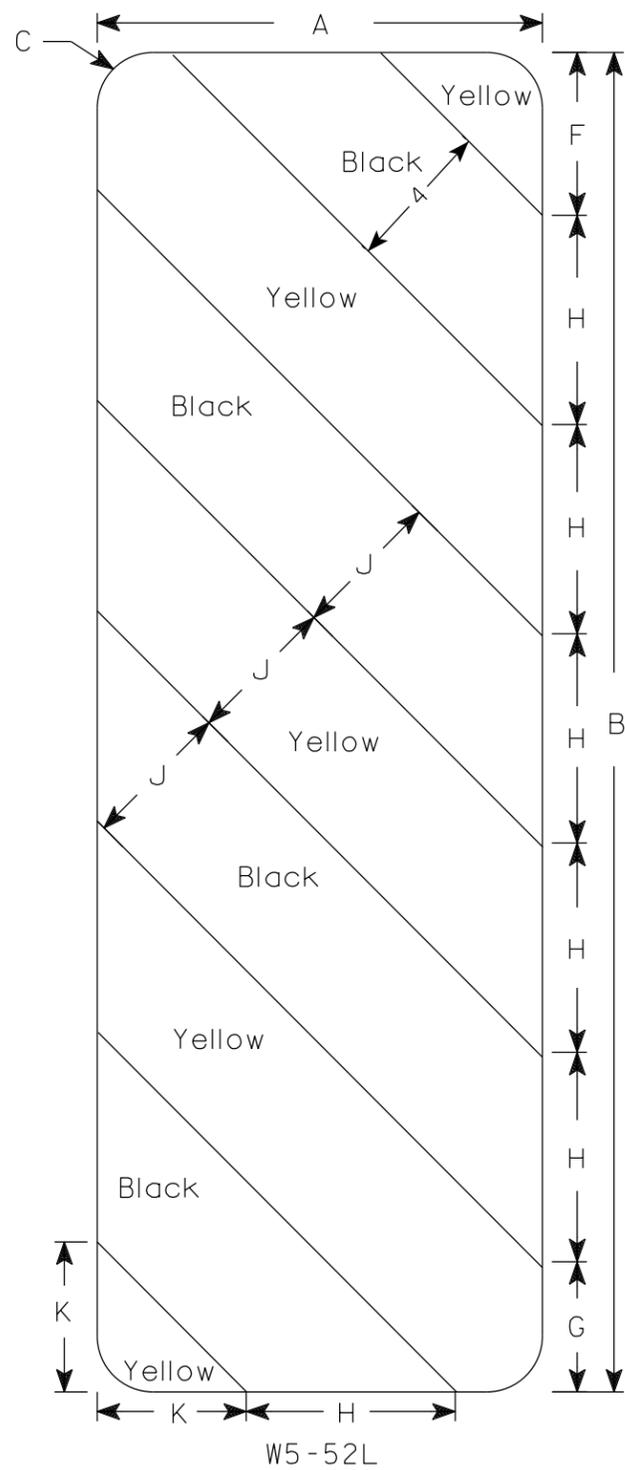


BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Alternate colors of stripes as shown.

7

7

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	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			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

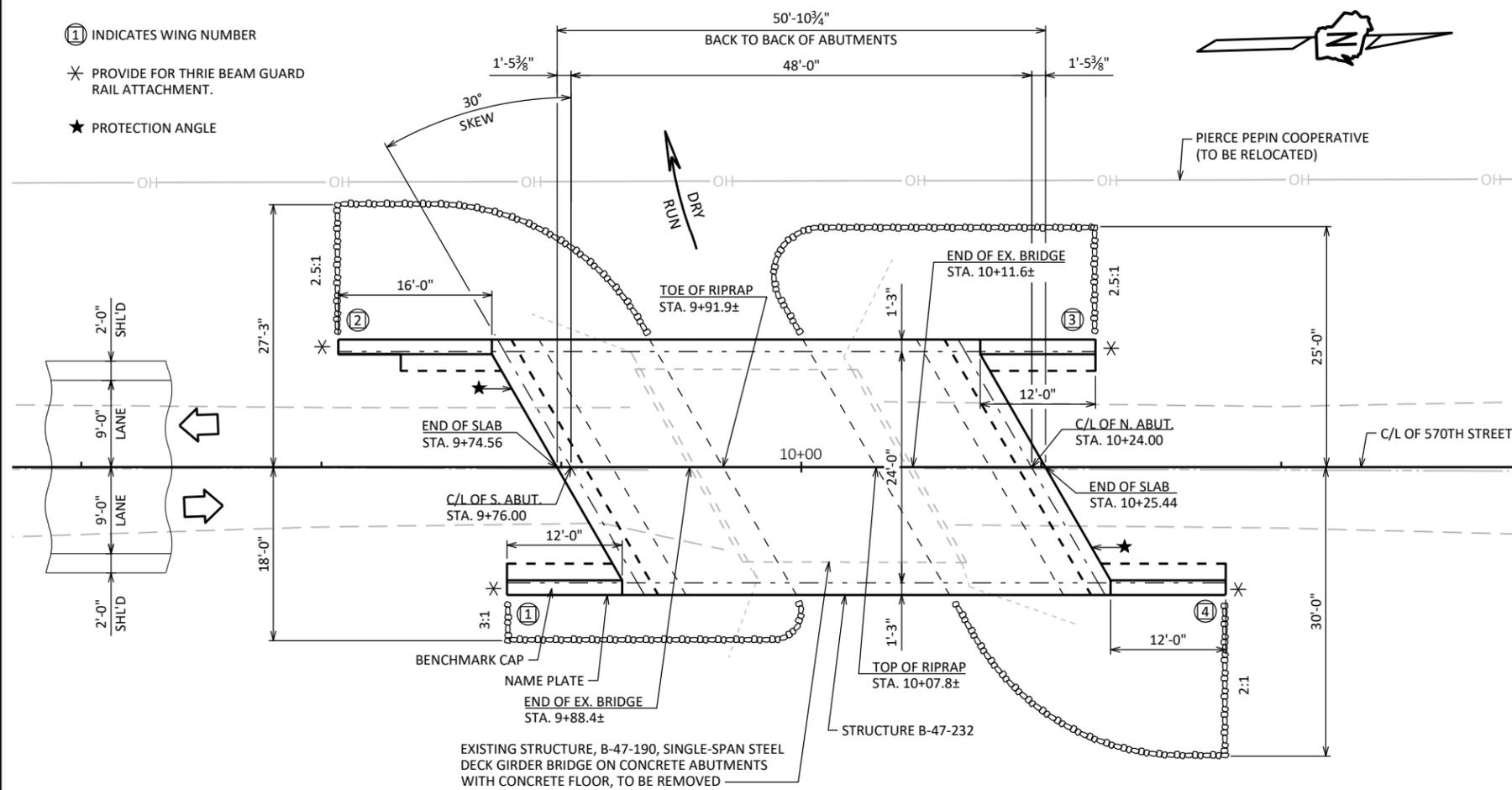
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10

① INDICATES WING NUMBER

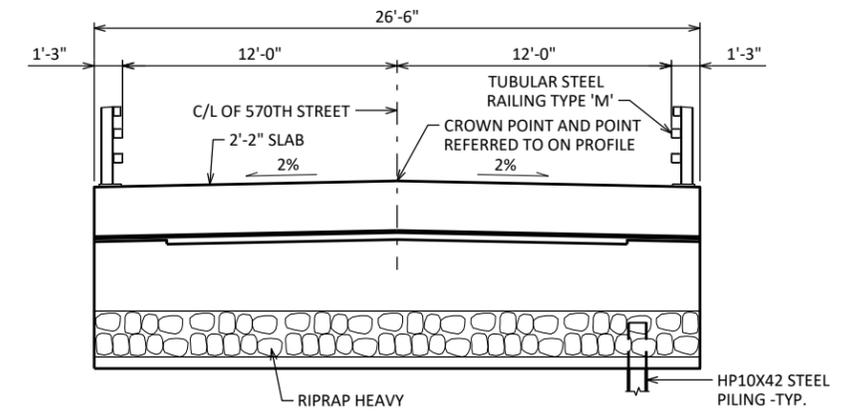
* PROVIDE FOR THRE BEAM GUARD RAIL ATTACHMENT.

★ PROTECTION ANGLE



PLAN

SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE



TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
 INVENTORY RATING: RF = 1.09
 OPERATING RATING: RF = 1.41
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
 SUPERSTRUCTURE $f'_c = 4,000$ PSI
 ALL OTHER $f'_c = 3,500$ PSI

BAR STEEL REINFORCEMENT
 GRADE 60 $f_y = 60,000$ PSI

HYDRAULIC DATA

100-YEAR FREQUENCY:

$Q_{100} = 1,650$ C.F.S.
 $V_{100} = 11.4$ F.P.S.
 $HW_{100} = EL. 951.63$
 WATERWAY AREA = 144 SQ. FT.
 DRAINAGE AREA = 2.35 SQ. MI.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

$Q_2 = 157$ C.F.S.
 $V_2 = 2.8$ F.P.S.
 $HW_2 = EL. 946.41$

TEMPORARY STRUCTURE:

$Q_5 = 374$ C.F.S.
 $HW_5 = EL. 947.4$
 MIN. AREA = 51.7 SQ. FT.

TRAFFIC DATA

FEATURE ON: 570TH STREET

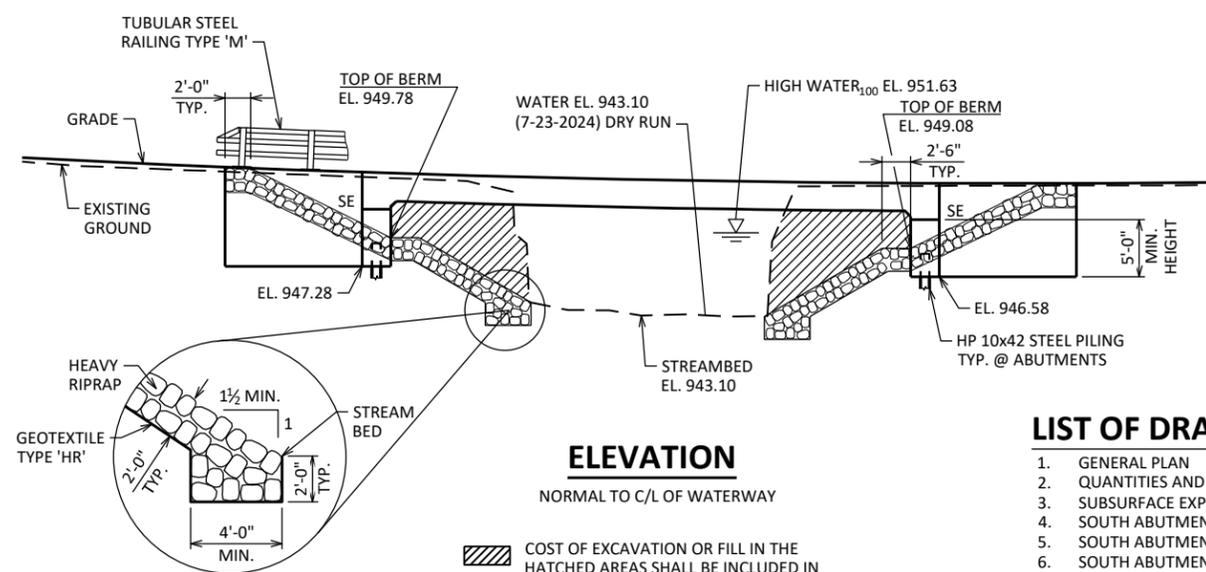
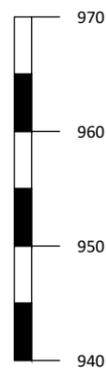
ADT = <100 (2026)
 ADT = <100 (2046)
 R.D.S. = 20 MPH

FOUNDATION DATA

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10x42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 160 TONS
 ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
 ESTIMATED 30'-0" LONG.
 PRE-BORE PILES 10'-0" PRIOR TO DRIVING PILES.

NORTH ABUTMENT TO BE SUPPORTED ON HP 10x42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 160 TONS
 ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
 ESTIMATED 30'-0" LONG.

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.



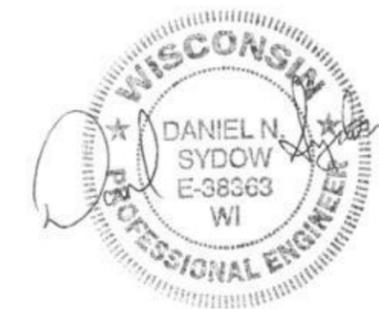
ELEVATION

NORMAL TO C/L OF WATERWAY

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-47-232".

LIST OF DRAWINGS:

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING 1 DETAILS
6. SOUTH ABUTMENT WING 2 DETAILS
7. SOUTH ABUTMENT PILE LAYOUT & BILL OF BARS
8. NORTH ABUTMENT
9. NORTH ABUTMENT WING 3 DETAILS
10. NORTH ABUTMENT WING 4 DETAILS
11. NORTH ABUTMENT PILE LAYOUT & BILL OF BARS
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE PLAN
14. TUBULAR STEEL RAILING TYPE "M"

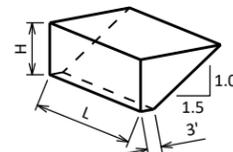


STRUCTURE DESIGN CONTACTS:
 DAN SYDOW 715-834-3161
 AARON BONK 608-261-0261

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	J.L.R. 12/02/25 CHIEF STRUCTURES DESIGN ENGINEER DATE		
STRUCTURE B-47-232			
570TH STREET OVER DRY RUN			
COUNTY	PIERCE	TOWN	HARTLAND
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	ERS	DESIGN CK'D	NBE
DRAWN BY	ZSS/CLP	PLANS CK'D	DNS
GENERAL PLAN			SHEET 1 OF 14

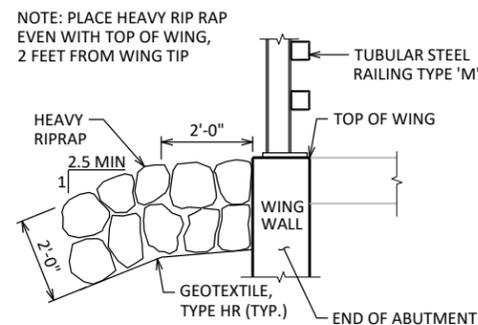
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	S. ABUT.	N. ABUT.	TOTALS
203.0220	REMOVING STRUCTURE B-47-190	EACH	----	----	----	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-47-232	EACH	----	----	----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	----	145	145	290
502.0100	CONCRETE MASONRY BRIDGES	CY	113.3	34.1	32.8	180
502.3200	PROTECTIVE SURFACE TREATMENT	SY	187	17	11	215
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	----	2,100	1,970	4,070
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	20,560	1,740	1,640	23,940
506.0105	STRUCTURAL STEEL CARBON	LB	530	----	----	530
513.4061	RAILING TUBULAR TYPE M	LF	102	31	27	160
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	----	9	10	19
526.0101	TEMPORARY STRUCTURE STA. 29+86.50	EACH	----	----	----	1
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	----	60	----	60
550.0500	PILE POINTS	EACH	----	6	5	11
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	----	180	150	330
606.0300	RIPRAP HEAVY	CY	----	90	110	200
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	----	100	100	200
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	----	30	30	60
645.0120	GEOTEXTILE TYPE HR	SY	----	160	190	350
NON-BID ITEMS						
	FILLER	SIZE	---	---	---	1/2", 3/4"

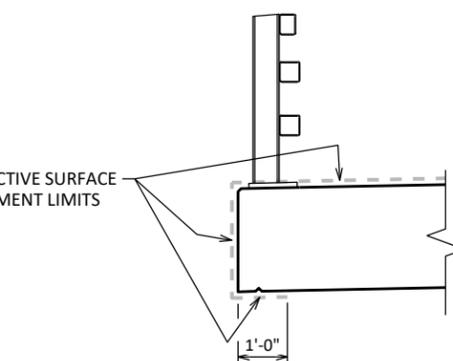


ABUTMENT BACKFILL DIAGRAM

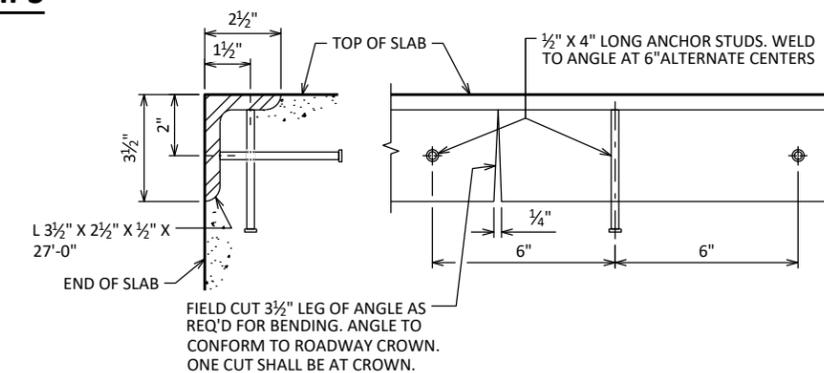
L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
 H = AVERAGE ABUTMENT FILL HEIGHT (FT)
 EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)$
 $V_{CY} = V_{CF}(EF)/27$
 $V_{TON} = V_{CY}(2.0)$



TYPICAL FILL SECTION AT WING TIPS



PROTECTIVE SURFACE TREATMENT DETAIL

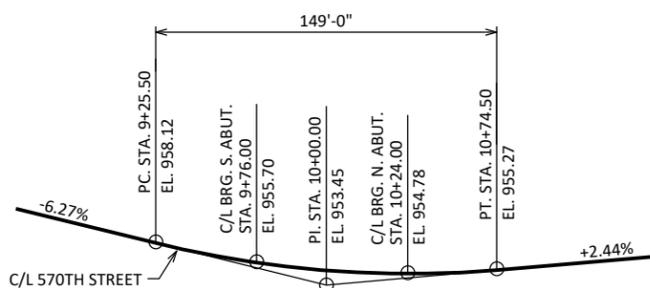


PROTECTION ANGLE ARMOR

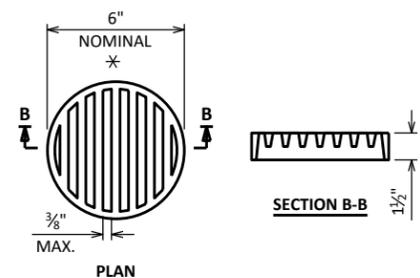
SANDBLAST PROTECTION ANGLE AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING" AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.

ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON". (NO PAINT REQ'D.)

NO SPLICE SHALL BE PERMITTED IN ANGLES.



PROFILE GRADE LINE



RODENT SHIELD DETAIL

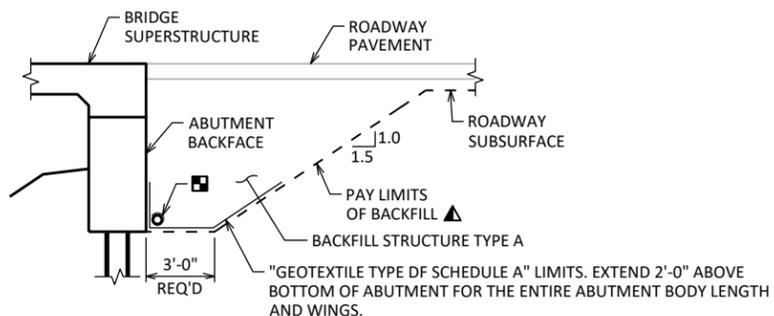
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

BENCH MARK

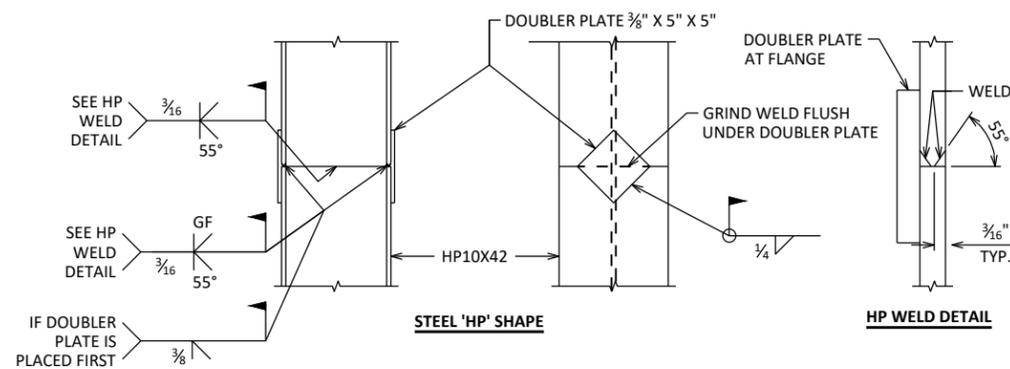
NO.	STATION	DESCRIPTION	ELEV.
50	10+17.7	CHISELED SQUARE IN NE WINGWALL, 12.2' RT	953.45
51	7+86.7	SPK IN PPO, 29.5' LT	967.17



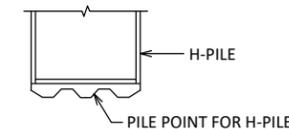
TYPICAL SECTION THRU ABUTMENT

▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

■ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



'HP' PILE DETAILS



PILE POINT FOR H-PILING

PILE POINT SHALL BE INSTALLED ACCORDING TO THE PILE POINT MANUFACTURE'S INSTRUCTIONS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY ZSS		PLANS CK'D LMP	
QUANTITIES AND NOTES			SHEET 2 OF 14

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-01	JANUARY 31, 2025	293820.333	500819.073
B-02	JANUARY 31, 2025	293866.998	500820.742

BORINGS COMPLETED BY: ECS MIDWEST, LLC
 REPORT COMPLETED BY: ECS MIDWEST, LLC
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) PIERCE COUNTY



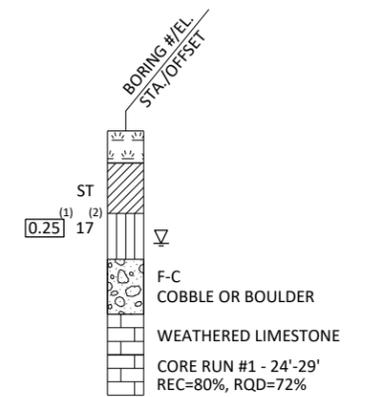
STATE PROJECT NUMBER

7895-00-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

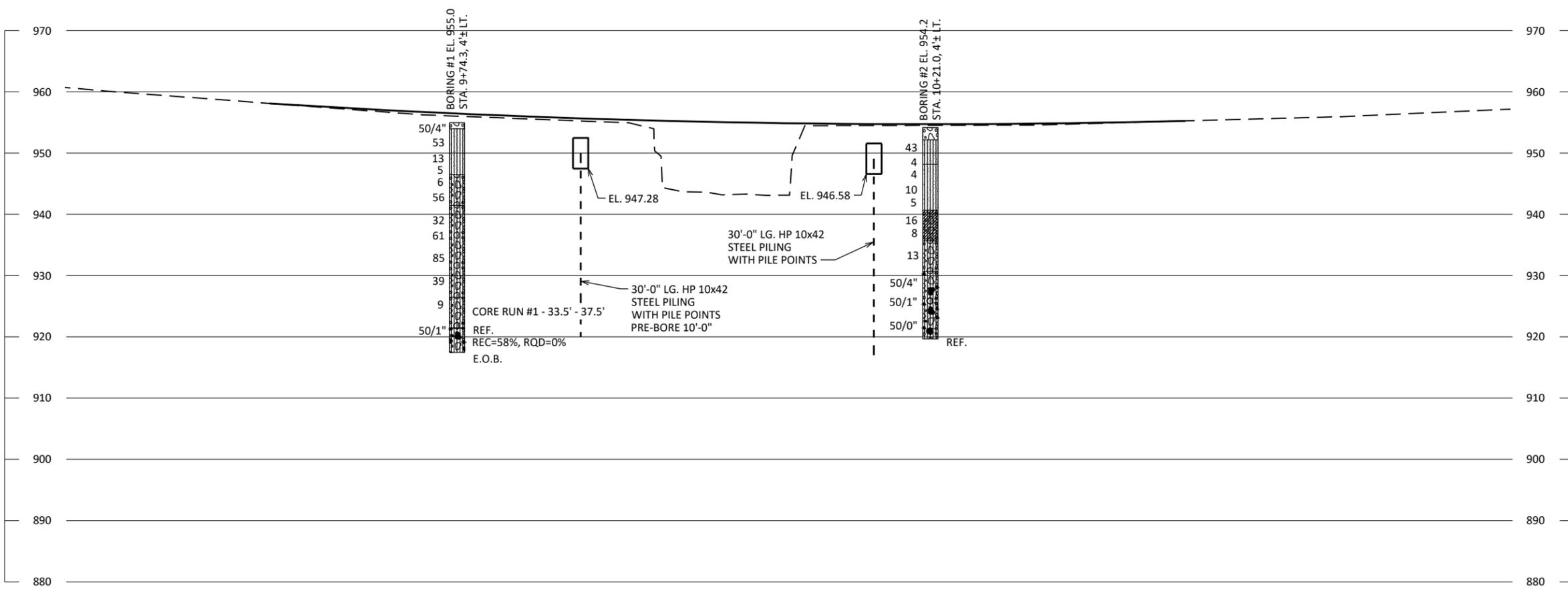
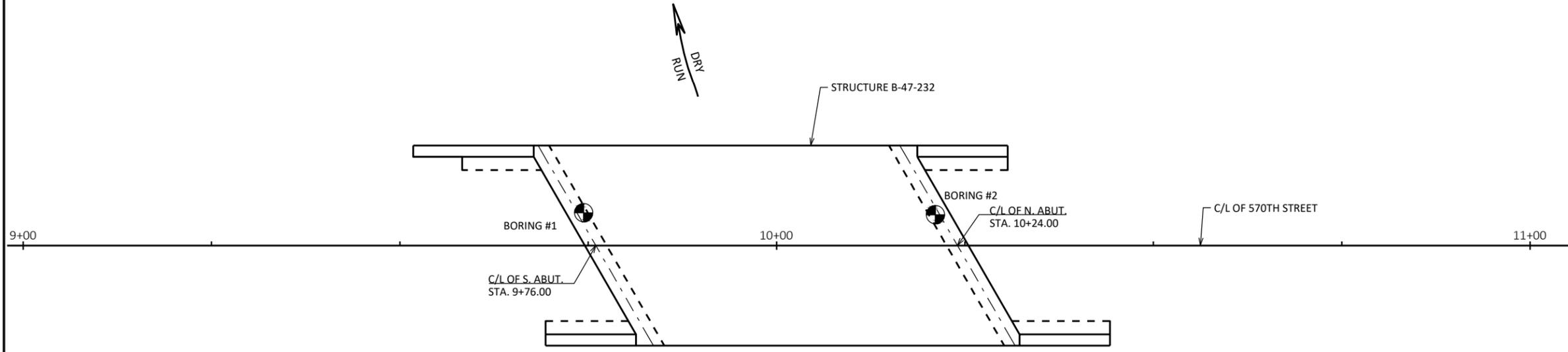
- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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



8

8

NO.	DATE	REVISION	BY

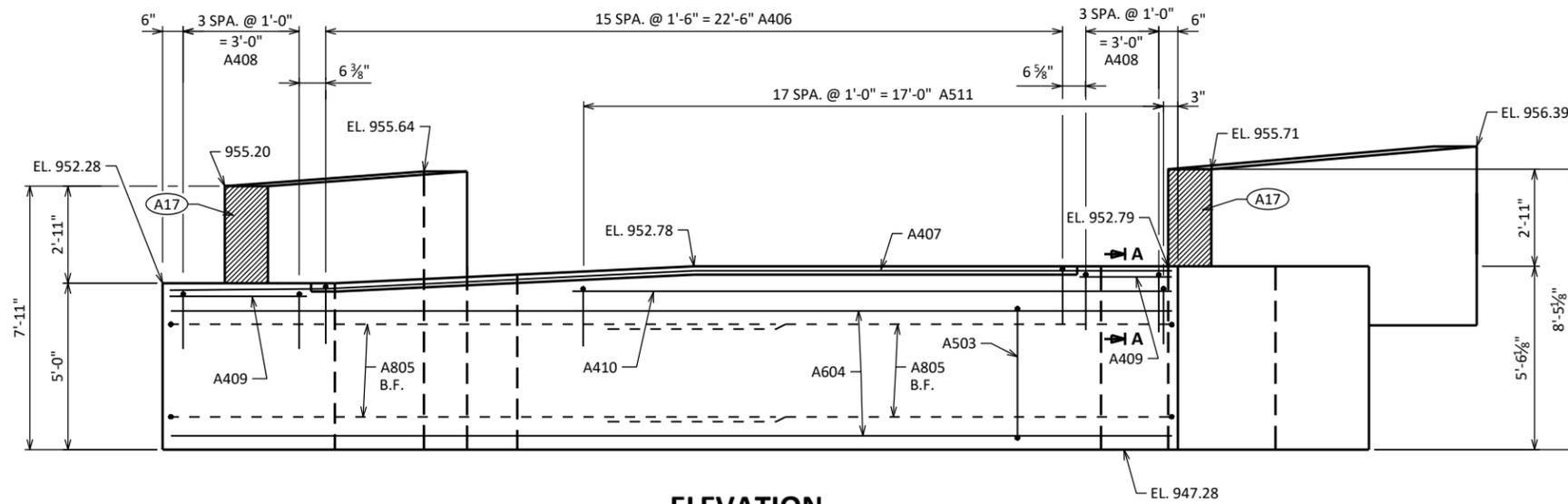
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-232

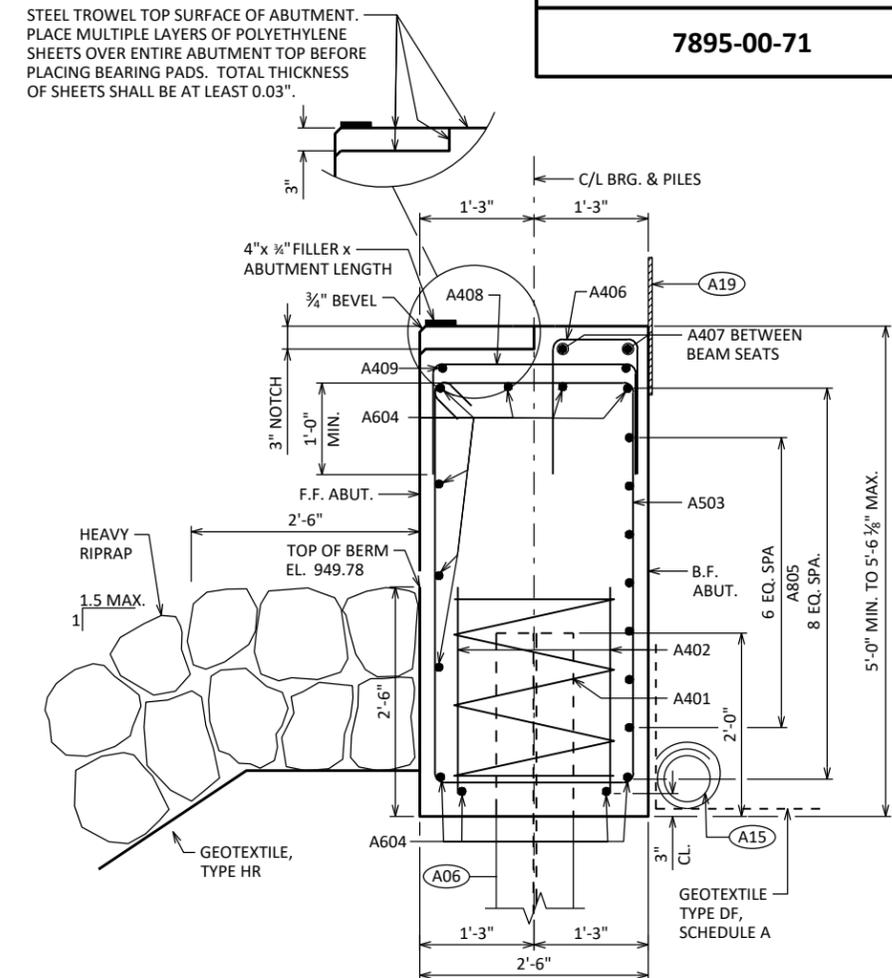
DRAWN BY	ZSS	PLANS CK'D	LMP
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SUBSURFACE EXPLORATION

SHEET 3 OF 14

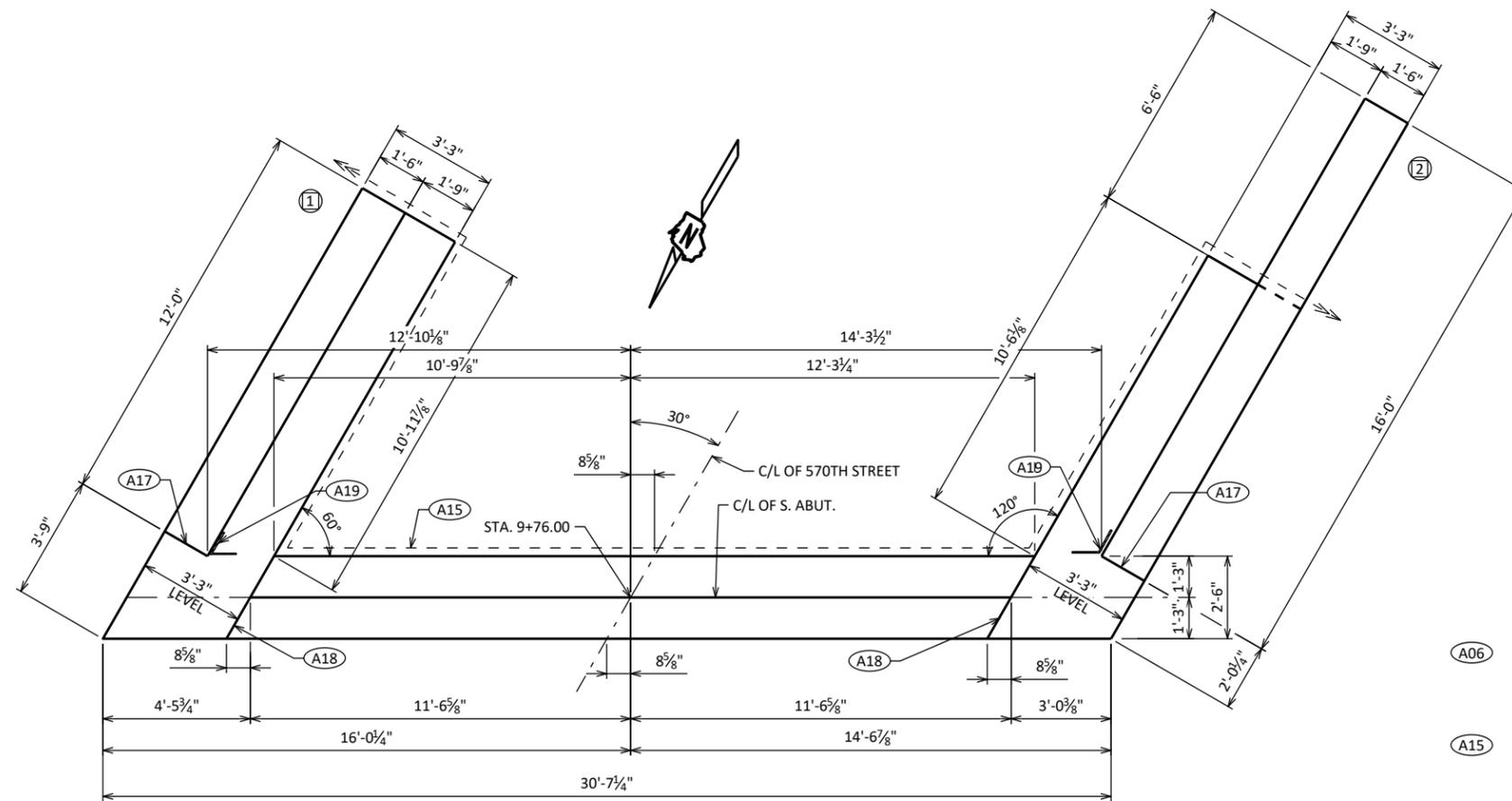


ELEVATION
(LOOKING SOUTH)



SECTION THRU BODY

SECTION A



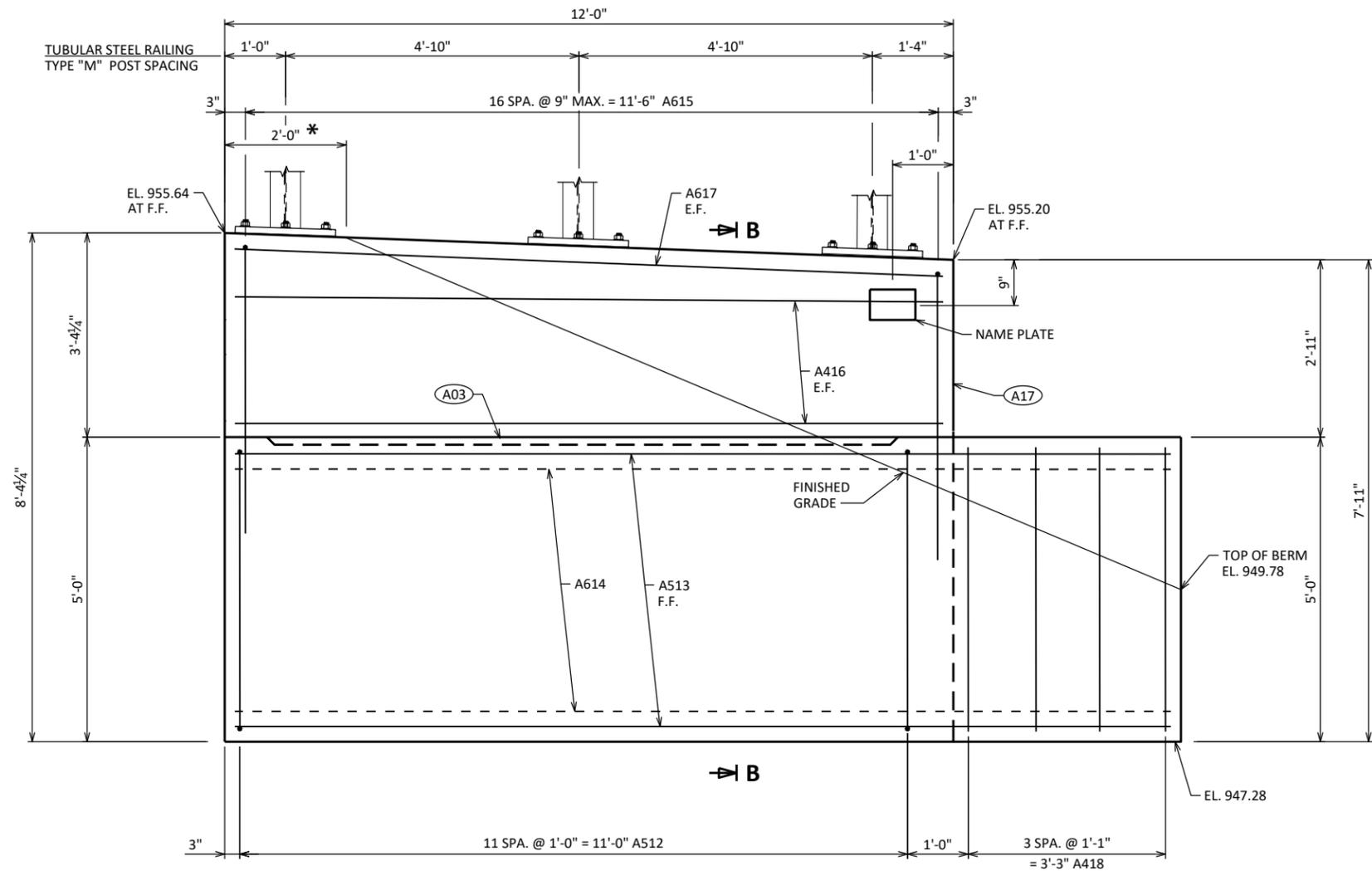
PLAN

- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, (WITH PILE POINTS), ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE. PRE-BORE PILES 10'-0".
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A18) 3/4" CORK FILLER UP VERT. FACE ONLY.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

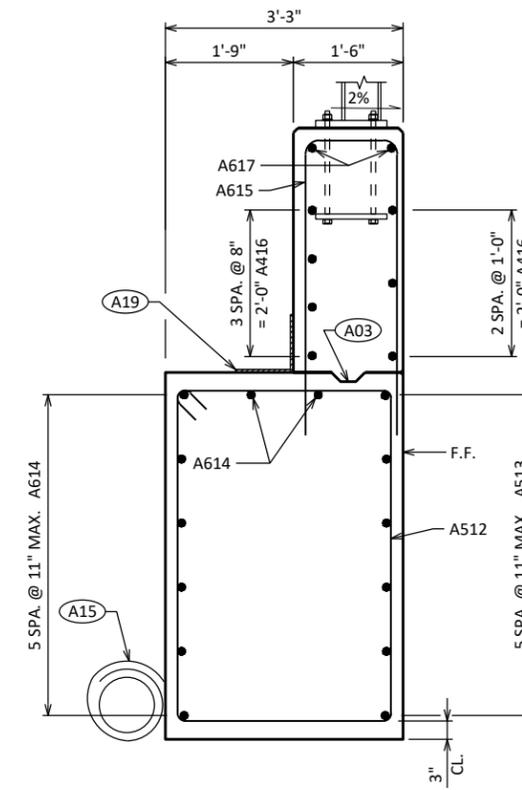
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
SOUTH ABUTMENT			SHEET 4 OF 14

* MEASURED FROM WING TIP TO FINISHED GRADE



ELEVATION - WING 1



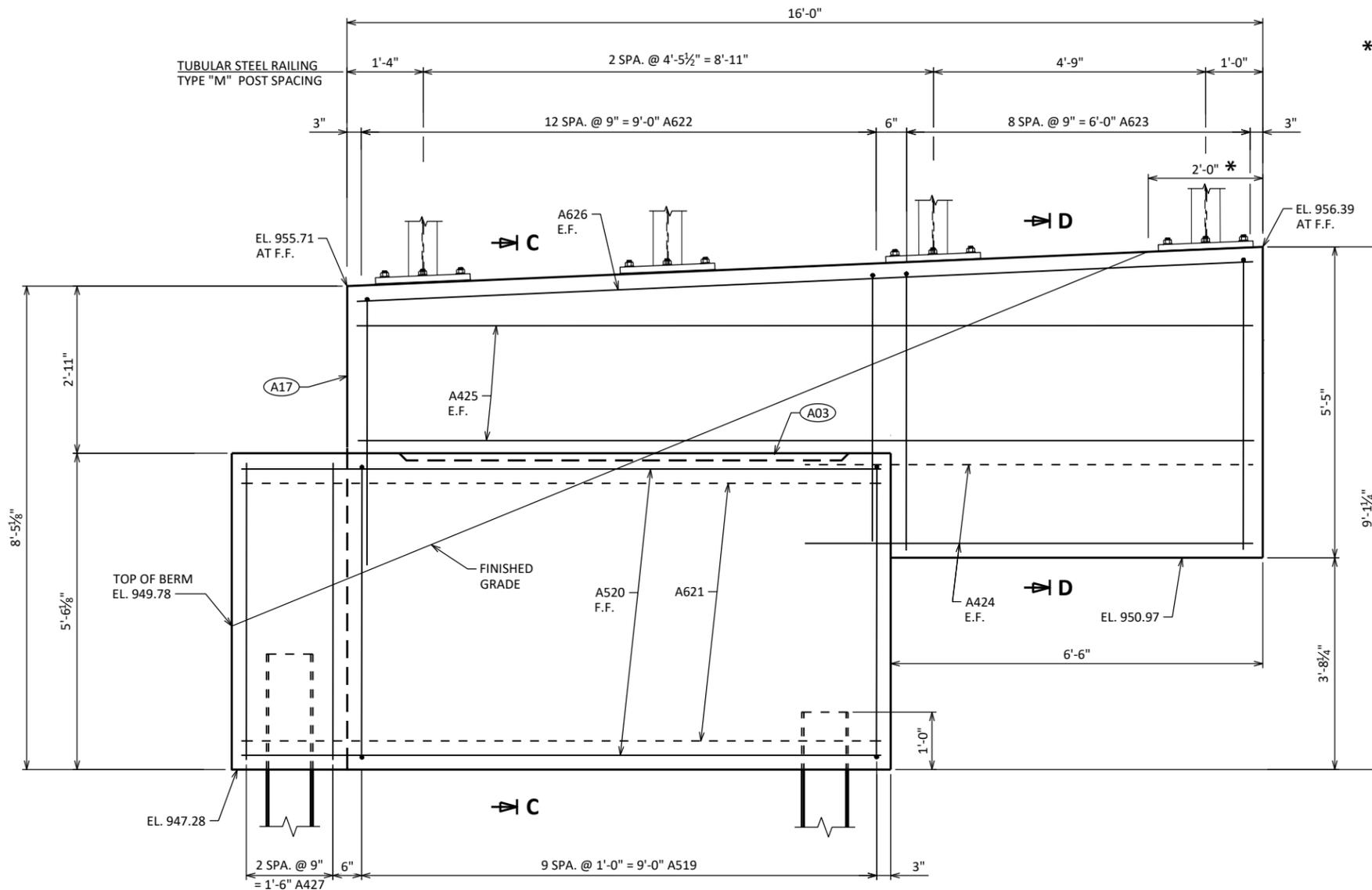
SECTION B

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

8

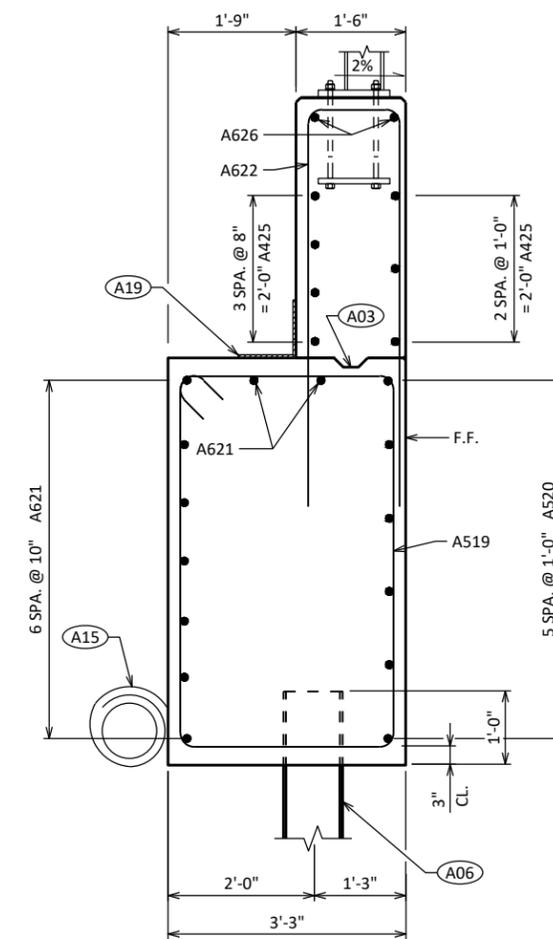
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
SOUTH ABUTMENT WING 1 DETAILS			SHEET 5 OF 14

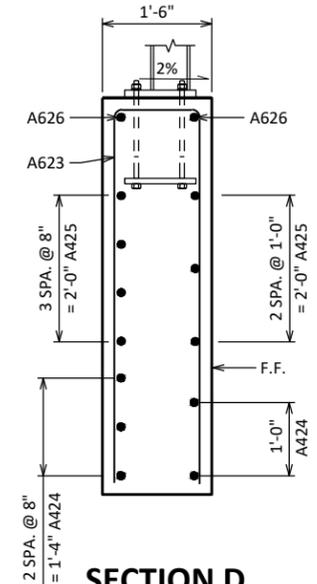


ELEVATION - WING 2

* MEASURED FROM WING TIP TO FINISHED GRADE



SECTION C



SECTION D

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, (WITH PILE POINTS), ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE. PRE-BORE PILES 10'-0".
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 3/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

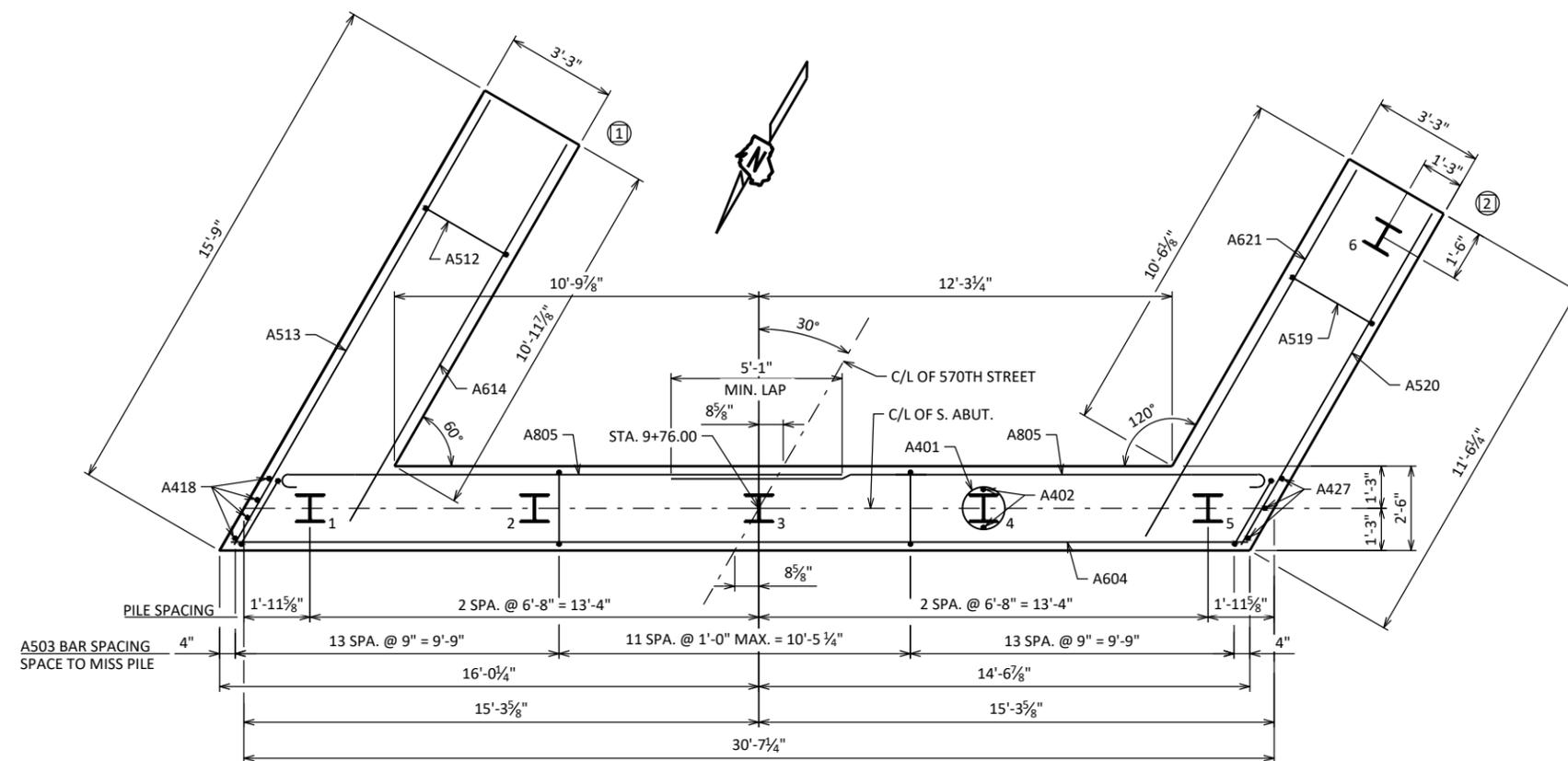
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
SOUTH ABUTMENT WING 2 DETAILS			SHEET 6 OF 14

BILL OF BARS

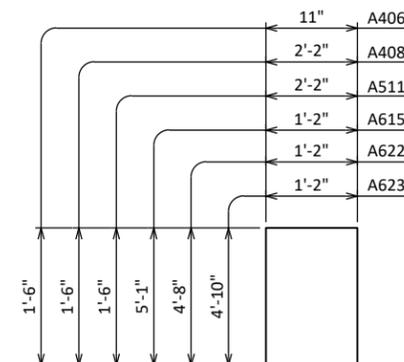
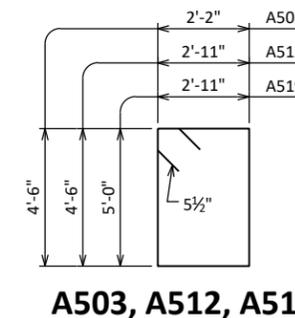
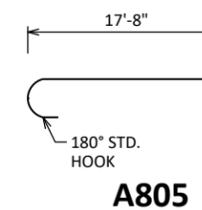
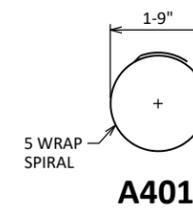
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		5	28'-0"	X		BODY @ PILES
A402		10	2'-3"			BODY @ PILES
A503		38	14'-0"	X		BODY VERT.
A604		11	30'-2"			BODY HORIZ.
A805		14	18'-7"	X		BODY HORIZ. B.F.
A406		16	3'-9"	X		BODY VERT. TOP
A407		2	30'-2"			BODY HORIZ. TOP
A408		8	5'-0"	X		BODY VERT. TOP
A409		2	3'-5"			BODY HORIZ. TOP
A410		3	17'-11"			BODY HORIZ. TOP
A511		18	5'-0"	X		BODY VERT. TOP
A512	X	12	15'-6"	X		WING 1 VERT.
A513	X	6	15'-2"			WING 1 HORIZ. F.F.
A614	X	8	12'-11"			WING 1 HORIZ.
A615	X	17	11'-0"	X		WING 1 VERT.
A416	X	7	11'-8"			WING 1 HORIZ. E.F.
A617	X	2	11'-8"			WING 1 HORIZ. TOP E.F.
A418	X	4	4'-7"			BODY VERT. END @ WING 1
A519	X	10	16'-6"	X		WING 2 VERT.
A520	X	6	11'-4"			WING 2 HORIZ. F.F.
A621	X	9	12'-6"			WING 2 HORIZ.
A622	X	13	10'-2"	X		WING 2 VERT.
A623	X	9	10'-6"	X		WING 2 VERT.
A424	X	5	7'-9"			WING 2 HORIZ. E.F.
A425	X	7	15'-8"			WING 2 HORIZ. E.F.
A626	X	2	15'-8"			WING 2 HORIZ. TOP E.F.
A427	X	3	5'-1"			BODY VERT. END @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT

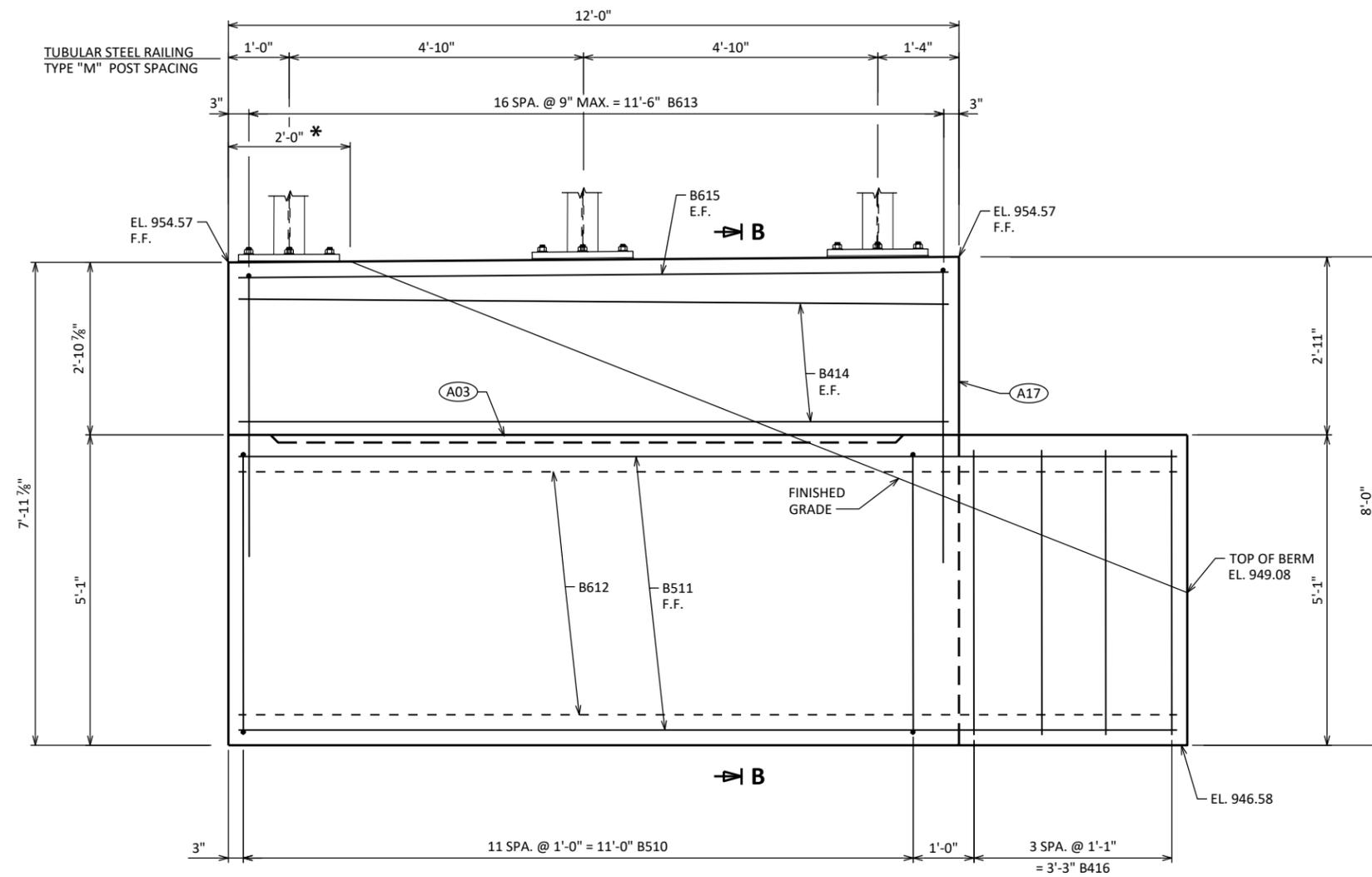


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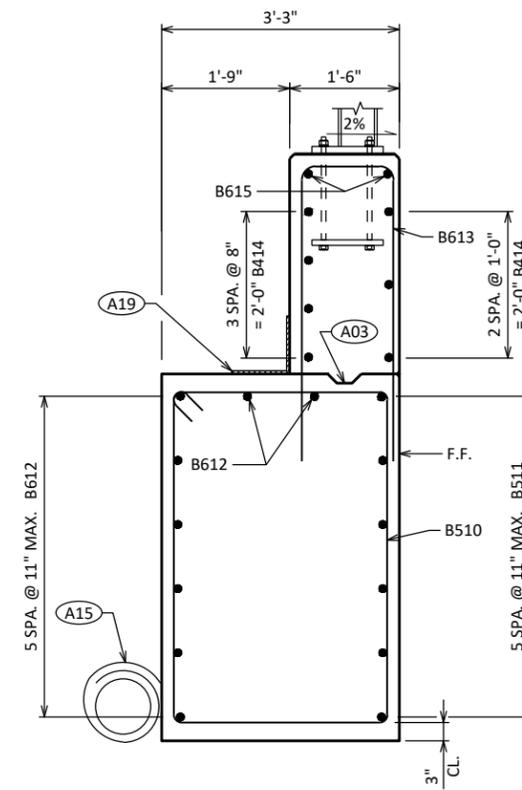
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
SOUTH ABUTMENT PILE LAYOUT & BILL OF BARS			SHEET 7 OF 14

* MEASURED FROM WING TIP TO FINISHED GRADE



ELEVATION - WING 3



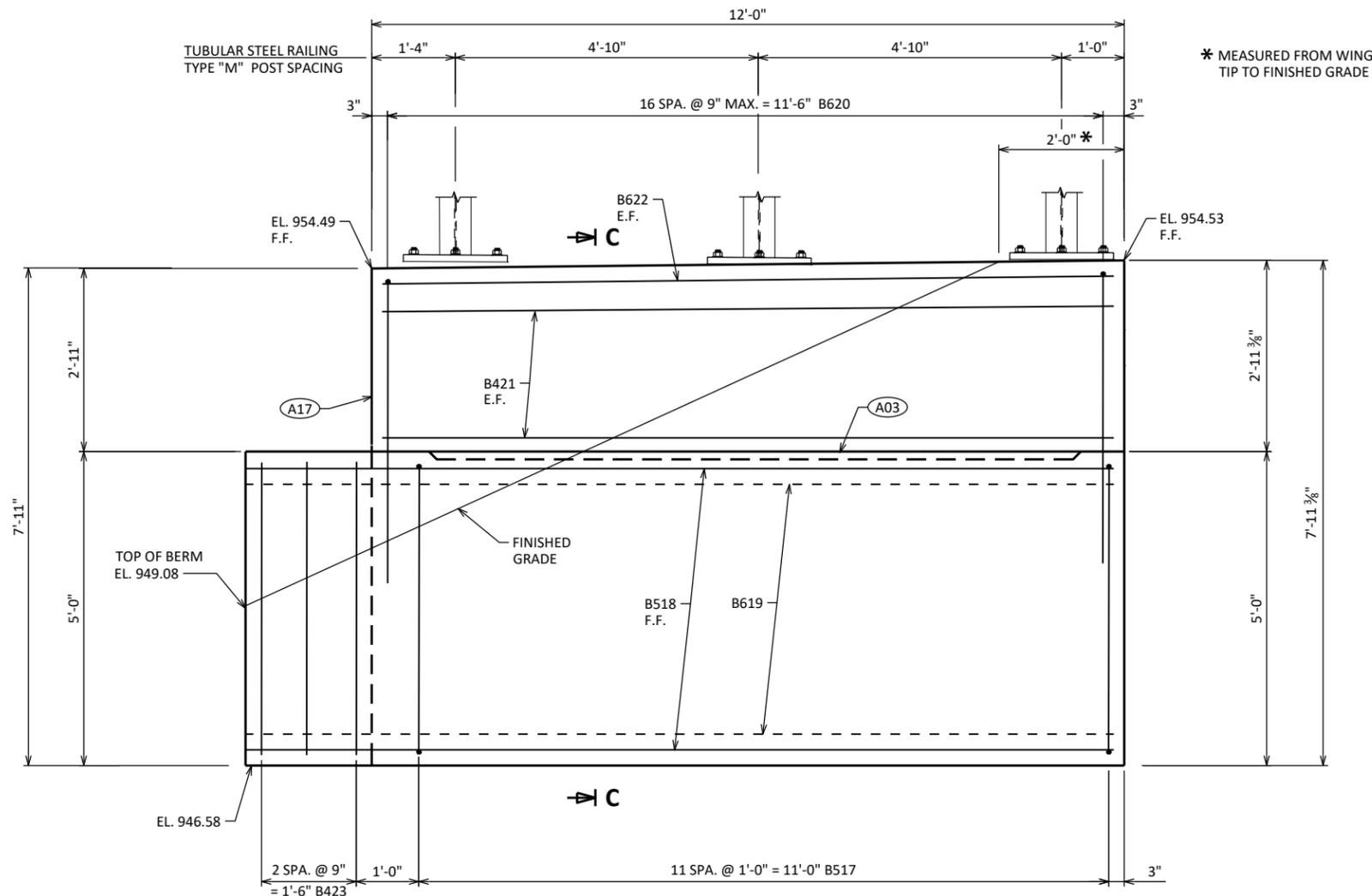
SECTION B

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 3/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

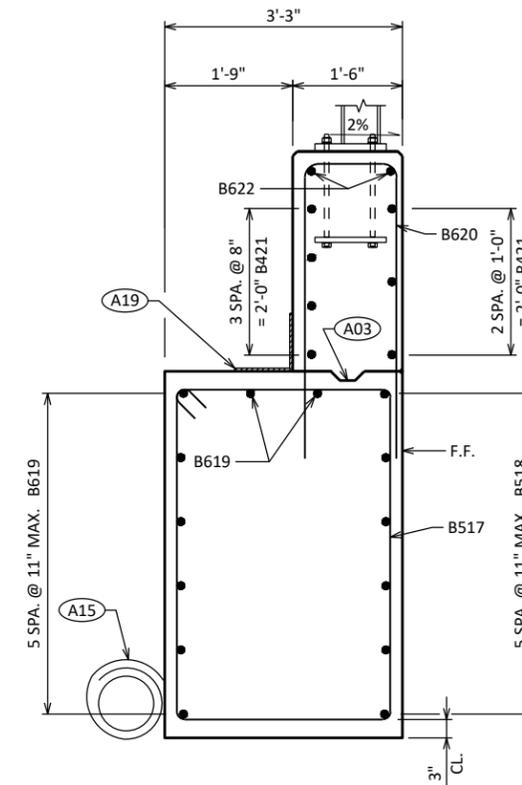
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
NORTH ABUTMENT WING 3 DETAILS			SHEET 9 OF 14



ELEVATION - WING 4



SECTION C

- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

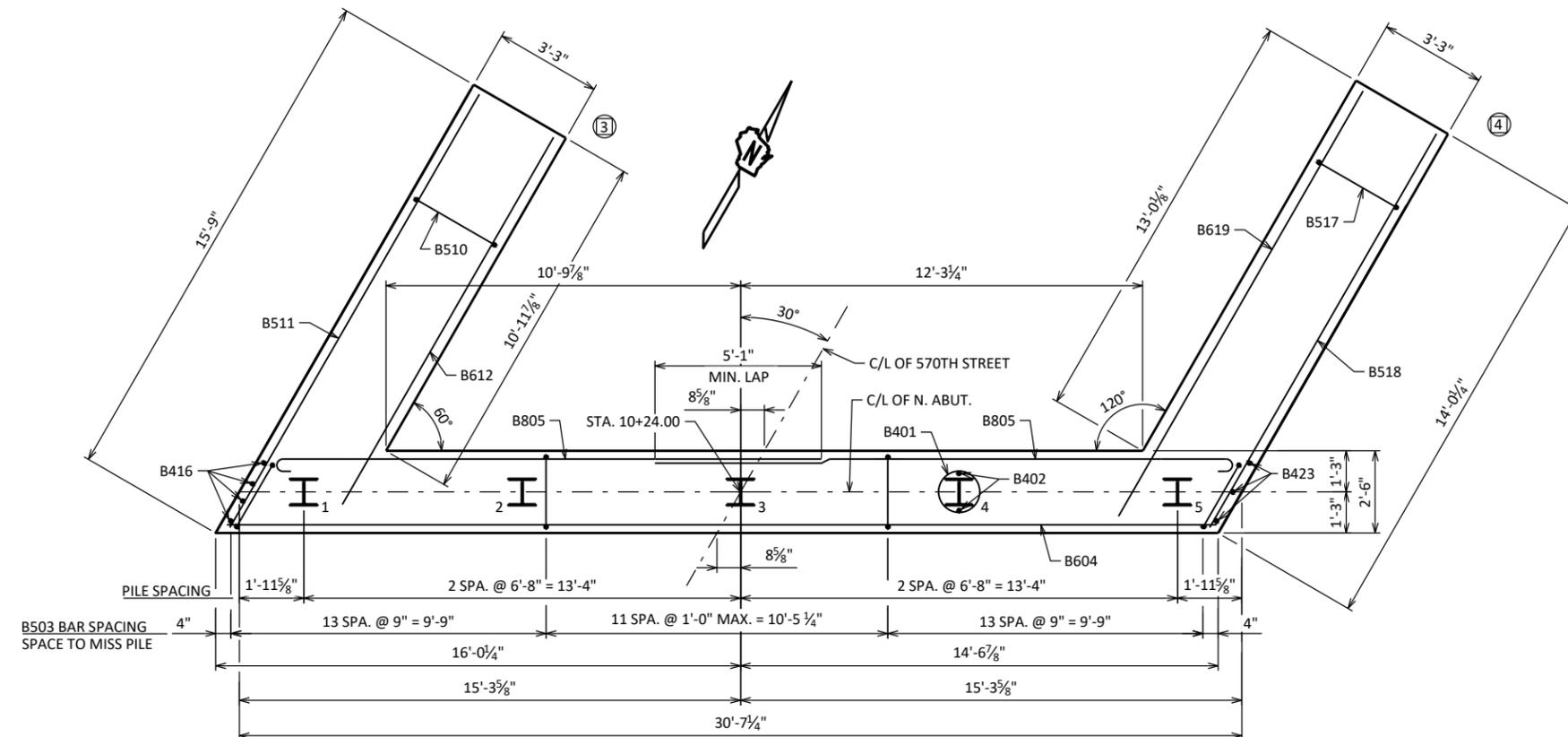
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
NORTH ABUTMENT WING 4 DETAILS			SHEET 10 OF 14

BILL OF BARS

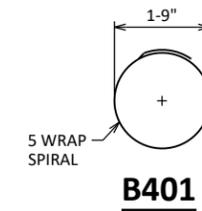
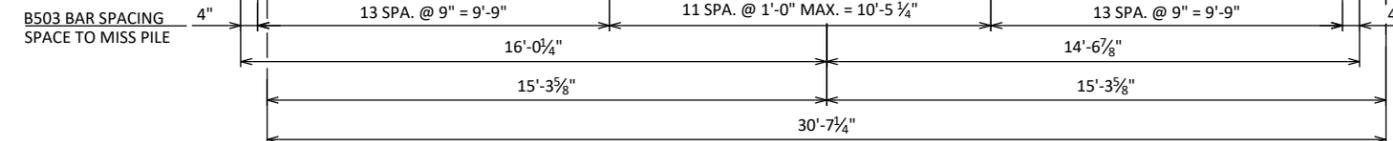
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		5	28'-0"	X		BODY @ PILES
B402		10	2'-3"			BODY @ PILES
B503		38	14'-0"	X		BODY VERT.
B604		11	30'-2"			BODY HORIZ.
B805		14	18'-7"	X		BODY HORIZ. B.F.
B406		16	3'-9"	X		BODY VERT. TOP
B407		2	30'-2"			BODY HORIZ. TOP
B408		8	5'-0"	X		BODY VERT. TOP
B409		2	3'-5"			BODY HORIZ. TOP
B510	X	12	15'-8"	X		WING 3 VERT.
B511	X	6	15'-2"			WING 3 HORIZ. F.F.
B612	X	8	12'-11"			WING 3 HORIZ.
B613	X	17	10'-4"	X		WING 3 VERT.
B414	X	7	11'-8"			WING 3 HORIZ. E.F.
B615	X	2	11'-8"			WING 3 HORIZ. TOP E.F.
B416	X	4	4'-8"			BODY VERT. END @ WING 3
B517	X	12	15'-6"	X		WING 4 VERT.
B518	X	6	13'-10"			WING 4 HORIZ. F.F.
B619	X	8	14'-11"			WING 4 HORIZ.
B620	X	17	10'-6"	X		WING 4 VERT.
B421	X	7	11'-8"			WING 4 HORIZ. E.F.
B622	X	2	11'-8"			WING 4 HORIZ. TOP E.F.
B423	X	3	4'-7"			BODY VERT. END @ WING 4

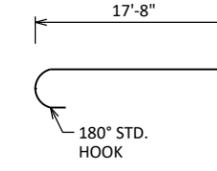
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



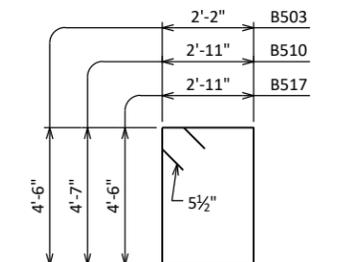
PILE LAYOUT



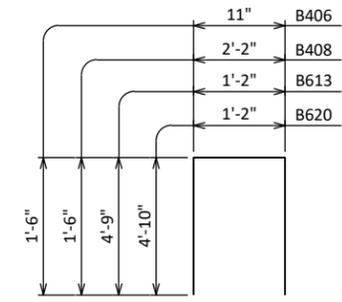
B401



B805



B503, B510, B517

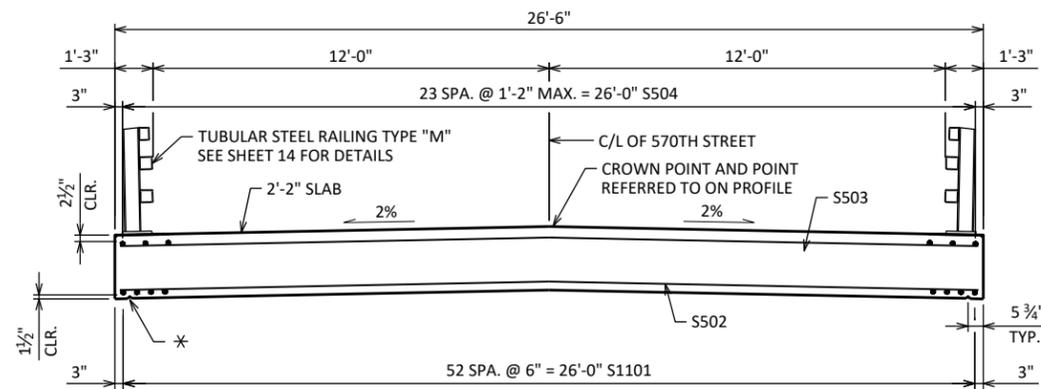


B406, B408, B613, B620

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STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
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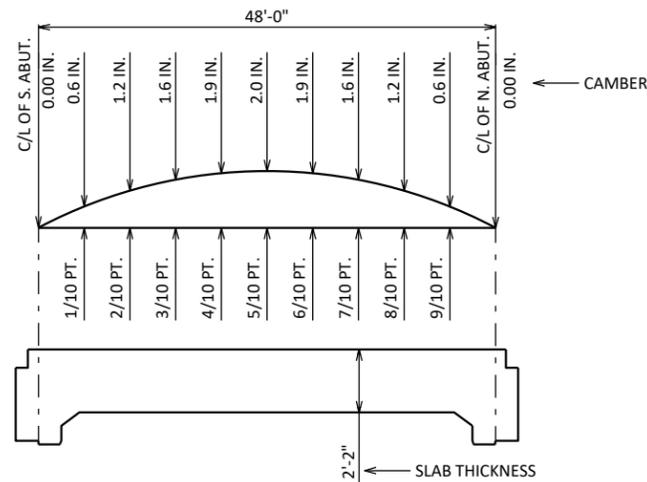
TYPICAL SECTION THRU BRIDGE

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCE NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

* 3/4" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT.

V-GROOVES ARE REQUIRED.



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

- TOP OF SLAB ELEVATION AT FINAL GRADE
- LESS SLAB THICKNESS
- PLUS CAMBER
- PLUS FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
- EQUALS TOP OF SLAB FALSEWORK ELEVATION

TOP OF SLAB ELEVATIONS

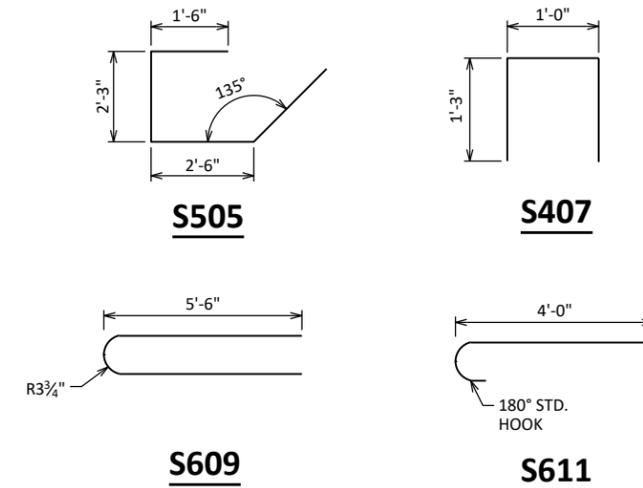
LOCATION	C/L S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L N. ABUT.
W. EDGE OF SLAB	955.71	955.53	955.37	955.22	955.09	954.97	954.86	954.77	954.69	954.63	954.57
C/L OF 570TH STREET	955.70	955.55	955.41	955.28	955.17	955.07	954.99	954.92	954.86	954.81	954.78
E. EDGE OF SLAB	955.20	955.07	954.95	954.85	954.76	954.68	954.61	954.56	954.53	954.50	954.49

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
S1101	x	53	44'-5"			SLAB LONG. BOT.
S502	x	77	30'-2"			SLAB TRANS. BOT.
S503	x	77	30'-2"			SLAB TRANS. TOP
S504	x	24	50'-6"			SLAB LONG. TOP
S505	x	54	7'-10"	X		SLAB @ ABUT. DIAPHRAGM STIRRUPS
S506	x	4	29'-2"			SLAB @ ABUT. DIAPHRAGM TRANS.
S407	X	42	3'-4"	X		SLAB @ ABUT. NOTCH
S408	X	4	22'-6"			SLAB @ ABUT. NOTCH
S609	x	36	11'-3"	X		SLAB @ RAIL POSTS
S610	x	56	6'-0"			SLAB @ INT. RAIL POSTS
S611	x	16	4'-8"	X		SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

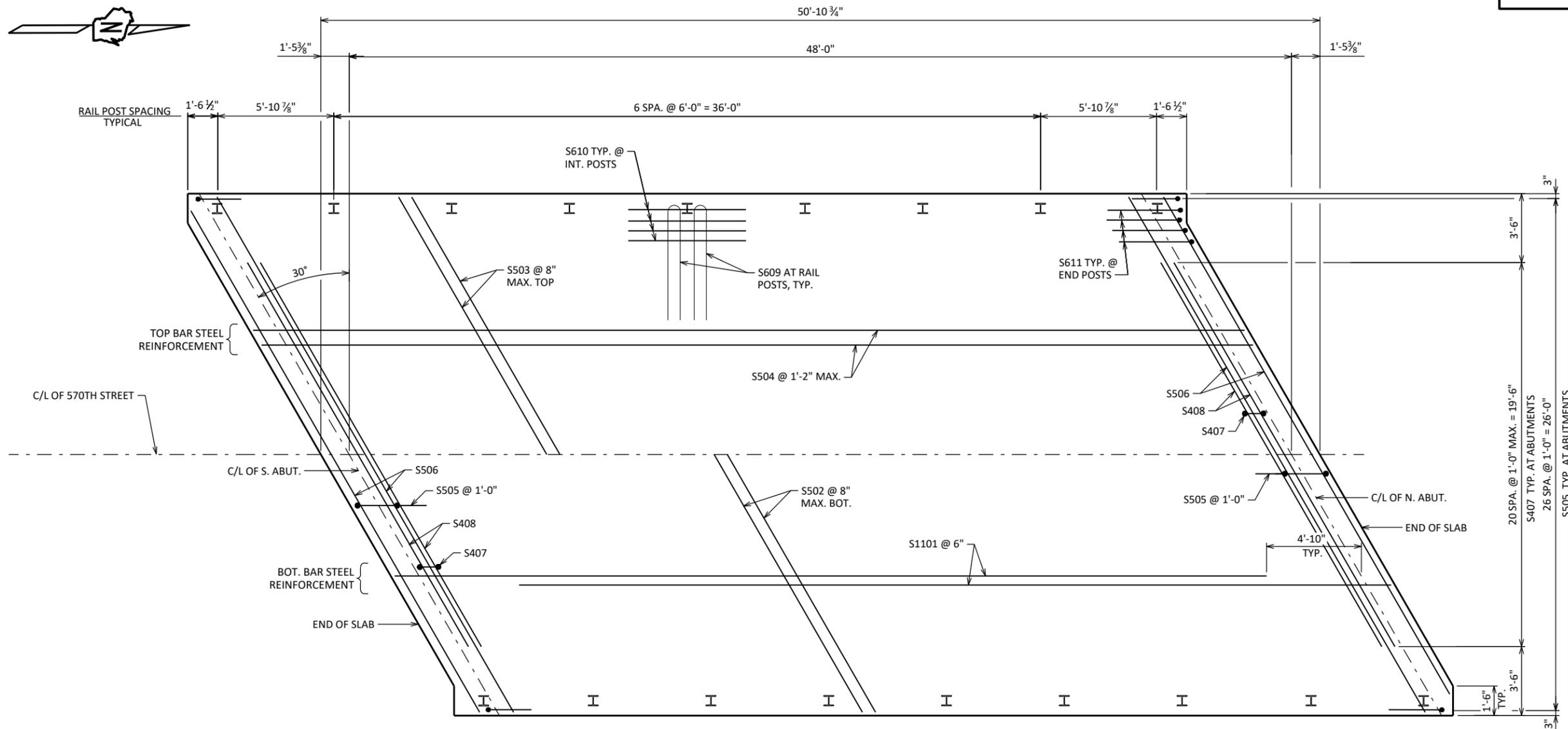


SURVEY TOP OF SLAB ELEVATIONS

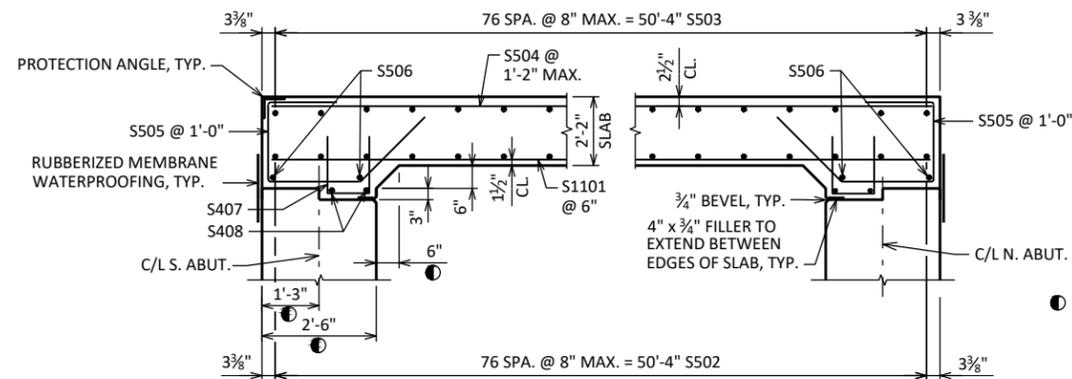
	ABUTMENT	5/10 PT.	ABUTMENT
W. EDGE OF SLAB			
C/L OF 570TH STREET			
E. EDGE OF SLAB			

PRIOR TO RELEASING SLAB FORMWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF SUBSTRUCTURES, AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND C/L. RECORD ELEVATIONS IN THE TABLE ABOVE FOR THE "AS BUILT" PLANS.

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PLAN



LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

● MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

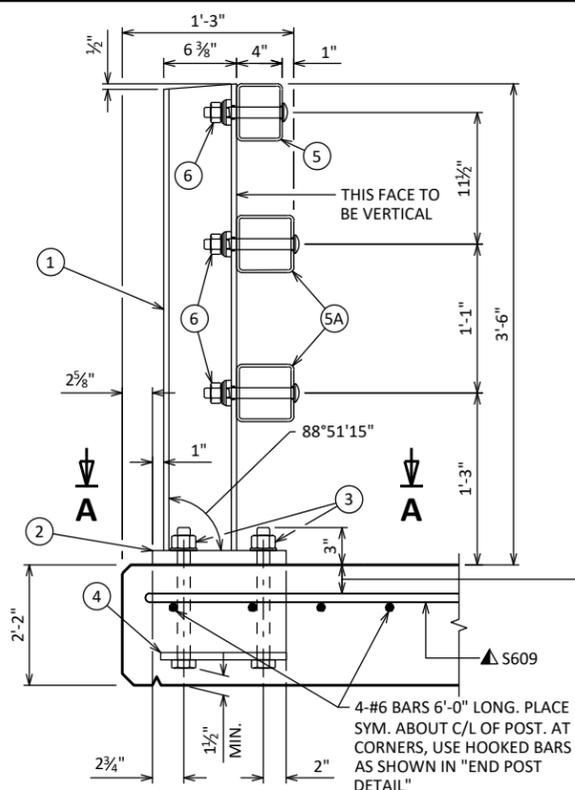
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
SUPERSTRUCTURE PLAN			SHEET 13 OF 14

LEGEND

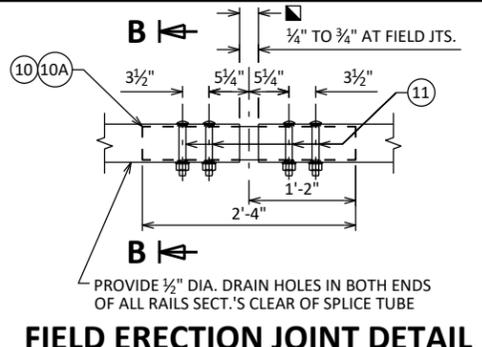
- ① W6 X 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1 1/4" X 11 3/8" X 1'-8" WITH 1 1/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10 3/4" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
- ④ 3/8" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- ⑤ TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑤A TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- ⑨ SPLICE SLEEVE FABRICATED FROM 3/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8" X 3 3/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- ⑩A 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 3/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/16" X 1 1/2" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 1 5/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 1 3/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
- ⑫ 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D.)
- ⑬ 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- ⑭ 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.)
- ⑮ 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

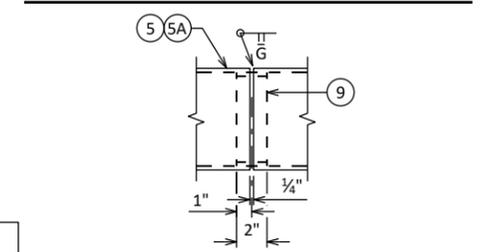
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/2 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. FABRICATE RAILING TO ACCOUNT FOR VERTICAL CURVE.



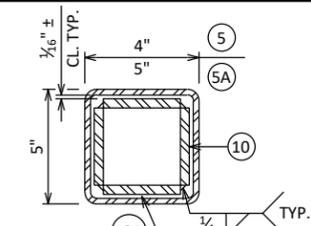
SECTION THRU RAILING ON DECK



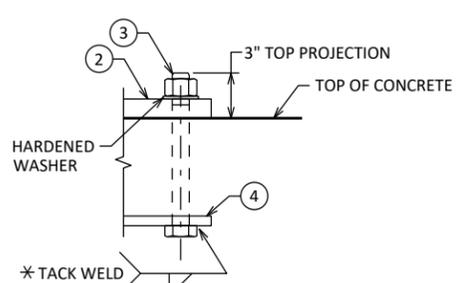
FIELD ERECTION JOINT DETAIL



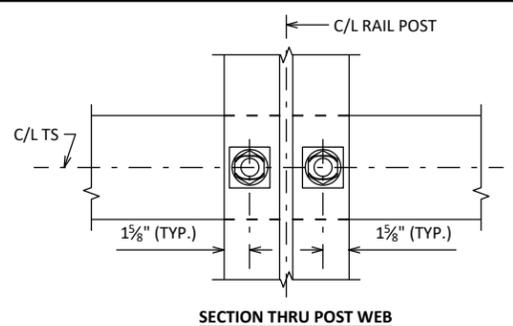
SHOP RAIL SPLICE DETAIL



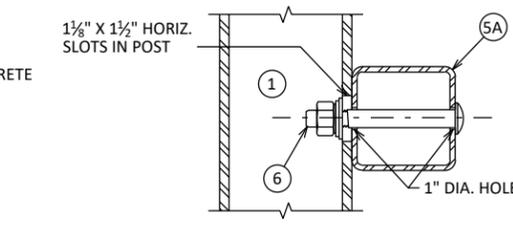
SECTION B-B



ANCHOR BOLTS



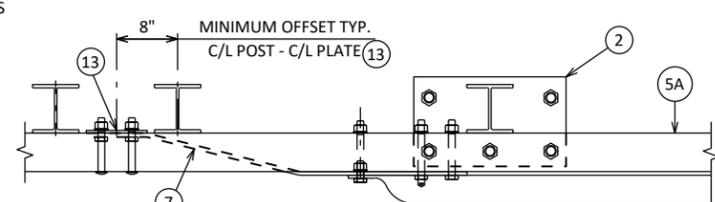
SECTION THRU POST WEB



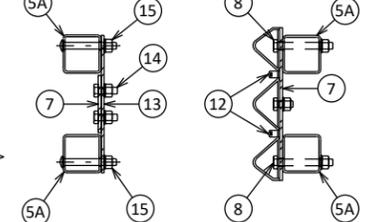
SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

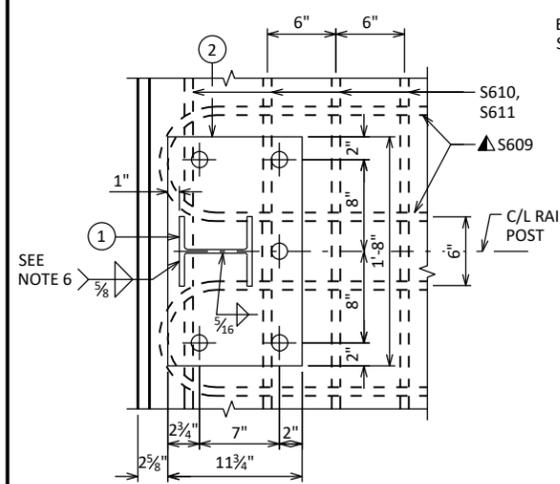
TYPICAL RAIL TO POST CONNECTIONS



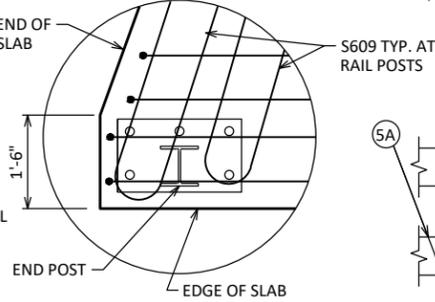
TOP VIEW AT END POST



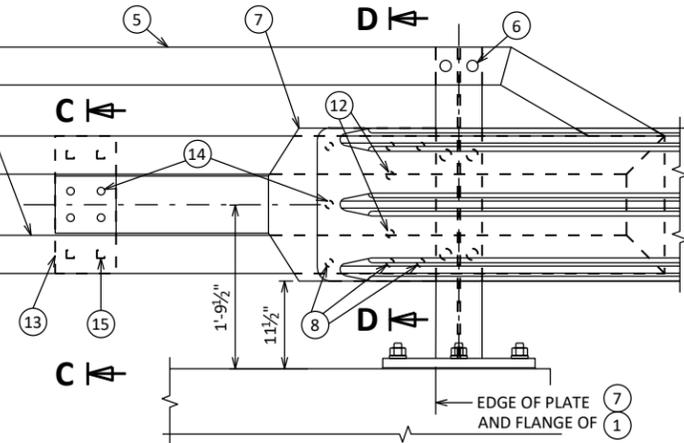
SECTION C-C SECTION D-D



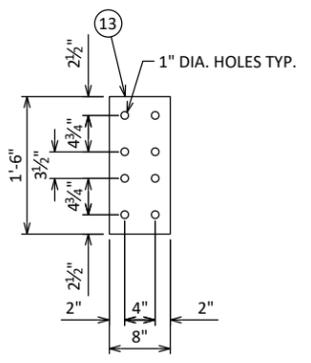
SECTION A-A



END POST DETAIL

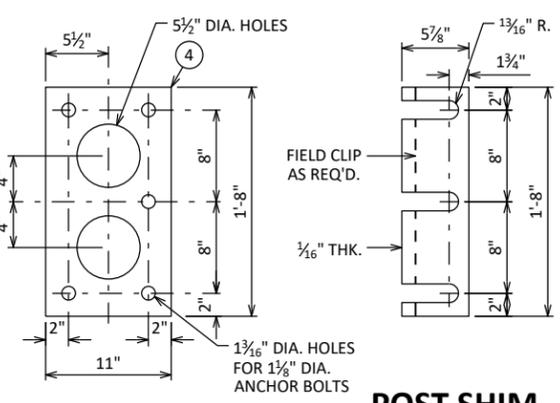


DETAIL AT END POST



ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

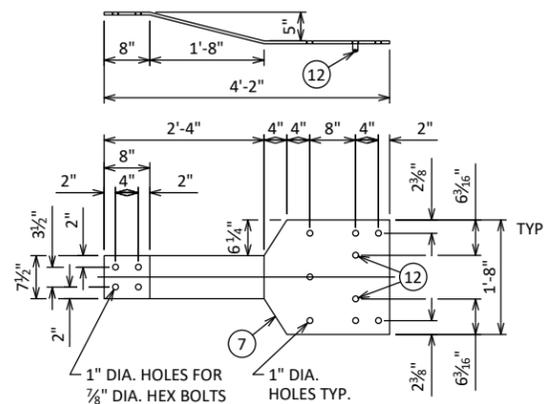


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

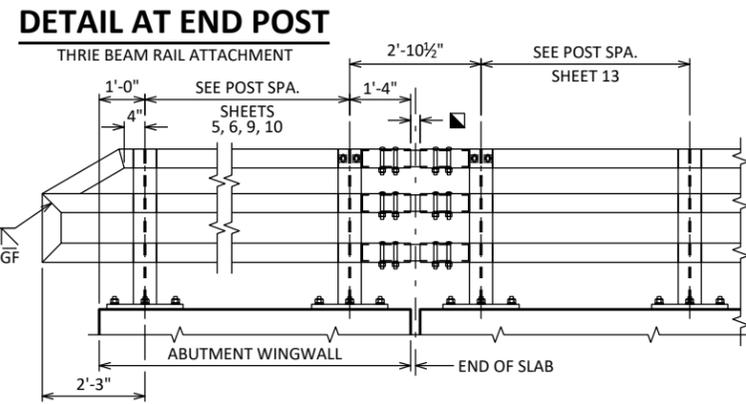
POST SHIM

DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

- ▲ TIE TO TOP MAT OF STEEL.
- * ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.
- 1/4" TO 3/4" OPENING FOR A1 ABUTMENT.

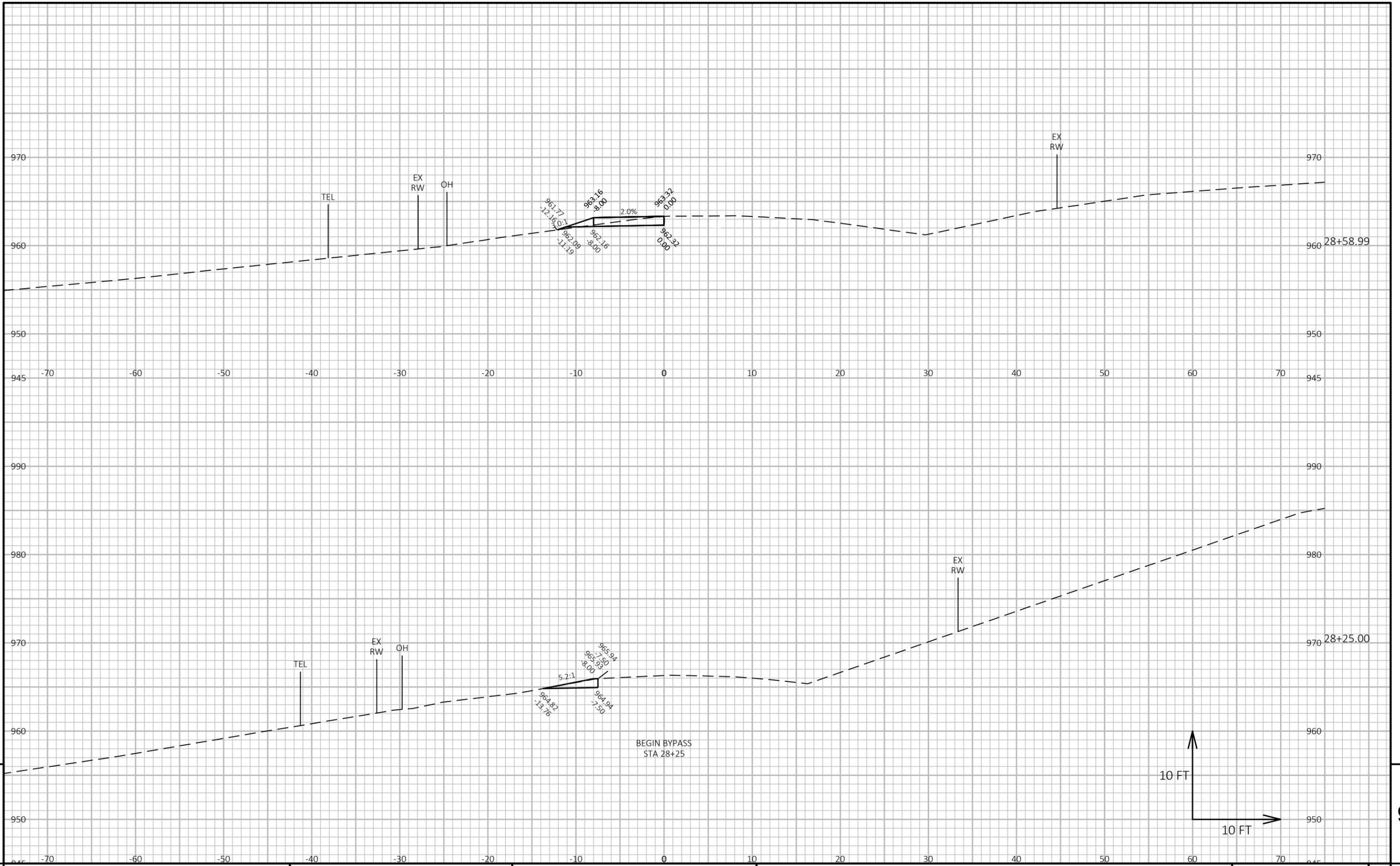
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-47-232			
DRAWN BY		CLP	PLANS CK'D LMP
TUBULAR STEEL RAILING TYPE "M"			SHEET 14 OF 14

570TH STREET TEMPORARY BYPASS COMPUTER EARTHWORK

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Unuseable Pavement Material	Fill	Cut	Salvaged / Unuseable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
28+25	--	3.2	0.0	0.0						
28+58.99	33.99	5.1	0.0	0.3	5	0	0	5	0	5
28+75	16.01	6.1	0.0	5.7	3	0	2	8	3	6
29+00	25	0.0	0.0	90.2	3	0	44	11	60	-49
29+25	25	0.0	0.0	228.7	0	0	148	11	252	-241
29+50	25	0.0	0.0	255.2	0	0	224	11	543	-532
29+69.5	19.5	0.0	0.0	262.6	0	0	187	11	787	-775
TEMP. STRUCTURE										
30+03.5	--	0.0	0.0	224.0						
30+25	21.50	0.0	0.0	80.3	0	0	121	11	944	-933
30+50	25.00	0.0	0.0	17.9	0	0	45	11	1003	-992
30+75	25.00	0.0	0.0	16.7	0	0	16	11	1024	-1013
31+00	25.00	0.0	0.0	17.4	0	0	16	11	1044	-1033
31+25	25.00	0.0	0.0	14.5	0	0	15	11	1064	-1052
31+50	25.00	11.0	0.0	0.0	5	0	7	16	1072	-1056
31+69.87	19.87	7.6	0.0	0.0	7	0	0	23	1072	-1049
32+00.42	30.55	3.7	0.0	0.0	6	0	0	30	1072	-1043
					30	0	825			

570TH STREET REMOVAL OF TEMPORARY BYPASS COMPUTER EARTHWORK

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Unuseable Pavement Material	Fill	Cut	Salvaged / Unuseable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
28+25	--	--	--	--						
32+00.42	375.42	--	--	--	1253	0	30	1253	39	1215



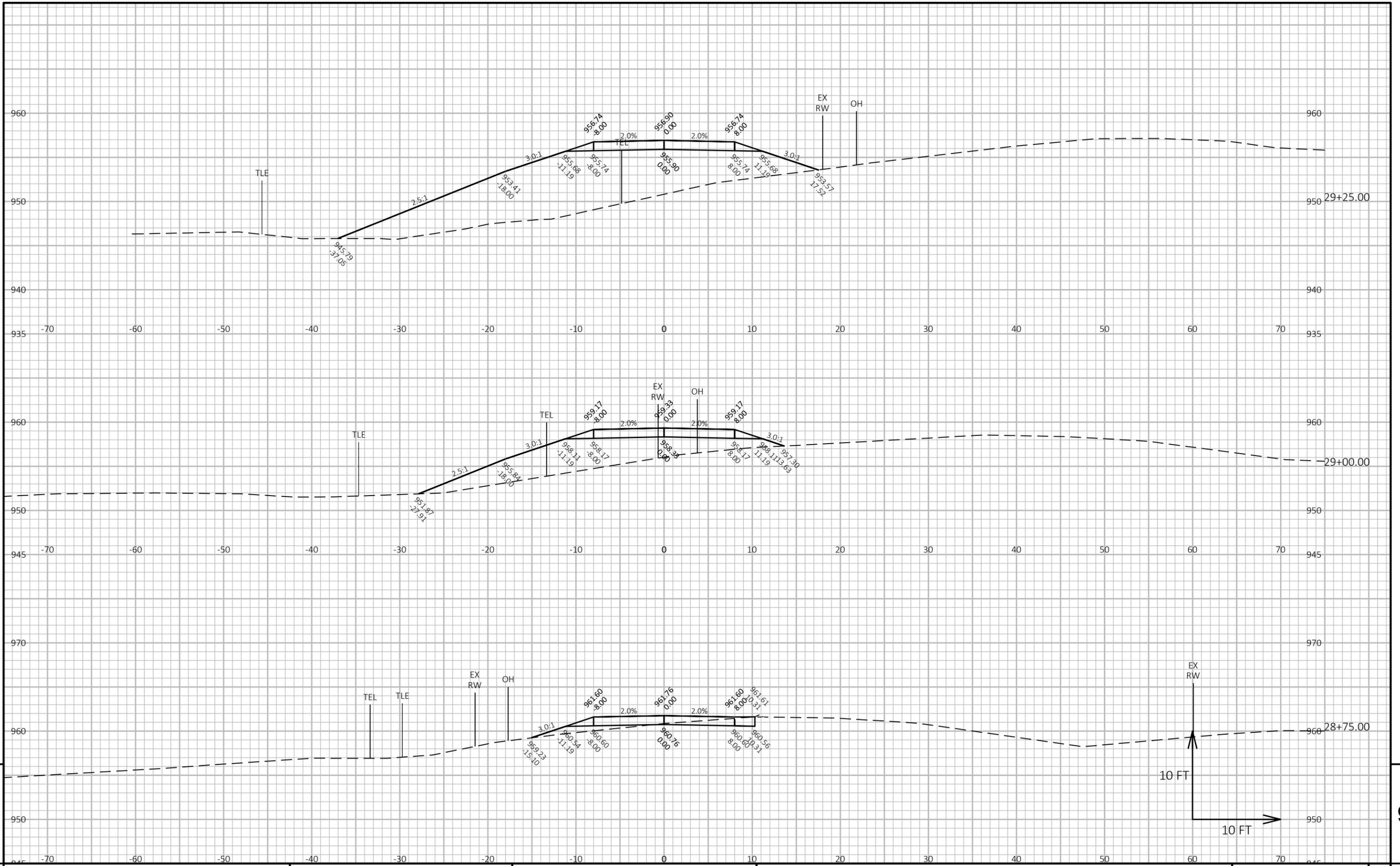
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PROJECT NO: 7895-00-71	HWY: 570TH STREET	COUNTY: PIERCE	CROSS SECTIONS: BYPASS	SHEET	E
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FILE NAME : I:\42\42-1439.00 - PIERCE CO, TN HARTLAND, 570TH ST\C3D\DSGN\CRDR\CRDR_570TH ST.DWG PLOT DATE : 10/22/2025 2:30 PM PLOT BY : WALDERA, KAREN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - Bypass XS 1

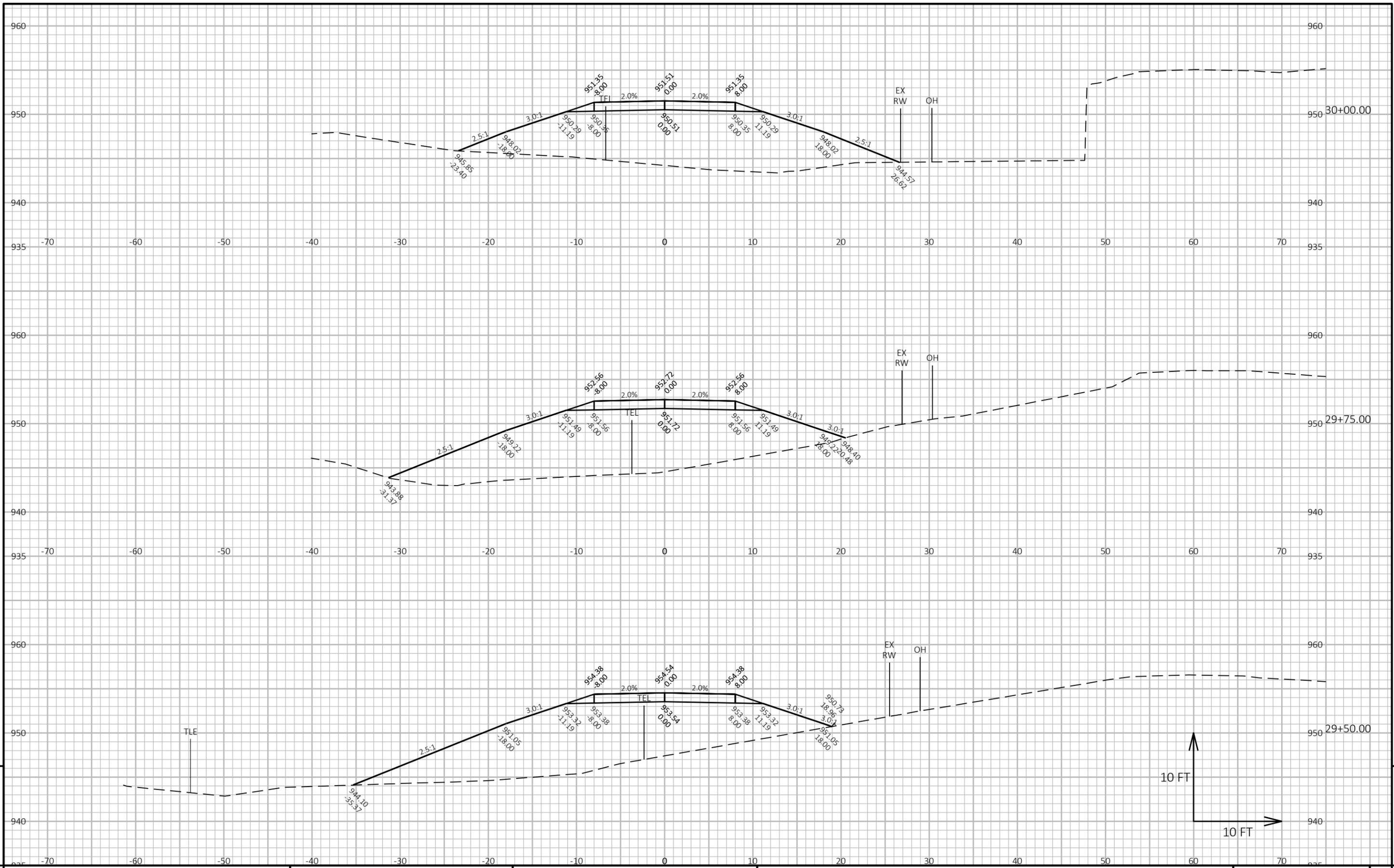


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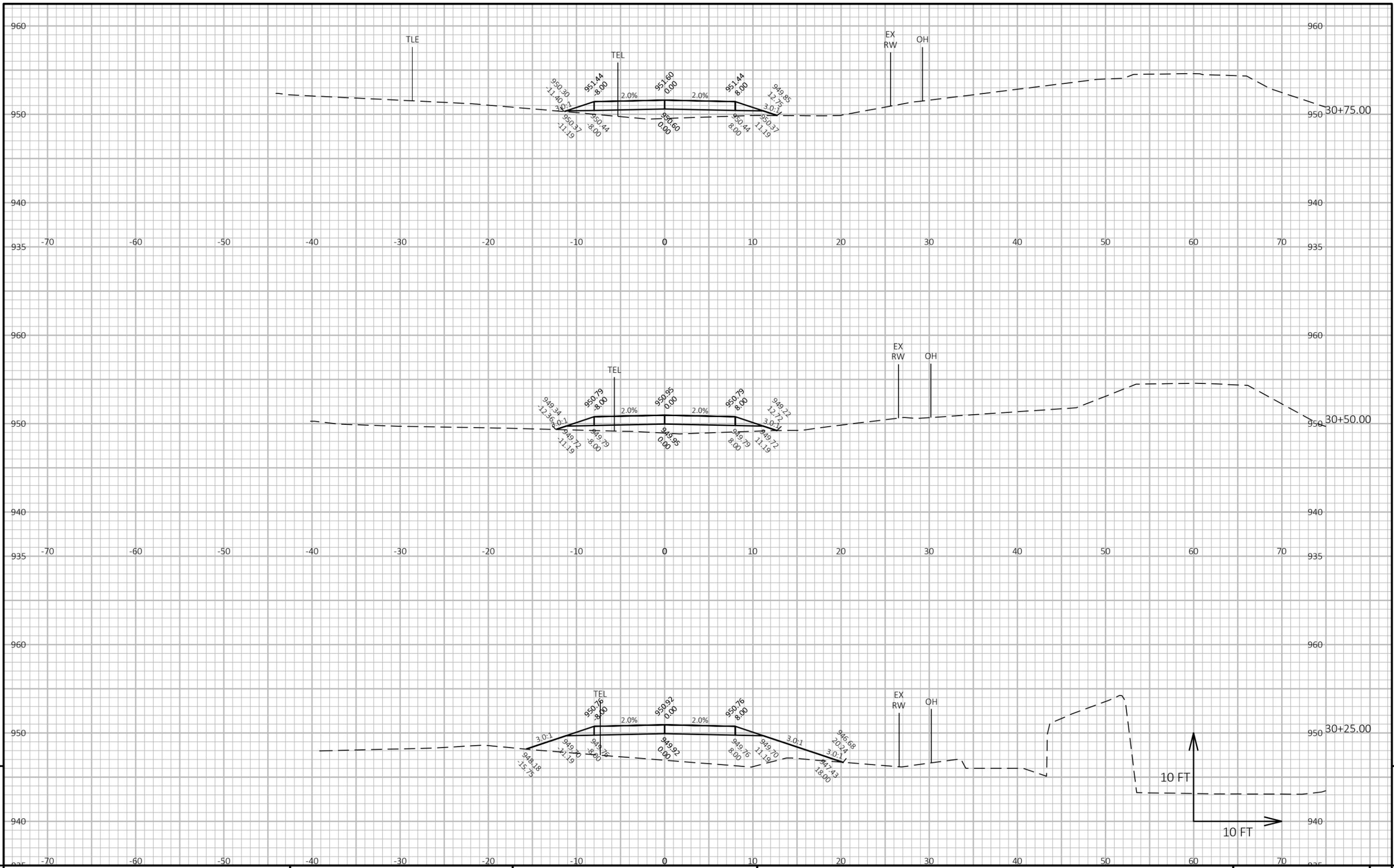
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PROJECT NO: 7895-00-71 HWY: 570TH STREET COUNTY: PIERCE CROSS SECTIONS: BYPASS SHEET E

FILE NAME : I:\42\42-1439.00 - PIERCE CO, TN HARTLAND, 570TH ST\C3D\DSGN\CRDR\CRDR_570TH ST.DWG PLOT DATE : 10/22/2025 2:30 PM PLOT BY : WALDERA, KAREN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 7895-00-71 HWY: 570TH STREET COUNTY: PIERCE CROSS SECTIONS: BYPASS SHEET 9

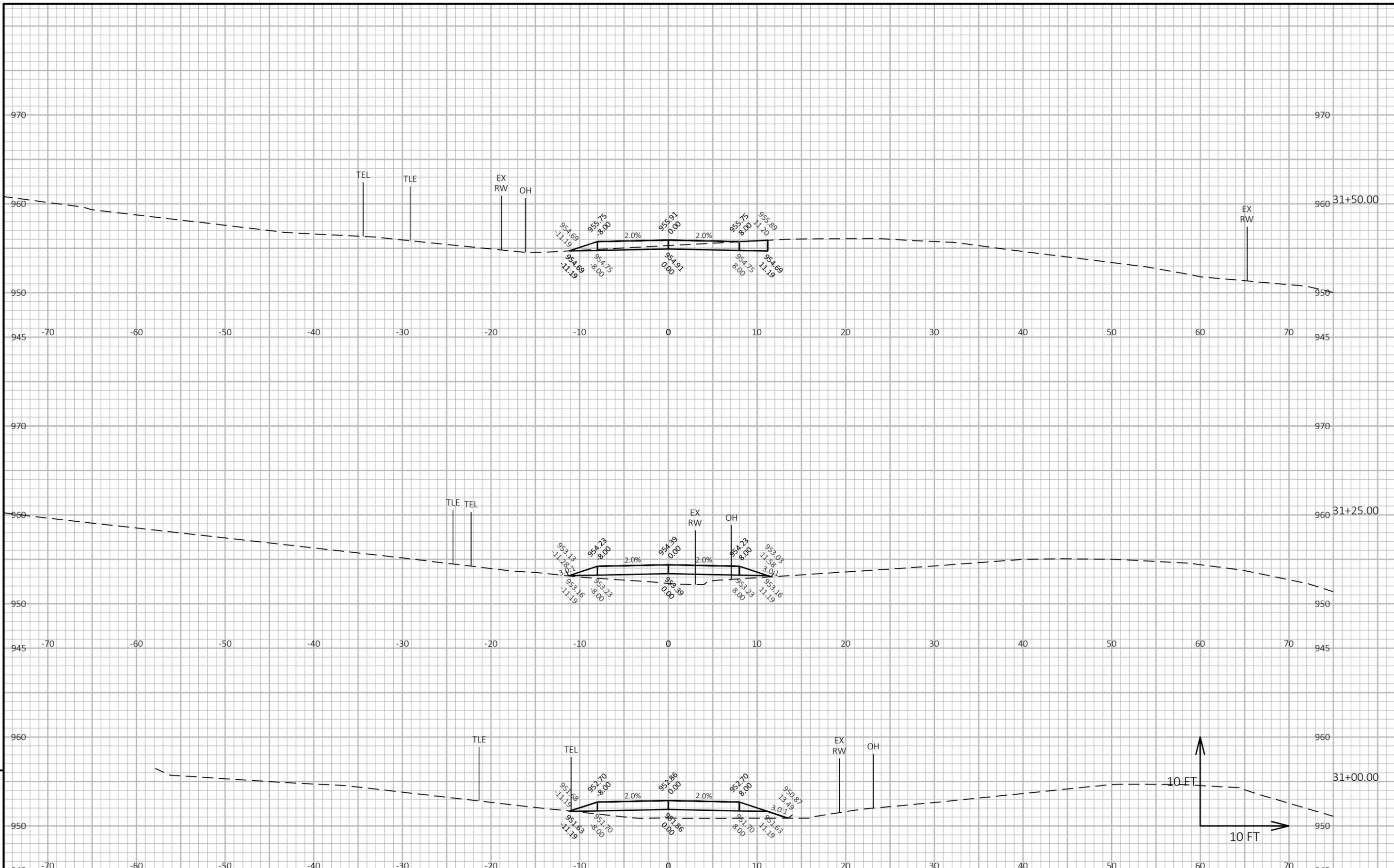


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PROJECT NO: 7895-00-71 HWY: 570TH STREET COUNTY: PIERCE CROSS SECTIONS: BYPASS SHEET E

FILE NAME : I:\42\42-1439.00 - PIERCE CO, TN HARTLAND, 570TH ST\C3D\DSGN\CRDR\CRDR_570TH ST.DWG PLOT DATE : 10/22/2025 2:30 PM PLOT BY : WALDERA, KAREN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 7895-00-71

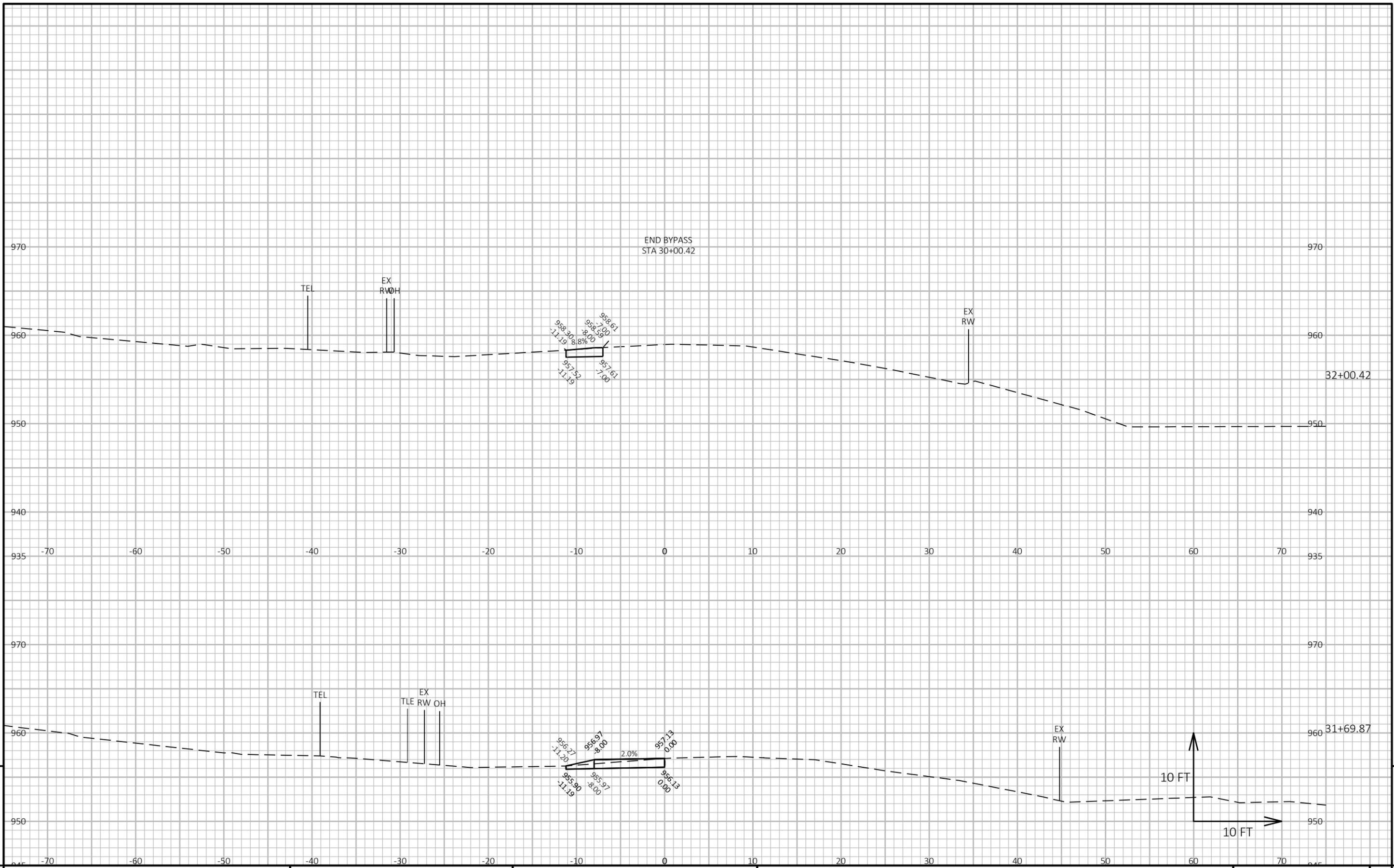
HWY: 570TH STREET

COUNTY: PIERCE

CROSS SECTIONS: BYPASS

SHEET

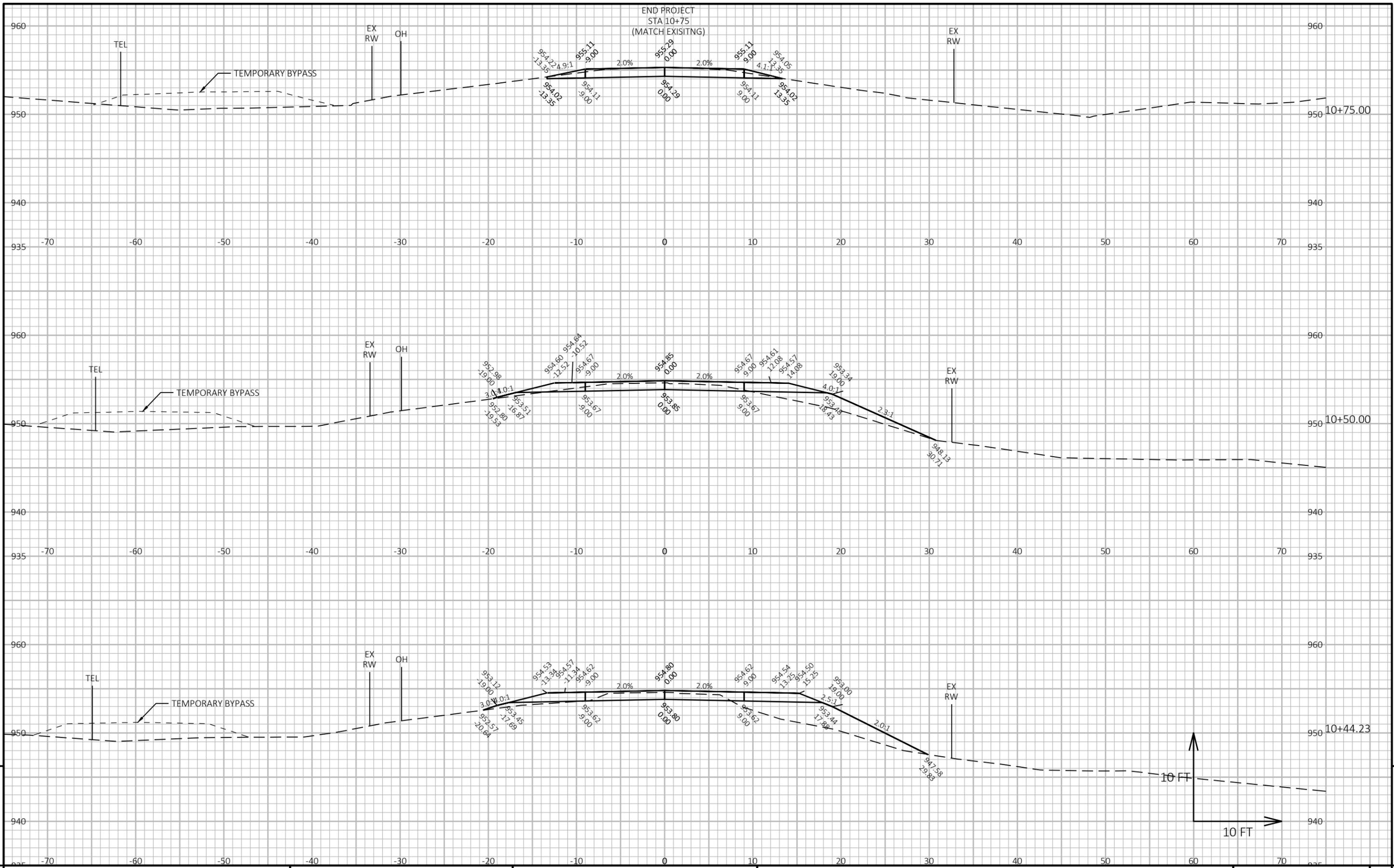
E



PROJECT NO: 7895-00-71 HWY: 570TH STREET COUNTY: PIERCE CROSS SECTIONS: BYPASS SHEET E

570TH STREET COMPUTER EARTHWORK

Station	Distance	Area (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Unuseable Pavement Material	Fill	Cut	Unuseable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.30	
9+25	--	20.9	0.0	0.0						
9+50	25.00	11.6	0.0	15.8	15	0	7	15	10	5
9+51.77	1.77	11.2	0.0	19.3	1	0	1	16	11	5
9+69.34	17.57	10.0	0.0	6.1	7	0	8	23	22	1
9+74.55	5.21	7.1	0.0	6.1	1	0	1	24	23	1
BRIDGE	--	--	--	--	--	--	--	--	--	--
10+25.44	--	6.2	0.0	7.5	--	--	--	--	--	--
10+30.66	5.22	11.1	0.0	19.4	2	0	3	26	27	-1
10+44.23	13.57	10.9	0.0	38.0	6	0	14	31	45	-14
10+50	5.77	13.1	0.0	18.4	3	0	6	34	53	-19
10+75	25.00	19.9	0.0	0.0	14	0	17	47	76	-29
					47	0	58			



PROJECT NO: 7895-00-71

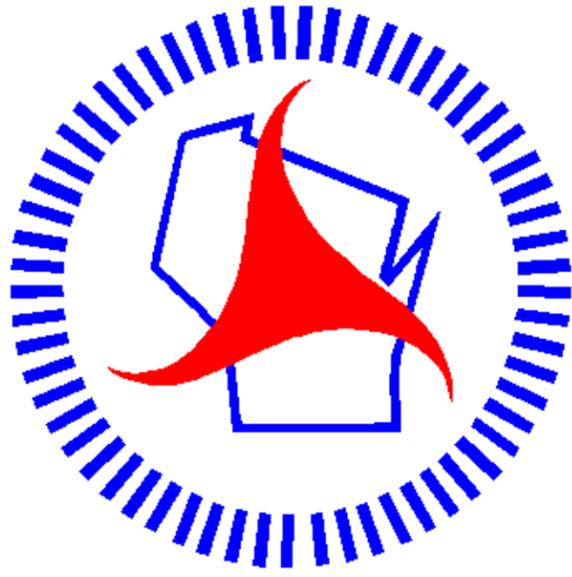
HWY: 570TH STREET

COUNTY: PIERCE

CROSS SECTIONS: 570TH STREET

SHEET

E



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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